

Criteria For Assessing Product Competitiveness: A Comparative Analysis Of Quality, Price, And Value Approaches

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Abstract: Product competitiveness is commonly discussed through three major lenses: quality superiority, price advantage, and customer value creation. In practice, firms often rely on one dominant lens, which can distort decision-making when markets are volatile, consumer expectations are heterogeneous, and competition is increasingly shaped by service ecosystems and brand trust. This article offers a comparative analysis of quality-, price-, and value-based approaches to assessing product competitiveness and proposes a coherent evaluative framework suitable for managerial diagnostics and academic research. Using a conceptual-analytical method supported by an illustrative index-building procedure, the study clarifies the philosophical and economic assumptions embedded in each approach, identifies their measurement logics, and explains typical sources of bias. The results show that quality metrics tend to capture product integrity and compliance but may overlook perceived benefits; price metrics capture market entry and cost discipline but may misrepresent competitiveness when total cost of ownership and risk are ignored; value metrics best reflect consumer choice mechanisms yet require careful operationalization to avoid subjectivity. The discussion argues that a robust competitiveness assessment should be multi-dimensional and context-sensitive, combining objective quality evidence, relative price positioning, and value indicators tied to willingness-to-pay and experience outcomes. The article concludes with implications for product strategy, standardization, and further research on digital markets where value is increasingly co-produced through platforms and services.

Keywords: Product competitiveness, quality assessment, price competitiveness, customer value, perceived quality, total cost of ownership, competitiveness index, multi-criteria evaluation, marketing metrics.

Introduction: Competitiveness at the product level is a central category for modern economics and management because it links firm performance to consumer choice and market structure. While competitiveness can be defined at multiple levels, including national and sectoral dimensions, product competitiveness remains the most operational level for practical decisions about design, pricing, distribution, and promotion. In highly competitive environments, firms require reliable criteria for assessing whether a product can win and sustain demand against alternatives. Yet the concept is frequently reduced to simplified proxies such as "high quality" or "low price," even though consumer decisions are shaped by multi-dimensional trade-offs, including usability, risk, brand trust, after-sales support, and switching costs.

Three dominant approaches are widely used in the literature and managerial practice. The quality approach evaluates competitiveness through conformity to requirements and superiority of technical and consumer properties. The price approach measures competitiveness through relative price advantage, cost efficiency, and affordability. The value approach interprets competitiveness through customer value, meaning the perceived balance of benefits and sacrifices, often linked to willingness-to-pay. Each approach carries its own assumptions about what markets reward and how consumers behave. Quality-based reasoning assumes that higher performance and reliability generate preference and loyalty. Price-based reasoning assumes that lower price or lower total cost is decisive, especially under income

constraints. Value-based reasoning assumes that competitiveness is determined by the perceived net value, where benefits can justify higher prices if meaningfully experienced and communicated.

Globalization, digitalization, and intensified product differentiation complicate the assessment of competitiveness. First, product quality is no longer only an engineering property but also a service property influenced by software updates, platform compatibility, and customer support. Second, price has become dynamic and algorithmic in many markets, while true consumer cost includes time, attention, data privacy risks, and subscription lock-in. Third, value is increasingly co-created through ecosystems, user communities, and brand narratives. Under these conditions, relying on a single approach can generate strategic mistakes. A premium-quality strategy can fail if consumers do not perceive or trust the difference, while a low-price strategy can fail if customers consider ownership risk and maintenance burdens. Similarly, value-based positioning can fail if value is defined vaguely or measured inconsistently.

This article aims to provide a comparative analysis of the three approaches and to propose an integrated framework for assessing product competitiveness. The research questions are as follows: what conceptual assumptions underlie quality-, price-, and value-based approaches; which indicators and measurement logics are most appropriate for each; what limitations and biases emerge when the approaches are applied in isolation; and how can an integrated evaluation improve reliability and managerial usefulness? The article follows an IMRaD structure and focuses on analytical clarity and methodological practicality rather than on a single industry case.

The study uses a conceptual-analytical methodology, combining theoretical comparison with an illustrative procedure for operationalizing competitiveness as an index. The conceptual component reconstructs each approach by clarifying definitions, evaluative logic, typical metrics, and interpretive boundaries. The operational component demonstrates how an integrated assessment can be constructed in a way that maintains transparency and reduces arbitrariness. This two-part method is appropriate because product competitiveness is both a conceptual category and an applied diagnostic tool.

For the quality approach, the analysis treats product quality in two interrelated senses: objective quality as compliance with specifications and standards, and perceived quality as the consumer's judgment of excellence. Objective quality is typically measured using defect rates, reliability indicators, durability,

safety compliance, and performance benchmarks. Perceived quality is measured using customer surveys, expert ratings, review sentiment, and repeat purchase behavior. The method considers both because competitiveness in real markets depends on whether quality is both achieved and recognized.

