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ALFA ROMEO JUNIOR

Launch and post-launch economic theories and strategies

Rapporteur:

Anna d'Ambrosio

Candidate:

Virginia Piletto S313359

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Figure 1: Alfa Romeo Junior

Abstract

The Alfa Romeo Junior marks a significant step forward in the automotive industry by entering the B-SUV segment with advanced onboard technologies and a dual hybrid-electric powertrain.

This paper begins with a brief overview of the product before examining various economic theories that analyze Alfa Romeo's strategies used for the launch of the Alfa Romeo Junior. By integrating these theories, the study offers a robust framework for understanding the challenges and opportunities associated with this launch, ultimately explaining how Alfa Romeo has optimized its market strategy.

The analysis starts by contextualizing the competitive environment in which the Alfa Romeo Junior operates, characterized by an oligopolistic market structure dominated by price competition and significant entry barriers.

To insert into this environment price competition strategies are necessary, that utilize the Bertrand model to assess how Alfa Romeo's aggressive pricing will capture market share amidst oligopolistic competition. This model also highlights how price wars can lead to lower profit margins despite higher sales volumes.

The study then explores the entry barriers that fill the automotive industry, among which economies of scale, absolute cost advantages, and product differentiation. The last two of these barriers pose substantial challenges for new Alfa Romeo Junior as it attempts to enter into the B-UV segment.

Subsequently the research investigates the customer loyalty strategies, employed by Alfa Romeo to beat the two entry barriers mentioned before and enhance competitiveness. By focusing on Customer Relationship

Management (CRM) and loyalty programs, the study highlights the critical role of sustaining customer loyalty in an environment prone to price wars, as described by the Bertrand model, where loyalty can prevent customer defections to lower-priced competitors.

The study also encompasses a detailed market analysis in which Alfa Romeo Junior operates, to better understand the competition behind this environment.

Game theory is the tool applied to understand the oligopolistic nature of the automotive market, examining how firms anticipate competitors' moves and adapt their strategies to remain competitive. Then, to better visualize this environment, a description and analysis of the main competitors of Alfa Romeo Junior is provided. The analysis further includes demand curves, demand elasticity and regression analysis to evaluate consumer behavior in response to pricing changes, understanding the elasticity of the demand, i.e. how an increasing of 1€ in the price affect the quantity demanded, using prices applied and quantities sold by competitors from April 2024 to June 2024.

Then to better understand Alfa Romeo's pricing strategy, that allows it to be competitive, a benchmarking analysis is applied, with the Jeep Avenger serving as the target model.

The paper also explores two key strategies implemented by Alfa Romeo to beat its competitors: second-degree price discrimination and a cost strategy. Effective cost strategies, such as shifting production to Tychy, Poland, are essential for achieving success in the competitive B-SUV market.

Further, market segmentation theory is used to identify and target specific customer segments, ensuring Alfa Romeo's marketing efforts align with consumer preferences and remain competitive in this, already discussed, environment. Rational choice theory and utility maximization are also explored to explain how consumers make purchasing decisions based on perceived value, linking these theories to loyalty and demand curves. These theories are linked to loyalty and demand curves, as effective segmentation helps to better understand demand elasticity and strengthen CRM strategies.

Finally, the research delves into Alfa Romeo's decision to produce both hybrid and electric versions of the Junior, examining the impact of network externalities, particularly the rise of Battery Electric Vehicles (BEVs), on market dynamics.

It also considers network externalities, particularly how the rise of Battery Electric Vehicles (BEVs) affects market dynamics. The growing adoption of BEVs influences consumer perceptions of product value, impacting market segmentation and rational choice.

Moreover, the study addresses the environmental impact of vehicle production and use, emphasizing the importance of sustainable practices. This environmental consciousness is increasingly crucial to product differentiation and customer loyalty, as consumers become more aware of environmental factors in their purchasing decisions.

To conclude, the study also discusses the negative externalities associated with vehicle production and use, such as pollution and resource depletion, underscoring the need for Alfa Romeo to adopt sustainable strategies that not only enhance competitiveness but also mitigate the broader environmental impact of their operations.

1. Introduction

Alfa Romeo Junior is one of the most discussed products of the moment!

It will be the only Premium vehicle outside of Stellantis with a double supply, both hybrid and electric. As one the latest offering from the renowned Italian marque, Alfa Romeo Junior embodies the essence of Alfa Romeo's storied heritage while embracing modern design and technology.
With its styling, dynamic performance and commitment to sustainability, the Junior promise is to captivate drivers and enthusiasts alike.

Alfa Romeo proposal is a compact car, below 4,3 meters, renewing the success of MiTo and Giulietta thanks to an excellent driving dynamic by offering a stand-still sporty experience (driver-oriented cockpit), a precise driving feeling (steering & mechanical slip differential for best-in-class road handling) and a sporty acceleration (0-100km/h in 5,9 sec).

This paragraph aims to explore the features of this vehicle.
In the picture below is shown the vehicle, in the Rosso Brera color (Figure 2).

Figure 2: Alfa Romeo Junior

Another feature is the iconic truncated rear, reminiscent of the brand's 1960s design. The coupé-style rear window adds a distinctive touch (Figure 3).

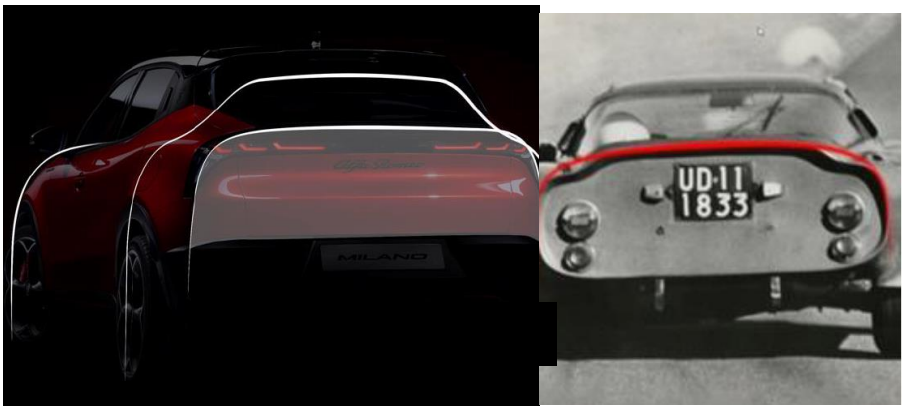


Figure 3: Iconic truncated rear

The new scudetto is available in two different versions; Progresso, that is the one in the first picture, and Legenda, the one in the third picture (Figure 4).

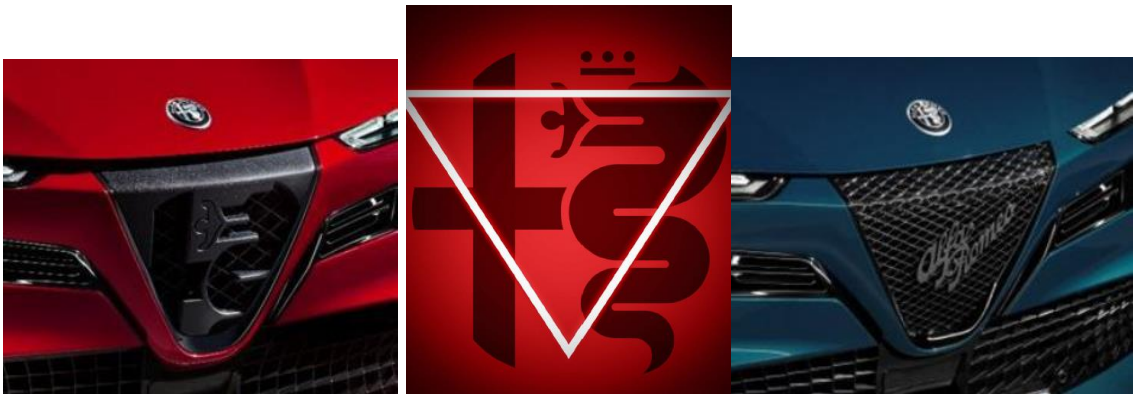


Figure 4: New scudetto

The vechilce is equipped with enhanced 3+3 signature led (Figure 5).

Figure 5: 3+3 signature led

The Alfa Romeo logo is positioned on the C-pillar, highlighting the importance of the brand and its distinctive character (Figure 6).
Moreover, placing the Alfa Romeo logo on the C-pillar is not just a matter of branding, but also a strategic action aimed at communicating the prestige and elegance associated with the brand.
This strategic logo placement, visible even from the side, allows the vehicle to further stand out on the road, enhancing brand and creating an impression of coherence and solidity that reflects Alfa Romeo's established reputation in the automotive sector.

Figure 6: Logo on the C-pillar

Alfa Romeo Junior comes in three variants for each engine type (the differences between the base version and the Speciale will be discussed into the paragraph 11 “Price discrimination”, whilst there are no details about the distinctive features of Hybird Q4 and Electric 240 Veloce because these two vehicles will be available in 2025).

The hybrid versions are:

- Hybrid (136 hp, architecture 1,2 l turbo and CO_2 emissions WLTP min 111/116 gr)
- Speciale (136 hp, architecture 1,2 l turbo and CO_2 emissions WLTP min 111/116 gr)
- Hybrid Q4 (136 hp, architecture 1,2 l turbo and CO_2 emissions WLTP min 111/116 gr)

The electric versions are:

- Electric (156 hp, 56 kwh, with fast charging of less than 30 minutes and 0 CO_2 emissions)
- Speciale (156 hp, 56 kwh, with fast charging of less than 30 minutes and 0 CO_2 emissions)
- Electric 240 Veloce (240 hp, 56 kwh, with fast charging of less than 30 minutes, 0 CO_2 emissions, 200km/h as maximum reachable speed and an acceleration of 5,9seconds in 0-100 km/h)

The name unveiling took place on December 14, 2023.

The first clue about the new Alfa Romeo vehicle's name was the number: 45°2740.68 – 9°0934.20, that represents the coordinates of the city of Milan used to reveal the name.

Milan holds historical significance as the birthplace of Alfa Romeo on June 24, 1910, under the name A.L.F.A. (Anonima Lombarda Fabbrica Automobili), featuring the iconic red cross logo representing the city. Moreover, Milan is renowned as a global hub for fashion and design.
This naming strategy aimed at paying homage to the city where Alfa Romeo's journey began and where it continues to thrive (Figure 7).
But then…

Figure 7: Alfa Romeo named Milano

A few days after the unveiling of the car, which took place on April 10, 2024, the Minister of Enterprises and Made in Italy, Adolfo Urso, sparked controversy regarding an alleged violation of Article 144, paragraph 1 bis, on Italian Sounding. This article pertains to the practice of falsely evoking the Italian origin of a product. According to the government, the B-SUV, assembled in Poland, could fall into this category.

Despite the production of four out of five models in Italy, the brand found itself at the center of controversy, fueled by a sudden resurgence of objections to the name "Milano" only after the official presentation, despite being announced three months earlier.

However, despite Alfa Romeo asserting that there were no grounds for a violation, on April 15, 2024, it opted to change the name of the car to Alfa Romeo Junior.

Also this name recalls the tradition of Arese, having been initially used for the GT 1300 Junior in 1966 and, more recently, had informally identified the project that led to the creation of the MiTo.

Carlos Tavares also clarified that the decision to produce the car in Poland was driven by lower costs compared to production in Italy, which, instead, would have resulted in a price increase of around 10,000 euros (Andrea Senatore, 12 Aprile 2024).

2. Price competiton

In entering the B-SUV segment, Alfa Romeo faces intense price competition, a common challenge in oligopolistic markets like the automotive industry (Onozaki and Yanagita, 2003).

This section delves into the Bertrand model, a key economic theory that explains the dynamics of price wars in markets with homogenous products. The discussion focuses on how Alfa Romeo has adopted aggressive pricing strategies to outmaneuver competitors while balancing the risks of reduced profit margins.

Price competition is a strategic approach adopted by businesses or firms within an industry to gain market share or attract customers by offering lower prices for their products or services compared to competitors. This tactic targets price-sensitive consumers who prioritize cost savings when making purchasing decisions. Companies engaging in price competition typically focus on reducing costs, improving operational efficiency, and leveraging economies of scale to maintain competitiveness while offering lower prices (Duffy, 1998).

In sectors like the automotive industry, where oligopolistic market structures prevail, price competition assumes a crucial role. Companies closely monitor competitors' pricing strategies and monthly offers, as this becomes essential to remain competitive (Onozaki and Yanagita, 2003). In such contexts, customers, especially those who are not brand loyal or enthusiasts, are inclined to choose a competitor's car if it offers a more affordable price (Krämer et al., 2016).

However, many managers mistakenly attribute the initiation of price wars solely to their competitors, overlooking their own role in fueling such conflicts. The failure to anticipate the consequences, often lead to increased sales volume but reduced profit margins. This reactive approach perpetuates untargeted price wars (McAfee, 2007).

Alternatively, some companies deliberately initiate price wars as part of their strategy. Decision-makers face a more nuanced pricing challenge, as they navigate the complexities of customer perceptions, market dynamics, and profit considerations (Krämer et al., 2016).

This is described with the term VUCA, that stands for volatility, uncertainty, complexity and ambiguity (McAfee, 2007).

Volatility refers to the rapid and frequent changes driven by factors like increased internet access and new marketing opportunities. The rise of online marketing has led to greater price transparency and easier price comparisons, heightening competition.

Both current and future pricing strategies are surrounded by uncertainty. Although strategic decisions can help mitigate some of this uncertainty, ambiguity persists, necessitating interpretation and adaptability. External factors also exert varying degrees of influence, complicating managerial decisions.

Complexity arises from the intricate interplay of multiple factors in pricing decisions. Managers must navigate a network of dependencies that includes market dynamics, consumer behavior, and competitive landscapes, rather than merely assessing consumer willingness to pay.

Ambiguity is driven by factors such as the speed of decision-making, the sheer volume of data, and constant pressure to act. In this complex environment, managers must swiftly interpret market signals to make informed decisions that align with organizational goals.

2.1 Bertrand model

The Bertrand model is a useful concept in oligopoly theory to illustrate price competition among firms with homogeneous products.

In this model, two firms with identical linear costs compete by setting prices for their products (2022/2023, slides from the course).

The key assumption is that consumers are very price sensitive and will purchase from the firm offering the lower price.

To solve this model, two approaches are commonly used: the Bertrand conjecture and the Bertrand-Nash equilibrium.

Under the Bertrand conjecture, each firm, in an attempt to attract customers from the other, begins undercutting its competitor by setting a lower price. This competitive dynamic leads to a situation where both firms eventually set prices equal to each other and equal to their marginal costs, eliminating any market power as they cannot undercut further.

In the case, instead, where firms have asymmetric marginal costs, just the more efficient firm, with lower costs, survives the competition. The less efficient firms cannot sustain a price lower than their marginal cost, while the most efficient one can set a price just slightly below the marginal cost of the other firms, capturing the entire market and making profits.

This model highlights how price competition can be intense, with only the most cost-efficient firm surviving and dominating the market.

The automotive sector is characterized by high levels of rivalry, with numerous brands competing across various market segments, from mainstream to premium vehicles. This rivalry often results in pricing wars, with automakers adjusting prices to undercut competitors or entice customers with attractive deals.

Moreover, consumer demand and preferences strongly influence pricing dynamics, necessitating automakers to align pricing strategies with market trends and economic conditions.

Technological advancements and innovation also contribute to price competition, as new features and improvements drive up production costs.

2.2 Alfa Romeo price competition strategies

Due to the mentioned price competition, Alfa Romeo adopted aggressive pricing strategies to penetrate new market segments.

Consequently, Alfa Romeo Junior lineup features competitive pricing, aimed at enticing customers with appealing offers for both hybrid and electric versions.

Alfa Romeo Junior pricing strategy is:

- Alfa Romeo Junior Base Hybrid 29,900€
- Alfa Romeo Junior Base Electric 39,999€
- Alfa Romeo Junior Speciale Hybrid 31,900€
- Alfa Romeo Junior Speciale Electric 41,500€
- Prices for Alfa Romeo Q4 Hybrid and Electric 240 Veloce are not yet available, because these two vehicles will be presented in 2025

Surviving in this competitive market requires more than just offering low prices (the comparison with competitor's prices is shown in paragraph 5.1.2 "Alfa Romeo Junior's main competitors" and in paragraph 5.2 "Demand curves"); vehicles are not homogeneous commodities and embody unique design elements, street safety features, comfort enhancements and optional upgrades that cater to diverse customer preferences.

To navigate this competitive landscape and justify setting slightly higher prices compared to competitors, automakers must differentiate their products.

Product differentiation implies enhancing brand awareness and fostering customer loyalty.

Implementing effective Customer Relationship Management (CRM), brand enforcement and loyalty strategies is crucial for attracting not only existing “Alfisti” enthusiasts but also a broader audience of potential customers.

Simultaneously, these strategies aim to persuade current Alfa Romeo owners, who are considering to change their car, to opt for the new Alfa Romeo Junior.

3. Entry barriers

In addition to price competition, this market is also characterized by entry barriers, that Alfa Romeo Junior faced in entering into the B-UV segment.

The automotive sector presents significant entry barriers, primarily due to economies of scale, absolute cost advantages, and product differentiation (Mitropoulos et al., 2017). This section explores how these economic concepts influence Alfa Romeo's strategy, helping the brand maintain a competitive edge and deter potential new entrants from the B-SUV market.

Economies of scale play a crucial role, as established automakers benefit from producing large volumes of vehicles, in order to reach the minimum efficient scale level (the quantity associated with the lowest average cost) which lowers their per-unit production costs. The greater the ability of incumbents to maintain or expand output post entry the less likely that entry will be profitable and the more that incumbents will be able to maintain and protect both market power and economic profits. This cost advantage is difficult for new entrants to match, especially considering the substantial investments required to achieve similar production scales.

Additionally, established manufacturers often possess absolute cost advantages stemming from their long-standing supplier relationships and access to advanced technology or superior input thanks to which they can acquire factors of production on more favorable terms and efficient production processes.

These advantages make it challenging for newcomers to compete on cost alone, accessing capital market with not equal terms. In addition, in a Bertrand model, as explained before, this cost advantage is crucial as the incumbent can price up to the marginal costs of the entrant without worry of attracting entry even if there are no sunk costs associated with entry or economies of scale.

Furthermore, product differentiation is a key entry barrier, with established brands having built strong customer loyalty, reputation and recognition over time.

Barriers to entry guarantee market power but not economic profits. Strategies that reduce the profitability of entry by introducing asymmetries or commit the incumbent to maintain output can instead result not only in the preservation of the incumbent market power but also economic profits.

While Alfa Romeo, as an established carmaker, faced fewer entry barriers entering the B-SUV segment, it still confronted challenges related to product differentiation.

Brand loyalty among consumers posed a competitive disadvantage for new entrants, as buyers often exhibit preferences for established products, requiring entrants to incentivize consumers to switch through lower pricing, aggressive advertising, higher quality, or other means that reduce entry profitability.

Due to this, brand loyalty represents a significant challenge in entering established segments within the automotive market.

4. Loyalty strategy

To face entry barriers and enhance competitiveness loyalty strategies are necessary.

This section examines the role of Customer Relationship Management (CRM) and loyalty programs in fostering long-term relationships with customers. By leveraging these strategies, Alfa Romeo aims to retain its current customer base while attracting new buyers to the Junior model, thereby strengthening its market position.

4.1 Customer relationship management

In the realm of customer relationship management (CRM), successful companies, whether operating domestically or globally, must build and maintain strong connections with a wide range of stakeholders, including customers, distributors, suppliers, employees, unions, governments, and other key players in the business environment.

CRM is vital for businesses due to its significant impact on multiple aspects of success (Frow and Payne, 2016). Firstly, it enables companies to foster strong relationships with customers, which leads to higher customer satisfaction and loyalty. Satisfied and loyal customers are more likely to make repeat purchases and recommend the brand to others, driving revenue growth and profitability.

Moreover, CRM allows businesses to gain valuable insights into customer preferences, behaviors, and needs through data analysis of their interactions. This deeper understanding enables companies to tailor their products, services, and marketing strategies to better align with customer expectations, resulting in more effective and targeted campaigns. Additionally, CRM enhances customer communication and support, leading to better service experiences and quicker issue resolution. By centralizing customer information and interactions, CRM systems streamline operations and improve internal collaboration, ultimately boosting overall business efficiency and competitiveness in the marketplace.

Regarding strategies to build strong bonds with stakeholders, there are three distinct concepts: relationship marketing, customer relationship management, and customer management (Figure 8). Each of these focuses on managing relationships but differs in scope. Relationship marketing involves strategically managing relationships with all relevant stakeholders to achieve long-term shareholder value. Critical tasks include identifying relevant relational forms for different stakeholders and their segments, optimizing interactions within stakeholder networks.

Whilst relationship marketing encompasses relationships with all relevant stakeholders, customer relationship management specifically targets relationships with customers and customer segments to

enhance shareholder value. This involves identifying suitable business and customer strategies, acquiring and sharing customer knowledge, deciding appropriate segment granularity, managing customer value co-creation, developing integrated channel strategies, and leveraging data and technology for superior customer experiences.

Finally, customer management focuses on tactical aspects of CRM implementation related to managing customer interactions, including campaign management, sales force automation, web-enabled personalization, and call center management.

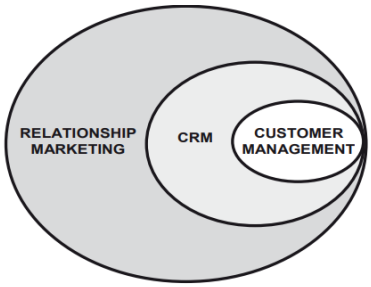


Figure 8: Relationship Marketing, CRM and Customer Management

4.2 Brand loyalty strategies

Brand empowerment strategies are crucial, because consumers are more likely to purchase products from well-known brands with a positive brand image to lower purchase risks (Gul et al., 2012). Brand acts as tool to reduce information asymmetries, to differentiate the product and to guarantee quality. Accordingly, consumers generally believe they can make a satisfying purchase by choosing well-known brands.

