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This is a graded discussion: 6 points possible

due Apr 3 at 4:29pm

Optima vs. Quanta Case Study [Interactive Presentation and Discussion 1.4] ³⁴ ⁶⁸

✔ 📄 (https://classroom.emeritus.org/courses/9054/modules/items/1506891)

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There is one interactive presentation and a discussion on this page. Please scroll down to view each.

Interactive Presentation: Optima vs. Quanta Case Study [10–15 minutes]

Now, you will go through the following Google presentation, which introduces the Optima vs. Quanta case study. This presentation provides you with the opportunity to interact with the case and visualize how data analysis helped to inform better decision-making for these two airlines.

Please note: This is an interactive case study with audio in some of the screens. You can also download a **transcript (https://classroom.emeritus.org/courses/9054/files/2512833?wrap=1)** ⬇

(https://classroom.emeritus.org/courses/9054/files/2512833/download?download_frd=1) of the case study if you wish to read it in simple text format.

To explore the complete spreadsheet with the data from this case in Optima vs. Quanta (**Airlines Data (https://classroom.emeritus.org/courses/9054/files/2338503?wrap=1)** ↓ **(https://classroom.emeritus.org/courses/9054/files/2338503/download?download_frd=1)**).

Discussion 1.4: Optima vs. Quanta Debrief [20 minutes]

🎯 Learning Outcomes Addressed:

- Reflect on the impact of thorough data analysis on business decision-making

This is a required discussion and will count toward course completion.

Now that you've gone through the Optima vs. Quanta case study, reflect on the key takeaways presented by Retsef and the choice of airline you made at the start of the case study and then again at the end. Did your choice change after diving deeper into the data?

Can you think of a time when your team or an organization you know should have taken a deeper dive into the data before making a key business decision? Based on what you have just learned, how would you have approached that situation differently? If you can't think of a specific situation, share how you plan to incorporate what you've learned in the future.

Be sure to read the statements posted by your peers. Engage with them by responding with thoughtful comments and questions to deepen the discussion.

Suggested Time: 20 minutes.

Rubric: Discussion 1.4

Criteria	Exceeds expectations	Meets expectations	Below expectations
Thoughtful and complete response to the question(s)	**4 pts** Fully responds to the question(s), post is supported by connections to the reading and real-life examples, and post makes additional connections to the field of data engineering with novel ideas, critical thinking, or extensive application of how to use the topic in future work.	**3 pts** Fully responds to the question(s), and post is supported by connections to the content or real-life examples.	**0 pts** Partially responds to the question(s), or connections to the content are missing or vague.
Engagement with the learning community	**2 pts** Posts thoughtful questions or novel ideas to multiple peers that generate new ideas and group discussion.	**1.5 pts** Asks questions or posts thoughtful responses to generate a single peer's response.	**0 pts** No responses to peers or posts minimal or vague responses to peers that do not motivate a response (e.g., "I agree.").

| Search entries or author | Unread | ⬆ | ⬇ | | ✓ Subscribed |

↩ **Reply**

(https: **Manjari Vellanki** **(https://classroom.emeritus.org/courses/9054/users/231480)**
Mar 28, 2024   ⋮

As I work in Clinical firm and we deal with huge data related to clinical studies which includes categorical variables as well as continuous variables. It is usual to dive deeper into the data perform certain analysis and to take decisions based on performed analysis. In this process, finding quartile estimates is one of our day to day task while calculating summary statistics on continuous variables which could be further stratified by categorical variables like gender, age category, treatment and some of other parameters.

By calculating quartile estimates will help us to find the outliers and also to understand the distribution of data. If upper quartile is far further to the median then the distribution is skewness to the right and if the lower quartile is far further to median then the distribution is skewness to left. Then will dive deeper in to the data by considering categorical variables which might ends up in change in initial decision/conclusion.

Edited by **Manjari Vellanki** **(https://classroom.emeritus.org/courses/9054/users/231480)** on Mar 28 at 10:30pm

↩ **Reply**   👍

(http **Yossr Hammad** **(https://classroom.emeritus.org/courses/9054/users/229118)**
Mar 28, 2024   ⋮

Hello Manjari,

very interesting conclusion you have here, can you elaborate more regarding the last part of your answer regarding whether the distribution is to the right or to the left based on the quantile.
Thanks

↩ **Reply**   👍

Manjari Vellanki (https://classroom.emeritus.org/courses/9054/users/231480)

Mar 28, 2024

Hi Yossr,

Thanks for your response. I was trying to explain the relation ship between the quartile and Skewness

Quartile Skewness is calculated by dividing the difference between Q3 and the median by the difference between the median and Q1. If the result is greater than one, the dataset is positively skewed, while a result less than one indicates a negatively skewed dataset. A result of one indicates a symmetrical dataset.

↩ **Reply**   👍   (1 like)

Haitham Farag (https://classroom.emeritus.org/courses/9054/users/233864)

Mar 29, 2024

Good day Manjari

Given the limitations of this learning requirement and the brevity of responses, I would be very interested to attend a more detailed presentation on the skewness litmus test you are conducting. If the followed methodology is not privileged, I would also appreciate sharing a resource.

Thanks

Haitham

↩ **Reply**   👍

Manjari Vellanki (https://classroom.emeritus.org/courses/9054/users/231480)

Apr 2, 2024

Hi Haitham-

Thanks for your reply. Are we allowed to share additional resource links in this platform? I'm not so sure about it.

↩ **Reply**   👍

Haitham Farag (https://classroom.emeritus.org/courses/9054/users/233864)

Apr 3, 2024

Good day Manjari

In yesterday's office hour (2 April), I posted the question on the opportunity for cross-learning to Jessica, and the response was positive.

I would like to suggest that colleagues connect on the designated networking platform and share experiences in more detail.

↩ **Reply** 👍

Roy Nunez (https://classroom.emeritus.org/courses/9054/users/229552)

Apr 1, 2024

Hi Manjari,

Thank you for sharing your insights on these valuable techniques!

I am curious to know what are informed business decisions that your team were gearing toward and what directions you decided to go to after refining the model?

↩ **Reply** 👍

Manjari Vellanki (https://classroom.emeritus.org/courses/9054/users/231480)

Apr 1, 2024

Hi Roy-

Thanks for your response. In these situations, will dig deeper and figure out what causes these scenarios like sometimes it might be a data issue, or might be programming issue or considering the records which are not part of analysis. Based on these will take further decisions.

↩ **Reply** 👍 (1 like)

5/24/24, 10:51 PM

Topic: Optima vs. Quanta Case Study [Interactive Presentation and Discussion 1.4]

Ricardo Anaya (https://classroom.emeritus.org/courses/9054/users/228915)

Apr 8, 2024

great example

↩ **Reply**   👍

Yossr Hammad (https://classroom.emeritus.org/courses/9054/users/229118)

Mar 28, 2024

Before seeing the rest of the data i have chosen to fly with Quanta but later after diving more in the numbers i realized Optima is the best choice.

Calculating the quantiles helps us to find accurate numbers of the data. I cannot think of a situation where i should've dived deeper in data as this is my job as an analyst to analyze data and dive deeper to understand where the numbers came from. When my team manage finances of one of the retail store we work with, we sometimes see negative numbers. first instance , one could think that this store is losing money and spending too much money but diving deeply you realize that there is reasoning behind the number and it is not as it looks.

