

# A Comparative Study of Honda and Toyota Brands in Hybrid Vehicle Sustainability Using the Competitive Profile Matrix (CPM) Framework

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**Abstract.** Global climate change and pollution have become critical global issues, necessitating the search for sustainable solutions in various sectors, especially transportation. Sustainable transportation is smart and environmentally friendly vehicles. One example is the HEV or Hybrid Electric Vehicle, a vehicle that uses two types of power sources. This research aims to see and understand the main factors that influence consumers in making decisions to buy HEV cars, especially in the Toyota and Honda brands. This study employs a quantitative approach using surveys as the primary data collection method with targeted number of respondents is 30 per brand (total 60) to ensure data represents the target population and allows relevant statistical analysis. The findings reveal that Toyota holds a slight competitive advantage, particularly in safety perception, internal capabilities related to technology, and responsiveness to government policy and innovation. Meanwhile, Honda competes closely, excelling in cost efficiency, particularly in maintenance and affordability. The use of empirically derived weights highlights a shift in consumer priorities, with operational and maintenance costs outweighing resale value in vehicle choice decisions. While Toyota maintains a slight edge, both brands' future differentiation will increasingly depend on their ability to respond to cost concerns, regulatory developments, and innovation cycles.

## 1 Introduction

Global climate change and pollution have become critical global issues, necessitating the search for sustainable solutions in various sectors, especially transportation. Indonesia as a developing country for economic growth depends on its transportation infrastructure [1]. This dependence has made road transportation the most energy-intensive sector and a major contributor to environmental degradation. Most air pollution comes from road transportation. As the number of people owning cars and motorcycles continues to rise, this sector is expected to remain the largest emitter of air pollution unless transformative changes are implemented. Indonesia has made decarbonizing transport a priority to achieve net zero emissions. The government is implementing numerous policies and incentives to support the

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expansion of e-mobility [2]. Transitioning to sustainable transportation solutions is critical to reducing environmental damage and air pollution.

Sustainable transportation is smart and environmentally friendly vehicles. One example is the HEV or Hybrid Electric Vehicle. HEV is a vehicle that uses two types of power sources, namely an internal combustion engine in the form of gasoline or diesel, and an electric motor. The advantages of HEV cars compared to conventional cars include lower air pollution and lower operating costs [3]. Sales of HEV cars in Indonesia have increased significantly. Whole sales HEV car in 2022 will be 10.344 units, 2023 will be 54.179 units, 2024 will be 56.812 units. This shows that the increasing level of public awareness of environmental issues is increasing.

For nearly 40 years, Japanese automobiles have dominated Indonesia's automotive industry, accounting for over 95% [4]. This research aims to see and understand what are the main factors that influence consumers in making decisions to buy HEV cars, especially in the Toyota and Honda brands. Based on the report of the Indonesia Automotive Industry Association (Gaikindo) for January-July 2024, HEV car sales in Indonesia reached 30.973 units. With sales of Toyota 17.140 units, Honda 1.881 units. Based on this data, Toyota and Honda are HEV car manufactures that have an increasing sales trend. How is the level of satisfaction with the safety concern factor, operational cost, maintenance cost, initial cost, resale value of HEV cars purchased by consumers. This research uses the Competitive Profile Matrix (CPM) approach to compare the advantages and disadvantages of Toyota and Honda companies from the consumer's point of view.

## **2 Literature review**

This chapter presents a review of relevant literature to provide theoretical and empirical foundations for the study. It discusses key concepts related to hybrid electric vehicles (HEVs), consumer behavior, and strategic analysis tools used in this research, and the behavior of the studied brand.

### **2.1 Competitive profile matrix**

Understanding consumer preferences is important in designing marketing strategies, product development, and brand positioning. Therefore, methods such as the Competitive Profile Matrix (CPM) can be used to determine a company's strengths or weaknesses by considering consumer preferences. CPM is a tool used in strategic planning to identify a company's main competitors and evaluate its strengths and weaknesses compared to the strategic positions of its competitors [5]. CPM is very commonly used in research related to corporate strategy, for example, research conducted by [6] on the business strategy of a real estate company in Vietnam, shows that CPM is a fairly strategic tool and can help companies understand their competitive position in the market by comparing critical success factors to competitors. In addition, research by [7] on companies in the education sector in Vietnam concluded that CPM analysis effectively identifies a company's competitive position compared to competitors and areas that need improvement, providing insights for companies to strengthen their competitiveness.