A brand encompasses various elements such as a name, term, symbol, or design, which distinguish products and services from competitors. Its image is not solely tied to technology, features, or the product itself; rather, it is cultivated through promotions, advertisements, and user experiences.

Profitable customer relationships stem from delivering on a powerful brand promise through exceptional brand experiences that surpass expectations.

Loyalty programs originated in the airline industry due to the significant challenges in differentiating products among competitors, when, in 1981, American Airlines introduced for the first time a frequent flyer program, offering free travel in exchange for customer loyalty. United Airlines quickly followed with its Mileage Plus program, prompting every company in the travel industry to develop or participate in loyalty programs (Duffy, 1998).

Brand loyalty strategies are essential for cultivating enduring relationships with customers, driving long-term value and enhancing customer engagement and satisfaction in the marketplace. Satisfaction occurs when customer expectations are met or exceeded, reinforcing the purchase decision and fostering positive attitudes toward the brand, which increases the likelihood of repeat purchases. Customer satisfaction is crucial because a company's sales come from two primary groups: new customers and repeat purchasers. It typically costs more to attract new customers than to retain current ones, making customer satisfaction a key driver of business success.

By prioritizing customer retention, businesses can reduce marketing costs and benefit from positive word-of-mouth marketing generated by loyal customers (Gul et al., 2012).

Loyalty programs also serve as valuable tools for collecting customer data and insights, which inform targeted marketing efforts and product development initiatives, while creating a competitive edge by establishing barriers to entry for competitors.

Alfa Romeo's loyalty strategy involves offering CRM offer workshops and an additional 2% discount for trade-in or scrappage to all customers who already own an Alfa Romeo MiTo or Alfa Romeo Giulietta (Figure 9), that represent a sizable pool of potential customers who already have a connection to the Alfa Romeo brand.

Figure 9: Alfa Romeo MiTo and Giulietta

This strategy is rooted in the fact that the existing car park of MiTo and Giulietta comprises 365,093 cars, with 136,454 being MiTo models and 228,639 Giulietta models, see Table 1.

Furthermore, 55.03% of these cars are relatively old (more than 10 years old), suggesting that their owners may be contemplating replacing their vehicles.

Moreover, if they have retained their Alfa Romeo for over ten years, it indicates a fondness for the brand, making them more likely to opt for another Alfa Romeo when upgrading.

Therefore, offering them an additional 2% discount serves as an incentive to steer them towards the new Alfa Romeo Junior, reinforcing their loyalty and incentivizing them to remain within the Alfa Romeo family when purchasing their next vehicle.

Table 1: MiTo and Giulietta car park

	2-7 years old cars	8-10 years old cars	>10 years old cars	Total
Total	72.833	91.364	200.896	**365.093**
Giulietta owners	59.634	67.738	101.267	**228.639**
MiTo owners	13.199	23.626	99.629	**136.454**

Furthermore, to incentivize brand customer loyalty, four packages have been introduced: Extended Care Premium, Service Care Plus, Complete Care and Complete Care Plus, which customers can choose based on their needs.

The Extended Care Premium package provides comprehensive coverage, including roadside assistance and a warranty extension for mechanical, electrical, and electronic components, starting after the two-year legal warranty and extending up to 5 years or 200,000 km. Service Care ensures vehicle longevity with fixed-price scheduled maintenance, roadside assistance, routine maintenance, original parts, and Europe-wide coverage, including up to 5 prepaid interventions. Complete Care combines these benefits, while Complete Care Plus adds extraordinary maintenance for wear parts not covered by routine services.

Starting March 4, 2024, service contracts will feature innovations like subscription options at no extra cost, harmonized remuneration rates, a revised accounting system with credit note payments, repositioned price lists, and expanded mileage and duration options, offering more flexibility for customers.

In the two tables below, it is shown the price lists, IVA included, in Euro for the four packages, both for the hybrid version (Table 2) and the electric version (Table 3).

Table 2: Loyalty packages for MHEV

JUNIOR MHEV						
	ANNI	KM	Extended Care Premium (L1)	Service Care Plus (L2)	Complete Care (L2+)	Complete Care Plus (L3)
10.000 KM/ANNO	3	30000	162	791	913	1.177
	4	40000	375	1.647	1.941	2.355
	5	50000	589	2.916	3.414	4.101
15.000 KM/ANNO	3	45000	195	791	937	1.205
	4	60000	450	1.648	1.995	2.471
	5	75000	723	2.917	3.511	4.357
20.000 KM/ANNO	3	60000	220	792	954	1.246
	4	80000	532	1.648	2.054	2.631
	5	100000	846	2.918	3.600	4.666
30.000 KM/ANNO	3	90000	274	792	994	1.399
	4	120000	656	1.649	2.144	3.040
	5	150000	1.008	2.920	3.717	5.405
40.000 KM/ANNO	3	120000	315	990	1.235	1.860
	4	160000	729	1.901	2.467	3.857
	5	200000	1.057	3.128	3.975	6.545

Table 3: Loyalty packages for BEV

JUNIOR BEV						
	ANNI	KM	Extended Care Premium (L1)	Service Care Plus (L2)	Complete Care (L2+)	Complete Care Plus (L3)
10.000 KM/ANNO	3	30000	228	356	494	726
	4	40000	554	724	1.080	1.427
	5	50000	882	1.256	1.844	2.411
15.000 KM/ANNO	3	45000	285	356	535	772
	4	60000	683	724	1.173	1.584
	5	75000	1.113	1.257	2.010	2.741
20.000 KM/ANNO	3	60000	328	357	565	826
	4	80000	824	724	1.273	1.790
	5	100000	1.326	1.257	2.162	3.118
30.000 KM/ANNO	3	90000	421	357	632	1.010
	4	120000	1.039	724	1.427	2.268
	5	150000	1.605	1.258	2.362	3.946
40.000 KM/ANNO	3	120000	492	436	768	1.357
	4	160000	1.165	825	1.625	2.951
	5	200000	1.689	1.341	2.512	4.969

5. Market analysis

This section provides a comprehensive description and analysis of the competitive environment in which Alfa Romeo Junior operate, to better understand the level of price competition and who are these competitors.

Game theory is the tool used to understand the strategic interactions between Alfa Romeo and its competitors. This analysis provides insights into how Alfa Romeo anticipates competitors' moves and positions itself to capture market share in a complex and highly competitive environment.

This section then analyzes the demand curves of the competitors and the price elasticity of demand to understand how much a change in the price of a vehicle affect the demand.

To start, it is important to clarify that the strategic choice of Alfa Romeo of positioning into this segment is driven by three primary factors; the former is that this segment is growing (as will be shown in the following graphs and tables), the second is that there are not many players into this segment, especially there are not many premium players, just Audi Q2 (ICE, specifically petrol), Volvo EX30 (BEV), and DS 3 (BEV and the new MHEV) and the new Mini Aceman BEV, launched the 24th of April.

Notably, only the DS3 is available in both electric and hybrid versions. Previously, the MINI Countryman was also offered in these variants, but it will no longer be produced because it will be reclassified as a C-SUV, so it will not be considered as a competitor.

The last reason is that when considering the future car choices of current B-SUV owners, projections made by Alfa Romeo indicate that a significant portion will continue within the B-SUV segment, comprising approximately 47% of this group.
Another 22% are anticipated to transition into the C-SUV category, segment in which Alfa Romeo Tonale resides.
A smaller percentage, around 4%, are expected to move up to the D-SUV and D-Car segment, which includes respectively Alfa Romeo Stelvio and Alfa Romeo Giulia models.
This forecast underscores an important strategic approach. By initially attracting customers with a B-SUV, the aim is to cultivate brand loyalty and subsequently retain these customers within the Alfa Romeo family. But the ultimate objective extends beyond the B-SUV sales alone. It includes nurturing a customer base that is not only loyal but also inclined towards exploring and purchasing other Alfa Romeo models, thereby driving overall sales across a broader range of vehicles within the brand’s lineup.

This strategy leverages initial entry into the B-SUV market as a gateway to foster enduring customer relationships and expand market presence across multiple segments.

In the table below, all the segments ranking by weight are shown (Table 4) (Source: Stellantis Worldwide Product Segmentation & Segment Forecast, Dataforce FY23 and Dataforce aprile 2024).

The data presented highlight that the B-SUV segment boasts the highest market share among all vehicle segments, indicating significant consumer demand and market influence within the automotive industry.

This observation serves to reinforce Alfa Romeo's strategic decision to position its new model, the Alfa Romeo Junior, within this particular segment.

Table 4: Segments ranking

Segment	% weight
#1 B-Suv	28%
#2 C-Suv	21%
#3 B-Car	19%
#4 A-Car	12%
#5 C-Car	8%
#6 D-Suv	4%

More in details, Alfa Romeo forecasted that the total B-SUV segment, encompassing both premium and mainstream offerings, will grow, doubling its market share from 5% in 2022 to 10% in 2025.
Additionally, not only the demand for B-SUV is expected to grow but also the demand for MHEV vehicles.
In fact, in the first quarter of 2024, Mild-Hybrid (MHEV) fuel experienced a 9,68% growth (+16,131 units) compared to the same period in 2023 (Table 5).

Table 5: MHEV sales YTD

Model	YTD 24(until April)	YTD 23(until April)
Fiat Panda	50738	40728
Lancia Ypsilon	17814	17537
Toyota Yaris Cross	16021	16631
Toyota Yaris	14666	9199
Ford Puma	13332	12850
Nissan Qashqai	9723	7830
Fiat 500	9570	14088
Kia Sportage	8297	6559
Toyota C-HR	6280	4961
Suzuki Vitara	5133	4351
Suzuki Ignis	4638	4218
Fiat 500X	4398	1367
Hyundai Tucson	4330	6226
Audi A4, S4	3748	2251
Suzuki Swift	3654	3583
Ford Focus	3631	6776
Alfa Romeo Tonale	3606	4791
Suzuki SX4 S-Cross	3266	2768

In contrast, Full Electric (BEV) fuel saw a decrease, with a 10,76% decrease (-1,477 units) in the first quarter of 2024 over the previous year (Table 6).

Table 6: BEV sales YTD

Model	YTD (until apr) 2024	YTD (until apr) 2023
Tesla Model Y	2583	3437
Tesla Model 3	1382	1571
Jeep Avenger	857	40
Volvo EX30	814	0
smart fortwo	764	1697
VW ID.3	735	515
Fiat 500e	718	1903
BMW iX1	704	325
Peugeot 208	427	681
Mercedes EQA	423	264
MG 4	365	723
Renault Twingo	359	774
Audi Q4 e-tron Sportback	355	322
Ford Mustang Mach-E	336	167
smart #1	264	0
Dacia Spring	255	698
Fiat 600e	249	0
Audi Q4 e-tron	220	348
Mercedes EQB	219	134
Citroen C4	218	125

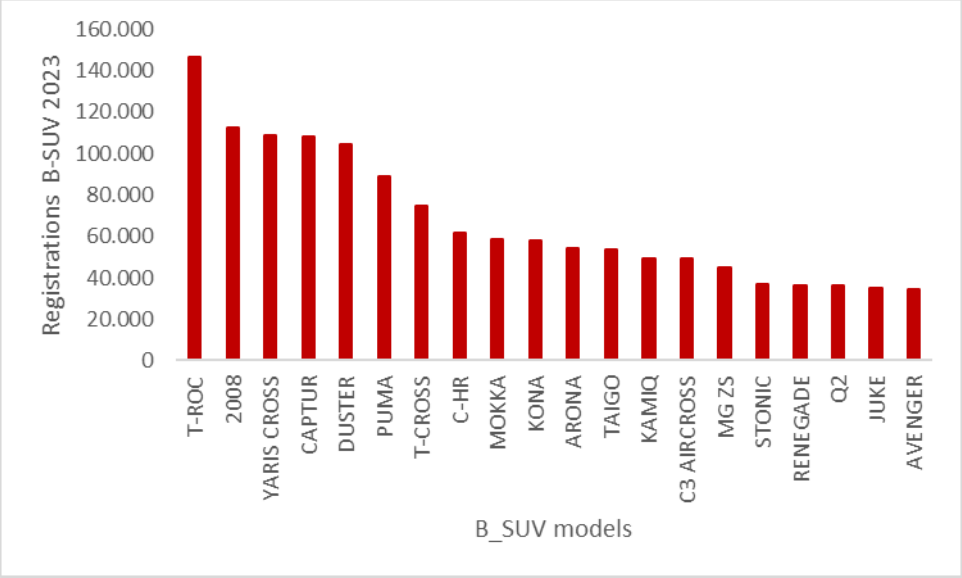
Additionally, given the expected growth of the B-UV segment, Alfa Romeo attempted to forecast the number of registrations and market share for various B-UV models in 2025 (Table 7).

Table 7: Forecasted registrations and MS B-UV 2025

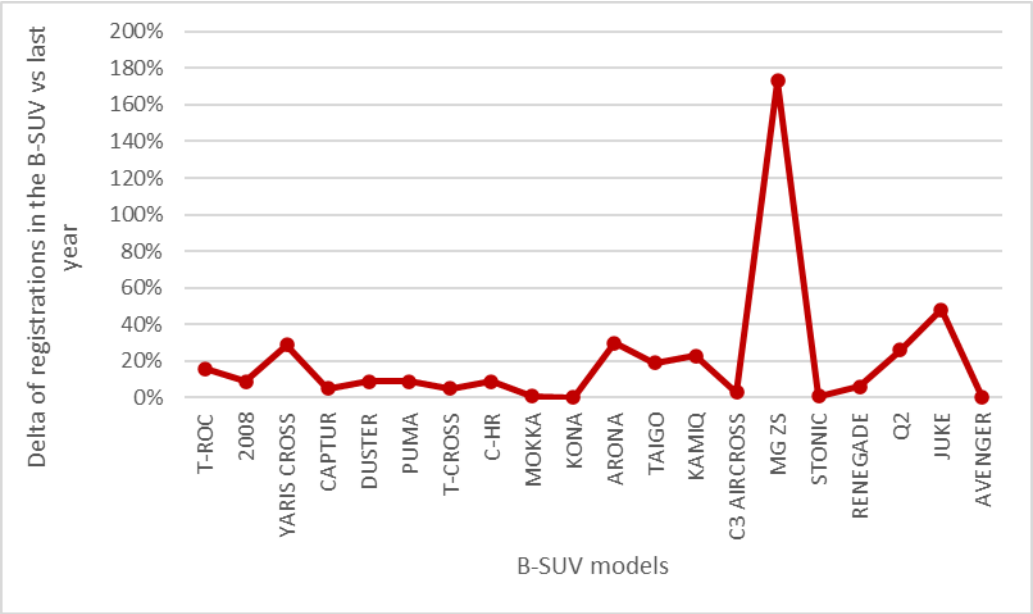
Model	Registrations	Market Share
Toyota Yaris Cross	32.921	7,3%
Alfa Romeo Junior	31.400	7,0%
VW T-ROC	31.373	6,9%
Ford Puma	29.039	6,4%
Renault Captur	28.949	6,4%
Dacia Duster	27.949	6,1%
Jeep Renegade	26.661	5,9%
Fiat 500X	26.151	5,8%
Peugeot 2008	22.179	4,9%
Jeep Avenger	21.187	4,7%

These forecasts are based on the observed number of registrations of the B-SUV in 2023.

The effective number of registrations (Graph 1) and the percentage increase in registrations of the major players in the B-SUV segment in 2023 compared to the previous year (2022) are shown in the graphs below (Graph 2) (Source: Stellantis Worldwide Product Segmentation & Segment Forecast, Dataforce FY23 and Dataforce aprile 2024).



Graph 1: B-UV registrations 2023



Graph 2: Delta registrations 2022 vs 2023

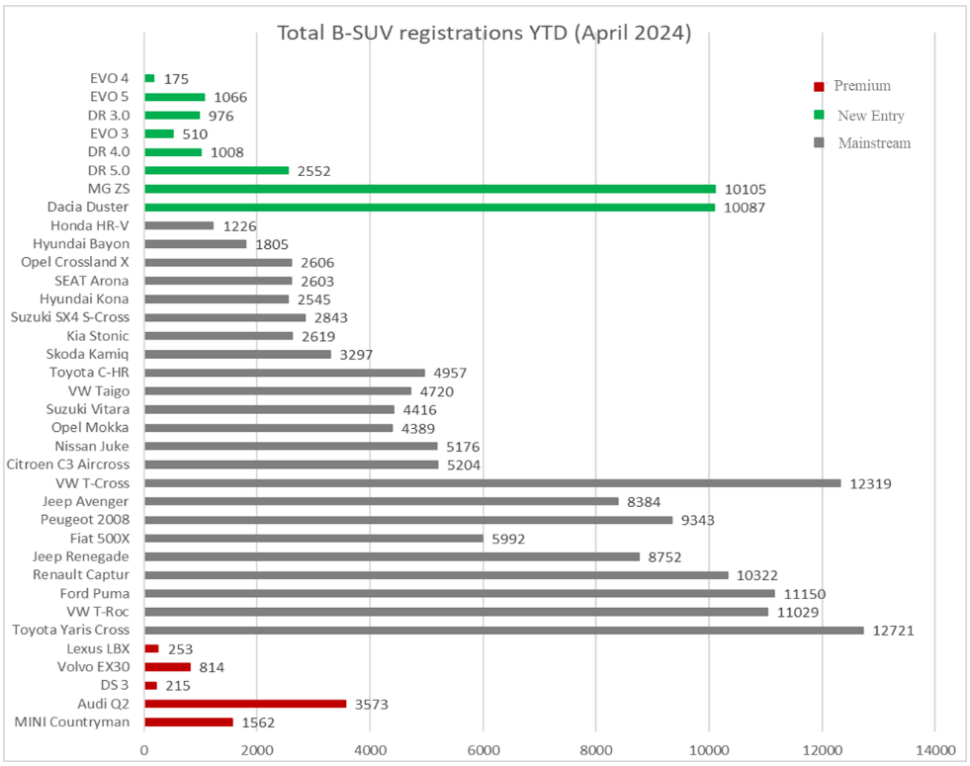
These two graphs show that there were just two premium players into this segment: BMW (T-Roc) and Audi (Q2).

Additionally, comparing the number of registrations of B-UV in 2023 with the ones in 2024 could provide valuable insights into the growth of the B-UV segment, forecasted by Alfa Romeo.

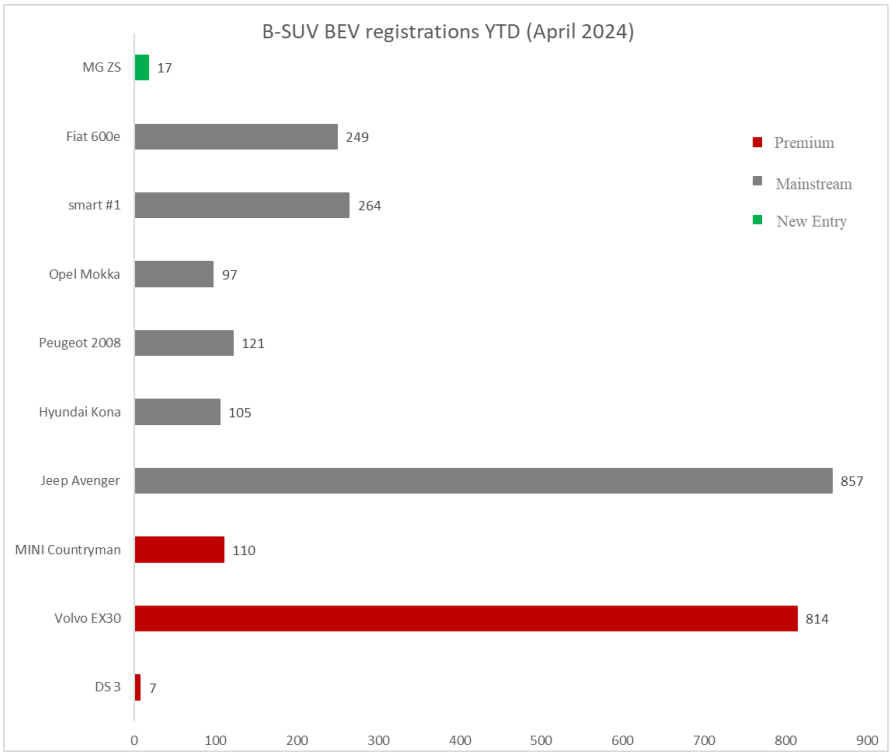
For this purpose, the three graphs below illustrate the number of registrations for the total B-SUV segment (Graph 3), the B-SUV BEV (Graph 4), and the B-SUV MHEV (Graph 5) from January to April 2024 (Source: Stellantis Worldwide Product Segmentation & Segment Forecast, Dataforce FY23 and Data force aprile 2024).

Overall, in the first quarter of 2024 the B-UV segment is grown by 10% with respect to the first quarter of 2023 (see Appendix C).