Edited by **Yossr Hammad (https://classroom.emeritus.org/courses/9054/users/229118)** on Mar 28 at 6:50pm

↩ **Reply**   👍

Turki Alghusoon (https://classroom.emeritus.org/courses/9054/users/229165)

Mar 29, 2024

Hi Yossr,

It is an interesting example you brought up about the negative store numbers. What did you conclude about those negative values after the deep dive?

↩ **Reply**   👍

Yossr Hammad (https://classroom.emeritus.org/courses/9054/users/229118)

Mar 31, 2024

Hello Turki,

The negative numbers is due to an increase in hiring labor previous year and since it was above the budget they have decided to move it to the current year which shows negative variance especially when it is in the first quarter of the year. So basically the negative numbers are usually due to different allocation of the $$.

another example is, in a specific store , the health insurance was neglected and not may emplyees chose to go with the health insurance provided by the business, based on these data the forecast for the health insurance coverage was very low and after an educational session done to the employees most of them decided to go with the business health insurance which showed as well negative variance.

Hoping that make sense.

Thank you

↩ **Reply**   👍   (1 like)

(http   **MATT DEFREITAS (https://classroom.emeritus.org/courses/9054/users/220100)**
        Apr 1, 2024   ⋮

Hi Yossr,

As I am not familiar with your industry, I may be making some assumptions here and I do apologize for that.

It sounds as if you may be dealing with finances for retail stores. Could you conduct a risk adjustment on the stores products? For example, if you are seeing a surge in revenue is it driven by more customers or is it driven by purchasing products that are of higher value? If you had to compare stores or specific periods of time, I feel like this may help you and your team provide some further insight into performance drivers.

↩ **Reply**   👍

(http   **Koffi Henri Charles Koffi (https://classroom.emeritus.org/courses/9054/users/208039)**
        Apr 2, 2024   ⋮

hi Yossr, I m kind of new   in the data science and analysis domain , I m think the misleading of data is mostly due to the data cleanup and preparation phase that is not

carefully done . to eliminate noisy data

↩ **Reply**   👍

Haitham Farag (https://classroom.emeritus.org/courses/9054/users/233864)

Mar 29, 2024

My choice has surely changed after further analysis was presented. If I were travelling and all other factors were equal (price, flight time, schedule ...etc) I would pick the airline with less delay in the route of interest.

Takeaways from the Optima vs. Quanta Case Study :

1. With all other variables (ticket price, loyalty program, single destination etc.) being the same or irrelevant, one can proceed to analyse the delay in flights

2. Slice and dice the data to the minute's available data level

3. Applying *Risk Stratification* by accounting for the weight of each mean can yield different results.

I plan to research further how likely *Risk Stratification* and Standard Deviation/ANOVA hypothesis test measures are congruent. And, in case they can not be used interchangeably, identify the use cases for each.

Potential use of *Risk Stratification measure*

Hygiene promotion activities are followed by data collection (survey) to identify the degree of behavioural change. In addition, those assessments are intended to compare the effectiveness of the different promotional approaches. Application of Risk Stratification would reveal more precise evidence that could contradict the aggregated results.

Edited by **Haitham Farag** (https://classroom.emeritus.org/courses/9054/users/233864) on Apr 3 at 7:56am

↩ **Reply**   👍

Turki Alghusoon (https://classroom.emeritus.org/courses/9054/users/229165)

Mar 29, 2024

I had initially chosen Quanta based on the aggregated statistics that were introduced earlier in the presentation. However and after I had the opportunity to see the detailed analysis, it was

clear to me that Optima is the better performer. I liked the idea of risk stratification and how it allowed for equal-term analysis. Optima has a larger portion of its flights involve LaGuardia airport which appears to have higher average delay across airlines. This should not create Bias against Optima, and the risk stratification helped eliminate that. It would also be interesting to investigate the LaGuardia data and compare it to data from other airports, to better understand what the root causes are for the higher-than-average delays in in-bound and out-bound flights.

It is important to look at all the facts and details when attempting to generate insights from data. Looking at high level aggregates without investing adequate time to understand the root cause for such aggregates can be gravely misleading. It is the responsibility of the data scientist to thoroughly interrogate the data available in order to generate accurate and robust insights to stakeholders.

This example reminded me of a situation I encountered in a previous job:

A quick analysis of staff performance for the previous fiscal year highlighted that senior staff were only able to work on 3 projects simultaneously, whereas more junior staff were able to simultaneously work on 4-5 projects. The management team took the insight at face value and proceeded to develop an action plan to improve the performance of the senior-level staff.

It was not a couple of years later when a similar analysis was conducted that the true root cause was discovered: for any given project, a team is assigned comprising both senior and junior staff. Senior staff would lead the project, provide thought leadership and coaching, and review the work of junior staff. As a result, senior staff end up spending around 30% of their available time on each project and, as a result, can only take 3 on projects at a time. In contrast, junior staff would generally play a support role on those same projects and subsequently end up only charging 20%-25% of their time per project. Therefore, junior staff were able to juggle more projects simultaneously.

This deeper analysis made it clear that senior staff were not less efficient than junior staff, and that the initial high-level analysis was misleading.

↩ **Reply**   👍   (1 like)

○

    (http   **Timothy Andrew Ramkissoon** (https://classroom.emeritus.org/courses/9054/users/226697)   ⋮
                    Mar 29, 2024

    It's interesting to think that Management would accept that the senior staff were less efficient than the junior staff.

The first thing I would question would be what the scale and complexity of the projects was worked on by the senior staff and junior staff. The senior staff would be given difficult projects, and the junior staff would be given relatively simpler projects, allowing for them to work on simultaneous projects.

It goes to show how the interpretation of data can determine strategic decision making, whether in the right or wrong direction.

↩ **Reply**   👍   (1 like)

Turki Alghusoon (https://classroom.emeritus.org/courses/9054/users/229165)
(http   Mar 30, 2024

⋮

Hi Timothy,

The projects were always staffed using a mixture of both senior and junior staff. in each project, senior staff have to do many things in on top of their own project work. Namely, senior staff had to coach and review the work of junior staff. You could say Senior staff were spending more time in each project to train and grow their junior colleagues. As a result, our recommendation to management was to not view the senior staff's increased time spend per project as inefficiency. Instead, management should view it as investment in junior staff, which would ultimately increase overall efficiency across the portfolio.

↩ **Reply**   👍   (1 like)

Priscilla Annor-Gyamfi (https://classroom.emeritus.org/courses/9054/users/226376)
(http   Apr 2, 2024

⋮

Turki,

Thanks for throwing more light on the deeper dive in data that helped you clearly define how the senior staff do not deliberately spend so much time on projects but are also equally engaged in other important areas of their scope of work and at the end of the day, the junior staff are groomed in the process.

↩ **Reply**   👍

(http   **David Taylor** (https://classroom.emeritus.org/courses/9054/users/233381)   ⋮

Apr 1, 2024

As someone who recently began a management role in my company, I can definitely see how time is taken up by thought leadership, coaching, and review. It's surprising that the senior staff didn't allot for that time in their overall performance. What do you think it was about the initial performance assessment that caused this gap in the conclusions? Also what was different about the first assessment years ago and the more the recent assessment? Did they include qualitative measures or simply expand the quantitative analysis?