### **2.2 Critical success factor**

Critical Success Factor (CSF) is a key element that determines a company's success in competing [5]. In the context of electric vehicles, [1, 8] identified safety concerns, operational costs, maintenance costs, initial costs, and resale value as the main factors in consumer

decisions. These five aspects are designated as CSFs for further analysis in this study. Safety concerns are a major factor in hybrid car adoption. [1] stated that concerns regarding hydrogen storage, battery stability, and long-term safety are major barriers to alternative vehicle adoption. This finding is in line with [9], who showed that concerns about exposure to non-ionizing radiation (NIR) also influence HEV purchase decisions. One of the main advantages of hybrid cars is fuel efficiency. [1] mentioned operating costs as an important factor in electric vehicle adoption decisions due to the potential for long-term savings. This is supported by [10] and [11], who emphasized that gasoline prices are a major consideration in choosing hybrid and electric vehicles. One of the main challenges of hybrid cars is the high cost of replacing the battery after the warranty period ends. [1] mentions maintenance costs as an important consideration in consumer decisions. Advanced technology in hybrid cars triggers high maintenance costs, as explained by [12], who state that limited choices and high costs make hybrid cars difficult for the general public to afford. High initial costs are one of the main barriers to hybrid car adoption, although they can be compensated by long-term fuel savings. [1] mention initial costs as a significant barrier for consumers in Indonesia. [13] also emphasize that HEV adoption tends to increase if the initial price is more affordable. Hybrid cars generally have good resale value, especially from well-known manufacturers. However, according to [1], the uncertainty of resale price is still a consumer consideration. In contrast, [14] stated that HEVs tend to maintain a higher proportion of the initial price than conventional vehicles, with the difference in resale price comparable to fuel savings. These factors not only reflect consumer preferences but also highlight the strategic areas manufacturers must address to increase HEV adoption. Addressing these CSFs effectively can influence market penetration and long-term acceptance of hybrid technology.

### 2.3 Hybrid electric vehicle

HEV or Hybrid Electric Vehicle, is a vehicle that uses two types of power sources, namely an internal combustion engine in the form of gasoline or diesel, and an electric motor, which aims to increase fuel efficiency and reduce carbon emissions. However, a study conducted by [15] shows that the adoption of electric vehicles, such as electric motorcycles, remains low in major cities like Jakarta. Therefore, a comprehensive strategy is needed to increase adoption by addressing key barriers such as high prices, range anxiety, and lack of supporting infrastructure. Another study conducted by [16] suggests that several factors can influence a person's interest in adopting electric vehicles, including government regulatory reforms, awareness of environmental impacts, the perceived benefits of owning an electric vehicle, the availability of supporting infrastructure such as charging stations, and knowledge of government regulations favoring electric vehicle owners [15]. These factors indicate that both technological advancements and supportive public policies play a vital role in shaping consumer behavior toward EV adoption.

In this study, the two automotive brands studied are Honda and Toyota, two Japanese vehicle manufacturers, which are known as one of the car manufacturers that have adopted hybrid model vehicles. Toyota presents the Toyota Hybrid System (THS) which has been developed for more than two decades. Toyota was founded in 1933, and until September 2023 has produced more than 300 million units globally, Toyota has two types of hybrid vehicles, namely Hybrid Electric Vehicle (HEV) and Plug-in Hybrid Electric Vehicle (PHEV). The THS system combines two electric motors/generators with a gasoline engine, allowing the vehicle to run on electric power at low speeds and combine electric and gasoline power during acceleration or high speeds. If the battery is low, the gasoline engine will drive the generator to charge, supported by a regenerative braking feature that stores energy from deceleration. The advantages of THS include fuel efficiency, responsive acceleration, and low emissions. While PHEVs work similarly but have a charging port for charging from an

external source. Toyota has a wider reach in terms of market segmentation, as it offers a variety of hybrid vehicles at varying price points. Honda is another Japanese automotive manufacturer founded in 1946. In the hybrid segment, Honda offers models with a balance between fuel efficiency and competitive prices. e:HEV technology allows the use of an electric motor at low speeds and a combination of an electric motor and a gasoline engine when extra power is needed or at high speeds. If the vehicle is running steadily, the system switches completely to the gasoline engine. The regenerative braking feature is also applied to recharge the battery. The main advantages of e:HEV are high efficiency, smooth power transfer, and no need for external charging such as a charging port. However, Honda has a more limited reach in terms of hybrid vehicle market segmentation. This contrast in product variety and market coverage reflects each brand's strategic approach in promoting hybrid vehicle adoption.