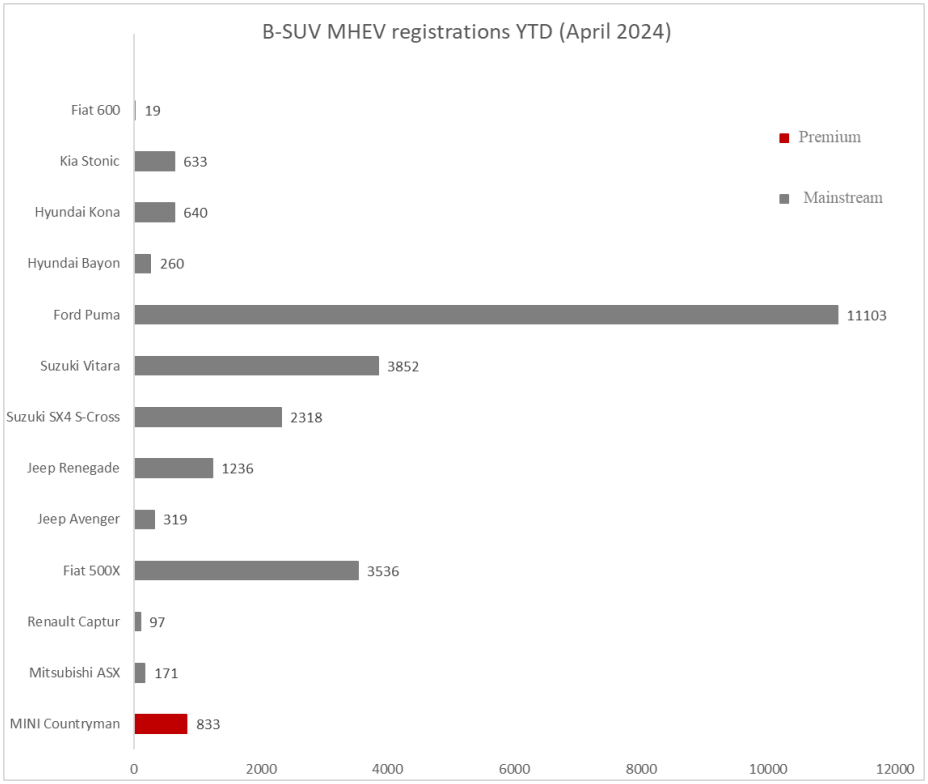
Looking at the graphs below, it is possible to notice that in the first quarter of 2024, there are five premium brands competing into this segment, instead of the two of one year before, that are Lexus, Volvo, Audi, DS and Mini.



Graph 3: B-SUV registrations year to day (YTD)



Graph 4: B_SUV BEV registrations year to day (YTD)



Graph 5: B-SUV MHEV registrations year to day (YTD)

It is also important to show the ranking of B-SUV electric (Table 8) and hybrid (Table 9) vehicle models, ordered by the number of vehicles sold in April 2024 (Source: Dataforce FY23 and Dataforce April2024, Dataforce April2023).

The data reveals that the market is not saturated with competitors.

The few premium models into the B-UV BEV segment include DS3, Volvo EX30, that is Alfa Romeo Junior's "car to kill", i.e. its main competitor in the B-SUV premium electric vehicles, and MINI Countryman. This supports Alfa Romeo's strategy of entering the premium electric B-SUV segment, which currently has only two competitors: Volvo EX30 and the newcomer (MINI Aceman).

Table 8:B-SUV BEV apr24

Model	apr-2	apr-23
Volvo EX30	206	0
Jeep Avenger	191	0
MINI Countryman	88	0
smart #1	66	0
Fiat 600e	41	0
Peugeot 2008	22	49
Opel Mokka	21	105
Hyundai Kona	10	68
MG ZS	9	7
DS 3	4	4
EVO 3	1	0

The premium B-UV MHEV models are, instead, MINI Countryman and Lexus LBX.

DS also has introduced a new MHEV vehicles, DS3, in April 2024. For this reason, its sales are not listed in these tables, as for MINI Aceman BEV.

This not crowded premium segment continuous to reinforce Alfa Romeo strategy to produce and sell a hybrid B-SUV vehicle.

Table 9: B-SUV MHEV apr24

Model	apr-24	apr-23
Ford Puma	2931	2614
Toyota Yaris Cross	2217	2197
Suzuki Vitara	1202	621
Toyota C-HR	992	644
Fiat 500X	906	168
Suzuki SX4 S-Cross	735	419
Hyundai Kona	608	193
Nissan Juke	571	61
Renault Captur	531	751
MINI Countryman	406	0
Honda HR-V	304	70
Jeep Renegade	271	375
Jeep Avenger	154	0
Kia Stonic	135	226
Lexus LBX	126	0
Mitsubishi ASX	73	0
Hyundai Bayon	62	74
Fiat 600	19	0

In addition to registrations, it could be useful to show also the market shares of various brands within the B-SUV segment, categorized into premium (where Alfa Romeo resides), upper mainstream, and mainstream segments (Table 10) (Source: Stellantis Worldwide Product Segmentation & Segment Forecast, Dataforce FY23 and Dataforce aprile 2024). Market shares represent the portion or percentage of total sales or registrations of a company with respect to the total ones of specific market.

Table 10: Market shares for each B-UV segment

16,042	Premium Brands
131,847	Upper mainstream Brands
284,167	Mainstream Brands

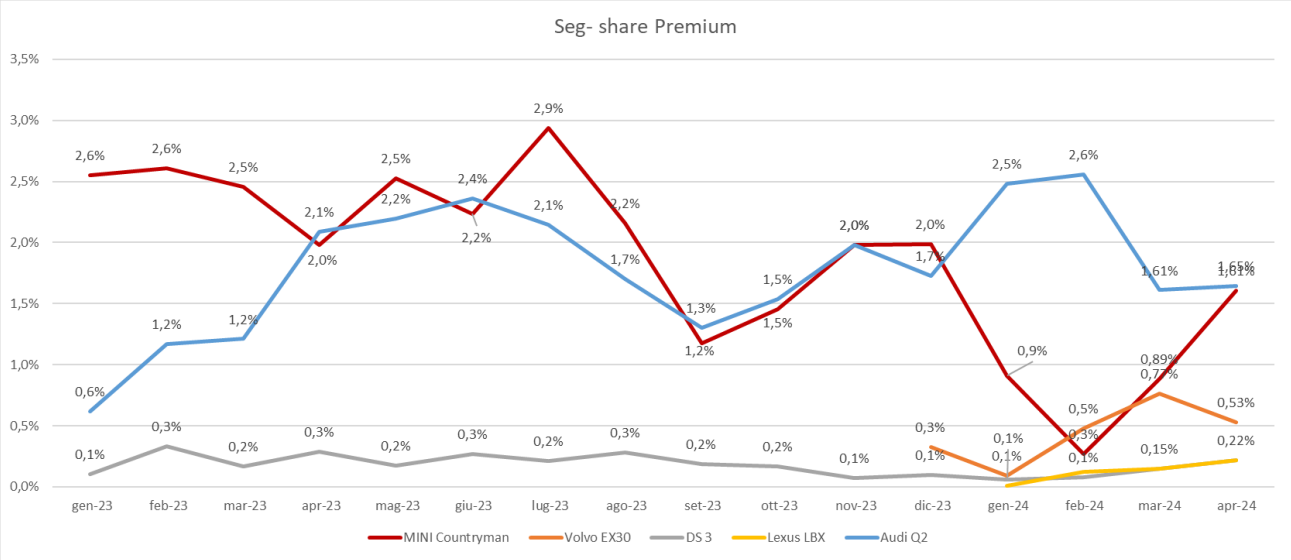
Premium brands collectively account for 3.71% of the total B-SUV market share ($\frac{16,042}{16,042+131,847+284,176} * 100$), with previously mentioned players including Audi Q2, Mini Countryman, Volvo EX30, Lexus LBX, and DS3.

Upper mainstream brands hold a 30.52% market share, with key contenders like VW T-Roc, Jeep Avenger, and Peugeot 2008.

Mainstream brands dominate the segment with a 65.77% market share, featuring models such as Toyota Yaris Cross, Ford Puma, and Renault Capture.

The graph below illustrates the percentage weight of these premium brands (MINI Countryman, Volvo EX30, DS3, Lexus LBX and Audi Q2) within the B-UV segment until April 2024 (Graph 6) (Source: Dataforce FY23 and Dataforce January, February, March, April 2024).

In 2024, Audi Q2 experienced an increase in its percentage of share, positioning as the brand with the highest percentage within these five brands.



Graph 6: Market share of Premium brands 2023-2024

5.1 Competition analysis

The environment in which Alfa Romeo Junior operates is an oligopolistic market.

Market structures are classified into four categories, that are perfect competition, monopolistic competition, oligopoly and monopoly, according to the degree of concentration, the entry barriers and the product differentiation.

If a market is perfectly competitive an equilibrium between quantity demanded and quantity supplied is realized, led by the Invisible Hand, and it satisfies Pareto efficiency. If, instead, a market fails owing to the existence of monopoly or oligopoly, externalities among agents come out and the market is not able to attain an efficient resource allocation (Onozaki and Yanagita, 2003).

The striking feature of the modern industries is the dominance of several large corporations, competing for the lion's share of the market. For instance, in the Japanese automobile industry, the market share of the four largest corporations namely, Toyota, Nissan, Honda and Mazda, accounts for 80% of the total market (Grodzicki and Skrzypek, 2020).

Specifically, oligopoly is an industry in which few firms compete and where market power is collectively shared. According to the Bertrand competition in oligopoly, as already explained before, only two firms seem enough to eliminate market power, reducing profit at zero.

Among these oligopolistic competitors in the automotive industry, Tesla has recently emerged as a leader by announcing significant price cuts, prompting other automakers to follow suit and triggering an unprecedented wave of price reductions in the New Energy Vehicles (NEV) market (Requia et al., 2018). This is why the Tesla Model Y has been included as a competitor to monitor in the tables below, even though it is neither an SUV nor a premium brand. With its lowered price, Tesla can capture a large market share of customers interested in an electric vehicle.

This intense competition has significantly eroded the market share of Traditional Energy Vehicles (TEV).

Increased consumer acceptance of NEVs, improved range, and reduced production costs are beneficial for NEV manufacturers and social welfare but pose challenges for TEV manufacturers.

This fierce competition, while stimulating market development, also carries risks of instability in the automotive industry. This volatility could threaten the long-term stability of the sector and complicate the smooth transition between old and new energy sources (Unilateral Conduct Working Group, 2018).

Consequently, in an oligopolistic market companies cannot ignore the behavior of their competitors, posing the base for a strategic interaction theory, called Game Theory, according to which players need to rationally forecast the opponent's behavior and act upon.

5.1.1 Game Theory

Game theory is a set of tools that is used to model the behavior or choices of players when the payoff of a choice depends on the choices of other players. Recognized payoff interdependency gives rise to interdependent decision making or strategic interaction (2022/2023 slides from the course).

Basically, the optimal choice of a player depends on his/her expectation of the choices of others playing the same game.

There are players, rules, outcomes, that depend on the actions chosen by players, and payoffs, which represent the players' preferences over the outcomes of the game.

A game could be static, where players move simultaneously, or dynamic, in which players move sequentially.

Additionally, players could have perfect information, knowing all the past and present actions of the other players, or incomplete information, where players do not have information of the past history of the game neither of the current period.

The assumptions are that players are rational, meaning that they act to maximize their payoffs over the outcomes, and have common knowledge, meaning that all players know the structure of the game, know that their opponents are rational and that their opponents know that they know this information. The game could end with a common equilibrium, called Nash Equilibrium, for which every player's strategy is a best response to the strategies of all the other players. It might be not unique, or it may not exist.

However, in a subgame, that is a smaller game embedded in the complete game and analyzed autonomously, not all Nash Equilibria are equally rational, as some of them could contain a non-credible threat. To this purpose, the concept of Subgame Perfect Nash Equilibrium (SPNE) is introduced. It is a NE that also respects the principle of sequential rationality, according to which an equilibrium strategy must be rational for the corresponding player not only at the initial node but in every subgame, meaning that is a comprehensive credible threat.

For the automotive case the game is a static game, because players' actions are undertaken simultaneously at the beginning of each month for an extended time span, with almost perfect information, because players know what their opponents did in all the previous stages, due to the fact that it is possible to keep track of all the offers, promo prices, total prices and additional services established and offered by the competitors to the customers. However, the information is almost perfect and not perfect because players do not know the actions of their opponents in the current stage, when they set the promo for the current month. More specifically, is an infinitely repeated game, or super game, because this game does not have a predictable or known end, in which stages represent time periods.

Due to the fact that this game is infinitely, it is not possible to use backward induction to solve it.

Backward induction is a procedure used in a finite game to find the SPNE.

One possible SPNE for this game is to play an infinite number of times Rat at every stage, assuming a non-cooperative behavior.

This is exactly the strategy adopted in the automotive market where each firm compete with the others. The strategy is looking at what the competitors have done in the past, forecasting their current actions and setting a more convenient price or offering a vehicle with enhanced characteristics with almost the same price.

Another alternative, not implemented in the automotive sector, is to play Clam in the first period (t = 1), to stimulate a collaborative approach, and look at what the competitors will do. If they collaborate

and play Clam, all players will play Clam in the future, if, instead, they will play Rat, the game will continue with no cooperation and all players will play Rat at each stage.

In the automotive sector, "Playing Clam" refers to aligning vehicle prices closely with competitors for models with similar features, allowing manufacturers to maintain higher prices collectively without risking market share loss to lower-priced alternatives. Conversely, "Playing Rat" involves undercutting competitors by consistently setting slightly lower prices to attract more customers and gain a competitive advantage.

This alternative strategy is known as “Grim punishment strategy” as if the rival deviates from cooperation (to Clam) he will be punished with a non-cooperative (to Rat) behavior forever.

This strategy is an example of trigger strategy as the past actions of the rival cam trigger a change in behavior. This strategy is a Nash Equilibrium if the payoffs of Clam-Clam are higher than the ones of Rat-Rat.

Explained better, the players, who will play after the first who played clam, can decide to play rat or clam. If they play rat (clam-rat) they will enjoy high payoffs in that stage, but then the first player will always play rat and so they will have lower payoff (rat-rat) forever with respect to the ones relative to play clam after the first have played clam (clam-clam, that are lower that clam-rat payoff). Consequently, if players are sufficient patient they will collaborate and play clam because they will notice that they will experience higher payoff in the future than if they play rat, because in the latter case they will enjoy higher payoff just in that stage, but for the other stages their payoff will be lower than clam-clam case.

To explain the patience of the players, a discount factor δ is introduced to discount future payoffs and to represent how much is worth today a dollar received in the next period. The higher δ the more the agents are patient.

δ is related to the discount rate r; the amount of compensation required to delay payment of a dollar by one period. Particularly: $\delta = \frac{1}{1+r} < 1$

One dollar today is worth (1 + r) dollars tomorrow. The higher r the less patient are the agents.

The payoff in a supergame is the present value of his payoff from each period or stage:

$$V_i = \sum_{t=1}^{\infty} \delta^{t-1} \pi_i(a_i(t), a_{-i}(t))$$

Where $\pi_i(a_i(t), a_{-i}(t))$ is player i’s payoff when i plays at $a_i(t)$ and the opponents play $a_{-i}(t)$.

This trigger strategy, thanks to the game without a forecasted end (it is not necessary infinite, is a game without a known end), contains a credible threat as to play Rat is a NE in the stage game.
The multiplicity of SPNE in the super game is established by the Falk Theorem, according to which any possible outcome such that each player gets a payoff at least as large as what get in the Nash Equilibrium to the stage game, can be sustained as a SPNE to a super game if the discount factor is close enough to one.

This game illustrates the importance for Alfa Romeo to monthly analyze and monitor competitors' offers, while also forecasting their actions to strategically propose better offers and gain market share. Moreover, it's crucial to consider various factors beyond price and offer convenience. For instance, Alfa Romeo is a premium brand whilst some of its competitors are mainstream or upper mainstream brands, leading to the fact that their vehicles are reasonably sold at lower prices. Other factors include horsepower and the type of motorization. Concerning the latter point, it is important to highlight that hybrid and electric vehicles tend to be more expensive than petrol or diesel ones.

5.1.2 Alfa Romeo Junior's main competitors

The tables below provide a more detailed overview of the competitive landscape for Alfa Romeo Junior, highlighting the key competitors in both the electric and hybrid vehicle segments as of June 2024 (that are already shown in Table 8 and Table 9).
The first set of tables focuses on electric competitors, including premium (Table 11), upper mainstream, mainstream categories, and Tesla (Table 12). The second set examines hybrid competitors within the same categories; premium (Table 13), upper mainstream and mainstream (Table 14).

These tables present several important financial metrics, among which the Manufacturer's Suggested Retail Price (MSRP), which is the base price without discounts and includes the " on-road costs" ("messa su strada"), the promotional price, that includes in brand-specific discounts such as financing or leasing deals, and the government incentives (all these data are taken from the websites of each vehicle).
Additionally, they detail the monthly installment, the deposit, and the final payment required if the customer chooses to purchase the vehicle at the end of the lease or financing term (Residual Value/Guaranteed Future Value or RV/VGF).

There are also shown the services included like the Wallbox, that, as already said, is embedded in the price of Alfa Romeo Junior Speciale Electric.

One of the most important metrics is the Leasing Factor (LF), that evaluates the financial attractiveness of leasing a vehicle compared to other acquisition methods such as direct purchase or financing through a loan.

It is calculated as:

$$LF = \frac{Monthly\ Installment + \frac{Deposit}{Duration\ (in\ Months) - 1}}{Total\ Price\ of\ the\ vehicle\ (MSRP)} \times 100$$

A lower leasing factor indicates that the lease payment is relatively low in relation to the vehicle's cost, making leasing a more attractive option.

Alfa Romeo uses it to compare different leasing offers to determine the most cost-effective choice and to increase the competitiveness of its ones.

BEV PREMIUM

Table 11: BEV Premium financial metrics

giu-24	PREMIUM							
B & B-UV BEV	Alfa Romeo JUNIOR	Alfa Romeo JUNIOR	MINI Cooper E	MINI Countryman E	Volvo EX30	DS3	Lancia Ypsilon	Lancia Ypsilon
Version	Elettrica	Elettrica SPECIALE	Essential	Essential	Core MY25	Performance Line E-Tense	Base	Ed. Limitata Cassina
Fuel	BEV	BEV	BEV	BEV	BEV	BEV	BEV	BEV
HP	156	156	184	204	158	153	156	156
Financial Product	Leasing	Leasing	Leasing	Leasing	Leasing	PCP	PCP	PCP
MSRP	39.999 €	41.500 €	32.300 €	40.705 €	35.900 €	42.150 €	35.399 €	39.999 €
Gov. Incentives	11.000 €	11.000 €	3.000 €	3.000 €	5.000 €	13.750 €	11.000 €	11.000 €
Discount promo	1.170 €	0 €	0 €	0 €	1.077 €	3.250 €	1.000 €	0 €
Promo Price	26.829 €	29.500 €	29.300 €	37.705 €	29.823 €	25.150 €	23.399 €	28.999 €
Discount (incl. Gov. Incentives)	33%	29%	9%	7%	17%	40%	34%	28%
Monthly Installment	170 €	170 €	287 €	390 €	274 €	170 €	130 €	180 €
Deposit	0 €	1.330 €	9.368 €	9.362 €	5.439 €	610 €	4.269 €	4.452 €
% Deposit	0%	3%	29%	23%	15%	1%	12%	11%
Duration (Tot. Months)	36	36	36	48	36	36	36	36
KM (Tot. Km/000)	30.000	30.000	30.000	60.000	30.000	45.000	30.000	30.000
TAN	4,99%	4,99%	5,49%	5,49%	6,99%	4,99%	4,99%	4,99%
RV/VGF	23.254 €	24.786 €	16.442 €	18.842 €	20.668 €	21.510 €	18.479 €	22.855 €
% RV/VGF	60,4%	61,2%	52,5%	47,5%	57,6%	52,1%	52,2%	58,5%
Rebate	1.000 €	1.000 €	0 €	0 €	0 €	1.000 €	0 €	0 €
Services included	Wallbox	-	Charging Card	Charging Card	-	-	Wallbox	Wallbox + 3y EW
Total Customer Cost	29.204 €	32.066 €	35.855 €	46.534 €	35.697 €	28.070 €	27.298 €	33.607 €
Leasing Factor (LF)	0,4	0,5	1,7	1,4	1,2	0,4	0,7	0,8

BEV UPPERMAINSTREAM, MAINSTRAM AND TESLA

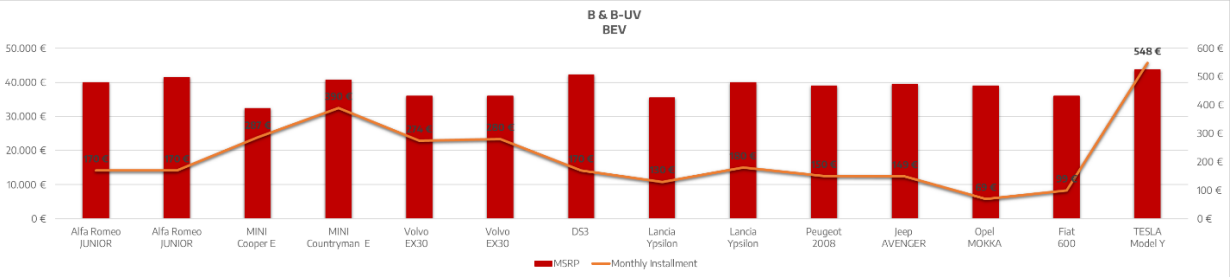
Table 12: BEV Uppermainstream, Mainstream and Tesla financial metrics

giu-24	UPPER-MAINSTREAM		MAINSTREAM		
B & B-UV BEV	Peugeot 2008	Jeep AVENGER	Opel MOKKA	Fiat 600	TESLA Model Y
Version	Active	Longitude	Edition	Red	Trazione posteriore
Fuel	BEV	BEV	BEV	BEV	BEV
HP	136	156	156	156	300
Financial Product	Leasing	Leasing	Leasing	Leasing	Leasing
MSRP	38.949 €	39.400 €	39.000 €	35.950 €	43.675 €
Gov. Incentives	11.000 €	11.000 €	13.750 €	11.000 €	5.000 €
Discount promo	6.799 €	3.700 €	41 €	1.750 €	0 €
Promo Price	21.150 €	24.700 €	25.209 €	23.200 €	38.675 €
Discount (incl. Gov. Incentives)	46%	37%	35%	35%	11%
Monthly Installment	150 €	149 €	69 €	99 €	548 €
Deposit	0 €	0 €	0 €	1.350 €	7.500 €
% Deposit	0%	0%	0%	4%	17%
Duration (Tot. Months)	36	36	36	36	48
KM (Tot. Km/000)	30.000	30.000	30.000	40.000	40.000
TAN	3,75%	3,75%	0,00%	3,99%	7,49%
RV/VGF	16.385 €	20.878 €	20.558 €	19.812 €	18.780 €
% RV/VGF	43,0%	54,3%	54,2%	56,8%	44,0%
Rebate	0 €	0 €	0 €	0 €	0 €
Services included	Wallbox	Wallbox	-	-	-
Total Customer Cost	21.635 €	26.093 €	22.973 €	24.627 €	52.036 €
Leasing Factor (LF)	0,4	0,4	0,2	0,4	1,6

Alfa Romeo Junior leasing factor, especially for the base version, is one of the lowest, overcome just by Opel MOKKA a mainstream brand with inherently lower price, monthly installment and deposit. Among the premium vehicles, Alfa Romeo Junior and DS 3 are the ones with the lowest leasing factor, reinforcing the position of DS3 as one of Alfa Romeo Junior main competitor.
Looking at the table, Alfa Romeo has strategically set the price of Junior slightly lower than the DS 3 trying to beat its competitor (39.999€ for the base version and 41.500€ for the Speciale version versus 42.150€ of the DS3) while offering the same monthly installment.
Additionally, the 0€ deposit for the Alfa Romeo Junior Base is an aggressive strategy, uncommon among premium competitors but prevalent among mainstream and upper mainstream brands.