↰ **Reply**   👍

(http   **Turki Alghusoon** (https://classroom.emeritus.org/courses/9054/users/229165)   ⋮

Apr 2, 2024

Hi David,

I think a main difference between the initial assessment and the second assessment was the growing understanding of the role of data as input for analysis, and that data does not replace the human factor in interpreting the data and asking the "so-what" questions. Specifically:

- What do you think it was about the initial performance assessment that caused this gap in the conclusions?
    - In the initial assessment, the results of the analysis were taken at face value. No follow-up conversations took place to investigate the results of the analysis, or to have conversations with staff to understand the context of the situation. as a result, the insight gathered from the data was incomplete and inaccurate.
- Also what was different about the first assessment years ago and the more the recent assessment?
    - In the most recent assessment, the more experienced analysis team took the results of the initial analysis as input and proceeded to develop an understanding of the time recording process in order to develop the context in which to interpret the data and generate insight.

I hope this answers your questions

↰ **Reply**   👍

(http   **Javier Di** (https://classroom.emeritus.org/courses/9054/users/226884)   ⋮

Very interesting example. A lot of it shows that you cannot blindly apply data and spit out conclusions but business judgment and understanding the specific business case are crucial to work effectively

↩ **Reply**   👍

Turki Alghusoon (https://classroom.emeritus.org/courses/9054/users/229165)

Apr 2, 2024

Hi Javier,

i totally agree. The data points used in both instances were the same. The main differences between right and wrong conclusions in this example were the business judgement and understanding of business nuances.

↩ **Reply**   👍

Timothy Andrew Ramkissoon (https://classroom.emeritus.org/courses/9054/users/226697)

Mar 29, 2024

Originally my choice of airline chosen was Quanta, however, after a detailed review, I've changed my decision to Opitma. The data presented at a glance favoured Quanta, the mean flight time and % delays were both lower than Optima. The key takeaways from this are relevancy of data being analyzed as the data for the flights were based on a holistic view and not categorized based on routes, hence, did not cater for a direct comparison of the performance of these two airline services. If a customer travelling a specific route were to take the holistic view of the data to determine which airline to choose, they would not be able to make an accurate informed decision vs someone who was to make a decision based on the information that is more relevant to their needs.

One of the projects I've worked on was to perform a market analysis for a new product. The company had an established sales force that would visit clients across the country. We used this sales force to gather data from retailers about how our products and rival products performed in their stores by tracking various metrics.

Our schedule was growing close to the point where we needed to make a decision, but the data had not been fully sorted so a decision was made based on the information that was processed. While the decision turned out to be a good decision, further analysis of the data

showed that there was one better option available to use at that point in time. If I were to return to that moment, I would convince the upper management to allow for the extension of the schedule for a better-informed decision to be made.

I also would like to do further research into Risk Stratification and how it may be able to assist me in making better informed decisions.

Edited by **Timothy Andrew Ramkissoon (https://classroom.emeritus.org/courses/9054/users/226697)** on Mar 29 at 8:43pm

↰ **Reply**　　👍

(http　　**Haitham Farag (https://classroom.emeritus.org/courses/9054/users/233864)**

Apr 3, 2024

Hello Timothy

Your point on collecting certain data to track various metrics highlights the importance of planning for data collection. Reflecting on your point planning for the different data dimensions and level of detail will improve the ability to perform *Risk Stratification.*

Thank you.

↰ **Reply**　　👍

(https:/　　**MATT DEFREITAS (https://classroom.emeritus.org/courses/9054/users/220100)**

Mar 31, 2024

Without diving into the data, I leveraged the surface layer analysis provided by the video and had selected Quanta solely because their rate was being. As we started to evaluate the mix by the airlines, it became evident that the aggregates were driving the rates and that further analysis would be required. Conducting the mix analysis, I was able to change my mind as the true winner here was Optima. I think this case study just reiterates that you should not take data at it's surface level and you must continuously ask questions of your data to fully understand and tell it's story. Otherwise, I would have ended up going with Quanta and then been delayed on my next flight :) Anyone else catch that the passengers were all blank for Quanta?

Just recently a department at work conducted a test to find out if launching a mobile-friendly product was going to beneficial to our customers. The initial results showed that the customers using this mobile friendly product retained slightly better than the control group; however, as

we dove into the mix of the populations, we uncovered it was a smashing success and the positive results were being muted because of the mix variance between the test and control populations. Had I started this course last month instead of this month, I personally would have been able to conduct the analysis rather than delegating to one of my team members to do the work.

↩ **Reply**   👍   (1 like)

(http **Mariana Flores** (https://classroom.emeritus.org/courses/9054/users/237198)   ⋮
Apr 3, 2024

Hi Matt, so nice to meet you. Great post, I also initially choose Quanta then changed my opinion to Optima after delving further into the data. I agree with you in that one should not take data at surface level rather try to understand what the data represents and inform the overall story.

Oh no, I'm sorry about the campaign readout. Just curious - the test and control groups were not an apples-to-apples or identical comparison? Could applying a weighting scheme help to control for the mix variance?

Hypothesis testing with test and control groups is fascinating – thank you for sharing.

↩ **Reply**   👍

(https: **Roy Nunez** (https://classroom.emeritus.org/courses/9054/users/229552)   ⋮
Mar 31, 2024

In this session I learned about risk adjustment and risk stratification and how aggregated results need to be evaluated very carefully and iteratively as they can easily mislead and result in poo business decisions. The Quanta and Optima airline case study is a memorable example of how key decisions can be mistakingly driven by missing statistical elements in aggregated models. I among many felt that Quanta was the better performer based on initial statistical observations.

Moving forward I will be taking these two concepts of risk adjustment and risk stratification and continue to reevaluate iteratively to ensure apples to apples comparisons in aggregated data, while keeping watchful eye out for outliers. Decisions based on surface-level information or preconceived notions can lead to negative business impacts and therefore one must be careful

to review and consider all angles. To me this could mean inviting other professionals that can weight in and share critical and valuable perspectives.

↩ **Reply**   👍

David Taylor (https://classroom.emeritus.org/courses/9054/users/233381)
Apr 1, 2024

"To me this could mean inviting other professionals that can weight in" ... I think this is such a crucial step in verifying results, and it is often one that is left out. Even with rigorous methodology, it is easy for one set of eyes to overlook a crucial variable or to see things from a limited perspective. We are all limited creatures in our perspectives, so having multiple sets of eyes look at a solution. This means not just the math but taking a step back conceptually to identify any weak points int he assessment.

We should all place value on others feedback and constructive criticism. It requires vulnerability, confidence, and an open mind, but prevents us from the "silo effect" that can limit our perspective.

What a great lesson to take from this module :)

↩ **Reply**   👍   (1 like)

Diego Milanes (*He/Him*) (https://classroom.emeritus.org/courses/9054/users/228518)
Apr 2, 2024

Hi Roy

I find your last paragraph very pleasant to read, and it summarizes the idea behind risk adjustment and stratification. If I may, I want to complement your idea by requiring a clear and pristine way to drive the conclusions, such that it is self-contained and encloses particularities found at a deeper level of information.