### 3 Methods

This study adopts a quantitative and descriptive comparative research design to explore consumer preferences and satisfaction regarding Hybrid Electric Vehicles (HEVs) in Indonesia, focusing on two major automotive brands: Toyota and Honda. The research process begins by identifying five Critical Success Factors (CSFs)—safety, operational cost, maintenance cost, initial cost, and resale value—based on existing literature as the main dimensions influencing consumer decision-making in the hybrid vehicle market [1] [5] [8].

Data collection was carried out using a structured online questionnaire designed to capture comprehensive and relevant insights from consumers. The questionnaire is divided into three main sections: demographic characteristics (age, gender, income, occupation), HEV preference factors (including perceptions on fuel efficiency, performance, technology, and brand image), and satisfaction indicators related to ownership experience or purchase intention. Each item was measured using a five-point Likert scale, allowing the transformation of subjective opinions into quantifiable data for statistical analysis [17].

The sampling method used in this study was purposive sampling, targeting respondents who meet specific inclusion criteria: aged 17 years or older, possessing a basic understanding of hybrid vehicle technologies, and having experience with or intention to purchase a hybrid vehicle. A minimum sample size of 60 respondents (30 per brand) was determined to enable balanced comparison and adequate statistical reliability [5]. A pilot test was conducted to validate the instrument, and the internal consistency of questionnaire items was evaluated using Cronbach's alpha to ensure the reliability of measurement scales [17].

Following data collection, the analysis proceeded in several stages. First, descriptive statistics were applied to summarize respondent demographics and identify general patterns in consumer preferences. Second, mean scores for each CSF were calculated for both Toyota and Honda to allow brand-level comparison. Unlike earlier studies that rely solely on theoretical weights, this study derives CSF weights directly from consumer responses to better reflect the actual market context in Indonesia [1] [9].

These empirically derived weights were then integrated into the Competitive Profile Matrix (CPM) framework, which provides a strategic assessment of each brand's positioning. Each CSF's empirical weight was multiplied by its performance score for both Toyota and Honda. The resulting weighted scores were then summed to produce a total score for each brand, representing its overall competitiveness. This technique allows for a clearer understanding of each brand's strengths and weaknesses from the consumer's point of view, while also highlighting areas for strategic improvement [5].

By combining literature-based theoretical constructs with consumer-derived empirical data, this method enables a context-sensitive and evidence-based evaluation of HEV brand performance in Indonesia, offering strategic insights that are practical for industry

stakeholders and relevant to academic discourse on sustainable transportation and consumer behavior.

4 Result and discussion

This section presents the findings of the comparative and strategic analysis using the Comparative Preference Analysis, the Competitive Profile Matrix (CPM), and the Internal and External Factor Evaluation (IFE & EFE) methodologies. In contrast to previous studies that applied theoretical or literature-based weight assumptions, this research adopts empirically derived weights obtained directly from consumer survey responses. This approach enhances the contextual validity of the results for Indonesia’s Hybrid Electric Vehicle (HEV) market in 2025.

Table 1 summarizes the average weighted scores across five Critical Success Factors (CSFs) which are Safety, Operational Cost, Maintenance Cost, Initial Cost, and Resale Value, as perceived by respondents who selected either Toyota or Honda hybrid vehicles.

Table 1. Average Weighted Consumer Perception Scores for Toyota and Honda HEVs

| Brand                | Safety | Operational Cost | Maintenance Cost | Initial Cost | Resale Value |
|----------------------|--------|------------------|------------------|--------------|--------------|
| Honda                | 0.877  | 0.707            | 0.583            | 0.455        | 0.350        |
| Toyota (excl. Zenix) | 0.944  | 0.735            | 0.513            | 0.439        | 0.353        |

The data show that Toyota leads in the safety dimension, reinforcing its strong brand image in terms of driver and passenger protection systems. In contrast, Honda slightly surpasses Toyota in Maintenance and Initial Cost, suggesting that consumers perceive Honda to be more affordable and cost-efficient in the long run. Interestingly, both brands are nearly identical in terms of Resale Value, indicating a shared consumer confidence in their long-term asset retention.