This analysis is not only useful for evaluating the competitiveness of leasing offers but also for assessing whether Alfa Romeo Junior's pricing aligns with that of its competitors. If necessary, Alfa Romeo can use these insights to adjust pricing strategies, starting from reducing its production and marketing costs.
The tables reveal that the Alfa Romeo Junior Electric has one of the lowest prices among premium brands, surpassed only by the Volvo EX30, already defined as one of its main competitors.
Additionally, while Mini Cooper and Lancia Ypsilon are priced lower, they are cars, not SUVs.

In the graph below are compared the different prices (MSRO) and monthly installments of the electric vehicles previously mentioned (Graph 7).



Graph 7: MSRO and monthly installments of BEV vehicles

MHEV PREMIUM

Table 13: MHEV Premium financial metrics

giu-24	PREMIUM							
B & B-UV MHEV	Alfa Romeo JUNIOR	Alfa Romeo JUNIOR	MINI Cooper	MINI Countryman	Audi Q2 NO OFFERS	DS3	Lancia Ypsilon	Lancia Ypsilon
Version	Ibrida	Ibrida SPECIALE	S Essential	C Essential		Performance Line	Ed. Limitata Cassina	Nuova Ypsilon Ibrida
Fuel	MHEV	MHEV	Petrol	Petrol	MHEV	MHEV	MHEV	MHEV
HP	136	136	156	170		136	100	100
Financial Product	Leasing	Leasing	Leasing	Leasing		PCP	PCP	PCP
MSRP	29.900 €	31.900 €	31.905 €	34.905 €		33.650 €	28.000 €	24.900 €
Gov. Incentives	3.000 €	3.000 €	0 €	0 €		3.000 €	3.000 €	3.000 €
Discount	867 €	0 €	0 €	0 €		1.350 €	0 €	1.000 €
Promo Price	26.033 €	28.900 €	31.905 €	34.905 €		29.300 €	25.000 €	20.900 €
Discount (incl. Gov. Incentives)	13%	9%	0%	0%	#DIV/0!	13%	11%	16%
Monthly Installment	200 €	200 €	290 €	329 €		200 €	180 €	130 €
Deposit	3.406 €	5.124 €	7.338 €	6.632 €		7.942 €	4.150 €	4.360 €
% Deposit	11%	16%	23%	19%	#DIV/0!	24%	15%	18%
Duration (Tot. Months)	36	36	36	48		36	36	36
KM (Tot. Km/000)	30.000	30.000	45.000	60.000		45.000	30.000	30.000
TAN	4,99%	4,99%	5,49%	5,49%		6,99%	4,99%	4,99%
RV/VGF	19.276 €	20.610 €	17.905 €	18.272 €		17.934 €	18.513 €	15.395 €
% RV/VGF	66,7%	66,7%	57,8%	53,8%	#DIV/0!	54,7%	66,1%	64,1%
Rebate	0 €	0 €	0 €	0 €		0 €	0 €	0 €
Services included	-	-	-	-		-	-	-
Total Customer Cost	29.682 €	32.734 €	35.393 €	40.380 €	0 €	32.876 €	28.963 €	24.305 €
Leasing Factor (LF)	1,0	1,1	1,6	1,3	#DIV/0!	2,0	1,1	1,0

MEHV UPPERMAINSTREAM AND MAINSTRAM

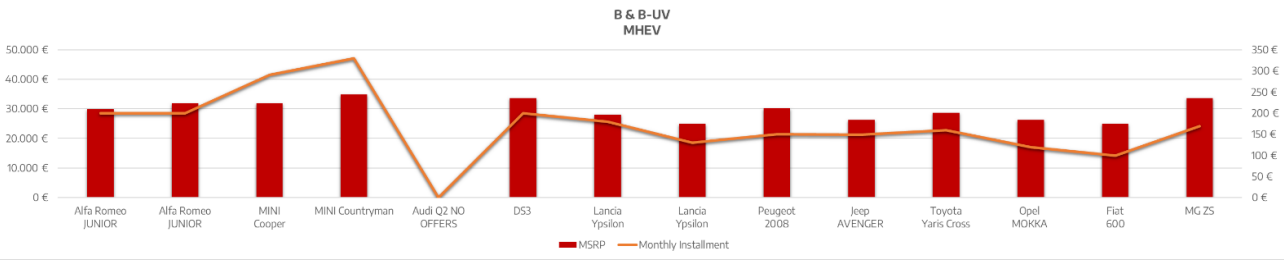
Table 14: MHEV Uppermainstream and mainstream financial metrics

giu-24	UPPER-MAINSTREAM		MAINSTREAM			ENTRY
B & B-UV MHEV	Peugeot 2008	Jeep AVENGER	Toyota Yaris Cross	Opel MOKKA	Fiat 600	MG ZS
Version	Allure	e-Hybrid	Active	Edition	Hybrid	COMFORT
Fuel	MHEV	MHEV	MHEV	Petrol	MHEV	PHEV
HP	136	100	115	100	100	258
Financial Product	PCP	Leasing	PCP	PCP	PCP	PCP
MSRP	30.150 €	26.200 €	28.650 €	26.200 €	24.950 €	33.590 €
Gov. Incentives	3.000 €	3.000 €	0 €	3.000 €	3.000 €	8.000 €
Discount	2.400 €	1.000 €	3.700 €	5.000 €	1.500 €	3.000 €
Promo Price	24.750 €	22.200 €	24.950 €	18.200 €	20.450 €	22.590 €
Discount (incl. Gov. Incentives)	18%	15%	13%	31%	18%	33%
Monthly Installment	150 €	149 €	159 €	119 €	99 €	169 €
Deposit	2.708 €	3.483 €	6.430 €	2.100 €	2.990 €	4.030 €
% Deposit	9%	13%	22%	8%	12%	12%
Duration (Tot. Months)	36	36	48	36	36	36
KM (Tot. Km/000)	30.000	30.000	40.000	15.000	30.000	
TAN	5,49%	6,45%	5,99%	7,99%	3,99%	6,95%
RV/VGF	19.932 €	17.549 €	15.594 €	15.458 €	16.576 €	18.661 €
% RV/VGF	67,9%	69,5%	56,5%	61,5%	69,5%	55,6%
Rebate	0 €	0 €	0 €	1.000 €	1.500 €	0 €
Services included	-	-	-	-	-	-
Total Customer Cost	27.890 €	26.247 €	29.497 €	21.723 €	23.031 €	28.606 €
Leasing Factor (LF)	0,8	0,9	1,0	0,7	0,7	0,8

Looking at the tables relative to MHEV vehicles, is it possible to notice that the Audi Q2, a significant competitor, lacks current offers.

Additionally, among hybrid models, the Alfa Romeo Junior Hybrid and Hybrid Speciale also boast the lowest leasing factors in their category, alongside the Lancia Nuova Ypsilon and Lancia Ypsilon Cassina Limited Edition. In the MHEV segment, the Alfa Romeo Junior Hybrid is competitively priced below its premium competitors, except for the Lancia Ypsilon, which is understandable as the Alfa Romeo Junior is an SUV, whereas the Lancia Ypsilon is a car.

In the graph below are compared the different prices (MSRO) and monthly installments of the MHEV vehicles previously mentioned (Graph 8).



Graph 8: MSRO and monthly installments of MHEV vehicles

In addition, to have perfect information about competitors' past actions and predict their future strategies, it is crucial to track their offers on a monthly basis. This involves recording the details of each competitor's offers and noting any changes in key parameters compared to the previous month. By doing so, Alfa Romeo can identify trends and anticipate market movements.

Furthermore, regularly updating and comparing of these metrics allows Alfa Romeo to benchmark its own offers against those of its competitors, ensuring its competitiveness in terms of pricing, leasing factors and included services.

5.1.3 Alfa Romeo Junior’s main competitors analysis

Below there is a list of the Alfa Romeo Junior and its main competitor vehicle’s characteristics (all these data are taken from the websites of each vehicle) (Table 15).

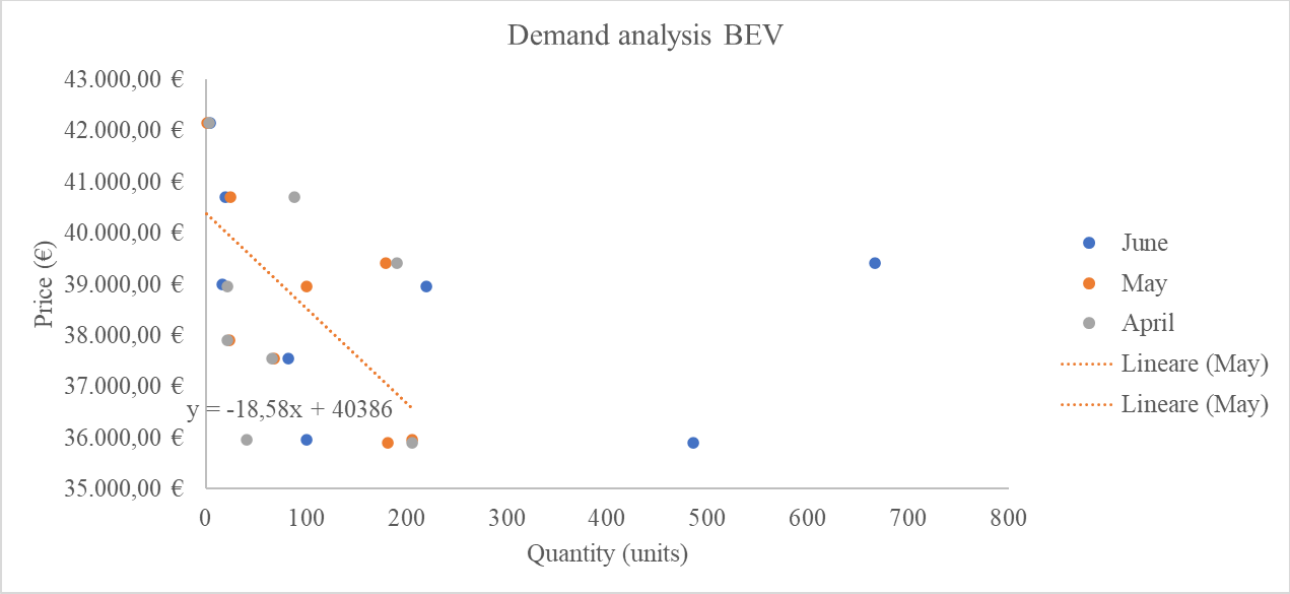
Table 15: Alfa Romeo Junior and its competitors

Model	Version	Max Power kW (hp)	Max Torque Nm	Max Speed km/h	Emissions CO_2 g/km	Dimensions of battery kWh	Autonomy km	Transmission	Picture
Alfa Romeo Junior	Electric Hybrid	115 (156) 100 (136)	260 230	150 206	0 117	51	410	Automatic	
Mini Aceman	Electric	135 (184)	290	160	0	42,5	310	Automatic	
Smart #1	Electric	200 (272)	343	180	0	47	330	Automatic	
Volvo EX30	Electric	200 (272)	343	180	0	51	344	Automatic	
DS3	Electric Petrol Diesel	100 (136) 95,6 (130) 95,6 (130)	260 260 300	181 181 181	0 123 123	51	344	Automatic (Manual on request for Petrol)	
Jeep Avenger	Electric E-Hybrid Petrol	115 (156) 74 (100) 74 (100)	260 205 205	150 180 185	0 111/114 126	54	400	Automatic (Manual on request for Petrol)	
Peugeot 2008	Electric Hybrid Petrol	115 (156) 100 (136) 100 (136)	260 230 205	150 206 183	0 110 126/133	54	395	Automatic (Manual on request for Petrol)	
Mini Countryman	Electric Petrol Diesel	230 (313) 125 (170) 120 (163)	494 240 305	225 212 200	0 133 124/127	64,6/66,5	399/432	Automatic	
Audi Q2	Petrol Diesel	140 (190) 110 (150)	320 360	250 216	162 138	No Battery	No Battery	Automatic	

5.2 Demand analysis

The quantities of the electric B-SUV sold in April, May and June 2024 with the associated prices are shown in the graph below (Graph 9) (Source: Dataforce24). The price considered is the MSRP, exclusive of any financing or leasing incentives, assuming the purchase of a car directly from a dealer without any promotional offers.

Each point is associated with model of a BEV B-UV.



Graph 9: BEV B-UV sold in April, May and June

Looking at these data, is it possible to notice that people are not too price-sensitive, exception DS3 that is the model with the highest price and accordingly with the lowest number of units sold (see Appendix A).

There is a negative relationship between price and quantity demanded but people look also at other factors beyond price, such as brand, the design, the offered features, among which horsepower, included services, and the convenience of the financing.

To make an example, Jeep Avenger is the model that sold the most in June, with almost 40% units more with respect to Volvo EX30 despite it costs 3,500€ more, whilst it sold just few units less than Volvo EX30 in April and may despite the higher cost.

Moreover, though they may eventually save money on gasoline and maintenance, BEVs are usually more expensive up front than conventional cars. Therefore, a greater price can turn off prospective customers who aren't sure they'll save money in the long run or who have limited funds. It is evident from the curve that there are variations in the demand for these cars in different months.

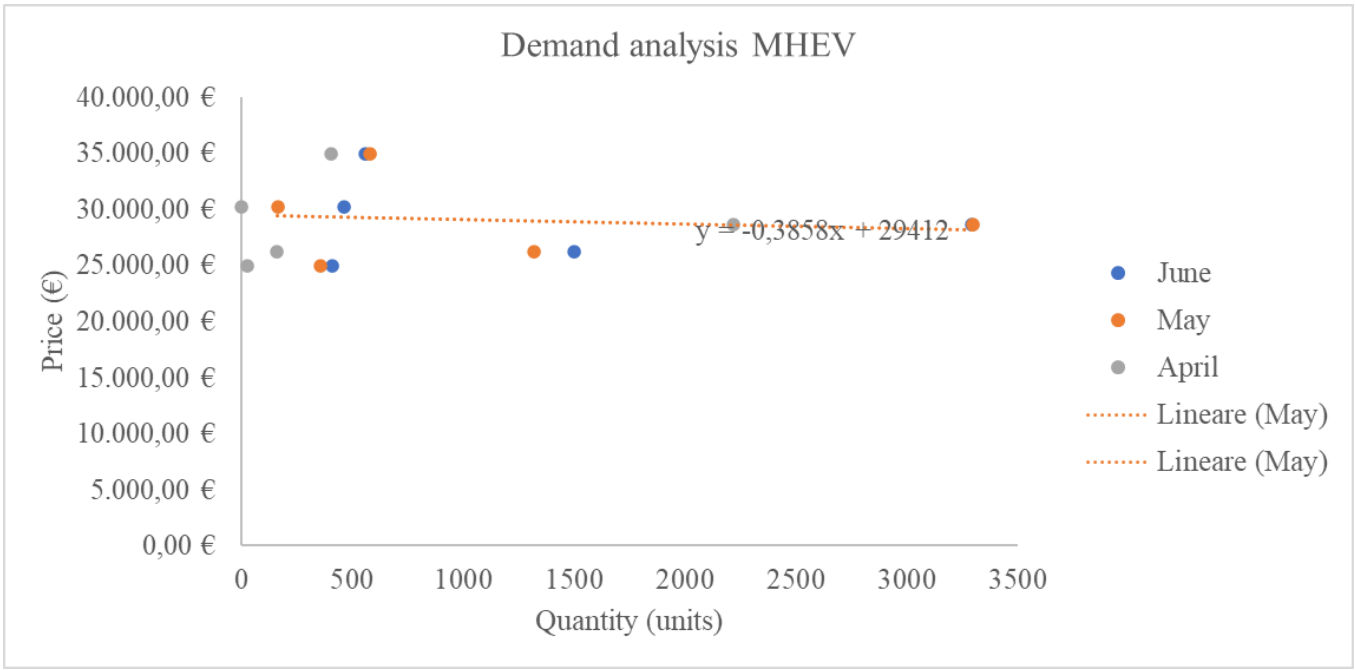
For instance, the Volvo EX30 was regularly priced at €35,900 in April, when demand was only 206 units. However, by June, demand had surged to 486 units, perhaps as a result of reasons other than price, including marketing campaigns or convenient financial offers.

The consistent pricing, however, continues to support the negative price-demand link by demonstrating that higher demand is typically attracted to lower-priced versions. This is evident looking at MINI Countryman and Opel Mokka, that sold less units with respect to Volvo EX30 and Jeep Avenger due to their high prices.

Moreover, technological developments that make BEVs more affordable or efficient, alterations in governmental regulations (such as subsidies for electric cars), rising fuel prices, and advancements in the infrastructure for charging BEVs are some of the factors that have the potential to move the demand curve for BEVs.

In the graph below is, instead, shown the quantities of the Mild-Hybrid B-SUV sold in April, May and June with their respective prices (Graph 10) (Source: Dataforce24). The price considered is, as for the electric vehicles, the MSRP, exclusive of any financing or leasing incentives, assuming the purchase of a car directly from a dealer without any promotional offers.

Each point is associated with model of a MHEV B-UV.



Graph 10: MHEV B-UV sold in April, May and June

Looking at these data, the highlights are the same as for the electric B-SUV.
Lexus LBS, despite its high price, sold 618 units in June (see Appendix B). Nevertheless this, there still is a negative relationship between price and quantity demanded, but this relationship, as for BEV, is influenced by other factors beyond price.
When opposed to BEVs, MHEVs often have a less steep demand curve.
In June, demand for the hybrid Jeep Avenger, which costs €26,200, was far higher than that of its BEV cousin, with 1,498 units sold. This implies that MHEVs are more in demand than BEVs. In addition, MHEVs, which combine aspects of conventional internal combustion engines with some advantages of electric technology, are frequently marketed as a more cost-effective option to BEVs.
Toyota Yaris Cross, with a price of €28,650, is the model that sold the most in June, with 3,293 units sold, indicating that consumers preferred this hybrid model even though its pricing was closer to the higher end of the MHEV spectrum. Additionally, the price of Toyota Yaris Cross is higher than the one of Jeep Avenger, but despite this, it sells more than twice as many units of the latter every month considered.
This high demand reinforces the fact that factors other than price, such as brand reputation, perceived reliability, and perhaps fuel efficiency, are considered by consumers when they have to buy a new vehicle.
Nonetheless, the general pattern continues to bolster the hypothesis that demand declines with price increases, as demonstrating by MINI Countryman, that sells less than Jeep Avenger and Toyota Yaris Cross possibly due it its higher price.
Lastly, while the MINI Countryman is more expensive, it still outsells the Fiat 600 and Peugeot 2008, but this can be due to the fact that it is a Premium brand whilst the others two are mainstream brands.

5.2.1 Demand elasticity

The decision of which prices to set depends also on how much the demand is elastic.
The "law of demand" states that as the price of a good increases, consumer purchasing tends to decrease.
These techniques were developed by the renowned British economist Alfred Marshall in the early 20th century (Anderson et al., 1997).
Price elasticity of demand is the tool used to measure consumer sensitivity to price, which quantifies the proportional change in demand resulting from a price change.

The formula for price elasticity of demand is:

$$\varepsilon = \frac{\partial Q}{\partial P} \times \frac{P}{Q}$$

- If ε is less than -1, demand is considered elastic, meaning price changes lead to opposite changes in demand (an increase in price results in lower demand, and a decrease in price leads to higher demand).
- If ε is between 0 and -1, demand is inelastic, indicating that price changes have little effect on the quantity demanded.
- If ε equals -1, it signifies that a price increase corresponds to an equal reduction in demand and vice versa.

Additionally, there are both long-run and short-run price elasticities of demand. Consumers cannot always adjust their purchasing decisions immediately in response to a price change. Thus, there is a long-run demand curve, which reflects the period when consumers have fully adjusted their purchase decisions to price changes, and a short-run demand curve, which reflects the period when consumers cannot immediately adjust their purchasing decisions to price changes.

In general, long-run demand is more price elastic than short-run demand because consumers have more time to adjust their behavior.

However, for durable goods like cars, the long-run demand can be less elastic than the short-run demand. This is because a person with an old car can wait a few years before replacing it, allowing them to thoroughly evaluate the most convenient offers. Conversely, in the long run, demand might become relatively inelastic, as the car will eventually need to be replaced if it breaks down, obliging the consumer to buy a new one even if there is an increasing in the price.

