CURRENT STATE OF ANALYTICS IN ORGANIZATIONS IN THE USA

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Abstract

The state of analytics in the United States is generally strong and growing. The use of data analytics and related technologies has become increasingly important across many industries, including finance, healthcare, marketing, and technology.

According to a report by the U.S. Bureau of Labor Statistics, employment in the computer and information technology field, which includes data analytics, is projected to grow 11% from 2019 to 2029, much faster than the average for all occupations.

A survey was created to identify the state of analytics in the USA, including questions organized into several sections:

Demographics – who is completing the survey: type of organization, role, and contribution to analytics.

Analytics Organization – how is the analytics team structured within the organization?

Analytics Importance and Role perceived within the organization.

Analytical tool/maturity.

The survey was sent to 90 employees from various US organizations, and 34 people responded.

The results show that while all participants perceive analytics as necessary, overall, their satisfaction with analytical structures and processes within the organization could be much higher. There are many opportunities to improve analytics and support decision-making.

Keywords: *Analytics Industry; survey*
JEL Codes: *L89, C83*

Introduction

Analytics plays a critical role in decision-making processes across industries and organizations. It uses data, statistical and quantitative analysis, and predictive modeling techniques to extract insights and drive informed decision-making.

According to John Tukey, data analysis is "Procedures for analyzing data, techniques for interpreting the results of such procedures, ways of planning the gathering of data to

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make analysis easier, more precise or more accurate, and all the machinery and results of (mathematical) statistics which apply to analyzing data". (Tukey, 1962)

The role of analytics can be summarized as follows:

Understanding business performance: Analytics helps businesses better understand their performance by analyzing data and identifying trends, patterns, and opportunities for improvement.

Identifying customer behavior: Analytics can help businesses understand customer behavior and preferences by analyzing customer data, such as purchase history and demographics.

Improving operational efficiency: Analytics can help businesses optimize their processes by analyzing data and identifying bottlenecks and inefficiencies.

Enhancing marketing effectiveness: Analytics can help businesses target their marketing efforts more effectively by analyzing customer data and identifying the most effective marketing channels and strategies.

Supporting strategic decision-making: Analytics provides insights that enable businesses to make data-driven decisions rather than relying on intuition or guesswork.

Other surveys have been completed in the USA to understand the role and the stage of analytics in large and small organizations.

Marr (2016) has collected data from forty-five different businesses and further evaluated their strategies based on the analytics they developed over time. In addition, he published a detailed report about his findings by the organization.

Gartner (2023) also does analytics and data-related surveys. In one of them, they identified that "Less than half of data and analytics leaders (44%) reported that their team is effective in providing value to their organization." The top 3 reasons are staff and skill shortages, lack of resources and funding to support the initiatives, and cultural challenges to accept the change.

One of the challenges of implementing analytics in organizations is the cost component and estimation of that cost. Per Athanasios (2017), " The estimation criteria should accurately describe the basis used for the estimation as well as the assumptions applied to lead to various conclusions." That is required to ensure the accuracy of the estimates.

Most organizations, or at least parts within them, understand how analytics can help them make better decisions. But unfortunately, there is a tendency for managers to think that they can make decisions without advanced analytical solutions. Still, with more and more information available and the increased dynamics and times for change, it becomes evident that analytics is necessary.

Thomas Davenport (2022) researched decision-making and "suggests that 40 percent of major decisions are based not on facts, but on manager's gut". It is scary that in the 21 century, when technology is advanced and the amount of information cannot be processed by the human brain, the decisions are still not based on analytics.

According to pilot testing McKinsey undertook with multiple banks, RMs who used AA workbenches had 9 percent portfolio growth over 12 months. In comparison, control groups who did not use workbenches saw 5 percent growth. They also spread this growth across more clients, received five times more cross-selling ideas, and spent 90% less on account planning.

Methodology

A survey methodology was chosen to identify where organizations stand with analytics currently. Questionnaires are the most used tool in survey research. However, the results of a detailed survey are only helpful if the questionnaire is written appropriately.