These relatively narrow score gaps reveal a growing convergence in consumer preferences toward both brands. While Toyota continues to benefit from its reputation for technological maturity and safety, Honda’s value-driven appeal positions it as a credible competitor, especially among price-sensitive consumers. The findings signal an increasingly competitive HEV landscape in Indonesia, where brand loyalty may be driven more by practical cost considerations than traditional brand dominance.

4.1 Overview company Toyota and Honda

Toyota and Honda are two of the most prominent Japanese automotive manufacturers, each with a significant presence in the global and Indonesian automotive markets. Both brands have made substantial investments in Hybrid Electric Vehicle (HEV) technologies, striving to meet growing consumer demand for fuel-efficient and environmentally friendly vehicles.

Toyota, founded in 1933, is a pioneer in hybrid vehicle technology, particularly with the introduction of the Toyota Prius in 1997, the world’s first mass-produced hybrid car. The company continues to lead the market with its Toyota Hybrid System (THS), which combines an internal combustion engine with an electric motor for better fuel efficiency and reduced emissions. Toyota's commitment to sustainability is reflected in its diverse hybrid lineup, ranging from sedans to SUVs, including models like the Yaris Cross HEV and Corolla Cross HEV.

Honda, established in 1946, also entered the hybrid market later than Toyota but has quickly made its mark with the e:HEV technology, focusing on offering affordable and efficient hybrid vehicles. Honda's approach emphasizes ease of use with its self-charging hybrid system, requiring no external charging. With models such as the Honda CR-V e:HEV and Honda Accord e:HEV, Honda has positioned itself as a strong competitor in the market, particularly among consumers looking for hybrid vehicles that combine efficiency with value.

Both companies, despite their differences in strategy, are now key players in the Indonesian HEV market, where rising environmental awareness and government incentives are driving a shift toward sustainable mobility solutions.

## 4.2 Consumer behaviour in the automotive industry

The survey respondents for this study were carefully selected to provide a representative sample of potential consumers in Indonesia's Hybrid Electric Vehicle (HEV) market. The demographics of the respondents are summarized as follows:

- **Age Group:** The majority of respondents were between 25 and 45 years old, representing consumers in their prime purchasing years with established income levels and an interest in fuel-efficient vehicles.
- **Gender:** Respondents were relatively balanced, with 52% male and 48% female, indicating a broad appeal for HEVs across genders.
- **Occupation:** The majority of respondents were professionals, including employees in the private sector (55%), public servants (25%), and entrepreneurs (20%). This demographic is likely to be more attuned to the benefits of hybrid technology, particularly in terms of fuel economy and environmental impact.
- **Income Level:** The average monthly income of respondents ranged from Rp 7,000,000 to Rp 20,000,000, indicating that the majority of respondents are middle to upper-middle class, with the purchasing power to consider hybrid vehicles.
- **Familiarity with HEVs:** 80% of respondents had previous exposure to hybrid vehicles, either through personal use or through family and friends, showing a relatively high level of awareness about HEVs.

This demographic profile provides a well-rounded view of Indonesian consumers who are most likely to adopt HEVs, particularly middle and upper-middle class professionals.

## 4.3 Comparison of HEV products: Toyota vs Honda

A comprehensive comparison of the Hybrid Electric Vehicle (HEV) offerings from Toyota and Honda is made with details shown in **Table 2** [18] [19], focusing on five key factors: Safety, Operational Cost, Maintenance Cost, Initial Cost, and Resale Value. Both brands have established a strong presence in the Indonesian market, offering a variety of hybrid models tailored to different consumer needs. However, their approaches and product strategies diverge in several important aspects, ranging from technology and pricing to market segmentation.

### 4.3.1 Safety

Safety is a paramount consideration for consumers choosing hybrid vehicles, and both Toyota and Honda have equipped their HEVs with advanced safety technologies. Toyota is known for its Toyota Safety Sense (TSS) system, which includes features such as Pre-Collision System (PCS), Lane Departure Alert (LDA), Adaptive Cruise Control (ACC), and Blind Spot

Monitoring (BSM). These systems are standard on most Toyota hybrid models, ensuring enhanced protection for drivers and passengers. In contrast, Honda uses its own Honda Sensing suite, which includes similar safety features like Collision Mitigation Braking System (CMBS), Lane Keeping Assist System (LKAS), and Road Departure Mitigation (RDM). While both systems provide a high level of safety, Toyota's TSS is often perceived as slightly more comprehensive, particularly with its extended range of safety technologies and its integration across a wider array of Toyota models.

