

# Scenario Analysis - volume changes

CASE STUDY: SUPPLY CHAIN ANALYTICS IN POWER BI



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# Deep Thoughts from a Wise Soul

Everyone has a plan until they get punched in the mouth. -Mike Tyson

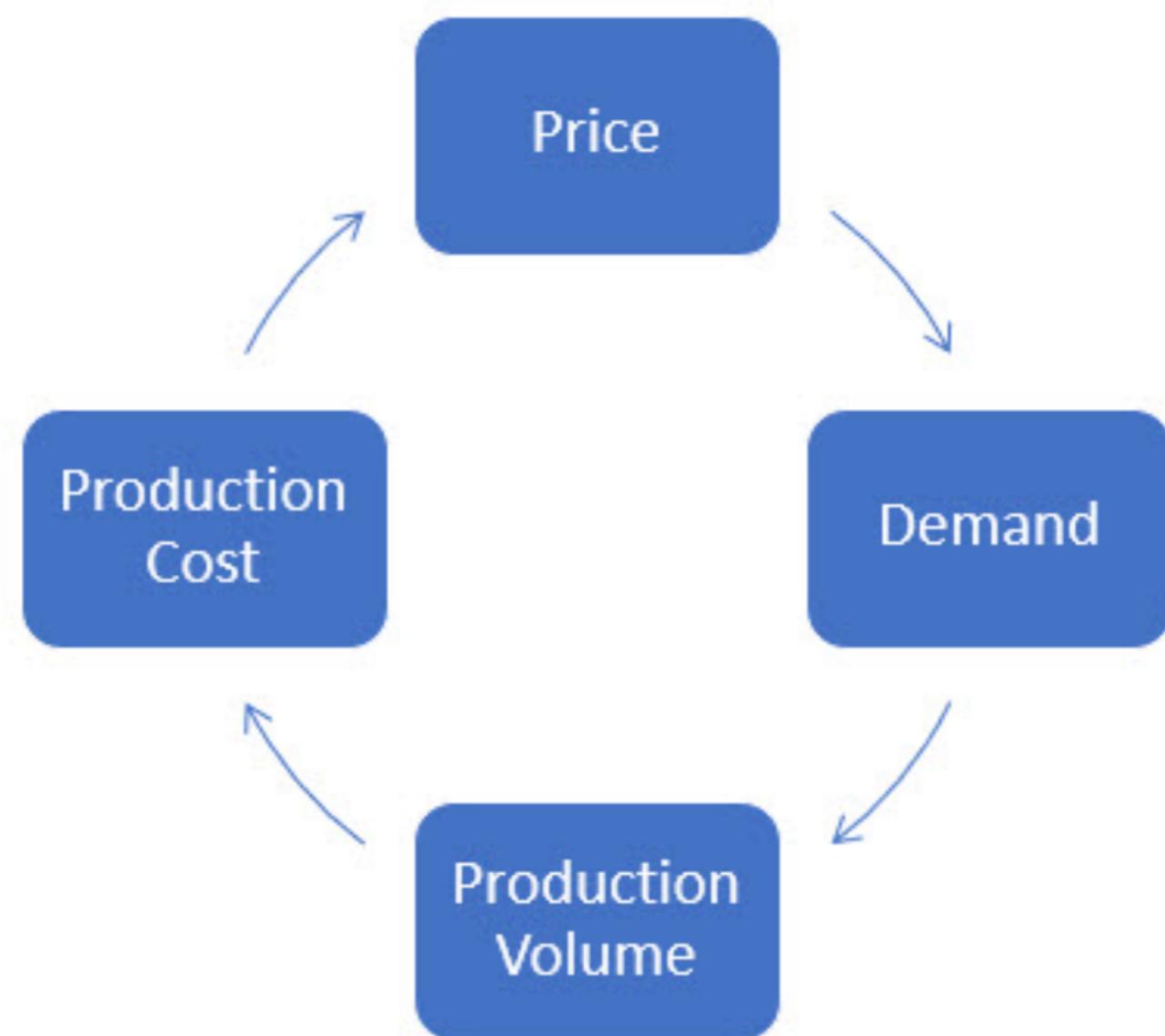


# Sources of uncertainty



- Projects start with assumptions
- Analysis tools should adjust to this uncertainty
- Sources of uncertainty:
  - Demand
  - Product-market fit
  - External economic conditions
  - Price

# Dependent Relationships



# Why not just ask for more quote data?



Quote preparation and ingestion takes:

- Time
- Resources

# Building a dynamic scenario analysis tool

Column name	Description
Part_Number	An ID of the Part Number Quoted
Supplier	Name of the supplier that submitted the quote
Volume	<b>Minimum production volume for the quoted price</b>
Unit_Cost	Quoted cost per unit
Non_recurring_expenses	One time expenses required for the production volume

- A scenario volume parameter makes the report dynamic.
- Parameters adds a user-controlled slicer to the report.

# Full Cost Measure

Supplier	Part_Number	Volume	Unit_Cost	Non_recurring_expenses
Supplier_XYZ	Part_A	1000	\$12.90	\$2000
Supplier_XYZ	Part_A	5000	\$9.78	\$3000
Supplier_MNO	Part_A	1000	\$5.90	\$6000

- Full cost measure must use volume parameter
- Full cost measure will return the lowest full cost from all eligible combinations of:
  - Supplier
  - Part
  - Volume
- Perfect use case for an iterative function

# Using an iterative function

`MINX(<table>, <expression>)` returns the minimum value of an expression computed for each row of the table you pass it.

## Function to use

Full Cost (Measure) = `MINX(<table>, < expression>)`

## Measure structure

Full Cost (Measure) = `MINX(FILTER(<table>,<filter>), <Full Cost formula>)`

# **Let's practice!**

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