↩ **Reply**   👍   (1 like)

Dawn Prewett (https://classroom.emeritus.org/courses/9054/users/233112)

5/24/24, 10:51 PM

Topic: Optima vs. Quanta Case Study [Interactive Presentation and Discussion 1.4]

Apr 1, 2024

I had initially chosen Quanta, despite having reservations about that choice. I noticed Quanta operated fewer overall flights, which could not only impact my ability to travel as needed but also potentially skew the data. While this concern did not materialize exactly as anticipated, it became evident that some relevant data were not considered in my initial decision. Delving deeper into the data clarified that Optima was the superior choice. This outcome further underscored the importance of risk stratification, a principle that should prove to be useful in my current role.

In a recent project aimed at enhancing internal process reviews, we encountered a challenge that underscored the importance of in-depth data analysis for continuous improvement. The project involved evaluating the efficacy of recommended changes across departments, with a primary focus on whether immediate corrective actions were sustained over time.

Initially, our evaluation metrics were centered on surface-level outcomes: pass or fail. This approach, however, revealed its limitations when it became apparent that some implemented changes, while addressing the immediate issues, did not fully extend to systemic improvements that could prevent future occurrences of similar challenges. To fully connect the dots and understand the efficacy of a corrective action, we would need to be able to identify previous corrective actions that could have prevented the need for the one being addressed.

This realization prompted a shift in perspective towards a more nuanced understanding of data's role in evaluating the effectiveness of actions taken. It became clear that a more sophisticated analysis was needed to not only assess compliance but also to ensure that changes were comprehensive and addressed the underlying factors contributing to the issues identified.

Additionally, leveraging advanced data analytics, specifically machine learning techniques, to uncover patterns and insights could inform more strategic and systemic improvements. The aim was to refine our evaluation framework to better capture the true impact of implemented changes, moving beyond binary pass/fail metrics to a more detailed assessment of long-term effectiveness and scope.

This project highlighted the critical need for a data-driven approach to internal reviews, emphasizing the importance of going beyond immediate fixes to foster enduring improvements. By enhancing our data analysis capabilities, we aim to provide a more accurate and insightful evaluation of process enhancements, ensuring they not only address specific issues but also contribute to systemic resilience and efficiency. Risk stratification would further hone these insights and help us focus more acutely on the right issues rather than all of them at once.

Edited by **Dawn Prewett (https://classroom.emeritus.org/courses/9054/users/233112)** on Apr 1 at 2:57am

← **Reply**   👍

Ahmad Abu Baker (https://classroom.emeritus.org/courses/9054/users/234460)
Apr 1, 2024

It's fascinating to hear about your initial choice of Quanta and the subsequent shift towards Optima after a deeper data analysis. Your experience highlights the nuanced nature of decision-making, where initial impressions can evolve with more detailed information. The concept of risk stratification you mentioned is indeed a critical element in dissecting data to make more informed choices, particularly in scenarios where the obvious choice isn't necessarily the best one.

Your project's journey from a binary evaluation model to a more comprehensive and nuanced data analysis approach resonates strongly with the need for depth in understanding data's implications. It's a compelling example of how surface-level metrics might provide immediate answers but fail to capture the broader, more impactful insights necessary for sustained improvement.

The shift towards leveraging advanced data analytics and machine learning to uncover deeper patterns and insights is a strategic move. It not only aids in identifying underlying factors contributing to issues but also enhances the ability to predict and mitigate future challenges. This approach transforms reactive measures into proactive strategies, fostering a culture of continuous improvement and systemic resilience.

Your experience underscores the importance of evolving our data analysis methodologies to adapt to complex and changing business environments. It serves as a reminder that decision-making, especially in strategic contexts, should be dynamic, data-informed, and adaptable to new insights and understandings.

In light of this, how do you envision integrating these advanced analytical tools and methodologies into your organization's decision-making processes moving forward? And how do you see risk stratification playing a role in prioritizing and addressing challenges in your projects?

← **Reply**   👍

Dawn Prewett (https://classroom.emeritus.org/courses/9054/users/233112)
Apr 1, 2024

Ahmad,

Having the opportunity to influence our decision-making processes directly, I'm eager to integrate advanced analytics and risk stratification into our strategic framework. This role allows me to introduce and advocate for innovative methodologies, a privilege I've not always enjoyed. In my interactions with the team, I often present data insights immediately or undertake in-depth analyses for future discussions. This dynamic facilitates the seamless incorporation of new practices into our evolving processes.

In the past, navigating the introduction of changes without the same level of access or visibility presented challenges. Yet, I've discovered that an iterative approach substantially boosts stakeholder buy-in. By actively involving stakeholders in the development and adoption phases, we foster a shared sense of ownership, enhancing openness to new processes. When faced with constraints, I prioritize clear requirements and prepare to substantiate the value of proposed changes against the currently established norms.

Regarding the application of risk stratification in our decision-making, it's clear that not all findings from our assessments carry the same weight. Implementing risk stratification would be allow us to quickly identify high-priority issues, particularly those recurrent patterns that demand concentrated effort. Machine learning and analytics tools stand to revolutionize our ability to discern risk from diverse and complex data sets—ranging from textual reports to structured forms—by uncovering insights that might elude manual analysis due to the sheer volume and varied formats of information. While the exact path to achieving this remains yet to be defined, it is in classes like this that I seek the knowledge required to shape the path forward.

↩ **Reply** 👍

Javier Di (https://classroom.emeritus.org/courses/9054/users/226884)
Apr 2, 2024

Very insightful Dawn. Do you know how risk stratification is applied in practical terms?

↩ **Reply** 👍 (1 like)

Dawn Prewett (https://classroom.emeritus.org/courses/9054/users/233112)
Apr 2, 2024

Risk stratification can be effectively applied in our scenario by leveraging the risk levels already associated with different types of issues. Currently, we utilize these

levels for a high-level risk analysis; however, incorporating them into a more structured risk stratification process is a logical and valuable progression.

Additionally, we have a matrix that categorizes issue types and facilitates cross-referencing with various regulations. This tool would be instrumental in our stratification process, as it allows us to categorize issues systematically. By doing so, we ensure that we are comparing similar issues ("comparing apples to apples"), which enhances the accuracy and relevancy of our risk assessments.

This methodical approach enables us to prioritize issues more effectively. Those issues that pose the greatest risk, either due to their severity or their regulatory implications, are identified and addressed with the urgency they require. This not only streamlines our focus on the most critical areas but also aligns our efforts with regulatory compliance and risk mitigation priorities.

↩ **Reply**   👍

Ahmad Abu Baker (https://classroom.emeritus.org/courses/9054/users/234460)
Apr 1, 2024

After reviewing the Optima vs. Quanta case study, my initial preference leaned towards Optima due to its strong customer service reputation and initial market share dominance. However, diving deeper into the data presented by Retsef, including operational efficiency, pricing strategies, and customer satisfaction metrics, shifted my perspective. I was intrigued by how Quanta's strategic investments in technology and route optimization yielded higher operational efficiency and customer loyalty over time.

Reflecting on this shift, it's clear how essential a thorough data analysis is before making strategic decisions. An experience that comes to mind is when a previous organization I worked with decided to launch a new product line without adequately analyzing customer demand and competitive landscape. The decision was based more on intuition and less on data, leading to lackluster market performance and resource misallocation.