#### **4.3.2 Operational costs**

Operational costs, which primarily include fuel consumption and overall efficiency, are a key factor in the adoption of hybrid vehicles. Toyota's Hybrid Electric Vehicles (HEVs), such as the Corolla Cross HEV and Yaris Cross HEV, are known for their superior fuel efficiency, often achieving 30-40 km/l depending on the model. Toyota's Hybrid System (THS) ensures that the vehicle can operate efficiently in both city driving and highway conditions, making it one of the most fuel-efficient hybrid systems available. Honda, while still offering strong fuel efficiency, typically provides 20-30 km/l across its hybrid models like the CR-V e:HEV and Accord e:HEV. Honda's self-charging hybrid system (e:HEV) offers a competitive level of efficiency, but it generally does not match Toyota's Prius or Corolla models in terms of fuel economy. Both brands offer cost-effective fuel solutions, but Toyota remains slightly ahead in operational efficiency due to its more mature hybrid system.

#### **4.3.3 Maintenance costs**

Maintenance costs for hybrid vehicles tend to be lower than for conventional vehicles, but there are still differences between Toyota and Honda in this regard. Toyota's Hybrid System (THS) is designed to be highly reliable with minimal maintenance needs. The regenerative braking system in Toyota's hybrids helps reduce wear on traditional braking components, lowering long-term maintenance costs. Additionally, Toyota offers a long warranty on its hybrid batteries (typically 8 years or 160,000 km), which helps mitigate concerns over battery replacement costs. Honda, with its e:HEV hybrid system, also provides low maintenance costs due to its self-charging technology, which reduces reliance on external charging infrastructure. However, Honda's e:HEV system may require slightly more frequent maintenance on its hybrid components compared to Toyota's more established technology. Overall, both brands offer low-maintenance solutions compared to traditional gasoline-powered vehicles, but Toyota's long-standing hybrid expertise and battery longevity give it a slight edge in this area. To ensure efficient maintenance of these complex hybrid systems, support from trained and qualified technicians is essential. This aligns with findings from research conducted by [20] which demonstrate that training is an effective way to improve maintenance performance and develop skilled technicians.

#### **4.3.4 Initial costs**

The initial cost of a hybrid vehicle is a critical factor, especially for consumers who are price-sensitive. Toyota offers a range of hybrid vehicles, including affordable options like the Yaris Cross HEV, which starts at Rp436,300,000, and mid-range SUVs such as the Corolla Cross HEV, which is priced at Rp603,500,000. Higher-end models, like the Vellfire HEV and Alphard HEV, are positioned in the luxury market with prices exceeding Rp1,400,000,000. These premium models offer high performance and advanced features but come at a much higher price point. In comparison, Honda's hybrid models, such as the CR-V e:HEV and Accord e:HEV, are generally more affordable with prices starting from Rp825,500,000 for the CR-V e:HEV and Rp970,900,000 for the Accord e:HEV. Honda's pricing strategy positions its hybrids as cost-effective alternatives, especially in the mid-range and SUV



categories. While Toyota’s premium hybrids offer more luxury and advanced technology, Honda appeals to budget-conscious buyers who seek affordable and efficient hybrid options.

**Table 2.** Vehicles Price Details

| Brand  | Type                       | Vehicle Type | Hybrid Type    | Power  | Machine Capacity | Price           |
|--------|----------------------------|--------------|----------------|--------|------------------|-----------------|
| Toyota | All New Vellfire HEV       | MPV          | Full Hybrid    | 187 hp | 2498 cc          | Rp1,868,100,000 |
|        | All New Alphard HEV        | MPV          | Full Hybrid    | 179 hp | 2494 cc          | Rp1,425,500,000 |
|        | New Corolla Cross HEV      | SUV          | Full Hybrid    | 97 hp  | 1798 cc          | Rp603,500,000   |
|        | All New RAV4 GR Sport PHEV | SUV          | Plug-in Hybrid | 182 hp | 2487 cc          | Rp1,150,000,000 |
|        | All New Yaris Cross HEV    | SUV          | Full Hybrid    | 105 hp | 1496 cc          | Rp436,300,000   |
|        | All New Prius HEV          | Hatchback    | Full Hybrid    | 97 hp  | 1798 cc          | Rp707,000,000   |
|        | New Camry HEV              | Sedan        | Full Hybrid    | 183 hp | 2487 cc          | Rp973,300,000   |
|        | New Corolla Altis HEV      | Sedan        | Full Hybrid    | 138 hp | 1798 cc          | Rp637,500,000   |
| Honda  | All New Accod e:HEV        | Sedan        | Full Hybrid    | 143 hp | 1993 cc          | Rp970,900,000   |
|        | CR-V e:HEV                 | SUV          | Full Hybrid    | 145 hp | 1993 cc          | Rp825,500,000   |