Despite this long-term inelasticity, competition remains significant, making the demand for a specific model elastic due to the availability of many substitutes; the more substitutes a product has the higher the price elasticity of demand.

It is important to highlight that even when consumers need to replace their cars, they are not willing to pay higher prices without justification. Instead, they seek the best balance between brand, quality, and price among the various options available. Thus, price competition continues to play a vital role in the market.

Therefore, elasticity of the demand depends on the kind of the good.

Automobiles, as already said, are durable goods that provide a stream of sustained consumption services and can be used more than once.

Thus, the price that consumers are willing to pay today depends on the expectations about the price of the good tomorrow.

Due to the nature of these durable goods, strategic consumers have incentives to delay purchasing if they anticipate that the firm will lower prices in the future.

Cost of waiting depends on the discount rate, so on the actual cost of consumption tomorrow. The larger it is, the greater the preference of consumers for a euro today as opposed to a euro tomorrow:

$$\frac{1}{1+i} = \delta$$

The discount rate (i) is a measure of impatient of consumers whereas the discount factor (δ) is a measure of patient.

5.3 Regression analysis

In the table below (Table 16) is shown the regression between the price and quantity demanded in June 2024 for MHEV and BEV vehicles.

The null hypothesis posits that an increase in the price of a vehicle does not affect its demand.

Table 16: Regression analysis

Statistic of regression	
R multiple	0,49307541
R^2	0,24312336
R^2 correct	0,18005031
Standard error	636,94162
Observation	27

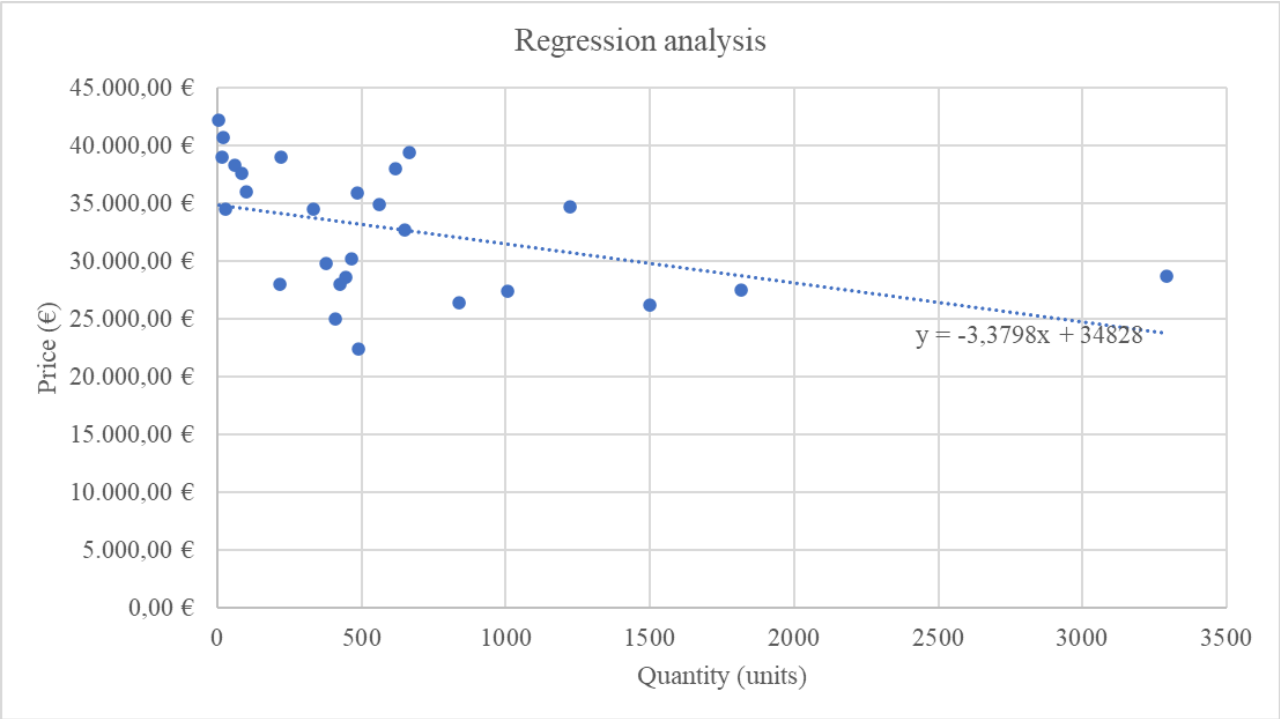
ANALYSIS OF VARIATION

	gdl	*SQ*	*MQ*	*F*	*Significance F*
Regression	2	3127606,366	1563803,18	3,854631242	0,035342821
Residual	24	9736671,042	405694,627		
Total	26	12864277,41			

	Coefficient	*Standard Error*	*t statistic*	*p value*	*Lower Bound 95%*	*Upper bound 95%*
Intercept	842,970912	1377,061522	0,61215196	0,546193656	-1999,144383	3685,086206
Price	-0,01763821	0,035624475	-0,49511485	0,625021727	-0,09116351	0,055887097
Hybrid	540,647924	399,6775775	1,35271017	0,188755951	-284,2460536	1365,541901

In the graph below (Graph 11) is shown the regression line with its equation, equal to:

$$y = -3{,}3798x + 34828$$



Graph 11: Regression line and equation

The purpose of this regression analysis is to investigate and quantify how the price of vehicles, specifically electric and hybrid models, affects the quantity demanded.

The regression equation indicates a negative relationship between vehicle price and demand, meaning that as the price increases, demand generally decreases. The price coefficient is -3.3798, suggesting that for every additional €1 increase in price, demand drops by about 3.38 units. This negative correlation aligns with basic economic principles, where higher prices typically lead to lower demand, assuming other factors remain constant.

However, the model's R^2 value is equal to 0.2431, meaning that only the 24.31% of the variation in vehicle demand is explained by the model's variables, price and vehicle type. This suggests that additional significant factors are not taken into account in this analysis, as 75.69% of the variation in demand remains unexplained. Consumer preferences, the availability of alternatives, brand loyalty, market trends, environmental concerns, the state of the economy, and government incentives for eco-friendly automobiles are examples of variables that may be considered.

Furthermore, the hybrid vehicle coefficient is 540.65, meaning that hybrid vehicles are often in greater demand than electric vehicles. This might be explained by elements like perceived dependability, electric car range anxiety, or the constraints of the current charging infrastructure.

Another key component of the regression analysis is the p-value, that evaluates the statistical significance of the coefficients.

The pricing coefficient's p-value is 0.6250, which is significantly higher than the usual cutoff of 0.05. This implies that there is insufficient evidence in the data to refute the null hypothesis, which holds that price has no discernible impact on demand. In the same way, there is no statistical significance found in the p-value for the hybrid vehicle coefficient.

The non-refuse of the null hypothesis, nevertheless it is known that price and quantity are negative correlated, could be due to several reasons.

First, the relatively low number of observations, only 27, may limit the model's ability to detect significant relationships. Regression analysis generally benefits from larger datasets, where patterns are more likely to emerge with greater clarity.

Second, the model might be oversimplified by only considering price and vehicle type as predictors of demand, while excluding other potentially influential factors. These could include marketing efforts, fuel prices, technological advancements, consumer income levels, brand, the design of the vehicles and preferences of consumers, the offered features, among which horsepower, included services, and the convenience of the financing.

6. Demand forecast

Among the economic actions and strategies that Alfa Romeo had to undertake to ensure the success of its new vehicle it must be mentioned the accurate demand forecasting.

This section discusses how Alfa Romeo forecasted the number of units of Alfa Romeo Junior that will sell, implementing a benchmarking analysis.

6.1 Benchmarking analysis

The strategy used to forecast the demand for the new Alfa Romeo Junior in the 2025 (a forecast of the 2024 cannot be taken into consideration because the launch of the car was the 11th of April and the first registrations are estimated to be for the month of September/October) is based on a benchmarking analysis. More precisely, Alfa Romeo Junior took as target Jeep Avenger to forecast its future sales and set the production accordingly.

Benchmarking began as a key component of process improvement programs in engineering, gaining prominence with Xerox's analysis of Japanese firms' cost efficiencies in the late 20th century (Balm, 1996). By comparing a firm's current performance (baseline) with that of industry leaders (benchmark), organizations can prioritize resource allocation effectively. In essence, benchmarking involves examining the strategies and practices of top competitors.

The practice entails comparing products and processes across various contexts, within different divisions of the same organization, among competing firms in the same industry, or across firms with similar processes in different industries.

The primary aim of benchmarking is to uncover how and why certain organizations achieve superior efficiency and to identify the methods that drive their success. This understanding helps organizations assess their relative cost and price positions in the market.

Benchmarking can be categorized into three types: internal, external, and international.

Internal benchmarking compares units within the same organization, such as Alfa Romeo using Jeep Avenger (both part of Stellantis) as a performance target.

External benchmarking involves industry leaders and is especially valuable when internal units underperform, although it requires substantial resources.

International benchmarking, facilitated by advances in digital technology, enables global comparisons of products and processes (Sammut-Bonnici, 2015).

Organizations also use benchmarking to evaluate strategic and competitive performance.

Strategic benchmarking focuses on the qualitative aspects of high-performance drivers, such as product innovation and core competencies.

Competitive benchmarking, on the other hand, examines industry competitors using quantitative metrics like profitability, growth, market share, and sales. Financial performance is scrutinized by analyzing factors such as revenue, pricing, production costs, marketing, sales, delivery, and operating expenses.

The case of Alfa Romeo is a competitive benchmarking.

Alfa Romeo strategy is about taking Jeep Avenger as the target, then set forecasted volume of registration 19,14% less, due to the fact that Alfa Romeo is a premium brand, and this implies higher prices than the Avenger that is an upper mainstream brand.

Differentiating the prices for version, the price of Jeep Avenger Electric is 39.400€, whilst for the Hybrid version is equal to 26.200€.

The prices of Alfa Romeo Junior are, instead, for base hybrid 29.900€, for Speciale hybrid 31,900€, for base electric 39,999€ and for Speciale electric 41,500€. These higher prices are expected since the "premiumness" of Alfa Romeo.

In the table below is shown the number of registrations of many brands for ICE and BEV vehicles in the 2023 (Table 17) (Source: DataForce FY23).

Due to the fact that the number of registrations of Jeep Avenger was 22,260, Alfa Romeo forecasted 18,000 registrations (19,4% less than Jeep Avenger) for the 2025, with an ambition share of 3,9%.

This number is obtain divided the number of registration of Alfa Romeo Junior for the total number of registration (18000/(444109+18000)*100).

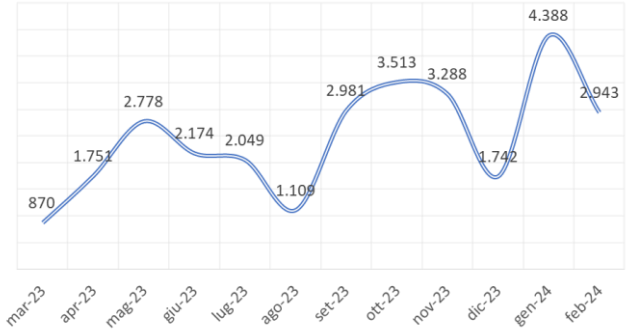
An estimation of the registration of 2024 could be 4,280, due to the fact that registrations will almost start in September/October.

Table 17: Units sold and MS in Full Year 2023

		FY 23 *(Premium & Mainstream, all channels)*				
		ICE	BEV	BEV mix	TOT	SHARE
1	Toyota Yaris Cross	34.590		-	34.590	7,8%
2	VW T-Roc	32.970		-	32.970	7,4%
3	Ford Puma	30.509		-	30.509	6,9%
4	Renault Captur	29.298		-	30.412	6,8%
5	Dacia Duster	28.891		-	28.891	6,5%
6	Jeep Renegade	24.480		-	28.016	6,3%
7	Fiat 500X	27.476		-	27.476	6,2%
8	Peugeot 2008	22.400	901	*4%*	23.301	5,2%
9	Jeep Avenger	20.764	1.496	*7%*	22.260	5,0%
10	VW T-Cross	21.858		-	21.858	4,9%
11	MG ZS	20.402	211	*1%*	20.613	4,6%
12	Citroen C3 Aircross	12.429		-	12.429	2,8%
13	Nissan Juke	11.107		-	11107	2,5%
14	Opel Mokka	9.969	798	*7%*	10.767	2,4%
15	MINI Countryman	7.924		-	9628	2,2%
16	Suzuki Vitara	9.398		-	9398	2,1%
17	VW Taigo	9.375		-	9375	2,1%
18	Toyota C-HR	8.940		-	8940	2,0%
19	Skoda Kamiq	8.032		-	8032	1,8%
20	Kia Stonic	7.964		-	7964	1,8%
21	DR 4.0	7.400		-	7400	1,7%
22	Audi Q2	7.382		-	7382	1,7%
23	Suzuki SX4 S-Cross	6.320		-	6320	1,4%
24	Hyundai Kona	5.304	947	*15%*	6251	1,4%
32	DS 3	735	119	*14%*	854	0,2%
34	smart #1		687	*100%*	687	0,2%
35	Fiat 600e		368	*100%*	368	0,1%
36	Volvo EX30		114	*100%*	114	0,0%
	TOT SEGMENT	432.056	5.699	1,3%	444.109	

The trend of registration of Jeep Avenger Petrol for all range in the first 12 months is shown in the graph below (Graph 12) (Sources: Dataforce23, Dataforce24).

Alfa Romeo targeted a similar trend for the diffusion of its Alfa Romeo Junior.



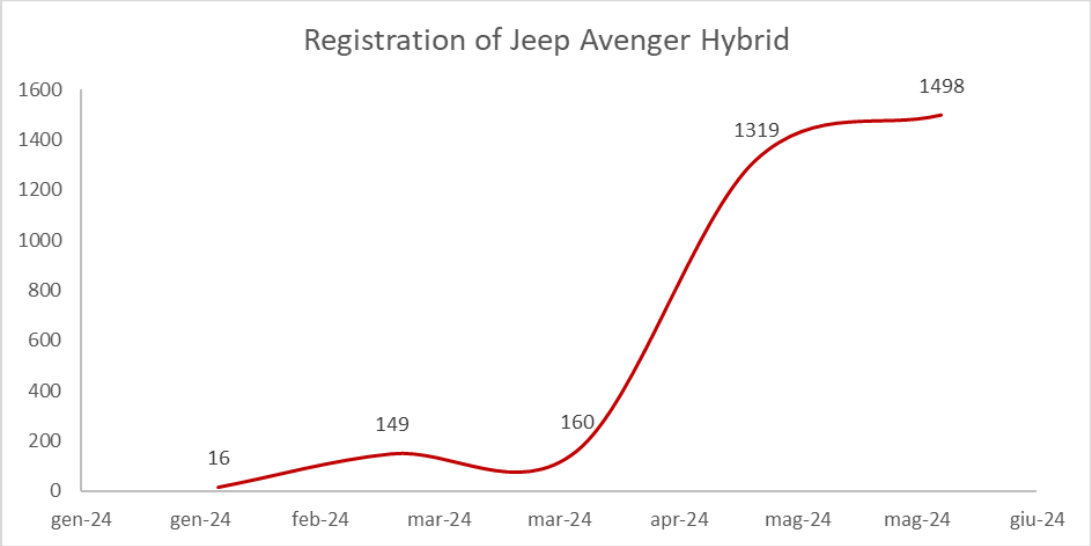
Graph 12: Registrations of Jeep Avenger Petrol

More in details, below there are the registrations of Jeep Avenger in the first months after launch. In particular, the registrations of Hybrid motorization are from February 2024 to June 2024, and the ones of Petrol and Electric motorizations are from March 2023 to February 2024 (Full Year 2023).

The table (Table 18) and graph (Graph 13) below represent the registrations of Jeep Avenger Hybrid (Figure 10) (Sources: Dataforce24).

Table 18: Registrations Jeep Avenger Hybrid feb24/jun24

Fuel	Sum feb24	Sum mar24	Sum apr24	Sum may24	Sum jun24
Hybrid	16	149	160	1319	1498



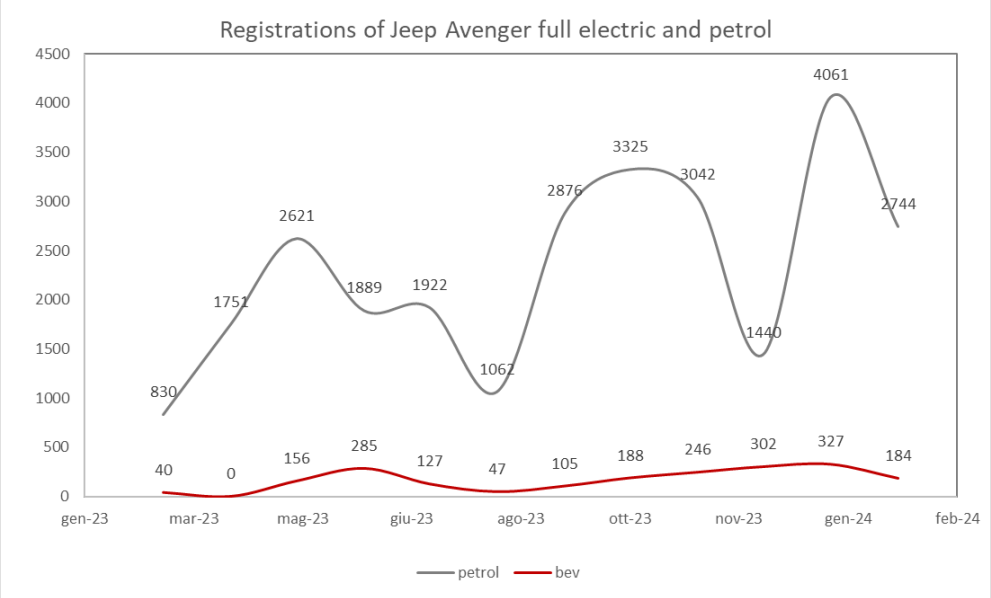
Graph 13: Registrations Jeep Avenger Hybrid feb24/jun24

Figure 10: Jeep Avenger Hybrid

In the table (Table 19) and graph (Graph 14) below the registration of Jeep Avenger Electric (Figure 11) and Petrol are shown (Sources: Dataforce23, Dataforce24).

Table 19: Registrations Jeep Avenger Petrol and Electric mar23/feb24

Fuel	Sum mar23	Sum apr23	Sum may23	Sum jun23	Sum jul23	Sum aug23	Sum sep23	Sum oct23	Sum nov23	Sum dic23	Sum jan24	Sum feb24
Petrol	830	1751	2621	1889	1922	1062	2876	3325	3042	1440	4061	2744
Pure Electric	**40**	**0**	**156**	**285**	**127**	**47**	**105**	**188**	**246**	**302**	**327**	**184**
Tot	870	1751	2777	2174	2049	1109	2981	3513	3288	1742	4388	2928

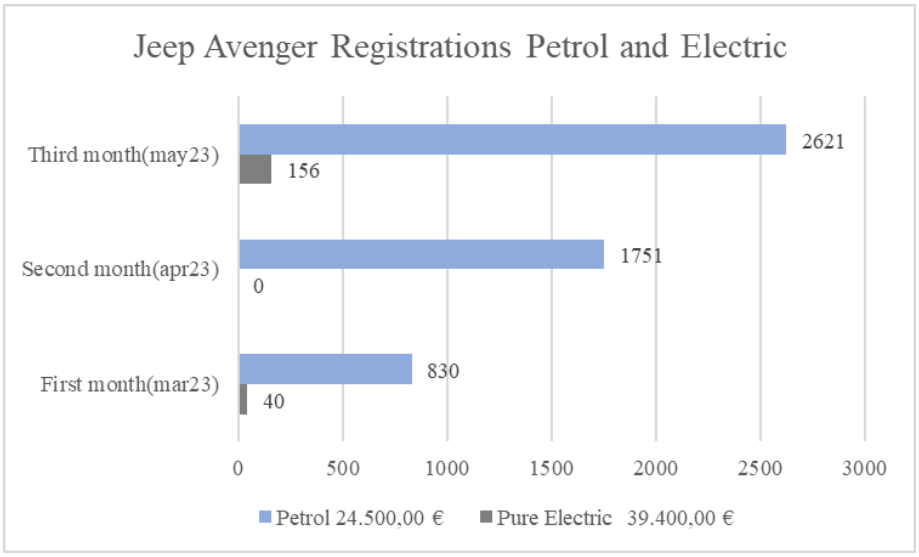


Graph 14: Registrations Jeep Avenger Petrol and Electric mar23/feb24

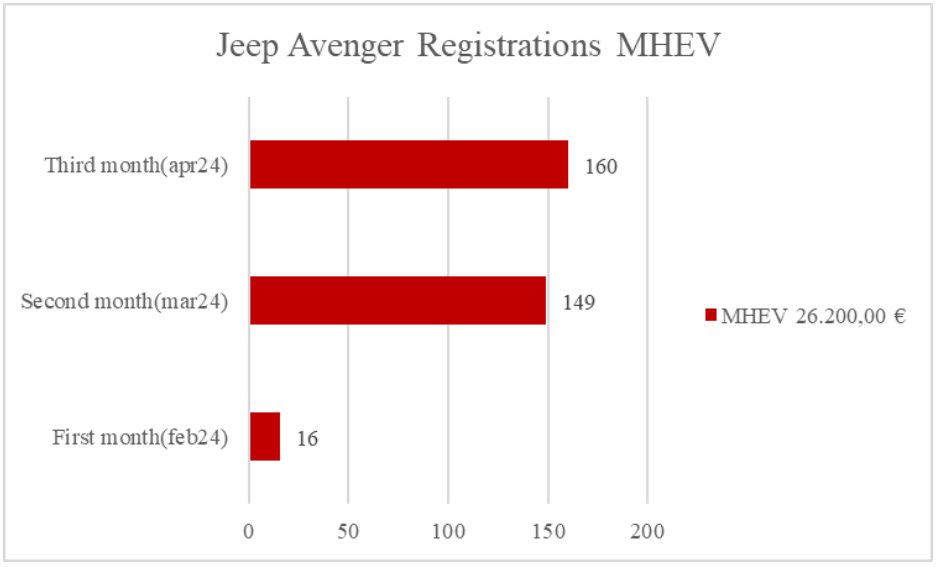
Figure 11: Jeep Avenger Electric

Alfa Romeo Junior aims to a trend like the Jeep Avenger petrol for the MHEV version, whilst similar to Jeep Avenger Electric for the BEV version.

