

A Study on User Perception Towards the Importance of Data in Business Decisions

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ABSTRACT

Economics is a social science that deals with the study of production, distribution, and consumption of goods and services. It's the study of scarcity and its implications for the use of resources, production of goods and services and other complex issues of concern to society. Economists often use data science in their work and likewise data scientists sometimes consider economic figures. Economics as a statistical and mathematical subject is heavily dependent upon data. The basic premise of Economics is to find helpful insights from datasets that reveal information about the financial state of an organisation, especially big business firms, in order to make better budgetary decisions. In May 2023, I sent out an online questionnaire to understand the importance of data in a 21st century firm and the advantages associated with it. I received responses from 203 people.

KEYWORD: Data science, Economics, Data driven administration

DATA SCIENCE

Data science is the study of data to extract meaningful insights that can be used to guide decision making and strategic planning. It is a multidisciplinary field that combines mathematics and statistics, specialised programming, advanced analytics, artificial intelligence (AI) and machine learning. It combines tools, methods, and technology to generate meaning from data. Data science is mainly used for descriptive, diagnostic, predictive and prescriptive analysis. It is highly beneficial for businesses as it helps discover unknown transformative patterns, innovate new products and solutions and real-time optimization.

ECONOMICS

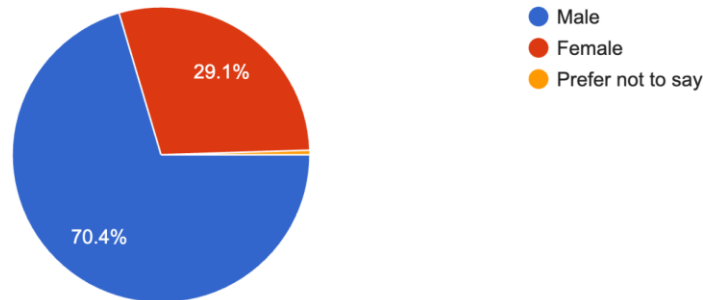
Economics is a branch of social science that focuses on the production, distribution, and consumption of goods and services, and analyses the choices that individuals, businesses, governments, and nations make to allocate scarce resources. It focuses on efficiency in production and exchange. It is the study of scarcity and its implications for the use of resources. Economics is a broad discipline that helps us understand historical trends, interpret today's headlines, and make predictions about the coming years.

ANALYSIS

The responses from the respondents have been collated and the following has been analysed

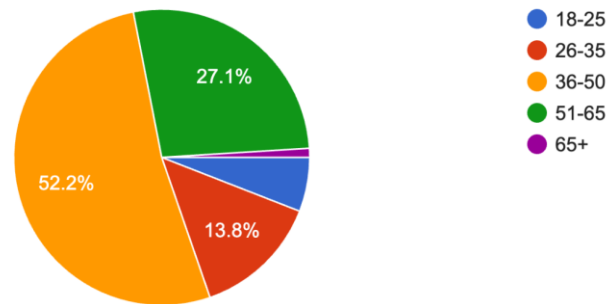
- 29.1% of the respondents are female, 70.4% are male and 0.5% of the respondents prefer not to disclose their gender.

Gender
203 responses



- 5.9% of the respondents belonged to the age group of 18-25 years, 13.8% were from the age group 26-35 years, 52.2% of the respondents belonged to the age group 36-50 years, 27.1% were from the age category of 51-65 years, while only 1% of the respondents were 65 years or above in age.

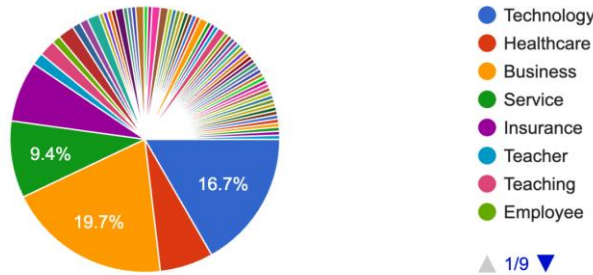
Age
203 responses



Since more than half the respondents belong to the age group of 36-50 years, it can be inferred that middle aged individuals have knowledge of and have interest in data science and the relevance of data in modern day businesses.

