

ECONOMICS OF QUALITY

The practical approach on doing the right thing and growing business

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Introduction

No business can survive long term without quality.

Most business leaders are aware of this fact, but some still view quality only as a necessary evil. Some may view quality as nothing but paperwork. We want to move away from this negative approach to quality and, instead, fit quality into the economic model of your business.

Quality of products and services is a fundamental requirement to sustain a business. But just blindly using all known quality tools won't guarantee a successful outcome. A smart deployment of quality tools brings amazing benefits to business. Our approach starts with defining the strategic position by choosing the level of quality that drives the proper set of tools. Then follow up with the positive KPIs (key performance indicators) to build the cadence of improvement.

Four Levels of Quality

A business's quality behavior could be categorized into one of four quality levels (figure below). We can assist a business with a self-reflection exercise to determine if it is performing at the level that represents their brand or mission. The result from this self-reflection can be used to set the strategic direction.



There is no right or wrong level. A business may also move between levels based on circumstances, and different parts of a business may operate at different levels. A higher quality level would require using more proactive and predictive quality tools. It would also increase the focus on customer services and require different sets of creative talents.

The premium brands in each sector are typically at the highest quality level. For example, Tiffany, Nike, and Lexus. They are the examples of having the power of prestige pricing which drives higher margin. The premium brand paradigm is just one example of how quality level is a critical factor of the economic model for your business and will continue to be relevant in the following discussion.

Positive Key Performance Indicator (KPI)

KPIs need be selected once the strategic direction is set. A KPI is used to describe whether the areas or processes are moving in a rate that meets the need. There are cases that multiple KPIs can be selected to measure the same thing and it is critical to select KPIs that encourage positive thinking. A positive metric will drive positive behavior.

To use inventory as an example, businesses want to keep it lower to avoid tying up working capital. However, operations can also lose flexibility with restricted inventory. Instead measuring with inventory turns can be more positive. In this case, the size of inventory doesn't matter. Such a metric would drive more attention toward managing high value or critical items to flow faster and drive up inventory turn. Such a positive metric would prioritize resource management naturally.

We suggest businesses to start with RoA (Return on Asset) as the foundation for the positive KPI approach. Instead of seeing RoA as a simple "Return/Asset", we turn it into a positive metric by driving **up** the margin and/or driving **up** turns to **improve** RoA.

$$\begin{aligned} \text{RoA} &= \frac{\text{Return}}{\text{Asset}} \\ &= \frac{\text{Return}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Asset}} \\ &= \text{Margin} \times \text{Asset turns} \end{aligned}$$

Margin and Asset turns are strongly correlated with quality level and operation efficiency respectively.

Businesses can drive up margin by driving up the quality level. Such a focus translates into an overall positive attitude for the workforce versus just cost reduction.

An efficient operation always has a good asset turn. It is as powerful, and often easier, to drive up RoA than margin. To achieve a higher asset turn, a business needs to become more predictable which means less downtime, scrap, and other wastes. That also means a high-quality process is also a predictable process.

Drilling down to execution level, we can assist businesses to identify the critical contributors of the margin and asset turns with a data driven discipline. Individual KPIs of these contributors will be developed and used to allocate the valuable resources. Furthermore, this concept fits perfectly with the Plan-Do-Check-Act cycle to ratchet up the RoA performance. Our know-how and proven record enable us to coach businesses through this journey.

Conclusion

The concepts of "Four Levels of Quality" and "Positive KPI" are the foundation of the economics of quality. In a nutshell, quality shall generate tangible business benefits beyond just "it is the right thing to do". We realize the journey can be challenging and confusing. At KCBC, we know we can make the challenging journey become an enjoyable one with the right use of data and provide coaching for the talents in your business. KCBC wants to be your partner of choice to realize the economic benefits of quality soon.



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About the Author

After a successful career of over 20 years in corporate America, Kaiwen Cheng switched his focus to share what he has learned to benefit others with his start up, KC Business Consulting, LLC.

Kaiwen has working knowledge in multiple industries span from trash can, equipment accessories, round baler, walk behind mover, AWD axle, to highly complex tier IV engine. He has experiences in both OEM factory and as tier I automotive supplier. His teams typically managing 100 – 180 suppliers. Combining his hands-on experiences as shop floor engineers up to functional leaders in a \$2B business. Kaiwen has the ability assessing processes and operations from multiple perspectives.

As a business leader, Kaiwen has multiple successful turn-around performance especially in quality. His practical approach of tying quality with business performance has played the key role in getting buy-in with effective executions. Examples of his success stories include record break warranty performance for the most complicated tier V engine. His recent successes include leading a supplier quality team to deliver a 60% reduction on external complaints within 20 months.

Kaiwen has a master's degree in industrial engineering from University Missouri – Columbia. He also holds a bachelor's degree in physics and with MBA education. He is also a certified Six Sigma Black Belt.