4.3.5 Resale value

Resale value is an important consideration for consumers, particularly for those who want to ensure their vehicle retains value over time. Toyota has a strong reputation for high resale value, with popular hybrid models like the Prius HEV and Corolla Cross HEV consistently commanding a higher resale price compared to other brands. This is due to Toyota’s long-standing reputation for reliability and durability, which is reflected in the used-car market. The Toyota brand is synonymous with long-term performance and value retention, making it a safe investment for consumers who are concerned about depreciation. Honda’s hybrid vehicles, such as the CR-V e:HEV and Accord e:HEV, also perform well in terms of resale value, but they generally lag behind Toyota’s models. Despite this, Honda’s hybrids retain good resale value due to their fuel efficiency and reliable performance. While Honda may not command the same premium resale price as Toyota, its affordability and quality ensure that its hybrids still maintain solid residual value.

4.4 Competitive profile matrix

The Competitive Profile Matrix (CPM) was developed to assess the relative strategic positioning of Toyota and Honda in Indonesia’s hybrid electric vehicle (HEV) market. Unlike previous studies that relied on theoretical or literature-based weights, this study utilizes empirical weights directly derived from consumer survey responses, allowing a more accurate reflection of actual market perception and priorities.

The following table presents the weighted scores across five Critical Success Factors (CSFs) based on the collected data:



**Table 3.** Comparison of Literature-Based and Empirical Weights for Critical Success Factors

| Factor           | Weight | Toyota Score | Honda Score | Weighted Toyota | Weighted Honda |
|------------------|--------|--------------|-------------|-----------------|----------------|
| Safety           | 0.2410 | 0.9440       | 0.8770      | 0.2270          | 0.2110         |
| Operational Cost | 0.2290 | 0.7350       | 0.7070      | 0.1680          | 0.1620         |
| Maintenance Cost | 0.2080 | 0.5130       | 0.5830      | 0.1070          | 0.1210         |
| Initial Cost     | 0.1700 | 0.4390       | 0.4550      | 0.0750          | 0.0770         |
| Resale Value     | 0.1520 | 0.3530       | 0.3500      | 0.0540          | 0.0530         |
| Total Score      | 1.0000 |              |             | 0.6320          | 0.6240         |

Toyota scores higher in Safety, reflecting its strong reputation for advanced safety technologies. The Toyota Safety Sense (TSS) system, which includes features like Pre-Collision System (PCS), Lane Departure Alert (LDA), and Blind Spot Monitoring (BSM), is a major factor contributing to Toyota’s higher score. Honda also offers competitive safety features through its Honda Sensing suite, which includes Collision Mitigation Braking System (CMBS) and Lane Keeping Assist System (LKAS), but Toyota’s TSS system is considered more comprehensive and is available across a broader range of models. This gives Toyota the edge in consumer safety perception, making it the preferred choice for safety-conscious buyers.

Toyota excels in Operational Cost, particularly in terms of fuel efficiency. With the Toyota Hybrid System (THS), vehicles like the Corolla Cross HEV and Yaris Cross HEV deliver 30-40 km/l fuel economy, making them highly efficient for both city driving and highway travel. Honda, while still efficient, provides 20-30 km/l across its hybrid models such as the CR-V e:HEV and Accord e:HEV, placing it slightly behind Toyota in fuel economy. Toyota’s more advanced hybrid system ensures it remains more efficient, resulting in lower fuel consumption and operational costs, which appeals to consumers seeking long-term savings on fuel.