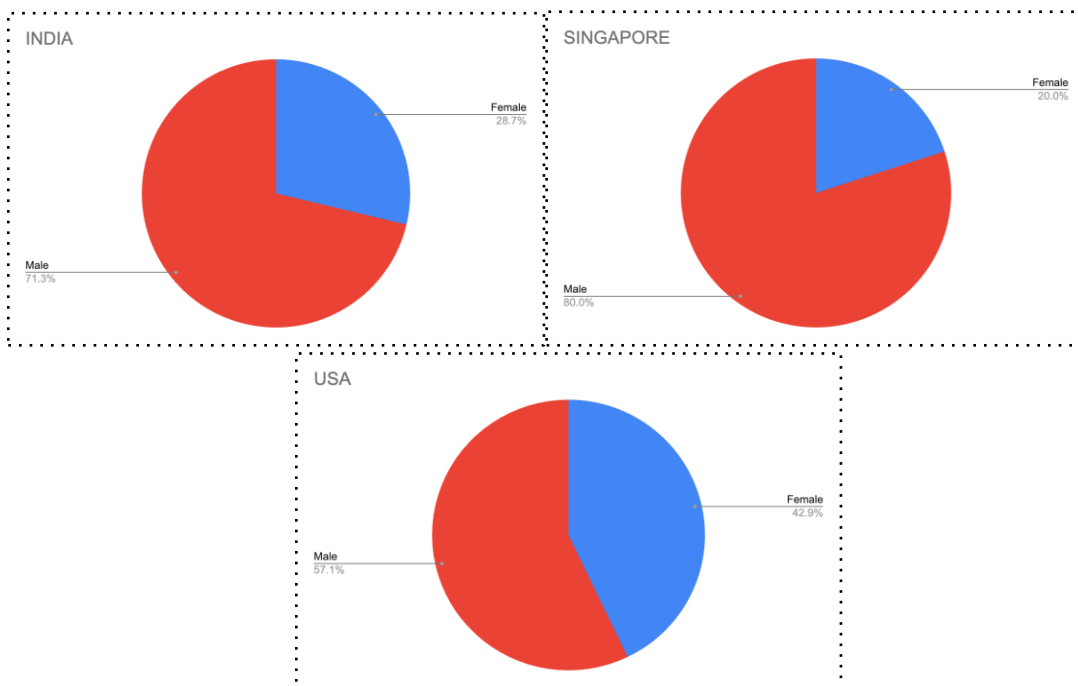
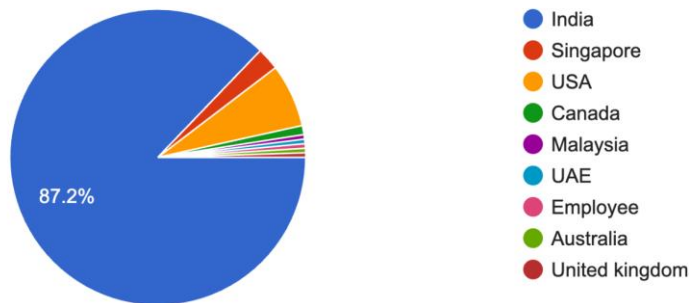
- Out of the 203 respondents, 16.7% belong to occupations related to the Technology industry out of which 7 are women and 29 are men, 19.7% are involved in businesses consisting 3 females and 37 males, 9.4% are in the Service sector with 9 females and 24 males, and 6.4% belong to Healthcare industry consisting 7 females and 6 males. The remaining 47.8% belong to varied sectors including education, Government jobs, Marketing firms, etc. out of which 7 females and 13 males belong to the insurance and banking industries.

Occupation
203 responses



- 87.2% of the respondents belong to India out of which 52 are females and 129 are males, while the remaining 12.2% consists of respondents belonging from Singapore (1 female and 4 males), USA (6 females and 8 males), Canada, Malaysia, UAE, Australia and The United Kingdom.