These graphs are, instead, used to better represent the registrations, highlighting also the prices, of Jeep Avenger Petrol, Electric (Graph 15) and Hybrid (Graph 16) in the first three months after launch (Sources: Dataforce23 and Dataforce24).

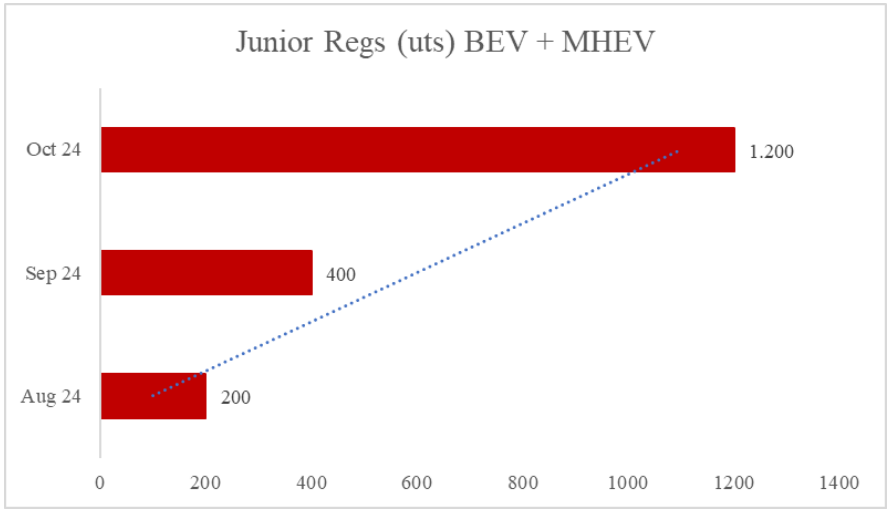


Graph 15: Jeep Avenger registrations Petrol and Electric



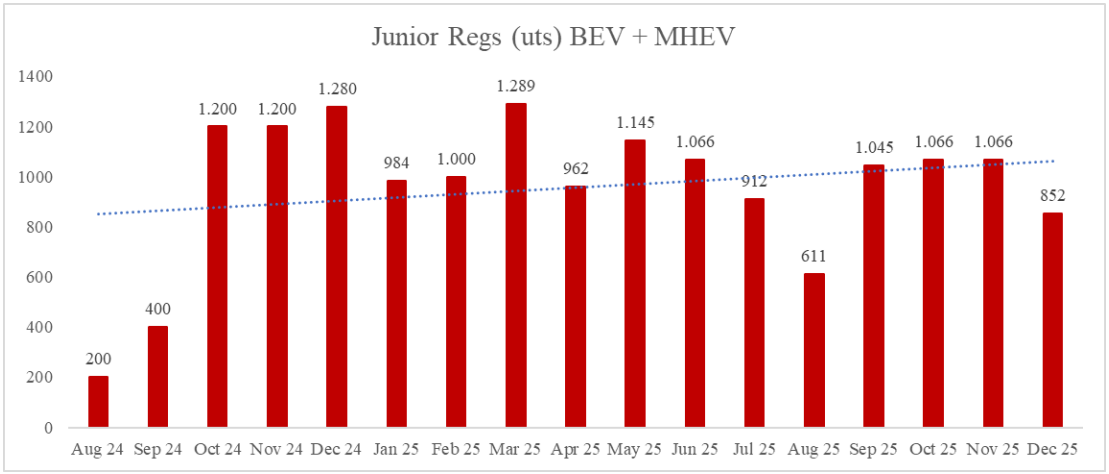
Graph 16: Jeep Avenger registrations MHEV

Below, instead, are represented the forecasted registrations of Alfa Romeo Junior MHEV and BEV in the first three months; to compare them with the ones of Jeep Avenger (Graph 17).



Graph 17: Forecasted AR Junior registrations BEV+MHEV aug24/oct24

In the graph (Graph 18) and table (Table 20) below, instead, the forecasted number of registrations (units) and market shares (%) for Alfa Romeo Junior, not divided into MHEV and BEV, are depicted, from August 2024, when the vehicles should be physically visible at dealerships, after the dealer tour, to December 2025.



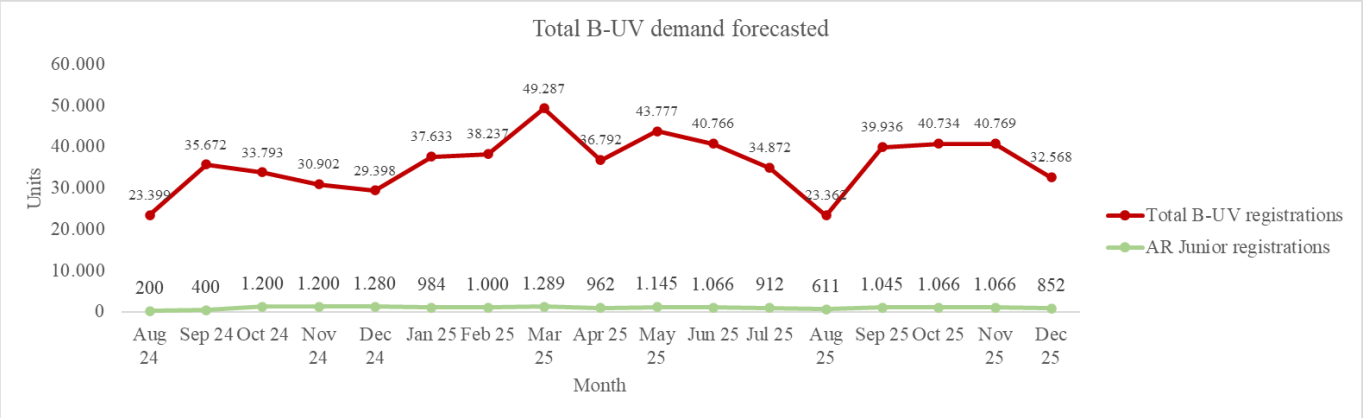
Graph 18: Forecasted registrations AR Junior BEV+MHEV aug24/dec25

Table 20: Forecasted registrations and MS AR Junior BEV+MHEV aug24/dec25

	2024					2025												
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	FY
B-UV total (uts)	23.399	35.672	33.793	30.902	29.398	37.633	38.237	49.287	36.792	43.777	40.766	34.872	23.362	39.936	40.734	40.769	32.568	**458.733**
AR Junior Regs (uts)	200	400	1.200	1.200	1.280	984	1.000	1.289	962	1.145	1.066	912	611	1.045	1.066	1.066	852	**12.000**
AR Junior Market Share (%)	0,9%	1,1%	3,6%	3,9%	4,4%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	2,6%	**2,6%**

Alfa Romeo has ambition volume of 12.000 units sold (registrations forecasted) and an ambition market share of 2,6% in a full year (meaning from January 2025 to December 2025).

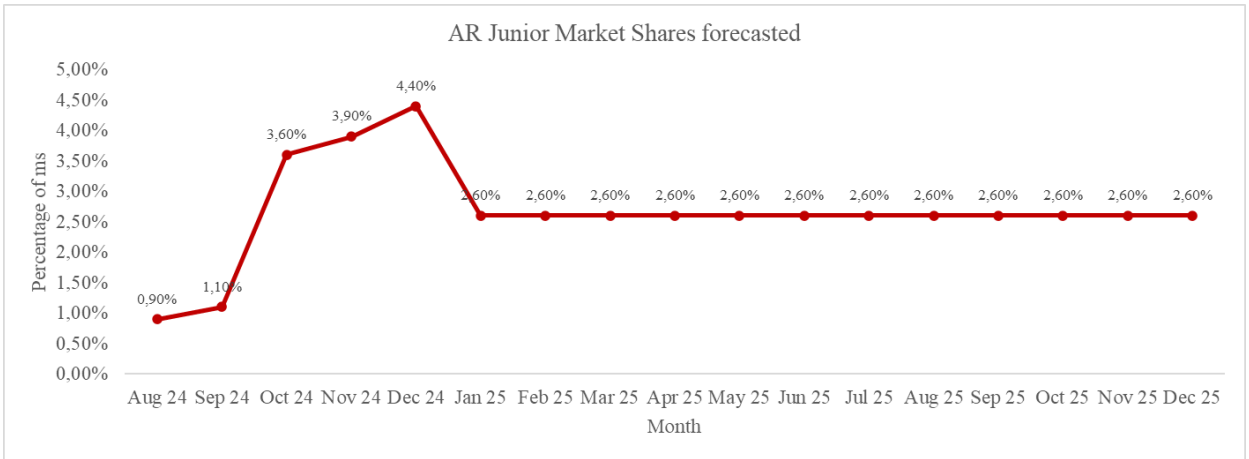
To better contextualize the position of Alfa Romeo in the B-UV segment, in the graph below is shown the total B-UV demand forecasted since August 2024 to December 2025, compared to the forecasted registration of Alfa Romeo Junior for the same period (Graph 19).



Graph 19: Forecasted demand of B-UV and AR Junior aug24/dec25

The forecasted registration trend for the Alfa Romeo Junior shows high ambition with generally increasing trend.

The only exception is the number of registrations in August, that are not so high, because of the holiday season, during which many people are on vacation and not considering purchasing a new car. However, the numbers rise sharply to 400 units in September 2024, followed by a significant increase to 1,200 units in both October and November 2024. December 2024 sees another rise to 1,200 units, then remaining stable at 1000/1200 units per month.



Graph 20: AR Junior forecasted MS

The above chart, instead, illustrates the forecasted market share trend for the Alfa Romeo Junior vehicle from August 2024 to December 2025 (Graph 20). This trend can be divided into two main phases: an initial increase followed by a decline and subsequent stabilization.

Starting in August 2024, the market share of the Alfa Romeo Junior is at 0.90%. Then it will rise slightly to 1.10% in September 2024.

From October to December 2024, there is a significant increase in market share, from 3.60% in October to the peak of 4.40% in December.

This rapid growth is due to the excitement and media coverage surrounding a new product that can lead to an increase in sales as early adopters and brand enthusiasts rush to purchase the latest and most discussed model. Positive reviews and word-of-mouth from early adopters and early majority customers recommendations during this initial phase can further boost sales, contributing to the observed market share increase.

Then, from January 2025, the market share of the Alfa Romeo Junior drops significantly to 2.60% remaining stable until December 2025 (last forecast).

This trend aligns with the S-curve model, which suggests that after an initial surge in sales, market saturation occurs as early adopters have already purchased the product, leading to a natural stabilization in sales. During this period, competitors may introduce new models or promotions that could erode Alfa Romeo Junior's market share.

More in detail, the S-curve model illustrates the progression and evolution of a product, service, technology, or business over time (Kaplan, 2007).

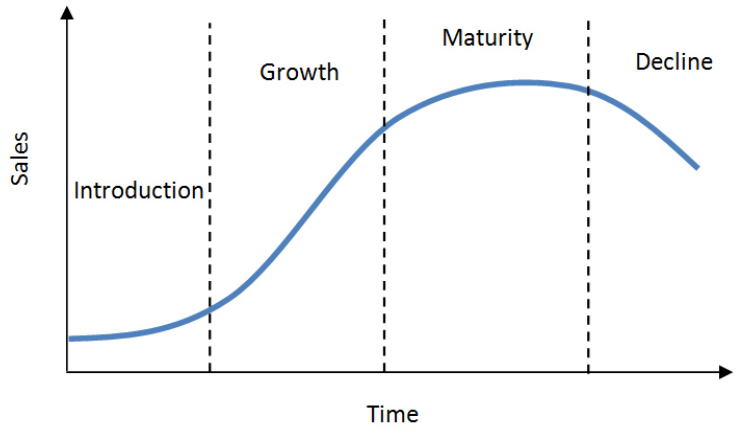


Figure 12: S-curve

The S-curve is divided into four sections (Figure 12).

The first is the introduction phase, where sales are modest as consumers are just becoming aware of and accepting the new product. Following the launch, the product enters the growth phase, characterized by a sharp increase in sales driven by positive word-of-mouth, a growing customer base, and increasing market acceptance. To capitalize on this growth, companies often invest heavily in production and marketing.

As the product moves into the mature phase, sales growth slows and eventually stabilizes. At this point, the market reaches saturation, with most potential buyers having already purchased the product, and competition intensifies. Finally, the product enters the decline phase, where sales decrease due to factors such as the introduction of superior competing products, market saturation, technological advancements, or changing consumer preferences.

The concept of S-curves is closely linked to "market adoption," with the start of the curve representing the emergence of a new market opportunity and the end indicating the product's obsolescence. Typically, the conclusion of one S-curve signals the beginning of another, which will eventually replace it unless disruptive innovations intervene and alter the natural course of the curve.

This S-curve model aligns with the Lifecycle model, depicting market adoption as a bell curve tracking customer adoption of new products (Figure 13).

Innovators, the first ones to buy a new product, are followed by early adopters, who are interested in testing out and trying something new, are not risk adverse, with leadership attitude and with quite high incomes. Other potential adopters look to early adopters for information and advice, thus early adopters make excellent missionaries for new products and processes.

Next in the curve are the early majority, who become reference points for others, and then the market matures with late adopters, who are risk-averse and skeptic and purchase products only when others have already tested it. At this stage, competitiveness depends on incremental improvements and economies of scale.

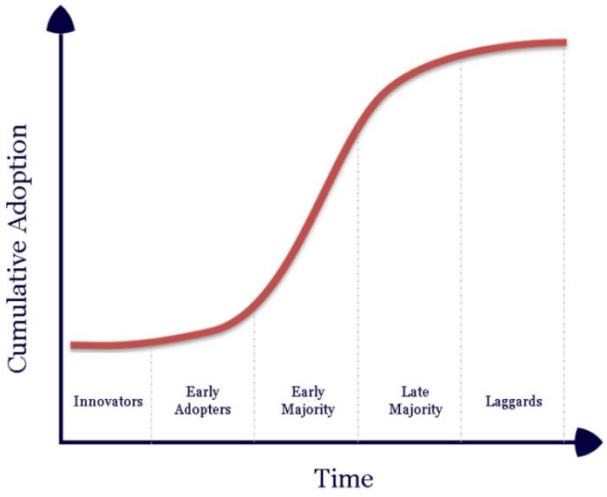


Figure 13: S-curve with market adoption (Source Tilburg University)

In the picture below the different key metrics to consider for the different phases of the S-curve are described (Figure 14).

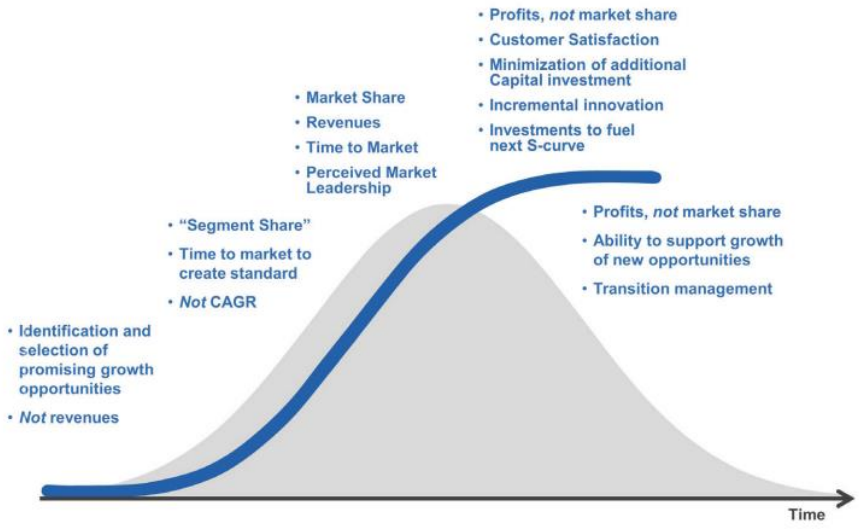


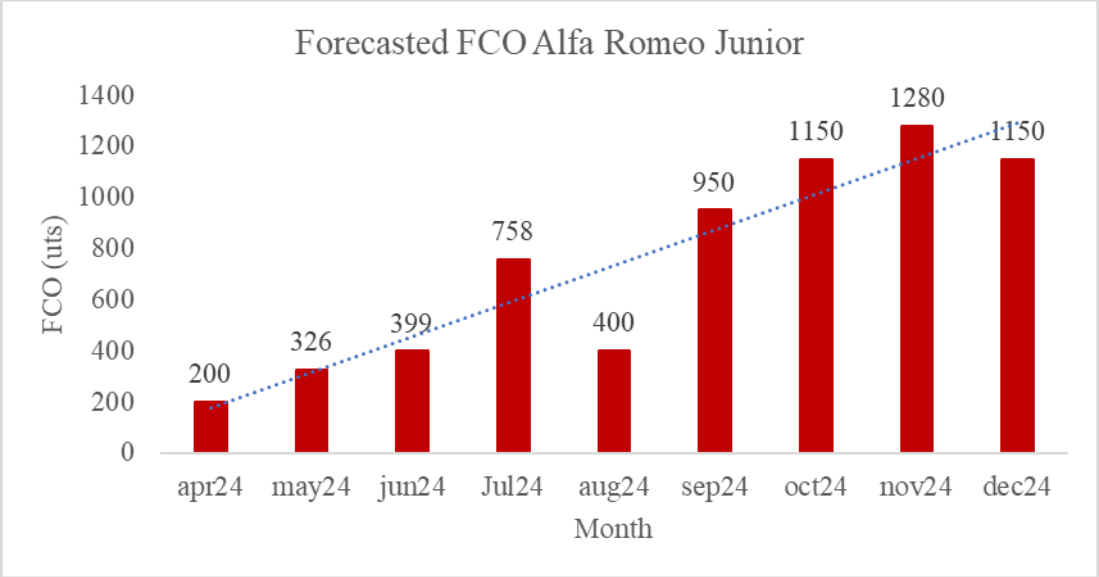
Figure 14: Key metrics along S-curve

6.2 FCO KPI

A crucial Key Performance Indicator (KPI) for forecasting demand in the automotive sector is the Final Customer Order (FCO). The FCO represents the point at which a dealer's order is aligned with a customer's order.

KPI are used to monitor how effectively a company is reaching targets that had forecasted before. These indicators help businesses to track progress, identify areas for improvement, and timely take correctively actions.

In the graph below the forecasted FCO of Alfa Romeo Junior from April 2024 to December 2024 are displayed (Graph 21).

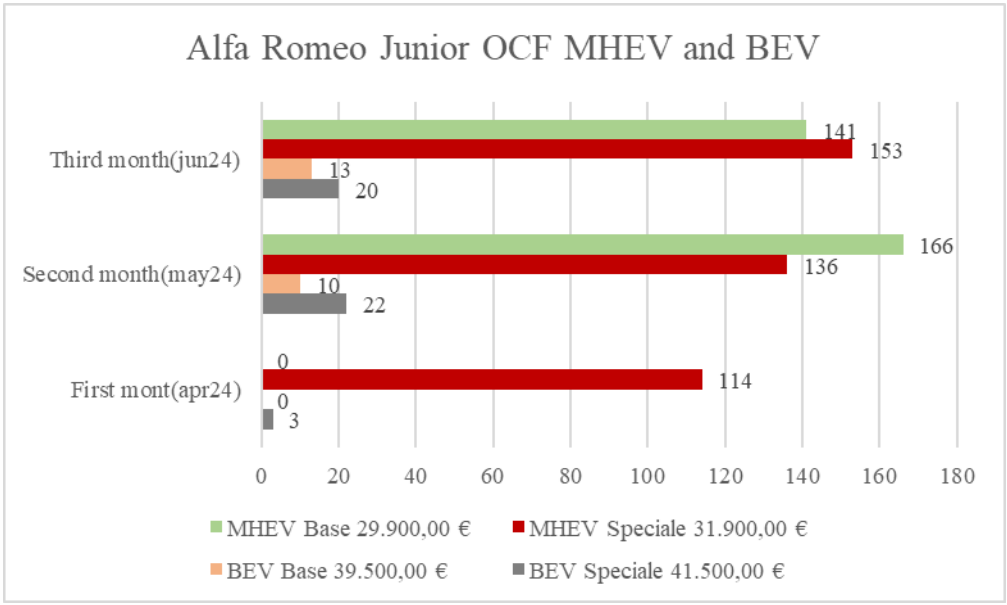


Graph 21: Forecasted FCO AR Junior apr24/dec24

The main contributors to FCO collection rump up should be the Dealer Tour (from June 2024).

The forecasted target of FCO is 7.400 by the end of 2024.

In the graph below is represented the trend of FCO of the Alfa Romeo Junior Speciale and base, MHEV and BEV collected in the first three months after the launch; April, May and June (Graph 22).



Graph 22: Actual FCO AR Junior MHEV and BEV

As with any KPI, it is crucial to set a monthly target for the FCO and then compare the actual FCO values with the planned targets.

If the difference between actual and plan is negative, it indicates that the KPI has not been met, necessitating corrective actions.