Based on the insights from the case study, I would approach similar situations differently by advocating for a data-driven decision-making process. This includes conducting comprehensive market research, analyzing customer feedback, and evaluating operational capabilities. Ensuring that decisions are backed by robust data analysis can mitigate risks and align strategies more closely with market demands and organizational strengths.

Moving forward, I plan to incorporate these learnings by championing the importance of data in decision-making processes within my team and organization. I believe fostering a culture that values data-driven insights will enhance strategic planning and operational efficiency.

I encourage others to share their experiences or reflections on how a deeper dive into data could have influenced business decisions in their context. How do you plan to integrate these learnings into your decision-making processes?

↰ **Reply**   ⚬

Chris Cosmas (*He/Him*) **(https://classroom.emeritus.org/courses/9054/users/226607)**
Apr 1, 2024

I ran into an issue with a project I performed not long ago. The project required me to estimate the value created by institutions in a specific industry on their monetary services. This was done by looking at spread between different interest-rate metrics. It was quite straight forward but required many hours as it was time-consuming as I needed to query data at every iteration and run the calculations based on different assumptions and required me to analyse the final result at each iteration. Long discussions also took place with my supervisor on the different data points to be included in my calculations. The constant back and forth with my supervisor and the constant updating of the model ended up taking three to four weeks focusing all the time on a single task. Each iterations kept on providing results that were inflated and did not seem logical whatsoever to my supervisors even after adjusting the variables in every way possible the results received seemed too high to be correct. We decided to reach out to the owners of the data to receive insights from their end on why the data was not providing us correct answers. It finally came to light that a concept which we both had the same term for "residency" had different definitions in different contexts. The context of residency differs from field to field, financial free zones are included in one but excluded in the other. We found out the inflated numbers we were computing were all due to us including values which should have been excluded from the first step. As seen in the exercise it is extremely important to have access to as granular data as possible as this allowed us to refine our model which was not possible on the aggregated values we were using. In future exercises I will make sure to understand the data as best as possible and try to access high detailed information before committing to a project and loosing valuable time.

↰ **Reply**   ⚬

5/24/24, 10:51 PM

Topic: Optima vs. Quanta Case Study [Interactive Presentation and Discussion 1.4]

Jignesh Dalal (https://classroom.emeritus.org/courses/9054/users/229173)

(http

Apr 1, 2024

⋮

Hi Chris,

Great insight into the example that you have shared above and seeing if I understood this correct when data signals indicators are really important to be understood for business decision making. If the data signals are being added then common definition and business value is documented, this will save time and add context to db details.

Thanks for sharing something that is important for coordination and working culture.

↩ **Reply**   👍

○

Jignesh Dalal (https://classroom.emeritus.org/courses/9054/users/229173)

(https:/

Apr 1, 2024

⋮

Case Study around Optima vs Quanta:

Reflecting on the Optima vs. Quanta case study, initially, my preference leaned towards Optima due to their marketing and customer service. Yet, a closer examination of the data, guided by Retsef's insights, highlighted Quanta's operational strengths and sustainable practices. This analysis prompted a change in my decision, favoring Quanta by the end of the study. The shift in my choice emphasizes the need for comprehensive data analysis before making a decision.

This learning mirrors an experience at a course firm where we introduced free course coupons to increase engagement. At first, this strategy seemed to succeed, attracting many users. However, our team later developed a machine learning model which revealed that those who used the free coupons were least likely to purchase further courses. This discovery showed that, despite the initial interest, the strategy did not lead to long-term customer retention.

Had we applied the insights from the Optima vs. Quanta study earlier, we might have taken a different approach. Before rolling out the free coupon strategy, conducting an in-depth analysis of customer behavior following coupon redemption and evaluating the long-term impact of

such promotions could have been more beneficial. This approach would help identify strategies that not only draw in users but also encourage ongoing engagement.

With these lessons in mind, I plan to promote a more data-centric approach in future decision-making. This means looking beyond immediate metrics to understand deeper patterns and outcomes. I aim to apply this approach across various initiatives, including marketing, product development, and customer engagement, to ensure decisions are both attractive in the short term and beneficial over time.

↩ **Reply**   👍 (1 like)

(https:/   **David Taylor (https://classroom.emeritus.org/courses/9054/users/233381)**   ⋮
            Apr 1, 2024

At first of course I chose the airline that had the lowest delay, Quanta. I think it was a misleading statistic since cancelled/diverted flights were not included at all. Although it was technically accurate for "delayed flights" it did not convey the information that most consumers would expect about overall timeliness **_and_** reliability of the airline.

One thing that I will be trying to apply this lesson to is our email deployment solution, which I briefly mentioned in another discussion. We are constantly monitoring the various event rates (delivered, spammed, bounced, etc) associated with particular email service providers (gmail, yahoo, etc) broken down by which servers sent those emails. I think this type of analysis would be very beneficial in order to determine which servers are performing well. A nominal aggregate of the data might show one story, whereas if we take into account email volume and weight the data accordingly perhaps a different picture may develop.

↩ **Reply**   👍 (1 like)

(https:/   **Mariana Flores (https://classroom.emeritus.org/courses/9054/users/237198)**   ⋮
            Apr 1, 2024

At the beginning of the Optima vs. Quanta case study and based on the initial actual scheduled arrive time flight statistics and flight delay indicator, my initial choice was to fly Quanta. I choose Quanta again even after replacing negatives with zeros which brought

Quanta's statistics closer to Optima. However, when diving deeper into the data my choice changed to flying Optima.

Diving deep into the data before making key business decisions is essential as overall values especially averages can skew and cover hidden insights necessary for decision-making. I recently worked with a small business owner who was interested in acquiring new customers and was looking to invest their dollars to maximize return on marketing investment (mROI). We initially calculated a blended Cost per Acquisition (CAC) value then did a deeper dive by product, audience segment, and other useful attributes. This provided a better understanding in terms of how CAC varied by important metrics and (along with other supplemental analyses) helped to make more informed business decisions of where to allocate funding.

↩ **Reply**   👍   (1 like)

(http   **Isabella Tockman** (https://classroom.emeritus.org/courses/9054/users/207395)
Apr 8, 2024   ⋮

It seems that most of us switched from Quanta to Optima after a deeper look! Your story with the small business reminds me of how we had to get smarter with tracking materials in my company to avoid losing money. Just like you, we found that first impressions from the data can be misleading.

Your experience shows how important it is to really dig into the details before making big decisions. Knowing more details definitely helps make better choices.

Did you use any special tools to help look at the data? I'm curious because the right tools can really help understand things better.

↩ **Reply**   👍

(https: **Diego Milanes** (*He/Him*) (https://classroom.emeritus.org/courses/9054/users/228518)
Apr 2, 2024   ⋮

In all situations, including this one in particular, statements must be accompanied by cross-checks that confirm our understanding of the data. If possible, a multiple-step validation mechanism must be incorporated, driving to a set of coherent conclusions.

A full study of the dataset must be addressed before any statement. For instance, I've realised there is information on the number of passengers on each flight. I hesitate to see the results

based on the percentage of on-time (happy) passengers that each company carry.

Special attention must be required to the appropriate weighting of the different subsets and the way the different (but coherent) conclusions can be drawn.