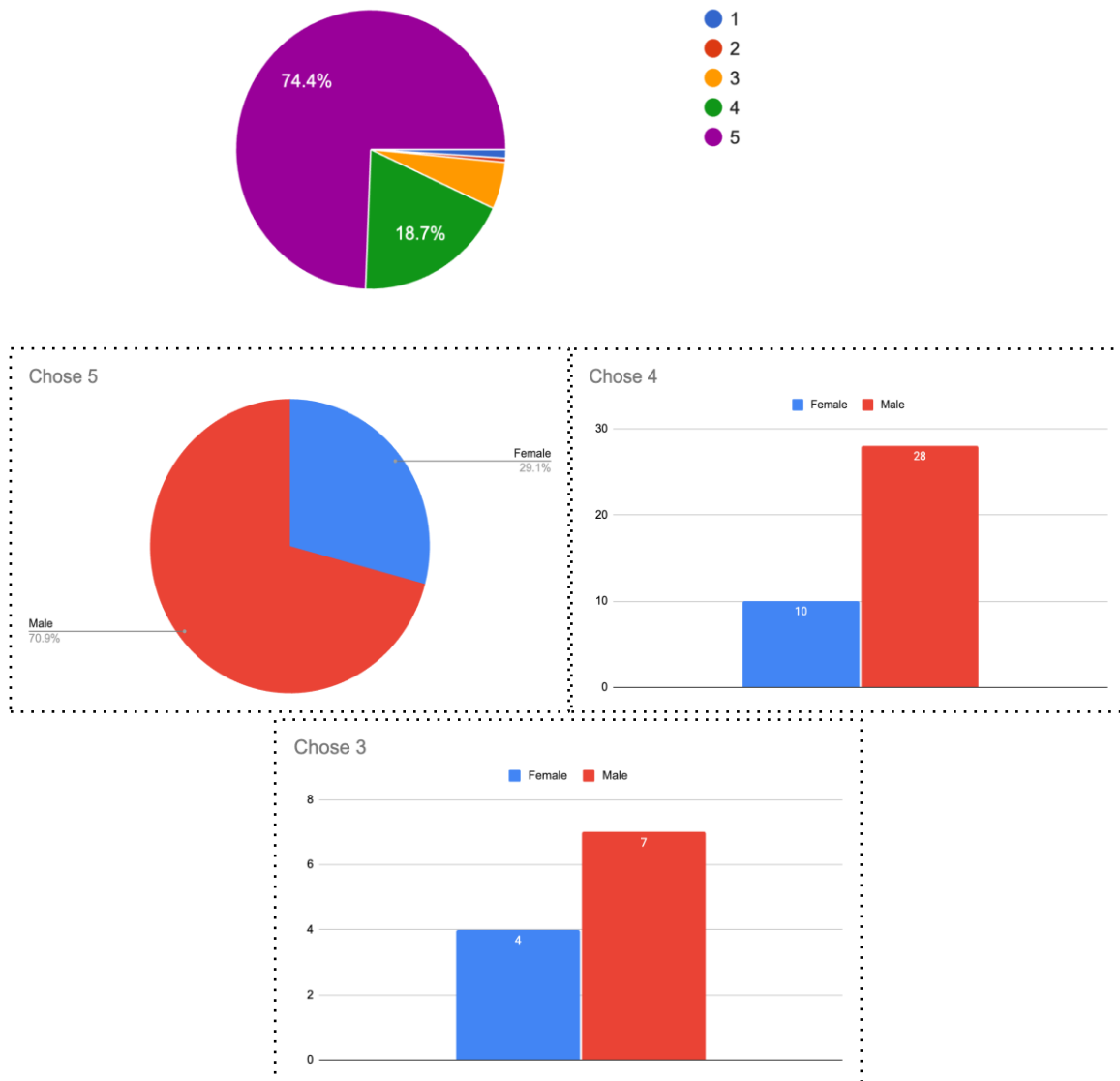
Location
203 responses



- The respondents were asked to rate on a scale of 1 to 5 how important they believed data is in the business world. 74.4% of the respondents chose “5” as they believe that data is extremely important for businesses. 44 females and 107 males chose “5”. 18.7% chose “4” consisting 10 females and 28 males, 5.4% (4 females and 7 males) of the respondents chose to rate the importance of data in the business world with a “3”, and 0.5% chose to rate it at “2”. The remaining 1% of the respondents believe that data is not at all important for the business world.

On a scale of 1 to 5, with 1 being "Not important at all" and 5 being "Extremely important," how would you rate the importance of data in the business world?