A survey is a research method used to collect data from a group of people through their responses to questions. Surveys are generally used to gain insights into people's opinions, beliefs, and behaviors.
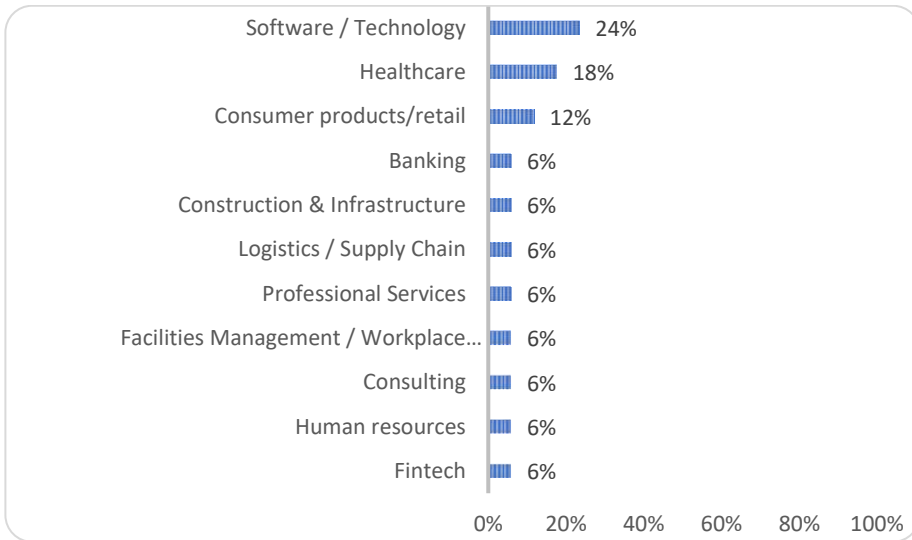
The State of Analytics in the USA - Survey Results

The survey for the research included 18 questions and was sent to 90 professionals from various functions and organizations. Thirty-four (34) people responded to the study.

The objective of the survey is to understand how analytics is structured within the organization and how analytics are used to benefit the organization. The survey was anonymous.

The first few questions are to understand the demographics of those who responded. Most responders (n=20) work for organizations larger than 1,000 employees.
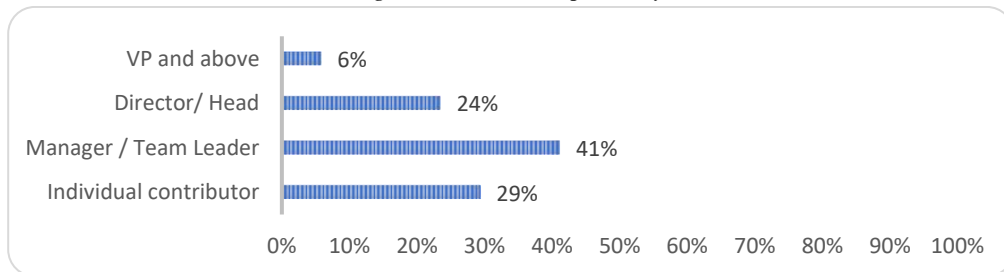
Figure no. 1 Participation by Sector

Sector	Percentage
Software / Technology	24%
Healthcare	18%
Consumer products/retail	12%
Banking	6%
Construction & Infrastructure	6%
Logistics / Supply Chain	6%
Professional Services	6%
Facilities Management / Workplace...	6%
Consulting	6%
Human resources	6%
Fintech	6%

Source: Author

The sample is representative of regular organization role fragmentation.

Figure no. 2 Participants by role.

Role	Percentage
VP and above	6%
Director/ Head	24%
Manager / Team Leader	41%
Individual contributor	29%

Source: Author

The second section of the survey identifies the analytics structure within the organization. Again, all the responders answered that they use analytics in their organization which is excellent news and is the expected outcome.

Almost half of the organizations (47%) have centralized analytics departments which speaks for higher analytics maturity. However, decentralized analytics areas are used in 41% of the organizations, which only allows the organization to benefit from the analytics. Most respondents use analytics (76%) vs. creating analytics (24%). Only 29% have Chief Analytics Officer.

The third section of the survey identifies the role of analytics in the organization.

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The question of the importance of analytics has five possible answers: Very Important, Important, Neutral, Not Important, or Not Important at all. For 59% of participants, analytics is Important; for 41%, it is Essential. People recognize that analytics plays a vital role in their organizations.

The answers to the question about satisfaction with the analytics within their organizations are in the middle part of the answering choices, which means that no one is Very Satisfied or Very Dissatisfied.