The two tables below represent the forecasted plans for FCO for April, May, June and July 2024 (Table 21) vs the FCO effectively collected during those same months (Table 22) (Source: Qliksense). The third table highlights the difference between the forecasted and actual results (Table 23).

Table 21: Planned FCO AR Junior BEV and MHEV

PLAN	Apr	May	Jun	Jul
FCO BEV	20	32	25	78
FCO MHEV	180	294	374	680
FCO TOTAL	200	326	399	758

Table 22: Actual FCO AR Junior BEV and MHEV

ACTUAL	Apr	May	Jun	Jul
FCO BEV	3	32	33	7
FCO MHEV	114	302	294	279
FCO TOTAL	117	334	327	286

Table 23: Difference between Planned FCO and Actual FCO AR Junior BEV and MHEV

Δ ACT VS PIANO	Apr	May	Jun	Jul
FCO BEV	-17	0	8	-71
FCO MHEV	-66	8	-80	-401
FCO TOTAL	-83	8	-72	-472

6.3 Executive summary

After the forecasting of the demand, Alfa Romeo decided the goals and objectives that its new vehicle has to reach and highlighted in a transparent way all the challenges that it will have to face.

Among goals, the first one is to double the sales volume to reinforce brand's reputation and Alfa Romeo’s footprint in the premium segment.

Secondly, Alfa Romeo aims to attract customers from the upper mainstream market, encouraging them to transition to a premium vehicle, that adds features but with a very competitive price.

Another key goal is to aggressively enter the Battery Electric Vehicle (BEV) market, not only by launching competitive BEV models but also by ensuring robust sales and market share growth in this rapidly evolving sector.

Challenges to face are, instead, increasing sales volumes without compromising profit margins, balancing competitive prices with profitability, and maximizing market shares thanks to the fact that from September the new Alfa Romeo Junior should be physically available in dealerships and also thanks to effective marketing, campaigns that will start concurrently.

Lastly, the actions to take to achieve these goals and face these challenges are optimizing high-trim models to maximize revenue, highlighting the superior features and benefits of the new Alfa Romeo Junior and attracting customers willing to pay little higher price for enhanced quality and performance.

Moreover, accurately anticipating and forecasting FCO collection is essential to promptly meet customer demand and to identify the need for corrective actions if the FCO collected in a month fall significantly below the forecasted ones.

7. Price discrimination

As explained into the abstract, also price discrimination theory is discussed.

This section explains how price discrimination helps Alfa Romeo maximize profits by catering to different consumer segments while maintaining a competitive edge in the market.

Price discrimination is the practice of charging different prices to different consumers for similar goods.

For the firms that opt to price discrimination, three conditions must hold. The former is that the firm must have market power.

The second one is that the firms must have some information about consumers' willingness to pay, that is the maximum amount that a consumer could pay for a certain good, and the third one is that arbitrage and reselling are not possible (White, 2012).

According to the first condition, market power expresses the extent to which the firm has discretion over the price that it charges.

In a perfectly competitive market, where firms sell homogeneous products at identical prices equal to marginal costs, no individual firm possesses market power. Any attempt by a firm to raise prices above this level would result in losing all customers to competitors, while lowering prices below marginal costs would lead to unsustainable losses despite increased demand (McAfee, 2007).

The Lerner Index, expressed as $L = (P – MC)/P$, quantifies market power by measuring the divergence between price (P) and marginal cost (MC) relative to price. In perfect competition where $P=MC$, $L=0$, indicating zero market power. When $P>MC$, $L>0$ and the firm has market power to set prices above its marginal costs (White, 2012; Nahata et al., 2006).

Referring to the third condition, if consumers can arbitrage price differences, any attempt to charge higher prices to some group would be defeated by resale. In arbitrage scenarios, a consumer who purchases a good at a lower price from a firm would then resell it to consumers denied the lower price. Perfect arbitrage would compel the firm to sell all its goods at the lowest available price, with initial buyers reselling to others. Consequently, arbitrage effectively eliminates price discrimination, reducing it to a single price offering. However, in practice, arbitrage faces numerous challenges such as high transportation costs, legal restrictions on resale, personalized products or services, market liquidity issues, information disparities, and contractual obligations.

Historically, price discrimination has been divided into three types, using terminology introduced by Arthur Cecil Pigou.

First-degree price discrimination involves the firm having perfect information about each consumer's willingness to pay. This type of discrimination achieves perfect price discrimination, where each buyer pays precisely 100 percent of their subjective value for the goods purchased, with prices tailored based on individual buyer identities.

Third-degree price discrimination represents, instead, an imperfect form of first-degree discrimination. In this case, the firm can identify consumers not individually but by group, allowing it to charge different prices to different groups based on their characteristics.

Second degree price discrimination, in contrast, refers to offer consumers a range of options, such as quantity discounts or different product versions, allowing them to self-select into groups based on their preferences and willingness to pay.

First and third-degree price discrimination are each example of where different groups of consumers are charged different prices for the same good, while second degree price discrimination refers to instances where consumers in a market are offered the same set of price and quantity options and "self-select" into different groups.

To engage in any form of price discrimination, market segmentation is a prerequisite.

In second-degree price discrimination, segmentation naturally arises as an equilibrium outcome. This occurs because consumers self-select based on their preferences, resulting in voluntary segmentation into distinct homogeneous groups, such as high and low-demand consumers.

Importantly, neither intra-group homogeneity nor inter-group heterogeneity is observable, which facilitates the self-selection process where the firm remains unaware of individual consumer identities.

In second-degree price discrimination, various combinations of deadweight loss and consumer surplus are possible. For instance, if consumer preferences are such that one group has high demand and the other has low demand, high-demand consumers experience no deadweight loss and positive consumer surplus, whereas the opposite holds true for low-demand consumers. This outcome stems

from the "efficiency-on-the-top" principle, ensuring that consumers with the highest valuation receive socially efficient output and positive consumer surplus.

When preferences are not strictly ordered, all consumer groups can potentially achieve socially efficient output, resulting in zero consumer surplus and deadweight loss for all types of consumers. Generally, in second-degree price discrimination, at least one consumer group receives socially efficient output, while another may receive output that is either lower or, sometimes, higher than socially optimal levels.

Referring to Alfa Romeo Junior, this is a case of Second-Degree price discrimination, since Alfa Romeo cannot identify individual customers or segment them into distinct groups to charge different prices based on their maximum willingness to pay.

Nevertheless, it can offer a menu of choices to its customers, allowing their self-selection, which effectively enables the firm to discriminate profitably between different customer segments.

The strategy implemented by Alfa Romeo is to capture before customers with a higher willingness to pay by launching the Speciale version in April 2024.

The base version was introduced lately, at the beginning of May, to capture the customers with a lower willingness to pay.

If the base version would have been launched at the beginning, Alfa Romeo won’t be able to charge a premium price to those willing to pay more for a superior product.

Customers, instead, with a lower willingness to pay had to wait for the base version.

Furthermore, the price difference between the "Speciale" and base versions is strategically small; just 2,000€ more for the hybrid version (29,900€ for the base vs. 31,900€ for the Speciale) and 1,500€ more for the electric version (39,999€ for the base vs. 41,500€ for the Speciale).

This minimal price difference is intended to push up the number of sales of the "Speciale" versions, encouraging also customers with a lower willingness to pay to purchase it, which yield higher profits for Alfa Romeo.

More specifically, the Speciale version, both hybrid and electric, adds the following features to the base version (Table 24):

Table 24: Speciale additional features

18’’ Fori alloy wheels (hybrid) and 18’’ Petali alloy wheels (electric)
Electrically foldable and heated exterior mirrors
Matte black body kit with Rosso Brera details
Progresso Scudetto
Private rear windows
Spiga interiors: vinyl and fabric seats with electrically adjustable driver's seat with massage function, and 6-way manual passenger seat; aluminum pedals and door sills; floor mats
Ambient lighting
LED touch front and rear dome lights
Rear center headrest
Leather steering wheel
Trunk floor adjustable to 3 levels
10.25’’ infotainment system with navigation
6-speakers audio system
Lane centering and traffic jam assist
Traffic sign recognition
Blind spot monitoring
Additionally, the electric Speciale version includes the EasyWallbox and an 11-kWh On Board charger.

7.1 Tying

Tying is the practice of requiring a customer to purchase one good in order to purchase another one. It allows firm to practice price discrimination more effectively and to transfer monopoly power from one good to the other. In other words, it refers to a practice whereby the seller of product A (the “tying” product) requires some or all purchasers of A also to purchase a separate product B (the “tied” product) (Unilateral Conduct Working Group, 2018). While purchasers of A must also buy B, B may be offered by the seller separately.

In the case of the Alfa Romeo Junior electric, there are different "tying" arrangements applied.

For the Base Electric Version, the Wallbox is not included in the car's list price, unlike the Special version. In this scenario, the customer can decide whether to buy the Wallbox or not, which is however useful and highly suggested for those who have an electric vehicle.

In addition, to encourage this purchase, Alfa Romeo offers a promotional package: the car's list price is 39,500€, the Wallbox costs 499€, but combined purchase of both includes a financing offer at 32,829€, instead of 39,999€. This offer aims to incentivize consumers to purchase both the electric vehicle and the Wallbox.

For the Special Electric Version, on the other hand, the Wallbox is included in the car's list price, obliging the customer to purchase it.

In the case of the 240 Veloce Electric Version, the eProWallbox is included in the list price.

Regarding charging cables, all electric versions include the Mode 3 Cable as standard. However, the Mode 2 Cable is available only as an optional accessory, which customers can purchase separately to customize their charging needs.

8. Cost Strategy

Among all the strategies previously mentioned, effective cost management was also essential for Alfa Romeo to maintain profitability while increasing market share and remaining competitive. This section explores the cost strategies employed by Alfa Romeo.

Major manufacturing firms achieve competitive advantage reducing their costs by relocating production processes to low-income economies through strategies such as offshoring, foreign direct investment, and establishing extensive supplier networks (Head and Mayer, 2017).

Offshoring is the relocation of production intended for a given market to new assembly sites. In other words when a vehicle is consumed in the home country but assembled in a different country.

Offshoring could be “downward”, meaning offshoring to lower income countries from “flat”, and “upward”, meaning offshoring to other countries at similar or higher income levels.

This shift is bolstered by factors like the low-wage environments of supplier countries combined with their relatively high labor productivity, often enhanced through technology transfers within multinational corporations. This results in reduced overall unit labor costs throughout the production cycle.

Conversely, the home country's non-cost advantages, such as agglomeration effects, institutional environments, and skilled labor pools, along with coordination and transportation expenses, act as countervailing forces. These factors may compel companies to retain certain stages of production close to their headquarters despite higher production costs (Grodzicki and Skrzypek, 2020).

Historically, automakers have a longstanding practice of assembling vehicles in foreign markets to optimize costs and operational flexibility.

For production intended for domestic or third-country markets, preferred assembly locations often include Mexico (for the North American market) and Eastern European countries that joined the EU in 2004.

China, instead, produced its vehicles for the Chinese market at home.

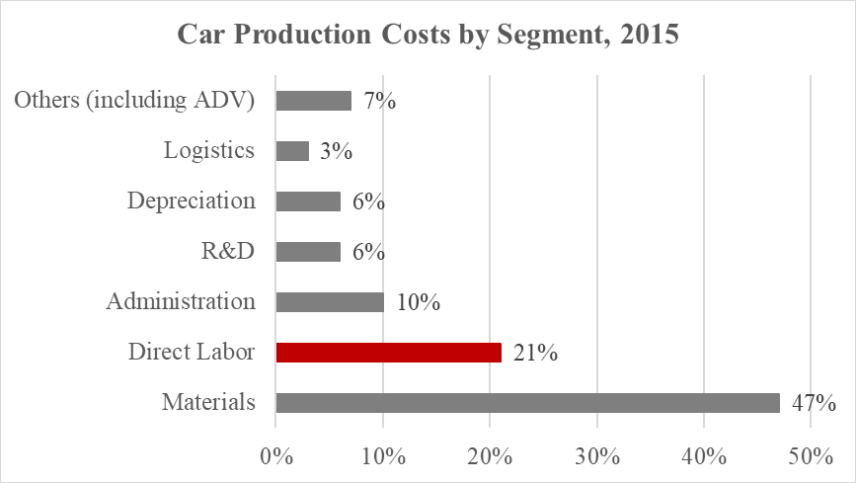
Offshoring also enhances companies' flexibility to adapt to fluctuating market dynamics, a challenge exacerbated by stringent labor laws that limit workforce adjustments and job creation flexibility domestically. This rigidity often leads to sub-optimal labor utilization and supply-demand imbalances. By leveraging foreign labor, companies gain the agility to innovate and swiftly respond to market shifts (Head and Mayer, 2017).

For instance, Fiat's former CEO, Sergio Marchionne, highlighted the efficiency of their Tychy, Poland plant, which assembled nearly as many cars as their five largest Italian plants combined.

Similarly, in March 2014, Porsche announced the relocation of Cayenne SUV production from Germany to Slovakia, marking a historic move as the first time Porsches would be assembled outside Germany. These anecdotes underscore a notable shift in global auto assembly patterns.

Firms based in countries that have relatively high assembly costs are more likely to offshore and the most likely models to be offshored are the less expensive cars of brands based in high income countries.

As Statista reported, labor cost impact 21% of total production costs for a vehicle (Graph 23). This percentage is substantial and indicates that any reduction in labor costs can lead to significant overall cost savings in the production process. Consequently, to this reduction, manufacturers can lower the selling price of their vehicles. This strategy enhances their competitiveness in the market by offering more competitive pricing compared to other (Statista, 2015).



Graph 23: Car Production Cost by Segment in 2015

As a cost-saving strategy, Alfa Romeo has decided to move the production of its new car to Poland, at Tychy, as Fiat had done before, to reduce manufacturing costs, thereby lowering the selling price and enhancing its competitiveness in the market. However, this decision, as previously mentioned, sparked controversy from the Minister of Enterprises and Made in Italy, Adolfo Urso, who criticized the fact that a car produced in Poland bore the name of an iconic Italian city (Milan).

In response to the criticism, Stellantis CEO Carlos Tavares renamed the car but defended the decision to produce the Alfa Romeo Junior in Tychy, emphasizing that this allowed for a reduction in the selling price by approximately €10,000. Tavares argued that if the car had been produced in Italy, the cost would have been around €40,000 instead of €30,000, thereby limiting its competitiveness in the market.

This choice was not only made for the benefit of Stellantis but also to make the new compact SUV more affordable for customers. Furthermore, it was motivated by social considerations, aiming to

facilitate the purchase of the electric model, which would have been prohibitively expensive if produced in Italy.

Additionally, Jean-Philippe Imparato, CEO of Alfa Romeo, highlighted how the significant entry of Chinese manufacturers into the European automotive market poses a growing threat (Claudio Todeschini, 18 Aprile 2024). The decision to produce in Poland aims to achieve competitive pricing to counter these new Chinese competitors.

Not only Chinese brands but also Tesla is growing as a competitor, after significantly reduced prices of its cars in Europe, cutting profit margins from 18% to 7-8%.

Moreover, some German competitors are, instead, outsourcing production to China, where costs are 40% lower than in Europe, to reduce prices and be more competitive on the market.

Faced with this competition, Imparato underscored the critical importance of an effective cost strategy aiming at controlling the production costs of European cars to remain competitive in the global market.

9. Target customer

Another important economic action to undertake in the competitive B-SUV market, as introduced into the abstract, is understanding and targeting the right customer segments, being sure that vehicle's features fit with the preferences of the identified target.

This section explores the economic theories and strategies that guide Alfa Romeo in reaching its ideal customer base.

The analysis begins by applying rational choice theory and utility maximization principles to understand how consumers make purchasing decisions based on their preferences and the perceived value of the vehicle. It then delves into market segmentation theory, which helps in identifying specific customer groups that are most likely to be attracted to the Alfa Romeo Junior. By aligning its marketing strategies with these insights, Alfa Romeo aims to ensure that the Junior model resonates with the right audience, thereby maximizing its market impact and driving sales growth.

9.1 Rational choice theory

In the automotive sector, Rational Choice Theory provides valuable insights into consumer behavior, market dynamics, and effective marketing strategies. By applying its principles, automakers can better predict and respond to consumer preferences, market trends, and competitive pressures, thereby optimizing business outcomes and meeting customer needs more effectively.

Rational Choice Theory begins with the assumption that individuals have preferences and make decisions based on these preferences (Levin and Milgrom, 2004). In the automotive context, consider the set of possible vehicle choices denoted by X. This set can be represented as $X \subset Rn$, where each vehicle is characterized by a vector of attributes (e.g., fuel efficiency, safety features, performance, brand reputation). If $x \in X$, then $x = (x1, ..., xn)$ specifies the levels of each attribute.

Consumers evaluate vehicles based on these attributes, forming preferences over the set X. For instance, if a consumer perceives vehicle x to be at least as good as vehicle y ($x \geq y$), it means they weakly prefer x over y. If x is strictly preferred to y ($x > y$), then x is preferred over y, but y is not preferred over x. Indifference between two vehicles ($x \sim y$) indicates that the consumer perceives them as equally preferable.

Rational Choice Theory is grounded in two key assumptions: completeness and transitivity of preferences. Completeness means that for any two vehicles x and y in the set X, consumers can always determine their preference, whether they prefer x to y, y to x, or are indifferent. This implies that preferences are reflexive, meaning $x \geq x$ for any vehicle x. Transitivity ensures that if a consumer

prefers vehicle x to y and y to z, they will also prefer x to z. Lastly, rational consumers choose the most preferred available option, and if they are indifferent between multiple preferred options, their selection may be unpredictable.

An essential aspect of this decision-making process is the presence of constraints, which necessitate choices. A common constraint is the budget, which limits spending to available income. Consumers assess the costs (e.g., purchase price, maintenance, fuel, insurance) against the benefits (e.g., utility, reliability, performance, safety features, brand image). Rational consumers will select the vehicle that offers the highest perceived utility relative to its cost, balancing features and price to make optimal purchasing decisions.

9.2 Utility maximization theory

Rational Choice Theory often employs a utility function to represent consumer preferences, where consumers choose the option that maximizes their utility within given constraints. The indirect utility function represents the maximum utility a consumer can achieve given the current prices and income.

The utility function typically exhibits two key properties: positive marginal utility, where more of a good is preferred to less, meaning additional consumption provides more satisfaction; and diminishing marginal utility, where the additional satisfaction from consuming each extra unit decreases as consumption increases (Green, 2002).

Mathematically, the utility function $u(p, I)$, where p represents the vector of market prices and I represents consumer income, is non-increasing in p, meaning that if $p1 > p2$, then $u(p1, I) > u(p2, I)$. Additionally, the function is continuous and quasi-convex, indicating that the level curves are convex.

In the automotive sector, a consumer's preference for a set of vehicles X can be represented by a utility function $u: X \rightarrow R$, where $x \geq y$ is equivalent to $u(x) \geq u(y)$. This means the utility function assigns a numerical value to each vehicle, reflecting the consumer's preference ranking.

Consumers aim to maximize their utility within their budget constraints. This decision-making process can be visualized using indifference curves and budget sets. An indifference curve represents various combinations of car attributes that yield the same level of satisfaction or utility. The optimal choice occurs where the highest possible indifference curve is tangent to the budget line, indicating the best combination of car features that the consumer can afford.

Considering the scenario with three indifference curves in Figure 15, the highest curve (I1) provides the greatest utility but does not intersect with the budget line, meaning the consumer cannot afford any of these options, the second curve (I2) represents the optimal choice (point A), where the budget line is tangent to the curve, indicating the best affordable option and the third curve (I3) intersects the budget set but offers lower utility than I2.

At the optimal point, the slope of the budget line equals the slope of the indifference curve, establishing the tangency condition where the Marginal Rate of Substitution (MRS) equals the price ratio (p1/p2) (Figure 16). Mathematically, this is expressed as MRS (x1*, x2*) = MU1/MU2 = p1/p2, where MU1 and MU2 are the marginal utilities of two goods (or attributes), and p1 and p2 are their respective prices.

The MRS indicates the amount of one attribute (e.g., fuel efficiency) the consumer is willing to sacrifice to gain an additional unit of another attribute (e.g., safety features). If the MRS exceeds the price ratio, is more willing to give up x2 than the market requires, so he/she can increase his/her utility by consuming less x2 and more x1. If MRS < p1/p2, then the agent is less willing to give up x2 than the market requires, so he/she can increase his/her utility by consuming more x2 and less x1.

The tangency condition can also be written as MU1/p1 = MU2/p2, which means that the consumer equalizes the marginal utility per dollar spent across all car attributes. If the marginal utility per dollar of one attribute is higher, such as good 1, then the agent buys more of good 1. If the marginal utilities per dollar of good 1 is lower than that from good 2, then the agent buys less of good 1. At the optimal choice, the marginal utilities per dollar of the two goods are equal.

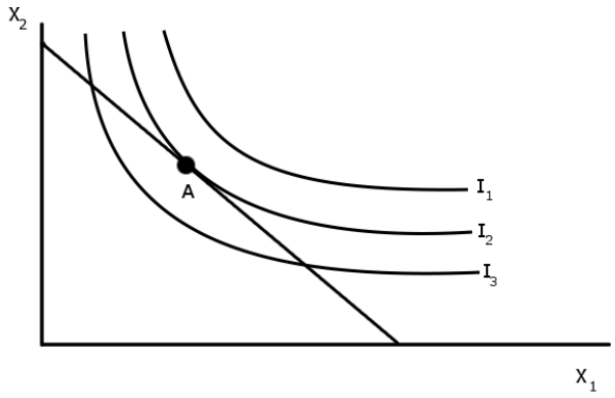


Figure 15: 3 indifference curves and the budget line

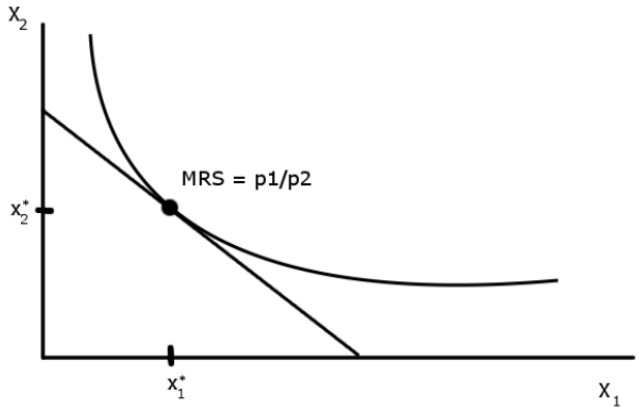


Figure 16: Tangency condition

This principle extends to multiple car attributes. In such cases, the consumer equates the marginal utility per dollar across all attributes, ensuring the most efficient allocation of their budget.