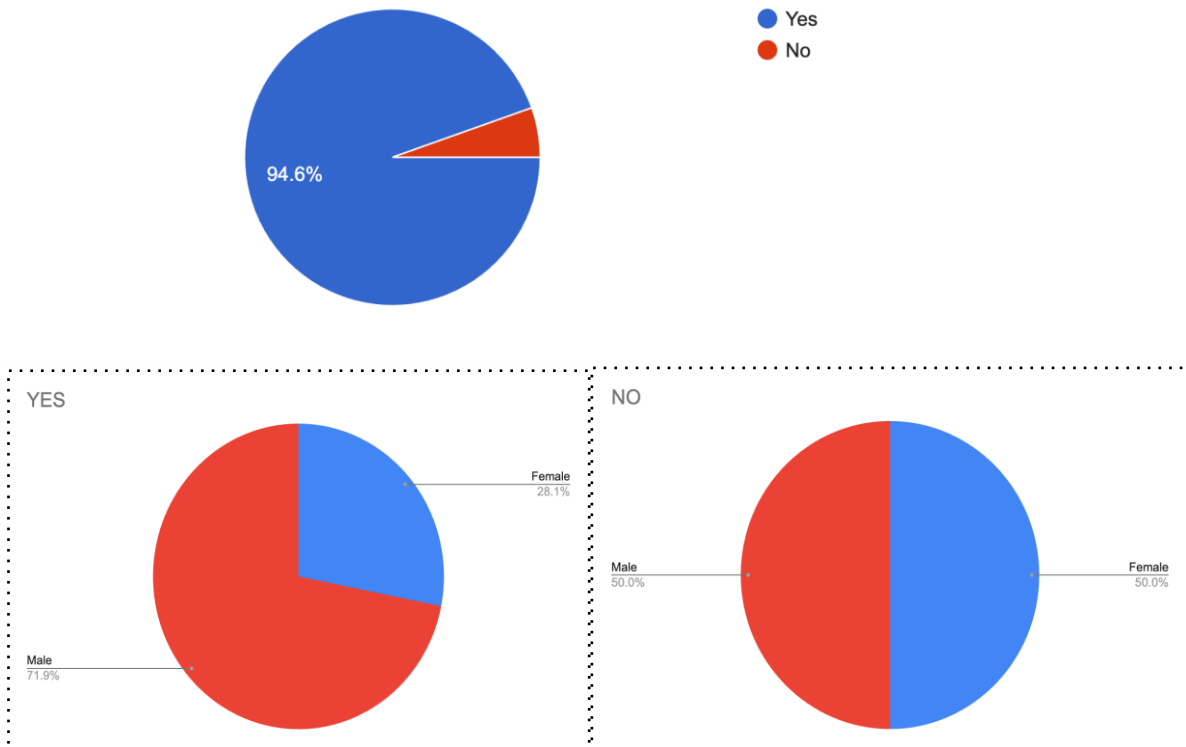
203 responses



- The respondents were asked if they have ever personally witnessed any improvements in efficiency or productivity resulting from data-driven strategies. 94.6% (54 females and 138 males) of the total 203 respondents have witnessed improvements due to data-driven strategies, while 5.4% (5 females and 5 males) of them have never personally witnessed any such improvements in efficiency or productivity.

Have you personally witnessed any improvements in efficiency or productivity resulting from data-driven strategies?