Honda outperforms Toyota in Maintenance Cost, offering more affordable maintenance due to its simpler self-charging hybrid system (e:HEV). The design of Honda’s e:HEV system reduces the need for complex hybrid components, resulting in fewer repairs and lower service costs. Toyota’s THS, while highly reliable, requires more specialized maintenance for its hybrid components, leading to slightly higher maintenance costs over time. Both brands benefit from the low maintenance inherent to hybrid vehicles, but Honda’s simpler system provides a cost advantage in this area.

Honda has a slight edge over Toyota in Initial Cost, with more affordable hybrid models like the CR-V e:HEV and Accord e:HEV. Honda’s pricing strategy positions it as a cost-effective alternative, offering hybrids with advanced features at lower prices. In contrast, Toyota’s hybrid vehicles, such as the Vellfire HEV and Alphard HEV, are priced in the luxury segment, with prices exceeding Rp1,400,000,000. While Toyota offers premium features and a broader hybrid portfolio, Honda’s hybrid models are more accessible, making them appealing to consumers looking for affordable hybrid options.

Toyota has a strong reputation for high resale value, particularly for models like the Prius HEV and Corolla Cross HEV, which retain higher resale prices due to Toyota’s reliability and durability. Honda’s hybrids, while also retaining good resale value, typically do not

command the same premium resale prices as Toyota’s vehicles. However, Honda’s hybrids still perform well in the used car market, retaining solid residual value due to their fuel efficiency and dependable performance. The Toyota brand’s long-term performance and value retention make it a safe investment in terms of resale value.

4.5 Interpretation and strategic implication

The integration of empirical weights into the CPM, IFE, and EFE analyses offers a more context-sensitive assessment of brand competitiveness in the Indonesian hybrid vehicle (HEV) market. The matrix results are summarized below:

Table 4. Summary of Strategic Matrix Scores (CPM, IFE, and EFE)

| Matrix | Toyota Score | Honda Score | Implication                                                      |
|--------|--------------|-------------|------------------------------------------------------------------|
| CPM    | 0.632        | 0.624       | Toyota holds a marginal advantage in consumer perception of CSFs |

Although Toyota leads across all three matrices, the score differentials are relatively narrow, especially in the CPM and IFE. This indicates that Honda is a close competitor and maintains a solid strategic position, particularly in aspects related to cost efficiency and consumer value perception.

The strategic implication is that while Toyota benefits from its technological leadership, safety credibility, and regulatory alignment, Honda can capitalize on its strengths in maintenance affordability and initial pricing appeal. To close the external responsiveness gap, Honda may consider increasing its visibility in policy compliance and technological signaling, such as by expanding its hybrid lineup or increasing engagement in public EV discourse.

In a highly dynamic HEV market, where consumer preferences are shifting toward practical efficiency and environmental sustainability, both brands must continue to innovate. Strategic adjustments based on real consumer input, rather than assumed global trends, can offer a competitive edge in this localized, fast-evolving segment.

5 Conclusion

This study provides a comparative analysis of Toyota and Honda in Indonesia’s hybrid electric vehicle (HEV) market using an empirical adaptation of the Competitive Profile Matrix (CPM). The findings reveal that Toyota holds a slight competitive advantage, particularly in safety perception, internal capabilities related to technology, and responsiveness to government policy and innovation. Meanwhile, Honda competes closely, excelling in cost efficiency, particularly in maintenance and affordability, making it an attractive alternative for budget-conscious consumers. The use of empirically derived weights also highlights a shift in consumer priorities, with operational and maintenance costs outweighing resale value in vehicle choice decisions.

Despite Toyota’s slight edge, both brands are strategically well-positioned in the HEV market. However, their differentiation will increasingly depend on their ability to respond to cost concerns, regulatory developments, and innovation cycles. For stakeholders in the automotive industry, integrating empirical data into strategic tools like CPM provides a more accurate and actionable foundation for decision-making in Indonesia’s evolving hybrid vehicle ecosystem.

The findings of this study are constrained by the sample size and geographical focus, which may not fully represent the broader consumer base across all regions of Indonesia.

Additionally, reliance on self-reported consumer data could introduce some bias in evaluating preferences and perceptions. Future research could expand the sample size to include a more diverse demographic and geographic representation. Longitudinal studies would also provide deeper insights into how consumer preferences evolve as EV infrastructure in Indonesia develops. Furthermore, exploring additional factors such as consumer attitudes toward environmental sustainability could yield valuable insights into broader market dynamics and consumer behavior in the hybrid vehicle sector.

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