Figure no. 3 Satisfaction with Analytics.
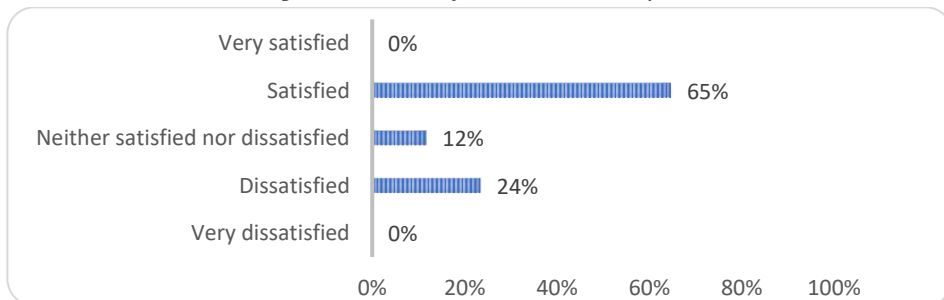
Net promoter Score will be used to evaluate satisfaction.

Net Promoter Score (NPS) is a metric used to measure customer loyalty and satisfaction. A single number represents how satisfied people are with a specific service and how likely they are to recommend a company, product, or service to their friends, family, or colleagues.

In our case, the result is 40.

An NPS of 40 indicates that the business or organization has more promoters than detractors, but there is still room for improvement.

Here are some clarifications for the ratings selected:

As a young organization (3 years), our data in terms of structure and availability is still evolving. As a result, we have many areas to improve and standardize across the org.

Processes are efficient for requesting and pulling data. However, challenges come when attempting to identify anomalies, trends, etc... Self-service analytics helps but requires continuous dashboard creation & updating.

The depth and breadth of data are extensive. However, timeliness and access to marketing data could be better.

Need more detailed reports

Many of our internal software packages are outdated

Bad communication

*There are still many opportunities where Advanced Analytics can be used.*

Not always available on demand

It is available upon request and accurate

It is evident that even those employees with some level of satisfaction still recognize opportunities to improve analytics processes and how recommendations are considered for better decision-making.

The participants indicated analytics' benefits for their organizations (multiple choice).

Figure no. 4 Analytics Benefits.
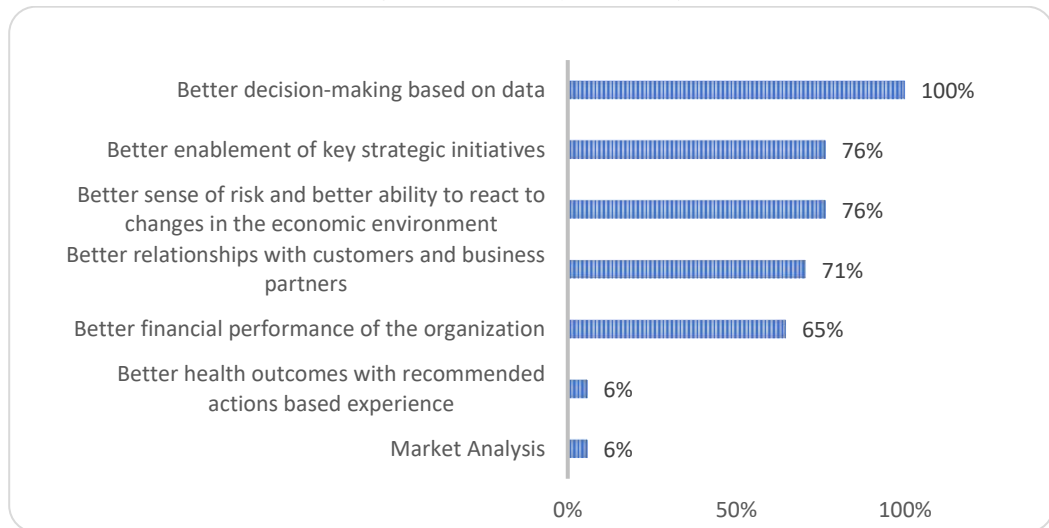
All participants pointed out that analytics supports better decision-making. Also, analytics help with risk management and strategic decisions and improve customer and business partner relations.