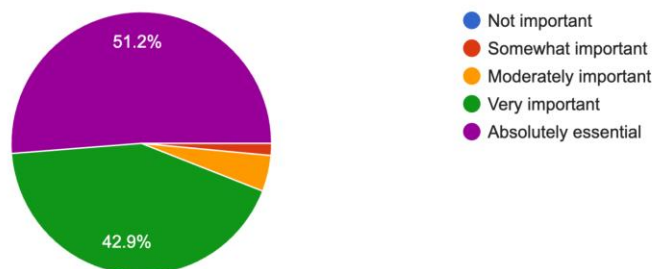
203 responses

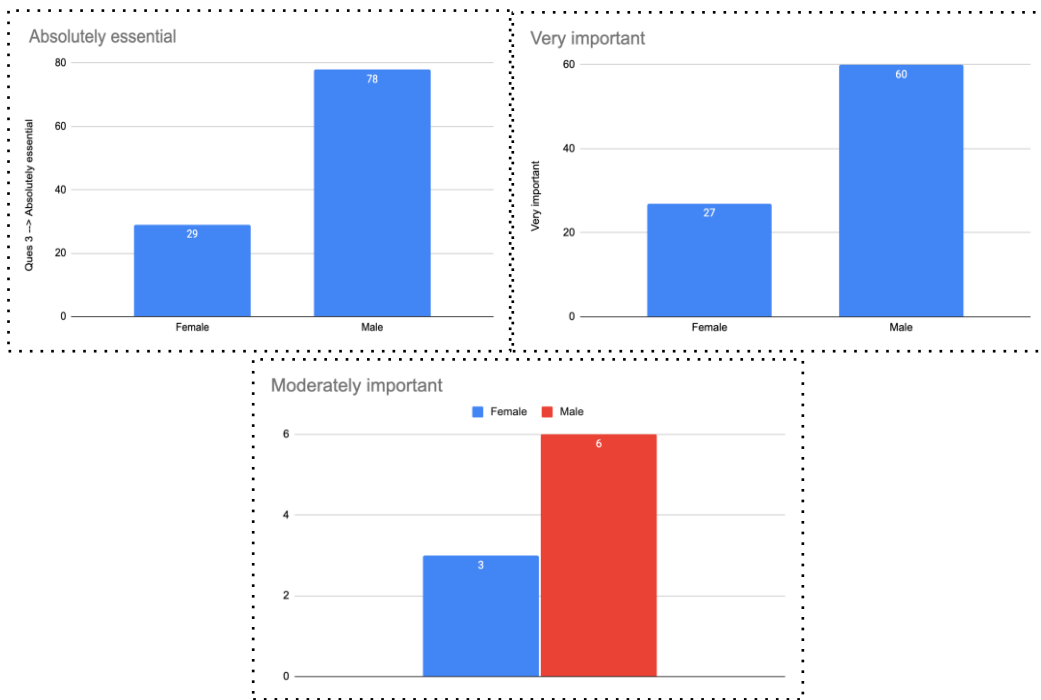


- The respondents were asked if they deemed data quality and accuracy important while making crucial business decisions and were provided with 5 options to choose from - Not Important, Somewhat Important, Moderately Important, Very Important, and Absolutely Essential. Out of the 203 respondents, 51.2% said that data quality and accuracy were the most important factors that affected their decisions regarding their businesses. At the same time, 42.9% believe that data quality and accuracy are very important contributing factors to their decisions. 4.4% said that they were moderately important, and 1.5% believe that accuracy and quality of data are somewhat important when it comes to making a business decision.

How important is data quality and accuracy when making critical business decisions?

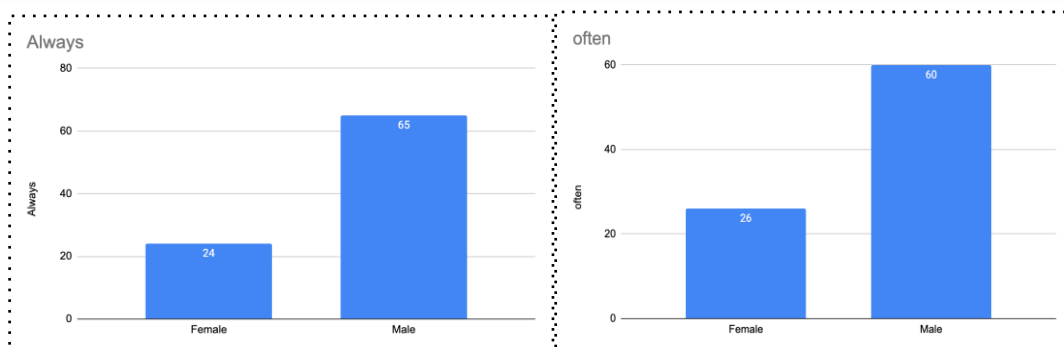
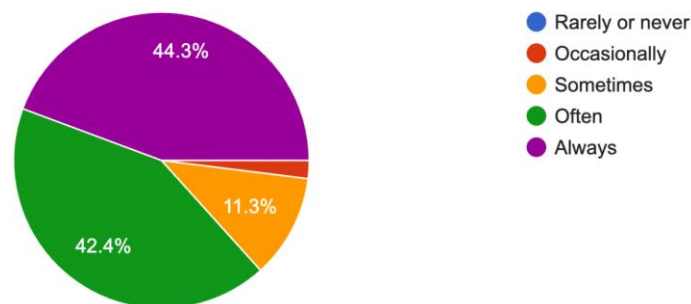
203 responses

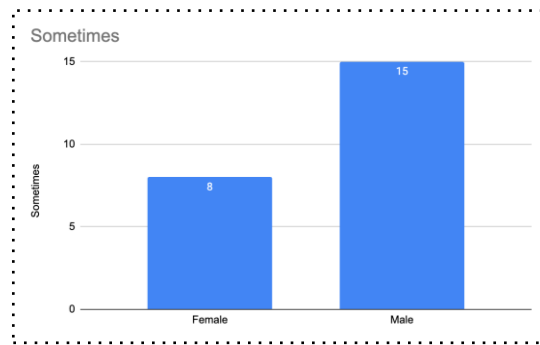




- Next, the respondents were asked how frequently they believed that data-driven insights contribute to achieving business goals. 44.3% respondents consisting of 24 women and 65 men said that they always believe that data-driven insights are instrumental to achieving the goals set for the business. 42.4% out of which 26 were females and 60 were males said that they often believed in this and 11.3% with 8 females and 15 males said that they only believed it sometimes that data-driven insights help a business to achieve its goals. 2% of the 203 respondents believe in this occasionally.