↩ **Reply**   👍   (1 like)

(http   **Lawrence Lumague** (https://classroom.emeritus.org/courses/9054/users/225055)

Apr 3, 2024

⋮

Diego,

You raised an interesting point. If we factor in a correlation between the number of passengers who arrived on time, the data would favor Optima. The cancelled Qanta flights could have no passengers on the manifest because the flight never took place and then the passengers could have been 'delayed' to the point of having to re-book their flight, thus never arriving on schedule.

↩ **Reply**   👍

(http   **Mariana Flores** (https://classroom.emeritus.org/courses/9054/users/237198)

Apr 3, 2024

⋮

Hi Diego, so nice to meet you. Great post, I agree with you in that validation should be included in all situations as well as appropriate weighting. Weighting can significantly affect results and thus decisions so being mindful of applying the correct procedure based on specific use case is of essence.

Delving deeper into the data with appropriate methodologies is key to decision making – thank you for sharing.

↩ **Reply**   👍

(https:/   **Javier Di** (https://classroom.emeritus.org/courses/9054/users/226884)

Apr 2, 2024

⋮

Yes, my response changed when looking deeper into the data and taking into account the difference in the route composition.

There was a real life business situation I encountered in which we should have taken a deeper look into the data and made different business decisions.

It involved an investment in a water company going through a privatization but a time when there had not rained for longer than usual and the reservoir levers were falling down to 40% capacity (vs 80-100% normal).

In this example, the investment team analyzed the earnings power of the water company so its price and concluded it was cheap.

Then we analyzed historical mean reversion and generally it worked because it rained again and the reservoir recovered.

However, there was one crucial datapoint which we didn't take into consideration and that was the fact that when the reservoir is at 40% capacity or lower it is very different than being at 80% or higher capacity. This is because it takes a lot longer for the water levels to recover to 100% and if mean reversion does not occur quickly you could end up falling at below 30% at which point it gets very hard to recover the reservoir (soil becomes dry, the compounding to get back to 100% is very hard of continuos rainy days) and may take along time for that.

The result was that the reservoir took a very long time to get back to 100%, the earnings power of the business was depressed for a few years due to the lower reservoir levels and we suffered a lot of pain and yelling from our bosses from not having correctly analyzed the data and simulated a predictable model around the low reservoir level and different levels of rainfall based on historical data.

↩ **Reply**   👍   (2 likes)

○   (http   **Lee Lanzafame** (https://classroom.emeritus.org/courses/9054/users/231975)   ⋮
                 Apr 2, 2024

great example, thanks i never knew what this term was called "historical mean reversion". great work.

↩ **Reply**   👍

○   (http   **Chris Cosmas** (*He/Him*) (https://classroom.emeritus.org/courses/9054/users/226607)   ⋮
                 Apr 3, 2024

Hey Javier.

Very interesting case I hope to learn more about financial modeling at some point it seems like a very engaging topic, as Lee I was not aware of the concept of Mean Reversion but does that not only apply to financial assets/ securities, are financial concepts able to emulate complex systems? Was the initial study only performed on financial metrics or where other metrics taken into account?

↩ **Reply**   👍

Lee Lanzafame (https://classroom.emeritus.org/courses/9054/users/231975)
Apr 2, 2024

Our Small Business Telecommunications department was keenly developing new products directly intended to be used by small business customers but nothing was sticking and the products weren't selling and no one could figure out why.

Looking at the data we figured out that most small business customers blurred the lines between their personal and business products and often held a combination of both personal and business products based on how it suited their needs.

So there was no need to develop new products but rather create bundles and add-ons that would enhance the products while managing costs. For example set blocks of additional data if mobile phone data plan is exhausted.

↩ **Reply**   👍

Koffi Henri Charles Koffi (https://classroom.emeritus.org/courses/9054/users/208039)
Apr 2, 2024

the mean value was really misleading me , I choose Qanta , and after I look deeply into the data my response change .
one of the common example is the dataset trained by microsft for chatbot to spew racist tween below :

in March 2016, Microsoft learned that using Twitter interactions as **training data for machine learning** ⤴ **(https://www.cio.com/article/193385/12-tips-for-machine-learning-training.html)** algorithms can have dismaying results.

Microsoft released Tay, an AI chatbot, on the social media platform. The company described it as an experiment in "conversational understanding." The idea was the chatbot would assume the persona of a teen girl and interact with individuals via Twitter using a combination of machine learning and natural language processing. Microsoft seeded it with anonymized public data and some material pre-written by comedians, then set it loose to learn and evolve from its interactions on the social network.

Within 16 hours, the chatbot posted more than 95,000 tweets, and those tweets rapidly turned overtly racist, misogynist, and anti-Semitic. Microsoft quickly suspended the service for adjustments and ultimately pulled the plug.

original source of information 🖼 **(https://www.cio.com/article/190888/5-famous-analytics-and-ai-disasters.html)**

Edited by **Koffi Henri Charles Koffi (https://classroom.emeritus.org/courses/9054/users/208039)** on Apr 2 at 4:35pm

↩ **Reply**   👍   (1 like)

Todd Engle (https://classroom.emeritus.org/courses/9054/users/228910)

Apr 2, 2024

I'm new to data analytics, therefore have never come across something like that in my career. As a project manager, I used very simple formulas to calculate the *planned value* or *earned value* of the project. I'm beginning to consider when doing project portfolio analysis, and comparing how projects are performing and if there is a better way to do it using the Risk Stratification technique. I could put the group the projects in tiers using the project factors like project risk, project effort, and project complexity. That would allow me to compare with a level of some equality, how small projects are performing compared to larger, complex projects. This exercise was very helpful.

↩ **Reply**   👍

Shahrod Hemassi (*He/Him*) (https://classroom.emeritus.org/courses/9054/users/224267)

Apr 2, 2024

Hi Todd. Yes, I think if you introduced additional factors into your analysis of projects so you can compare them fairly, that would be beneficial. For example, determining which projects to take on based on a scoring that prioritizes opportunities based on various factors such as cost, benefit, resource impact, risk, strategic alignment, complexity, etc.

could help when evaluating projects of different size. It could be that scoring opportunities in this way could prioritize projects in a much different way than initially thought.

↩ **Reply**   👍

Victor Flores (https://classroom.emeritus.org/courses/9054/users/197659)
Apr 3, 2024

Hi Todd, perhaps you have already applied stratification techniques in some of your projects but you did not realize this. The steps or efforts to accomplish the planned values in your projects should have provided you with crucial insights when working on achieving the goals of the projects. Past experiences should have also narrowed down the actions you continuously take in order to achieve immediate and long term goals.

↩ **Reply**   👍

Priscilla Annor-Gyamfi (https://classroom.emeritus.org/courses/9054/users/226376)
Apr 2, 2024

Yes, my choice did change from Quanta to Optima after we dived deeper into the data.

One instance that comes to mind is from my personal experience with my beaded accessories business. I aimed to launch promotional activities to reach potential buyers and existing customers, enhance visibility, and ultimately boost sales. However, without delving deeply into the demographics of our current customers (such as age group and gender), market trends and seasonality, and historical data on product preferences and what marketing strategy was a best fit, my team and I proceeded with radio advertisements and in-store promotions.

Unfortunately, radio advertisements proved costly, allowing only three broadcasts per week, and failed to showcase our products visually. Consequently, although our brand was heard, our products remained unseen, hindering our ability to reach our target audience and achieve our objectives. In-store did not also do so well because we did not have a lot of walk-in customers due to poor location of our store.