For the price approach, the analysis distinguishes nominal price positioning from economic price competitiveness. Nominal positioning compares the product's price with competitors' prices in a defined segment. Economic price competitiveness includes total cost of ownership, where acquisition price is combined with operating costs, maintenance, downtime, disposal cost, financing cost, and risk premiums. The method therefore treats price competitiveness as a relative and expanded concept rather than a single sticker price.

For the value approach, the method interprets competitiveness through the relationship between perceived benefits and perceived sacrifices. Benefits include functional utility, emotional satisfaction, symbolic meaning, and service outcomes. Sacrifices include money price, time, effort, learning cost, uncertainty, and opportunity costs. Operationalization is anchored in willingness-to-pay logic, in which consumer preference is reflected by the maximum price a consumer accepts for a given bundle of benefits. The method therefore prioritizes value indicators that can be tied to choice behavior, such as conjoint-based estimates, price premium tolerance, net promoter outcomes, and repurchase intent after controlling for price.

To integrate the three approaches, the study outlines an index-building procedure. First, indicators are selected within each dimension, ensuring they are measurable, comparable, and relevant to the product category. Second, indicators are normalized to allow aggregation, typically by transforming them into unit-free scores relative to competitors or benchmarks. Third, dimension weights are determined, either equally or through structured weighting methods such as analytic hierarchy process. Fourth, a composite competitiveness score is calculated for each product, and sensitivity analysis is conducted to see whether conclusions change under different weights. Because the paper is not based on proprietary firm data, an illustrative example is used in the Results section with plausible values to demonstrate interpretation rather than to claim empirical generalization.

RESULTS

The comparative analysis yields distinct evaluation profiles for the three approaches and shows why they often produce different conclusions about the same

product. Under the quality approach, a product is competitive when it reliably meets requirements and performs better than alternatives on attributes that matter in use. Consider a product A and product B in the same category. If product A has a substantially lower defect rate, stronger durability performance, and better safety compliance, quality scoring will favor product A even if its market share is not yet high. This outcome is common when technical superiority exists but is not fully visible to consumers or not yet supported by brand credibility. Quality assessment is therefore strongest for engineering decisions, compliance management, and risk-sensitive markets, such as medical devices, automotive components, or industrial equipment.

Under the price approach, competitiveness is driven by a product's ability to deliver comparable functionality at a lower cost to the buyer. If product B is priced 15–20% below product A and consumers view their performance as similar, price scoring will favor product B. However, the analysis shows that conclusions can reverse when total cost of ownership is included. If product B requires more frequent maintenance or has higher failure-related downtime, then its ownership cost may exceed the initial price advantage. In an illustrative calculation, if product B is cheaper by 20 units at purchase but imposes 30 units of additional maintenance and downtime cost over a typical ownership period, its economic cost becomes higher, and its price competitiveness declines. This result demonstrates that sticker-price comparisons can misrepresent competitiveness in categories where operating costs and reliability risks are substantial.

Under the value approach, competitiveness is evaluated by whether consumers perceive the product's benefit bundle as worth its price and associated sacrifices. In the illustrative assessment, product A may command a higher price yet remain more competitive if consumers experience superior usability, trust its performance, and expect lower hassle. If surveys show that consumers rate product A's benefit score higher by a meaningful margin while their perceived sacrifice difference is modest, the value ratio favors product A. This frequently occurs in markets where brand reputation, service quality, and experience design matter, such as smartphones, software subscriptions, or consumer appliances. The analysis shows that value-based competitiveness can be present even when price is not lowest and objective quality is not the highest, because value depends on the specific benefit-sacrifice structure perceived by the target segment.

When the three approaches are integrated through a composite index, the results suggest a more stable and

strategically informative judgment. In an illustrative index with equal weights assigned to quality, price (including total cost), and value, product A may score highest because it combines strong objective quality, acceptable ownership cost, and high perceived value. Product B may score competitively only in the sticker-price component but lose points in total cost and perceived benefit stability. A third product C might show moderate objective quality and moderate price but high perceived value due to strong design and service experience; the integrated index would capture its competitive potential more accurately than a pure quality audit would. These patterns demonstrate that integrated assessment reduces the risk of one-dimensional conclusions and can better guide decisions about whether to improve engineering performance, adjust pricing, or redesign the value proposition.

The comparative results can be interpreted more deeply by examining the philosophical and behavioral assumptions behind each approach. The quality approach implicitly treats competitiveness as a property of the product itself, grounded in material integrity and objective performance. This aligns with engineering rationality and standardization logic, where compliance and reliability are central. The limitation is that markets do not reward quality in a vacuum; they reward recognized and trusted quality. When information is imperfect, consumers use signals such as brand, reviews, warranties, and price as proxies. In such contexts, a technically superior product may underperform if its superiority is not communicated, if switching costs are high, or if consumers do not experience the difference in everyday use. This implies that quality competitiveness must be paired with signaling mechanisms and user experience design, otherwise "quality" remains invisible capital.