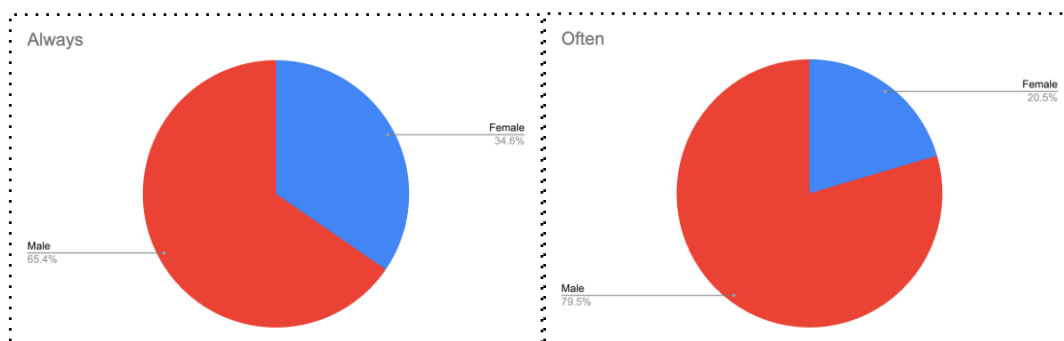
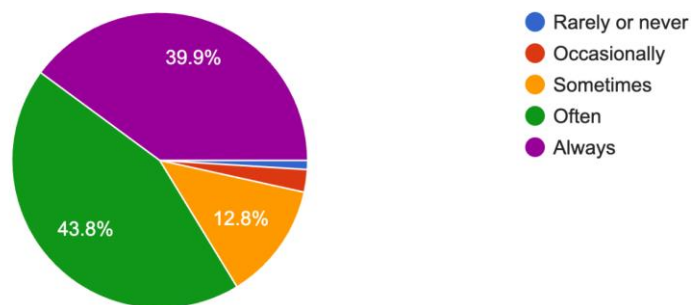
How frequently do you believe data-driven insights contribute to achieving business goals?
203 responses

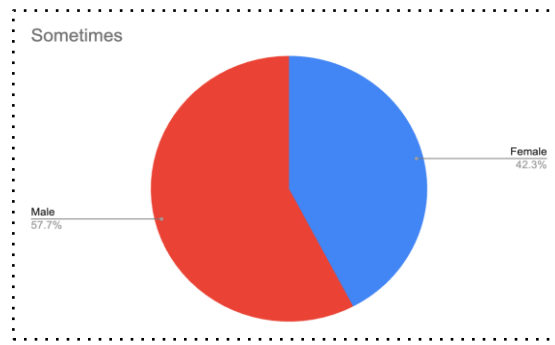




- The respondents were asked how often they rely on data analytics to identify market trends and customer preferences. 39.9% of the respondents consisting of 28 females and 53 males always rely on data analytics to identify market trends, while 43.8% of the respondents out of which 18 are women and 70 are men rely on this practice often. 12.8% (11 females and 15 males) rely on data analytics only sometimes and the remaining 3.5% rely on this technique occasionally, rarely or never.

How often do you rely on data analytics to identify market trends and customer preferences?
203 responses

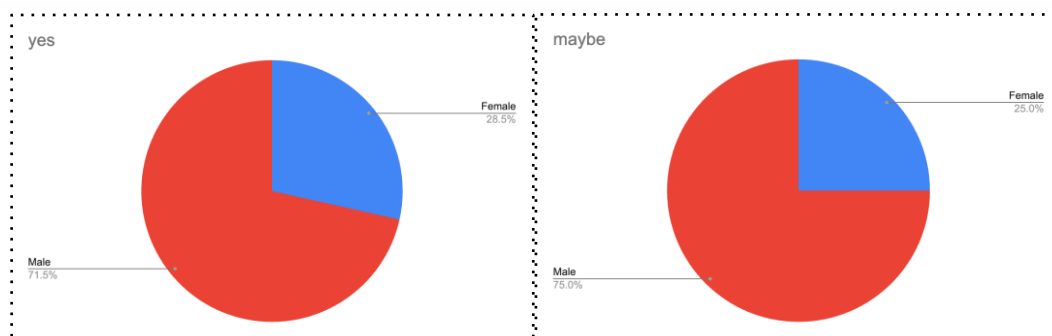
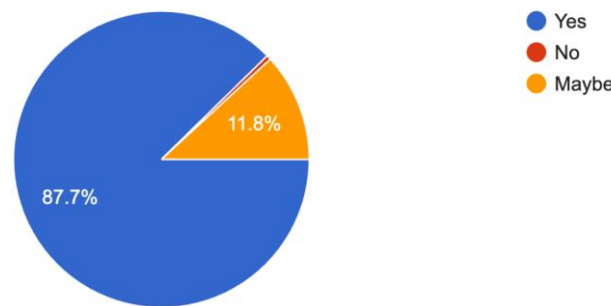




- Respondents were asked if in their opinion companies that leverage data analysis have a comparative advantage in the market. 87.7% responded in affirmative out of which 53 are female and 133 are male, while 11.8% of the respondents consisting of 6 women and 18 men were uncertain whether data analysis helps the business grow. 0.5% of the respondents believe that data analysis has no correlation to the company’s performance in the market and does not give it an edge over the other companies.