At the same time, the respondents identify the reasons that prevent greater analytics adoption. While it may sound strange that the main reason for analytics problems is selecting the right tool since 65% choose that answer, in reality, many employees think that the device is the problem rather than the implementation or the design of the reports and analytics itself. The second challenge is the "Implementation of the strategies from the data analytics exercises" (47%), which is typical for most organizations. Even if the organizations have average analytics maturity, the decisions are sometimes based on gut feelings or collective opinions, not actual analytics recommendations.

A high percentage of answers are regarding "Data privacy and security issues" (41%), which has become more critical lately due to data and security breaches and sharing important data with not the right people. The last two reasons, "Leadership doesn't understand it" and "Too expensive," have each 29% selection.

Figure no. 5 Challenges to analytics adoption.
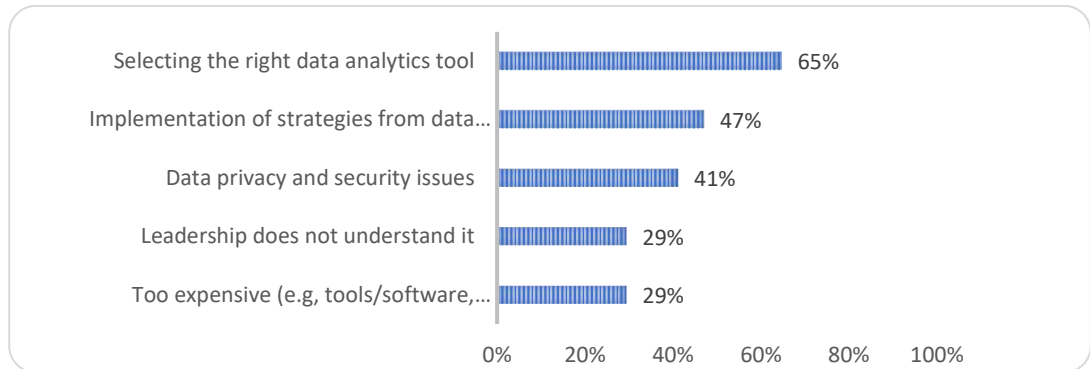
When asked, "Did data and analytics improve your organization?" 94% answered yes.

In addition, they have shared examples of how analytics did that.

Improves strategic initiatives implementation. We are moving to more centralized data warehouses, so the organization reads and reports from a single data source.

To invest more productively with historical performance to guide decisions. Health behavioral information enables the following logical actions to improve health outcomes and reduce claim costs.

More successful initiatives

It helps us make better, more strategic decisions for our clients

Better estimations, better risk analysis, more comparisons
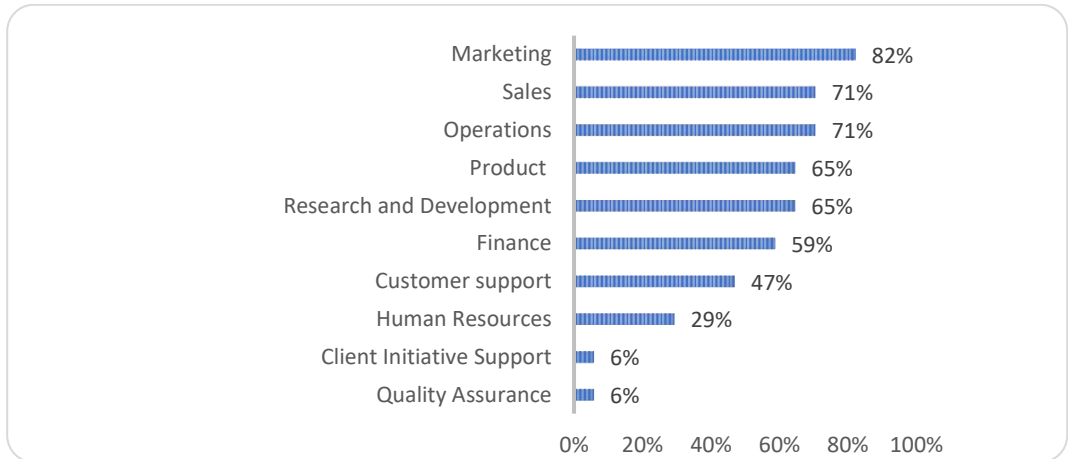
Better forecasting for supply/demand, meeting KPIs, measuring risk, monitoring manufacturing efficiencies and product release (pass/fail data)

It gives us a better understanding of all Financials manufacturers, consumers, and retailers allowing us to build better sales plans and Joint Business plans with retailer partners

The responses show that the Marketing department uses analytics the most, and there are a few reasons. The first is that marketing has the money for analytics. Second, much customer behavior information is collected and can be used to motivate future sales. Other

analytics departments include sales, Operations, Product, Research and Development, and finance.