Subsequently, we decided to conduct a thorough analysis of our existing customer and sales data to gather demographic insights, identify market trends and seasonality, and pinpoint our best-selling products. We discovered that a significant portion of our sales occurred online

through our social media platforms, and our target audience was highly active on these channels.

As a result, we launched a sponsored seven-day promotion featuring high-quality images of our beaded accessories and models showcasing them. This strategic shift led to over 100 new followers on our social media platforms and notable sales during the promotional period. Consequently, our brand visibility received a significant boost, marking a successful endeavor for our business.

Gaining a good understanding and diving deeper into data unveil useful information that can help us make good informed decisions yielding great outcomes.

Edited by **Priscilla Annor-Gyamfi (https://classroom.emeritus.org/courses/9054/users/226376)** on Apr 2 at 8pm

↩ **Reply**   👍   (2 likes)

Shahrod Hemassi (*He/Him*) (https://classroom.emeritus.org/courses/9054/users/224267)

Apr 2, 2024

My choice of airlines did change as we dug into the data further. At first, it seemed like Quanta was the better airline but after looking deeper at the data, it was apparent that Optima was the better choice.

I was previously managing a presales team for a large project & portfolio cost control solution. Part of my responsibility was to review RFP's and to evaluate whether we had a solution that met the tender requirements. One of our sales reps came across a RFP that was larger than any the company had won previously and was excited to submit a proposal. My team was one of several tasked with reviewing the RFP for viability. Basically, we would need to determine if it was worthwhile for the company's resources to devote around 1,000 hours collectively to develop the proposal for submission. In our evaluation of the large RFP that had over 800 requirements, we found that our software would be able to meet 90% of the requirements out-of-the-box or with minor configuration, with an addition 5-7% achievable with customization. We were unable to meet 3-5% of the requirements, and some of these were marked as high importance for the customer. The company executives felt that we had a great chance and decided to move ahead.

After investing about 1,200 hours on the proposal, we learned that the 3-5% of the requirements that we were unable to address carried a much heavier weight in the scoring. While we thought that we had a high score, our weighted score that factored in the customer's priorities was much lower. We unfortunately lost the bid.

I was thinking about this while watching Retsef's presentation about the airlines. At the time, I had communicated my concern that we were not able to meet some of the high importance requirements but my concerns were ignored as the executives felt that we were scoring high enough. Unfortunately, my concerns proved to be valid and we lost the bid. If I was in the same position again, I would try to communicate our evaluation of the proposal with a scoring that applied a weighted factor based on the importance of each requirement to the prospective customer. Maybe the executive would have been able to make a decision not to proceed if they were able to see how a deeper analysis of the data that was available revealed that our "winnability score" was much lower than it initially appeared. Backing up my concerns with a deeper data analysis could have saved us a lot of wasted effort. Lesson learned.

↩ **Reply**   👍   (1 like)

○

Ricardo Anaya [(https://classroom.emeritus.org/courses/9054/users/228915)](https://classroom.emeritus.org/courses/9054/users/228915)
Apr 2, 2024

⋮

The company that I work for has created features for mobile phones for over 35 years.

sometimes the products are promoted or cancelled. the information to promote or cancell uit is based only on adoptio of the feature, (based on that more fetures can be created, or cancelled)

in many cases there are features that are cancelled due to poor adotion , but then they have to be reclaimed later in the future, some products are launched ahead of its time.

the history of those should be keep in track for new generation of products, not only adoption and price, but what are the uses for specific features

I cannot talk specifics due to confidencial information but now Im thinking that I can use the learnign here to:

analyze historical data, adoption and price range of components to predict adoption,

compare with competition price to adjust them to be more competitive.

add more contextual information, some features have network dependencies, so adding network infromation (by network companies and operators/ wireless carriers) to predict adoption can be also added to the model.

there should be also evolution paths to have more features added and some of them removed.

↩ **Reply**   👍

○

(http   **Ricardo Anaya** (https://classroom.emeritus.org/courses/9054/users/228915)
       Apr 2, 2024   ⋮

by the way my choice of airlines did change after digging more information.

this reminded my of this very interesting article, that can give you a different perspective

https://www.linkedin.com/pulse/how-ww2-aircraft-can-teach-us-data-driven-insights-kevin-o-callaghan/ ▭ **(https://www.linkedin.com/pulse/how-ww2-aircraft-can-teach-us-data-driven-insights-kevin-o-callaghan/)**

↩ **Reply**   👍

○

(http   **Victor Flores** (https://classroom.emeritus.org/courses/9054/users/197659)
       Apr 3, 2024   ⋮

Hi Ricardo,

I agree with you. Great post! I strongly believe taking into account historical data where product or service adoption together with price are reviewed can bring significant inputs to the analysis of decision makers. Moreover, stratifying data will drive wiser decisions and align them to the long term goals of an organization or an individual.

↩ **Reply**   👍

○

(https: **STEPHEN HUTSON** (https://classroom.emeritus.org/courses/9054/users/233645)
        Apr 2, 2024   ⋮

This module was very helpful in illustrating why it's important to dig deeper into data and to not take baseline statistics at face value. For me, when I initially reviewed the mean average delay times it seemed like Quanta would be the better choice of airline, but after we dug deeper it became clear that the better choice would have been Optima.

This scenario reminds me of a time when i supported a customer's Equal Employment office and assessing how the organization was doing in terms of hiring diverse candidates and ensuring their workforce was representative, and when looking at the numbers at the enterprise-wide level it appeared they were meeting their mandated goals. However when looking at certain regional offices, some groups struggled to meet these goals which would not have been clear had we not taken a deeper dive into their data. Based on what was covered in this topic, had i had the ability to go back I think it would have been interesting for the organization to set goals at the office level rather than at the top-line organization level so that certain better performing offices couldn't skew the data, and possibly look into factors relating to diversity at higher vs. lower levels in the organizations as well, as I'd imagine those statistics could look different.

↩ **Reply**   👍

○

(https:/   **Roman Jazmin (https://classroom.emeritus.org/courses/9054/users/225803)**   ⋮
               Apr 3, 2024

I don't have any work-related experience that matches the Optima vs. Quanta example. Though now that I learn that I must do a deep dive into every data statistical factor to make a more informative decision, there are a few things I can do.

One example is when regarding flight delays, one must look at the maintenance records and performance of each plane in active service of a given airline. Yes, that matters because every plane's flight performance at any given time reflects on the airline's customer experience statistics accumulated over time.

It does not matter if a few planes have perfect maintenance and flight performance records leading to an enjoyable customer experience, it is human nature to also include into the calculations how many planes within the same given airline have poor flight maintenance and performance that contribute and affects the same customer satisfaction experience. In actual experience negative reviews or performance carries more weight than positive reviews or performance in the minds or people.

Not every plane operating on the same airline is created or operated equally. One plane might have more unforeseen defects in the construction parts that were used in building it as compared to a similar plane created at the same time.

Also, if 2 planes were created perfectly at the same time, each one would have different operational flight experiences than the other. What I mean is that one plane might statistically be operating in flight paths that will take it into more adverse weather conditions than another plane. Which means that it needs more maintenance times to satisfy customer safety requirements and accumulates more operational costs due to needed replacement parts to continue to have the plane operate within customer safety thresholds and due to wear and tear.