Do you think organisations that leverage data analysis have a competitive advantage in the market?

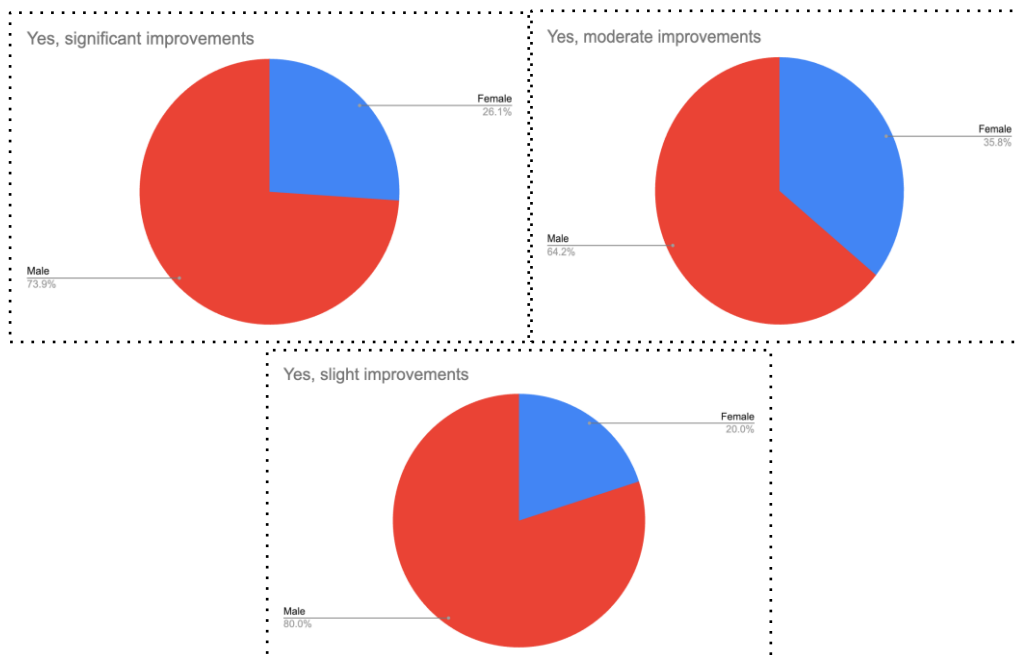
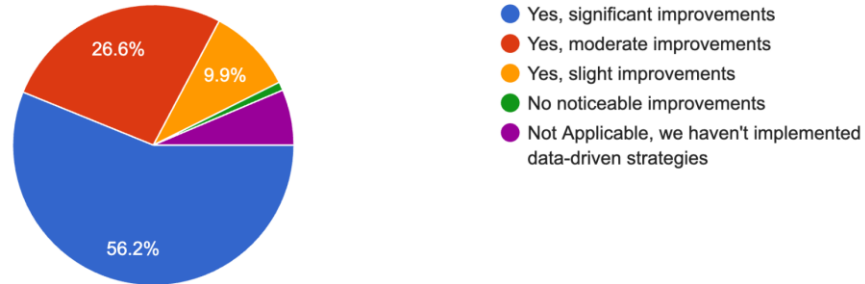
203 responses



- When asked if the respondents had observed any improvements in efficiency or productivity since implementing data-driven strategies in their businesses/organisations, 56.2% (31 females and 88 males) of them said that they have seen significant improvements after implementing such strategies. 26.6% of the respondents out of which 19 were females and 34 were males had observed moderate improvements, while 9.9% (4 females and 16 males) witnessed slight improvements. 1% of the 203 respondents have not observed any improvements in the efficiency or productivity since implementing data-driven strategies. 6.4% of the respondents said that the asked question was not applicable to them as they have not implemented any such data-driven strategies yet.