*Figure no. 6 Analytics usage by department.*

Marketing — 82%
Sales — 71%
Operations — 71%
Product — 65%
Research and Development — 65%
Finance — 59%
Customer support — 47%
Human Resources — 29%
Client Initiative Support — 6%
Quality Assurance — 6%

Source: Author

The last section of the survey is related to the tools used by the organizations.

The results show that most organizations use essential reporting tools and spreadsheets, while only 12% have Reporting and Predictive tools and tools for analyzing unstructured data. They are shown in *Figure 7*.

Figure no. 7 Analytical tools used.

Basic reporting tools with limited predictive analytics tools — 35%
Reporting and predictive tools widely available — 29%
Spreadsheets and basic reporting tools — 24%
Reporting and predictive tools, plus tools for analyzing unstructured data — 12%
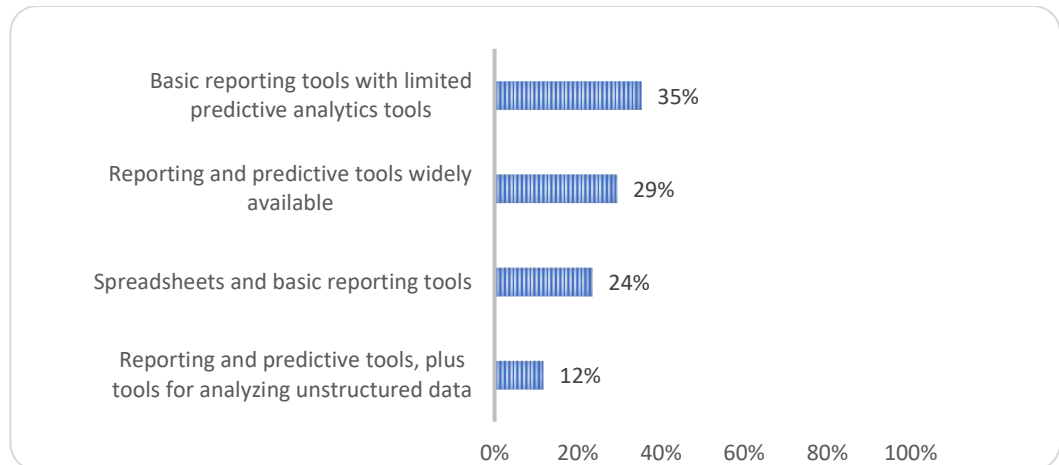
Source: Author

Conclusion

The survey results show that analytics is essential for both large and small organizations. 94% say that analytics has improved the work in the organizations. They see "better decision making," "more successful initiatives," and "better estimation and risk management." Analytics can be and is used at most organizational levels; while different information in a different manner is provided, the decision-making process is better when analytics is used.

Analytics are more developed in software/technology companies, but it has their place in other types of businesses.

Organizations with more mature data and analytics structures are centralized, which is valid for 46% of the participant organizations. Overall, a centralized analytics team can provide better consistency, collaboration, specialization, resource allocation, and governance in data analytics, leading to more effective use of data for decision-making in an organization.

Respondents are unsatisfied with how analytics are used in their organization, having an NPS of 40. However, even in places with analytics, there is an area for improvement. The reasons for dissatisfaction vary from software cost, management needing to understand the benefits, and data requiring better quality and readily available.

Overall, the future of analytics in the USA will likely be shaped by the increasing use of AI and ML technologies, the growing importance of data privacy and security, the demand for skilled professionals, greater integration with business strategy, and a focus on real-time analytics.

Since we are in 4th industrial revolution and as Dimitreska, Stankofska, and Efremova (2018) state, "variety of innovative producers and competitors will have easy access to digital platforms of marketing, sales, and distribution" only those with advanced on-time analytics will have the competitive advantage to succeed.

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