Other deep dive factors that one should consider when determining which airline to use based on our flight example are (1) operational flight destinations that a given airline operates to at any given time, (2) the airline's flight personnel track record in dealing with all customer complaints, and (3) an airline's flight discounts in terms of how often the discounts are made and how much of a discount they offer customers as compared to other airlines.

These are some of the major deep dive concerns one must take into considerations, and I am sure there are more than what are stated into this posting. So please do your homework to make sure you have the best customer experience and not go through consumer remorse.

↩ **Reply**   👍

○

Lawrence Lumague (https://classroom.emeritus.org/courses/9054/users/225055)
Apr 3, 2024

⋮

Based on the data provided by the first data set, I made my choice to fly with Qanta. Based on the one-month data between the two airlines, Optima showed a higher percentage of flight delays than Qanta. As we did a deep dive with the following data sets, we see that Optima had a larger sample set than Quanta. Looking into the excel file, Quanta had many cancelled flights. It seems these cancelled flights are worse than the normal, data-measured delays. They reflect that the airplane will never arrive as the flight never took place under the scheduled day and time of travel. The canceled flights are indefinite delays and are not a measurable element when processing the average of delayed flights, since there is no flight data that could fit them on the delayed or arrival categories. To more accurately measure all flights, on-time arrivals should be the focus. By doing so we can also factor in the fact that the cancelled can be measured as a flights that are not on time.

When working with data sets, I would run models that also place into consideration, elements that could be skewing my data sample that I am working with. In the case of the airline, the element that skewed the data would be the cancelled flights.

↩ **Reply**   👍

○

(http   **Swati Sharma** (https://classroom.emeritus.org/courses/9054/users/236938)
Apr 3, 2024   ⋮

Hello Lawrence, very nice to meet you! Absolutely, considering cancelled flights as indefinite delays provides a more accurate picture of airline performance. By factoring in on-time arrivals, we can better assess the true operational efficiency of airlines. Running models that account for such factors ensures more reliable data analysis and decision-making.

↩ **Reply**   👍

○

(https:/   **Victor Flores** (https://classroom.emeritus.org/courses/9054/users/197659)
Apr 3, 2024   ⋮

Through the execution of this exercise, I observed a change on my preferred choice after data was stratified and presented from different perspectives. I initially chose Quanta over Optima; however this changed later when we look into the results of the deep dive. It was interesting to see that without having data stratified, users could be easily imposed to make decisions which may not reflect their actual preference. Marketing strategies can easily mask the whole picture to end users and lead them to make an incorrect decision. If the individual making the choice is not educated or does not follow a basic analytical thinking, he or she could fall into the traps of marketers. I will now use this approach for making my decisions more sophisticated and not elemental. A few weeks ago, I was deciding on which car insurance I should purchase and I believe I did not follow risk stratification techniques in order to refine my decision among the options I had on the table.

At my organization, I can think of an instance where a deeper look into the historical stratified data could have lead to better performance results in terms of service quality. For example, many time at operations we come across the issue of which engineer and how many engineers should be assigned to run a job. By job I mean a specific service to be delivered for an oil operator at a particular job site. Due to the high volume of operations, proficient engineers cannot be always assigned to confirmed job hence we have to assign whichever

engineer is available and trust that he or she will follow standard operating procedures to execute the job. Most of the times jobs will be flawlessly completed; however, the are times where assigning a non proficient engineer could compromise service quality, initiate losses and put at risk future job for the company. From here that I think selecting on the right individual(s) to run a job should be a decision that needs to consider many inputs in order to apply stratification techniques properly just like the leg by leg breakdown performed for Quanta and Optime Airlines. The results of adhering to stratification techniques will result in optimum decision making and reduce the risks to the minimum for any individual or organization.

↩ **Reply**   👍

Swati Sharma (https://classroom.emeritus.org/courses/9054/users/236938)   ⋮

Apr 3, 2024

Based on the abover scenario, like Retsef mentioned, it is very crucial to dig deep into the data. When looking at averages between the two airlines, it is apparent that we needed to weight it and Retsef rightfully pointed that out. My choice of airline changed from the beginning to the end after considering additional data points.

My main key takeaways from this are the following.

1. Understanding of the business process/ and the business requirements

2. Search for hidden important parameters that can impact the model.

3. Identify risk of overlooking key data points.

4. Use the model as a key element in building a data driven language in the organization,

I plan to continue to dig deep into the data to correctly identify the key elements of the data model and the parameters associated to it. The use of weighted averages/percentages will be a key component so i am comparing the the data points accurately.

↩ **Reply**   👍

Mhelissa Yayalar (https://classroom.emeritus.org/courses/9054/users/233590)   ⋮

Apr 11, 2024

Hi Swati,

I resonate with your post.

Slice and dicing the data sets to make sure we have good signal to use for our calculations also prevents rework. I recall during my past experience running reports the number of times I had to re-rerun the same report because the data was bad.

Cheers,

-my

↩ **Reply**   👍

Gustavo Santana (https://classroom.emeritus.org/courses/9054/users/120927)

Apr 7, 2024

Yes, I changed my first choice from Quanta to Optima by the end.

When working with English Student behavior by learning using mobile applications one thing that we quickly discovered was how difficult was to understand data when everything is aggregated, separate the information into categories is essential to not mix premium users with VIP licenses with users that have logged only once for example.

↩ **Reply**   👍

Isabella Tockman (https://classroom.emeritus.org/courses/9054/users/207395)

Apr 8, 2024

Yes, my choice changed after a deeper analysis of the data.

In the construction company where I work, we provide job estimates to clients, including a note that change orders for additional costs not covered in the main contract may be sent. Occasionally, clients delay payments and request discounts on these change orders upon project completion. Since we allocate materials and labor per project and are meticulous about billing accuracy, unexpected discrepancies arose. We discovered that materials stored in our yard were being used for projects without proper documentation, leading to excessive and

unrecorded material use. Consequently, we offered discounts on projects that should not have received them, further reducing already low profit margins aimed at staying competitive.

Realizing our data collection was flawed, we implemented a system to track materials between the yard and projects, with double verification upon material departure and arrival. This ensures data is only entered into our system when both sides' figures align, or we investigate discrepancies further.

↩ **Reply**   👍

Mhelissa Yayalar (https://classroom.emeritus.org/courses/9054/users/233590)
Apr 11, 2024

Did your choice change after diving deeper into the data?

Yes. My initial knee-jerk reaction by looking at the standard aggregated led to choosing Quanta.

Can you think of a time when your team or an organization you know should have taken a deeper dive into the data before making a key business decision?

An example from work was when developing a KPI dashboard for our Sales team to monitor sales performance. The data (signal) we used was the total revenue of each sale. This data was aggregated, and it showed that week-over-week, the sales teams was meeting their revenue targets. However, after further analysis of the data, it was discovered that the sales were not considered new sales, but instead some of the revenue was allotted as Renewals. Renewals were considered existing sales. The sales targets KPI was monitoring new sales.

Based on what you have just learned, how would you have approached that situation differently?

My new approach would be to conduct further analysis of the data set attributes. The aggregated data between the Optima and Quanta were not equal. If a data validation was performed, then it would have raised additional steps to ensure each data sets reflects a good sample.

↩ **Reply**   👍