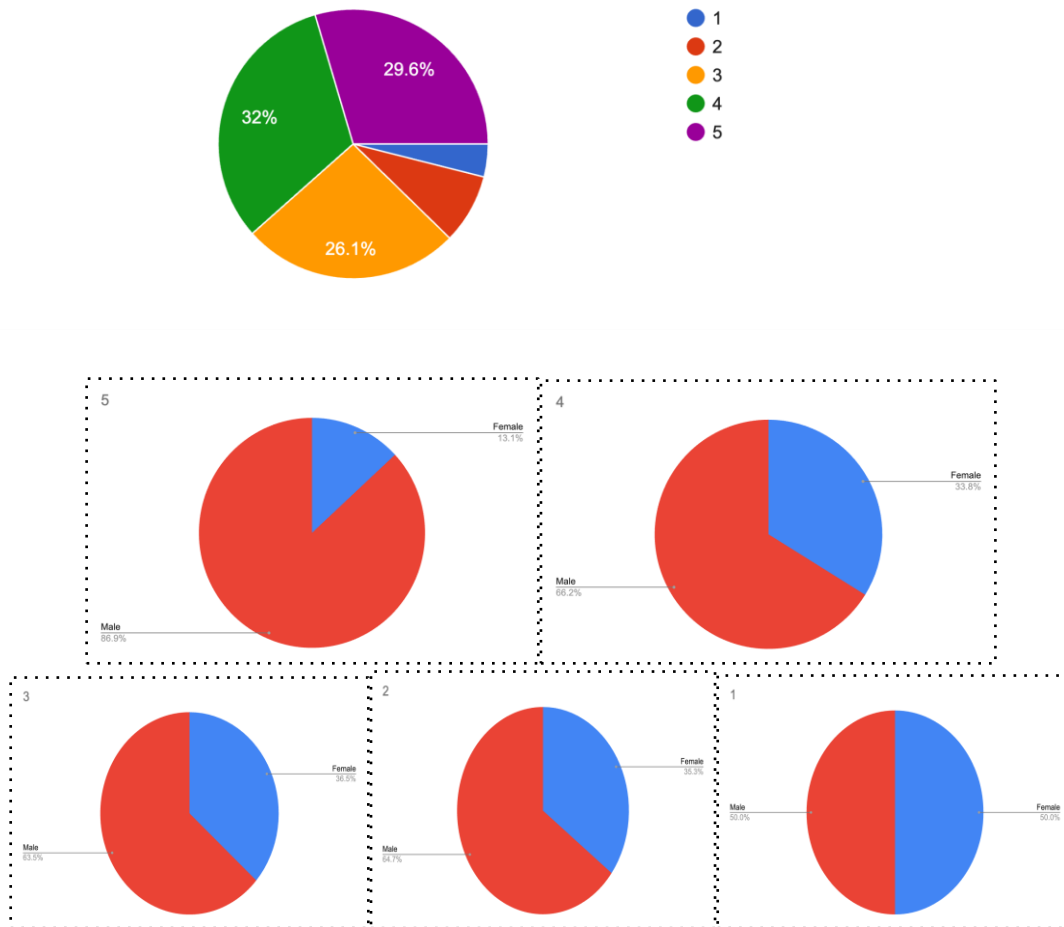
Have you observed any improvements in efficiency or productivity since implementing data-driven strategies in your organisation?

203 responses



- Finally, the respondents were asked about their familiarity with emerging technologies, such as artificial intelligence and machine learning that extract insights from data. The respondents were asked to rate this familiarity on a scale of 1 to 5 with 1 being “Not familiar at all” and 5 being “Very familiar”. 29.6% (8 females and 53 males) rated their familiarity with a “5”. 32% respondents out of which 22 were females and 43 were males chose “4”. 26.1% consisting of 19 females and 33 males were moderately familiar with these technologies and chose “3”. 8.4% (6 females and 11 males) chose “2”. While 3.9% of the respondents consisting of 4 females and 4 males expressed their familiarity with these technologies as being “Not familiar at all” and chose 1 on the scale.

On a scale of 1 to 5, with 1 being "Not familiar at all" and 5 being "Very familiar", how familiar are you with emerging technologies, such as artificial intelligence and machine learning, that extract insights from data?
203 responses



RECOMMENDATIONS

1. More than half respondents believe that data holds immense importance in modern-day businesses. Data helps one understand and improve business processes so that time and money can be saved.
2. Data-driven strategies are an essential approach for businesses and organisations across various sectors. These strategies enable decision-makers to make well-informed choices rather than relying on subjective opinions.
3. Making informed decisions requires the availability of accurate data and the assurance that this data is of high quality. Accurate and high quality data provides reliable insights into the current state of the business, reduces uncertainty and minimises risk, reduces the chances of making wrong investments, and leveraging this information can help companies stay ahead of competitors and build a sustainable competitive advantage.
4. Data-driven insights are absolutely essential for businesses to achieve their goals as they provide valuable information and guide decision making. Data driven insights contribute to achieving business goals by identifying opportunities, optimising operations, helping create targeted marketing strategies, monitoring key performance indicators, etc.

5. Data analytics helps in identifying market trends and customer preferences by playing a crucial role in data collection, data cleaning and preparation, segmentation and profiling, sentiment analysis, etc.
6. More males engage in such questionnaires as compared to females.

CONCLUSION

Findings have demonstrated that data is an essential aspect of our lives in the current day world. Accurate and timely data can enhance our predictions and decisions for our businesses. This research underscores the importance of data quality and transparency for the effective functioning of our business.