Seven Leading KPIs for Inventory Analysis (Part One)

“Everything should be made as simple as possible, but not one bit simpler.”

-Albert Einstein

While most people do remember the first part of this saying, I would like to reflect on the second. Life is inherently complicated, and business life is no exception. While I do believe that the secret of BI team’s success is in its focus on simplicity and ease of use, not every business need can be met with a lightweight, simple solution. Simplicity should never be confused with a pass to stay ignorant. In BI developer’s mind, business intelligence does not have to be hard, cumbersome, and expensive, yet the BI team must be prepared to develop complex BI solutions when needed.

In other words, the BI team must select the mean between simplicity and sophistication. I can already convert the last sentence to a multiple-choice decision: does it need to find the arithmetic mean, harmonic mean or simply the median As you see, a BI developer is constantly making choices, and those choices determine the business direction of the organization.

The four main parts of any BI development include:

Business Case: Which describes the subject of analysis, identifies the business pain points and the metrics to be analyzed.

Data Modeling: A theoretical exercise that describes how the source data needs to be organized for an effective analysis.

Data Load Scripting: The practical implementation of data modeling exercise, and ultimately determines the load time of dashboards, which by itself is a KPI for comparing dashboards.

Building Visualizations: The process of building visual layout of analytical application and creating insightful visualizations, based on the requirements that were laid out in the business case.

While there is a lot of online discussions these days on data modeling, data load scripting and building visualization, I would like to share some ideas on business case design.

Inventory and demise of Qcommerce Startups

There are many retail businesses who appear floating on the surface, but their bad (or complete absence of) inventory analysis had killed their business long ago. To the untrained eye, these businesses might have appeared to be alive and well – but they had died a long time ago by unsustainable business models and poor inventory analysis. It just takes one calamitous event to fatally compromise their ability to remain a going concern.

Across the world, analysts are predicting a massive global recession in coming months. While I abstain from predicting anything about the financial markets, I would like to point out the demise and decline of qcommerce (quick commerce) startups, which is often blamed on recession; although there is consensus impact cannot precede the cause.

While most qcommerce startups focused heavily on customer experience index and sales analysis, it is my hypothesis the biggest pain point for retail commerce is inventory analysis, be it quick commerce or ecommerce etc. Even for legacy retailers like Walmart, inventory is still 15% above optimal levels, according to CFO David Rainey.

The biggest challenge in inventory analysis is the varying and competing context from various stakeholders of the business. Let's discuss how different people in a qcommerce startup look at inventory.

For the owner of the business, it is a headache that must be managed to service the customer. His pain point is that inventory will take up all the cash needed to invest properly in the business.

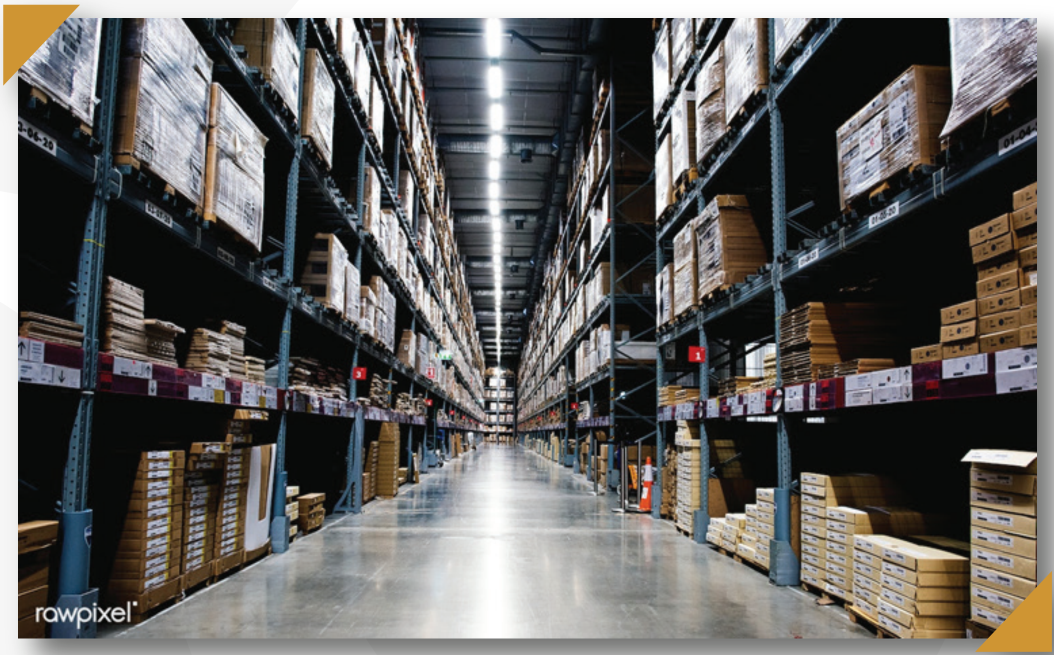
For the investors in the company and CFO, inventory is a drain on cashflow that is necessary to serve customers. Their pain point is: can the inventory be converted into enough cash to pay bills, salaries and still make money?

For VP Sales, inventory is required to serve the customers. The pain point is that there will not be enough of what the customer wants when the orders arrive.

For Chief Operating Officer, inventory is something required to meet production and shipping schedules. The pain point is that COO will be blamed if there is not the right amount on hand at any point in time.

For employees who must handle inventory, inventory is something necessary to service customers. The pain point is finding the right product in short amount of time.

Finally, inventory is always tagged as an asset in the financial statements, no matter for how much time it has been sitting idle in the warehouse and how much cost it incurs in terms of real estate and maintenance.



In simple terms, inventory is something needed to attract and retain customers. Paying customers keep the business running and the paychecks coming. However, a more detailed analysis reveals that excessive inventory is the number one killer of retail businesses.

The mix and amount of inventory you have on hand at any time is a significant worry regardless of your perspective. In addition to what is on hand, the flow (timing) of inventory is also a significant worry. Both mix/amount and flow affect the value of inventory. There is a need for inventory items to replenish on a regular basis and flow relatively uninterrupted or the value of the inventory is diminished. Inventory is the lifeblood of a business. If it does not replenish and flow properly, you will have significant business health problems. Having too much or too little inventory can be equally detrimental.

Having inventory means you must pay for, protect, and handle it. That investment takes cash. When you have more inventory than you need, it requires using cash that could be used for investments in other parts of the business. The cost (cash) of excess inventory does not earn any return on your investment because there is no revenue or earnings on inventory when it remains unsold. Inventory that does not sell is in fact a liability, not an asset. On the other hand, not having enough inventory results in lost revenue and is equally as bad as too much inventory.

Now that we have a basic understanding of how different teams and contributors have a different take on inventory, we next discuss what are the leading KPIs for inventory analysis in our next articles. Stay tuned.

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