The price approach treats competitiveness as the ability to win demand through affordability or cost advantage. It corresponds to classical models of price competition and to strategies of cost leadership. Its strength lies in clarity and immediate comparability. Yet price competitiveness is also the approach most vulnerable to strategic traps. If firms interpret competitiveness primarily as low price, they may erode margins, underinvest in quality, and enter a race to the bottom. More importantly, globalization and digital markets complicate price as a signal. Dynamic pricing, discounting, subscription models, and freemium structures blur the meaning of price. In many categories, the buyer's real sacrifice is not limited to money but includes time, attention, data, and lock-in risk. Therefore, a philosophically robust price approach must expand toward total cost of ownership and total

cost of usage. Doing so turns price analysis from a superficial comparison into a more realistic economic evaluation.

The value approach shifts attention from the product's intrinsic properties to the consumer's evaluative horizon. Competitiveness becomes relational and segment-dependent: a product can be competitive for one segment and uncompetitive for another. This approach is particularly relevant under market heterogeneity and rapid innovation because it captures why consumers may choose higher-priced products if they perceive distinctive benefits, lower risk, or stronger identity fit. However, the value approach faces methodological challenges. Because value is partly subjective, measurement can be biased by short-term emotions, marketing influence, and social desirability. Online reviews may overrepresent extreme experiences. Survey-based value scores may be unstable if respondents lack sufficient product experience. To strengthen validity, value indicators should be tied to observed choices or to structured methods such as conjoint analysis, which forces trade-offs and approximates willingness-to-pay.

The integrated framework proposed in this article addresses the limitations of one-dimensional assessment by treating competitiveness as a multi-criteria construct. From a methodological standpoint, integration requires careful alignment of indicators and transparent weighting. Weighting should reflect product category logic. In safety-critical markets, quality may deserve a higher weight because failures carry severe costs. In commoditized markets, price may deserve more weight because consumers treat quality differences as negligible. In experience-driven markets, value indicators may dominate because differentiation is primarily perceptual and service-based. Therefore, the integrated approach should not assume universal weights; it should use category-sensitive weights justified by market research and strategic objectives.

A significant implication concerns the role of standards and certification. Quality assessment often relies on ISO-based management systems and product standards, which can increase buyer trust and reduce information asymmetry. Yet certification does not guarantee perceived value if the consumer's benefit is experiential rather than technical. Conversely, value-driven products may succeed without superior objective quality if they optimize convenience, design coherence, and ecosystem fit. Firms therefore should interpret standards as necessary but not sufficient conditions for competitiveness. They support the credibility layer of competitiveness, while value design and pricing strategy determine market traction.

Another implication concerns innovation and competitiveness over time. Quality improvements tend to produce long-term advantage when they reduce failure costs and build reputation. Price advantage can produce rapid market entry but may be easily imitated unless it is anchored in structural cost advantages. Value advantage can create strong differentiation, but it must be continuously renewed as consumer expectations evolve. This dynamic suggests that competitiveness assessment should be repeated periodically and should include forward-looking indicators such as innovation pipeline strength, service scalability, and brand trust resilience.

Finally, the digitalization of markets intensifies the relevance of the value approach while simultaneously raising measurement complexity. In platform-based ecosystems, a product's competitiveness can depend on compatibility, network effects, and access to services. The "product" becomes a bundle of hardware, software, updates, community, and support. Under these conditions, quality includes cybersecurity and privacy reliability, price includes subscription and switching costs, and value includes ecosystem convenience and perceived control. Future competitiveness assessment frameworks should incorporate these digital dimensions explicitly.

This article has compared three major approaches to assessing product competitiveness—quality, price, and value—and demonstrated why each approach can yield different conclusions when applied in isolation. The quality approach provides rigorous insight into technical integrity and compliance, but it can overlook perception and signaling. The price approach offers clarity and market comparability, but it becomes misleading when total cost of ownership and non-monetary sacrifices are ignored. The value approach best aligns with consumer choice mechanisms and market differentiation, but it requires disciplined operationalization to avoid subjectivity and unstable measurement. The integrated framework proposed here interprets product competitiveness as a multi-dimensional construct that combines objective quality evidence, economically realistic price positioning, and value indicators connected to willingness-to-pay and experience outcomes. Such integration supports more reliable diagnostics, better strategic decisions, and a clearer link between engineering, marketing, and financial management. Further research should test integrated indices across industries, refine digital-era value metrics, and explore how sustainability attributes reshape perceived value and competitiveness under evolving consumer ethics.

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