

SAYED AMINI

Assignment 05: Data Reflection Exercise

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Introduction

In this assignment, I am researching a problem from my job. I work in a company that makes eye surgery systems. A few years ago, we had many orders from all over the world. But this year, our sales dropped a lot. Now, my company is thinking about moving part of production to another country to save money. My goal is to find what data can help us understand why sales are down and if moving the factory is a good idea.

	Difficult to Access	Readily Accessible
Critical / Important	<ul style="list-style-type: none">• Real reasons why surgeons are unhappy• Competitors' secret plans• Internal quality problems	<ul style="list-style-type: none">• Monthly sales reports• Competitor prices• Currency exchange rates
Probably Not Needed	<ul style="list-style-type: none">• Private chats between employees	<ul style="list-style-type: none">• Weather at customer clinics• Capacity of the company parking lot

Data Item	Importance (A/B/C)	Accessibility (1-4)	Why it's important	Why it's accessible (or not)
Monthly sales reports	A	4	To see exactly when and where orders started to drop.	These are internal records from our system.
Competitor prices	A	4	To check if our machines are now too expensive.	Prices are usually on their websites.
Production cost in USA	A	3	To compare our current cost with moving away.	Internal finance data; needs permission.
Estimated production cost abroad	A	3	To see if moving is actually cheaper.	Needs research and quotes from vendors.
Surgeons' real opinions	A	2	Maybe they think our quality is not good anymore.	Need to collect this through surveys.
Why top employees left	A	2	If we lose our best people, quality might drop.	Requires private interviews.
Currency exchange rates	A	4	Changes in money value make our machines expensive.	Publicly available on finance websites.
Import/Export taxes (Tariffs)	A	4	New taxes policies can make it hard to trade with some countries.	Public government trade information.
Technical complaint records	A	4	To see if customers report more bugs or failures.	Internal database in customer support.
Delivery time for customers	A	4	If it takes too long to get a machine, they buy from others.	Internal logistics tracking.

Private competitor strategy	A	1	Knowing their secret plans would help a lot.	Impossible to get legally.
Internal quality control	A	3	check if some offices don't care about high quality.	Internal audits and customer feedback.
Global eye surgery volume	B	4	Make sure if the whole market is smaller now.	Public medical health reports.
Google Trends ("Eye Surgery")	B	4	Shows if people are searching for this technology less.	Publicly available through Google.
Shipping and logistics costs	B	3	Moving products across the world costs more now.	Need to get quotes from shipping companies.
Competitor's new products	B	4	To check if they have better technology than us.	Public records on their websites.
Government health budgets	B	4	If governments have less money, hospitals buy less.	Public government budget records.
Global inflation rates	B	4	High inflation and economic problems, reduces the money power of customers.	Public economic websites.
Employee happiness surveys	B	3	Unhappy employees might make more mistakes.	Internal HR data.
Social media mentions	C	4	General talk online usually doesn't explain why sales drop.	Publicly available on social media.
Weather at customer clinics	C	4	Weather doesn't stop a hospital from buying systems.	Publicly available.

CLOSING REFLECTION

This exercise taught me to think like a data analyst. I learned that the data universe is huge, but I must choose only the most important parts.

I realized that some of the best data is not in a computer, but in people's heads and their idea like why a doctor likes a competitor or why some employees quit.

This information, showed me that while some data is easy to find, the most valuable information is often hard to get. Now, I can focus on the right data for my project and avoid wasting time on some useless data like weather, some chatting between employees or parking space.