This process can be formalized using a Lagrangian function, where the optimal demand for each attribute is derived by maximizing utility subject to the budget constraint $L=u(x1,x2,...,xN)+\lambda[m-(p1x1+p2x2+...+pNxN)]L=u(x1,x2,...,xN)+\lambda[m-(p1x1+p2x2+...+pNxN)]$
Solving this yields the optimal demand for each attribute and the Lagrange multiplier, reflecting the consumer's utility maximization within their budget constraint.

9.3 Market segment theory

In the automotive sector, consumers do not choose a car based solely on rational economic factors. Their decisions are influenced by a combination of aesthetic, emotional, and sensory responses to driving, as well as considerations of kinship, sociability, habitation and work (Bose, 2012).
To understand how social, demographic, and geographical factors influence car buying decisions, it is essential to discuss the value chain and then market segmentation and customer focus strategy.
The concept of the value chain, first defined by Michael Porter, represents a series of interrelated value-adding activities that help an organization convert inputs into outputs efficiently and effectively, creating and sustaining competitive advantages (Figure 17).

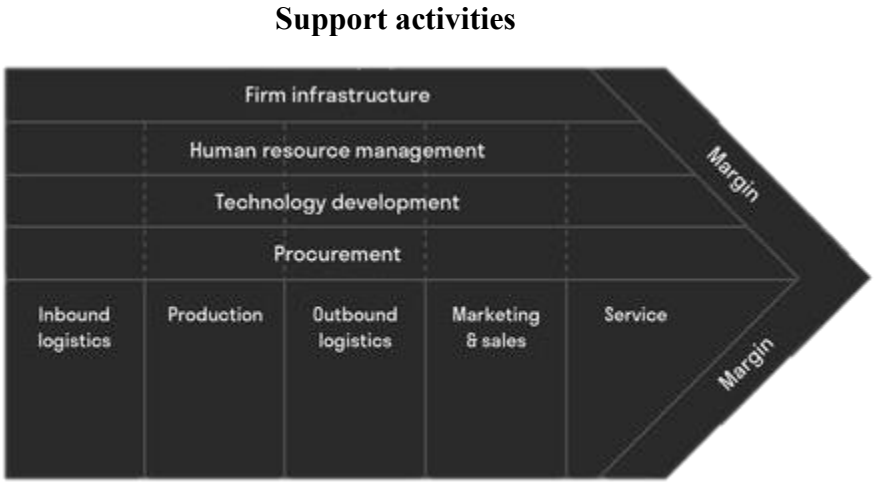


Figure 17: Porter's Value Chain

A typical value chain consists of five primary activities: inbound logistics, manufacturing operations, outbound logistics, marketing and sales, and after-sales services. Additionally, there are four supporting activities: procurement, research and development, human resource management, and corporate infrastructure.

Value Chain Analysis is crucial for providing the best products and services to the marketplace. It involves several steps like analyzing the company's own value chain, examining the value chain of the customers to understand how the product fits into their processes, analyzing competitors' value chains, and identifying potential value additions for customers through the company's products or services.

Effective value chain management relies heavily on market segmentation and customer-focused strategies.

Market segmentation involves dividing the market into homogeneous groups that respond differently to various marketing mix variables.

Different strategies and value delivery options are required to establish a successful, comprehensive value proposition for each segment (Gichuru and Limiri, 2017).

Market segmentation identifies consumer groups that share similar needs, characteristics and behaviors, which may require different products or marketing mixes compared to other consumer groups. Generally, the closer the needs match within a segment, the smaller the segment becomes. These smaller segments often attract premium prices because customers are willing to pay for products that closely or exactly meet their needs.

In the automotive sector, the immense importance of market segmentation arises from the reality that consumers are not a homogeneous group. Each consumer has individual needs, preferences, resources, and unique behaviors. Producers face the challenge of it being practically impossible to provide a different type of vehicle for every individual consumer. Therefore, they group the market into homogeneous clusters through segmentation, which is the most viable solution.

Market segmentation can be done in four basic ways: geographic, demographic, psychographic, and behavioral segmentation (Gentile et al., 2007; Meyer and Schwager, 2007).

Geographic segmentation includes variables such as region, country size, city size, density, and climate.

Demographic segmentation considers factors like age, gender, family size, family life cycle, income, occupation, education, religion, race, and nationality.

Psychographic segmentation focuses on social class, lifestyle, and personality (Table 25).

Finally, behavioral segmentation looks at variables such as purchase occasion, benefits sought, user status, usage rate, loyalty status, readiness state, and attitude toward the product.

Because the changes in person, family and occupation throughout life affect buying behaviour, psychographic and demographic segmentation bases are often used in combination to better identify market segments.

Behavioral variables, e.g. usage rates, can also be used to complement a psychographic segmentation scheme. Behavioral segmentation divides buyers into groups based on their knowledge, attitudes, uses or responses to a product.

Table 25: Psychographic segmentation

Social grade	Social status	Occupation
A	Upper middle class	Higher managerial, administrative or professional
B	Middle class	Intermediate managerial, administrative or professional
C1	Lower middle class	Supervisory or clerical, junior managerial, administrative or professional
C2	Skilled working class	Skilled manual workers
D	Working class	Semi and unskilled manual workers
E	Lowest level of subsistence	State pensioners or widows (no other earner), casual or lowest grade workers

Among behavioral segmentation, the Social Value Groups classification offers a nuanced understanding of how values, lifestyles, and socio-demographic factors shape human behavior and societal trends.

The table below (Table 26) outlines the different Social Value Groups and their distinct characteristics, highlighting the diversity within societies and the varied motivations driving individuals and groups. This classification system provides valuable insights into consumer behavior, political orientations, and social attitudes, making it a useful tool for marketers, sociologists, and policymakers alike.

Table 26: Behavioral segmentation

Social value group	Characteristics
Self actualisers	focused on people and relationships, individualistic and creative, enthusiastically exploring change, 'in a framework of non-prescriptive consideration for others'
Innovators	self-confident risk-takers, seeking new and different things, setting their own targets to achieve
Esteem seekers	acquisitive and materialistic, aspiring to what they see are symbols of success, including things and experiences
Strivers	attaching importance to image and status, as a means of enabling acceptance by their peer group, at the same time holding onto traditional values
Contented confromers	wanting to be 'normal', so follow the herd, accepting of their circumstances, they are contented and comfortable in the security of their own making
Traditionalists	averse to risk, guided by traditional behaviours and values, quiet and reserved, hanging back and blending in with the crowd
Disconnected	detached and resentful, embittered and apathetic, tending to live in the 'ever-present now

From the definition and structure of market segmentation variables, it's evident that the segmentation process enables organizations to identify specific customer groups. Consequently, value chain activities are tailored for each target segment, resulting in a well-synchronized value chain maintenance across the organization (Bose, 2012).
Segmentation also contributes to organizational profitability by allowing adjustments in the value chain for different segments, enabling the charging of higher prices for superior products or services. For example, Alfa Romeo produces premium car models and charges higher prices, capitalizing on the willingness of customers in that segment to pay more for luxurious vehicles.
Segmentation plays a crucial role in tailoring individualized approaches for specific target segments, thereby enabling organizations to both retain existing customers and capture new customers from previously untapped demographics.
For Alfa Romeo Junior, this entails a strategic focus on expanding its reach to a broader and younger audience, particularly Generation Z.
By segmenting its market and understanding the unique needs, preferences, and behaviors of the chosen target, Alfa Romeo Junior can develop targeted marketing strategies and product offerings that resonate within it.

Customer focused strategy, instead, has been defined as a plan that put all the focus on the needs and expectations of a particular customer segments.
In the automotive sector, customer-focused strategies enhance organizational communication with customers, allowing companies to better understand and meet their preferences, enhancing customer satisfaction. Customer satisfaction is a key determinant of loyalty, often measured by the percentage of long-term customers.
This enables automakers to adapt their value chains, accordingly, fulfilling customer expectations and fostering long-term relationships.
Moreover, customer-focused strategies facilitate the implementation of modern and efficient value chain management practices such as Total Quality Management (TQM) and Customer Relationship Management (CRM), that contribute to product quality improvement.

Implementing customer-focused strategies within an organization's value chain management also fosters innovation, ensuring that innovations are aligned with the perspectives and needs of customers.

Alfa Romeo Junior exemplifies this approach through the integration of various Advanced Driver Assistance Systems (ADAS) designed to enhance both safety and convenience during driving.

These ADAS features include adaptive cruise control, which maintains a safe distance from the vehicle ahead and recognizes speed limits through traffic signs, as well as active lane assist that alerts the driver if they veer out of their lane.

Additionally, technologies such as traffic sign recognition, lane centering, parking sensors, rear camera, blind spot monitoring, and driver attention assist further augment the driving experience by providing additional safety measures and alerts.

Moreover, Alfa Romeo Junior incorporates user-friendly tools aimed at simplifying the driving experience and emphasizing the importance of the driver.

Examples include hands-free trunk opening, which responds to a simple foot movement, and keyless entry which detects the electronic key within approximately a one-meter radius from the respective side of the vehicle door, enabling locking and unlocking without the need for physical interaction.

In addition, for the electric vehicle version, Alfa Romeo offers the Free2Move application, enabling users to locate charging points and monitor charging status, and the RFID card, that facilitates starting or ending charging sessions, providing flexibility for both public and home charging. These technologies allow the customers to use their smartphones to find charging points and manage charging sessions remotely.

Moreover, the Free2Move application embeds the E-Route function, that allows customers to seamlessly locate charging stations, providing essential information on both the mobile app and the vehicle's head unit (HU). This feature enables users to view charging station locations and specifications, empowering them to plan their journeys effectively.

Users who opt for the navigator can also benefit from EV Routing, which automatically incorporates necessary recharging stops during a trip. This functionality is particularly insightful as it not only indicates where to stop but also estimates the duration required to reach a certain battery level and calculates the total estimated time of arrival.

Moreover, the suggested planning takes into account various factors such as charging times, estimated arrival times, traffic data, and the compatibility of the vehicle with different types of connectors. This comprehensive approach ensures that users receive the best overall route based on their specific needs and circumstances.

Furthermore, users have the option to select their preferred eMSP (Electric Mobility Service Provider) provider, allowing the app to automatically generate the most suitable routes tailored to their requirements.

The system dynamically adjusts to changing conditions, such as availability or deviations, ensuring that the route remains optimized and updated in real-time. Additionally, users are promptly alerted in the event of recalculations, ensuring a seamless navigation experience.

In addition to these advanced navigation features, Alfa Romeo offers Alfa Connected Services, including "Hey Alfa" voice recognition and entertainment options such as games, enhancing the overall journey experience.

To enhance customer driving experience, the 10.25-inch infotainment display is driver-oriented and offers full customization, including up to five homepages and widgets, enhancing the driving experience and providing a seamless transition akin to using a smartphone.

9.4 Alfa Romeo customer target

The Alfa Romeo Junior promise is “To turn the ordinary everyday life into something exciting with a sporty driving experience that’s unique in the segment”.

With a strategic shift towards engaging a younger audience, particularly Generation Z, Alfa Romeo Junior aims to broaden its appeal beyond traditional Alfisti enthusiasts, creating a more inclusive demographic profile that encompasses a more balanced mix of genders and ages.

This strategic move aims to appeal to a broader demographic, making the brand more relevant than ever to a youthful target market.

The related marketing campaign also considers new media preferences and consumption habits, ensuring it resonates effectively with this younger audience.

What is even more interesting is the behavior of this target, much more independent and individualist such as social leaders, for which the career is key, innovators, like startuppers, image conscious and trendy, people with expensive tastes and keen on designer labels and sporty people, especially passionate about individual sports.

Alfa Romeo’s main customer is young and sporty, has will to emerge in an elegant way and lives a dynamic life.

The target is a young adult, single or in pairs, who is looking for a sports car for every day in town. They are drawn to the meticulously crafted design of the vehicle, which embodies the spirit of Alfa Romeo while infusing it with a contemporary flair. With an active and metropolitan lifestyle akin to the vibrant energy of a city like Milan.

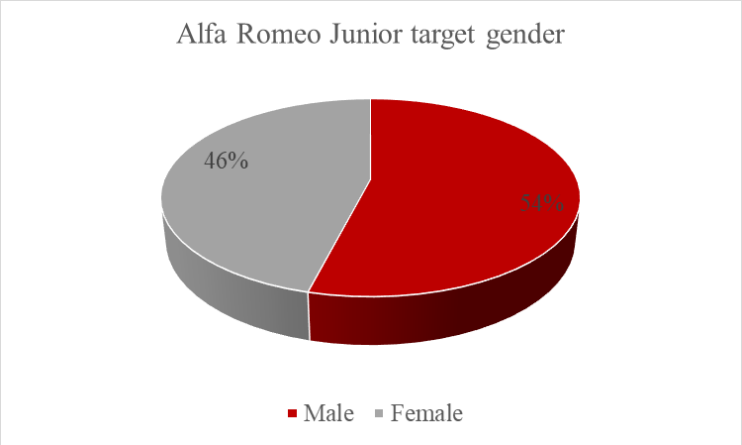
These individuals value the fusion of tradition and innovation, reflecting the Italian heritage with a global perspective.

The target is someone who wants to discover the newest and freshest thing, to find a spark in his/her routine, who wants that people see him/her as being in the know and who wants to assert his/her uniqueness as much as he/she can, independent minded and not afraid to standout.

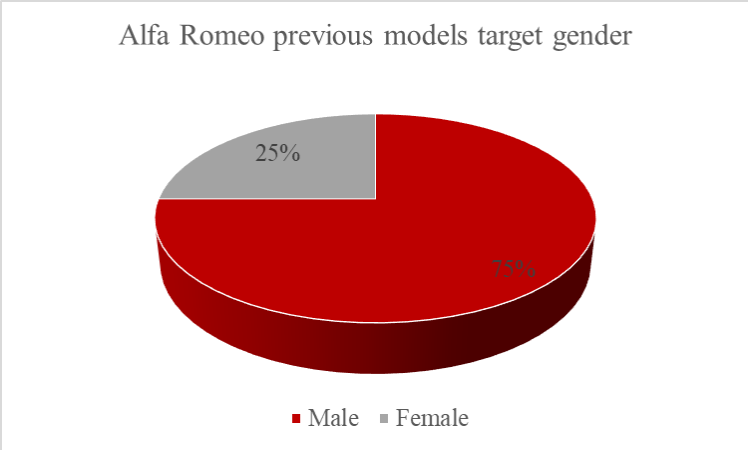
Alfa Romeo's new Junior target demographic marks a significant shift towards gender inclusivity, aiming to balance their traditional male-dominated customer base.

The new target consists of 54% male and 46% female consumers (Graph 24), a notable change from the previous composition of 75% male and 25% female (Graph 25).

This strategic shift demonstrates Alfa Romeo's commitment to inclusivity and their recognition of the growing influence of female consumers in the automotive market.



Graph 24: Alfa Romeo Junior target gender



Graph 25: Alfa Romeo previous target gender

Alfa Romeo Junior is strategically targeting a younger demographic segment, specifically those aged 25-54. This audience includes individuals who are passionate about sports, lead active lifestyles, work diligently, and often make spontaneous decisions.

In contrast, the traditional Alfa Romeo customer base skews older, primarily ranging from 35-54 years old and extending to those over 55 (Source: Starcom via Wekosmos Data).

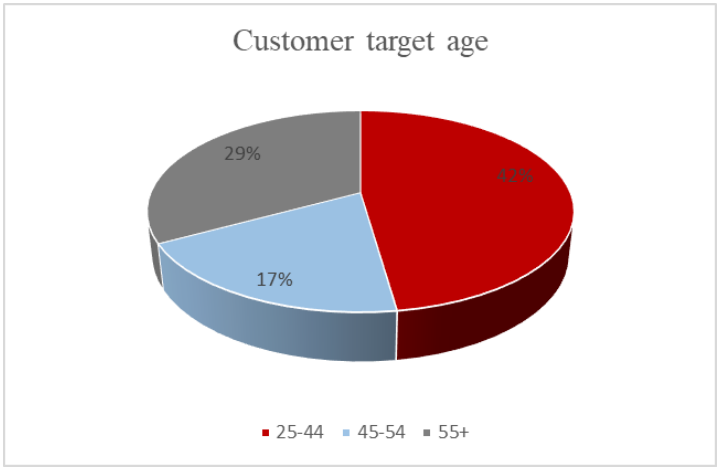
The 25-44 age group, additionally, represents a significant portion of the workforce with disposable income to invest in premium and lifestyle-oriented products, making them an ideal target for Alfa Romeo Junior's offerings.

The graphs below provide a detailed breakdown of the new target customer age and generation groups, highlighting a shift towards Generation X and millennials, predominantly in the 25-44 age range (Graph 26) (Source: Starcom via Wekosmos Data).

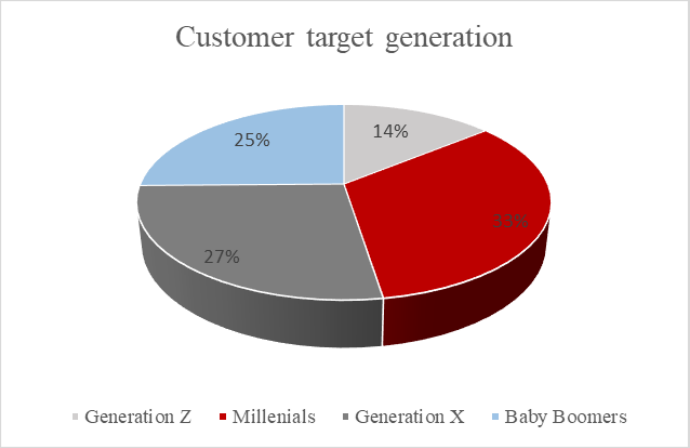
This strategic focus on younger generations is driven by several key factors (Graph 27). Changing lifestyle trends play a significant role, as millennials and Gen Xers are known for their dynamic lifestyles and a strong preference for experiences that align with Alfa Romeo Junior's emphasis on sportiness, spontaneity, and adventure.

By capturing the interest of these younger customers, Alfa Romeo aims to build long-term brand loyalty, engaging them early to foster lasting relationships as their purchasing power increases over time.

Furthermore, targeting a younger audience helps Alfa Romeo expand its market reach. Millennials and Gen Xers are tech-savvy and socially connected, enhancing brand visibility and word-of-mouth promotion through digital and social media platforms.

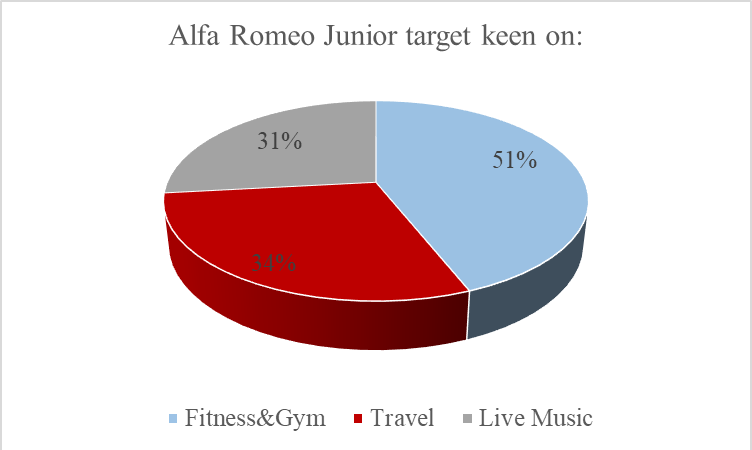


Graph 26: Alfa Romeo Junior target age

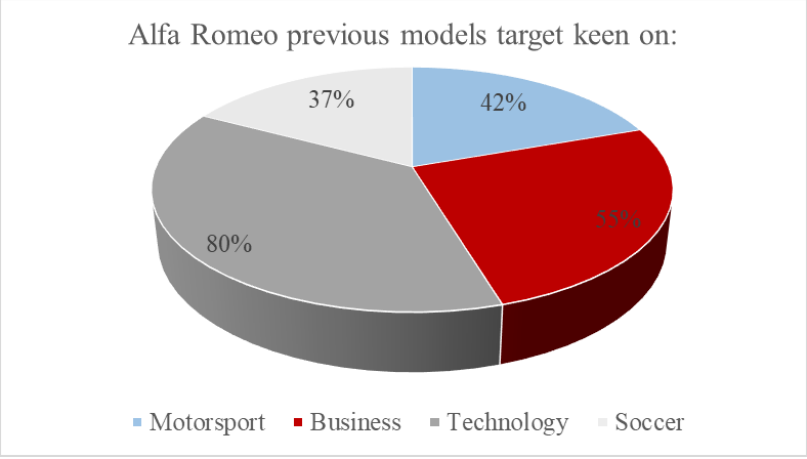


Graph 27: Alfa Romeo Junior target generation

The two graphs below, instead, illustrate the shift in target customer passions and hobbies (Graph 28 and Graph 29) (Source: Starcom via Wekosmos Data).



Graph 28: Alfa Romeo Junior target's hobbies



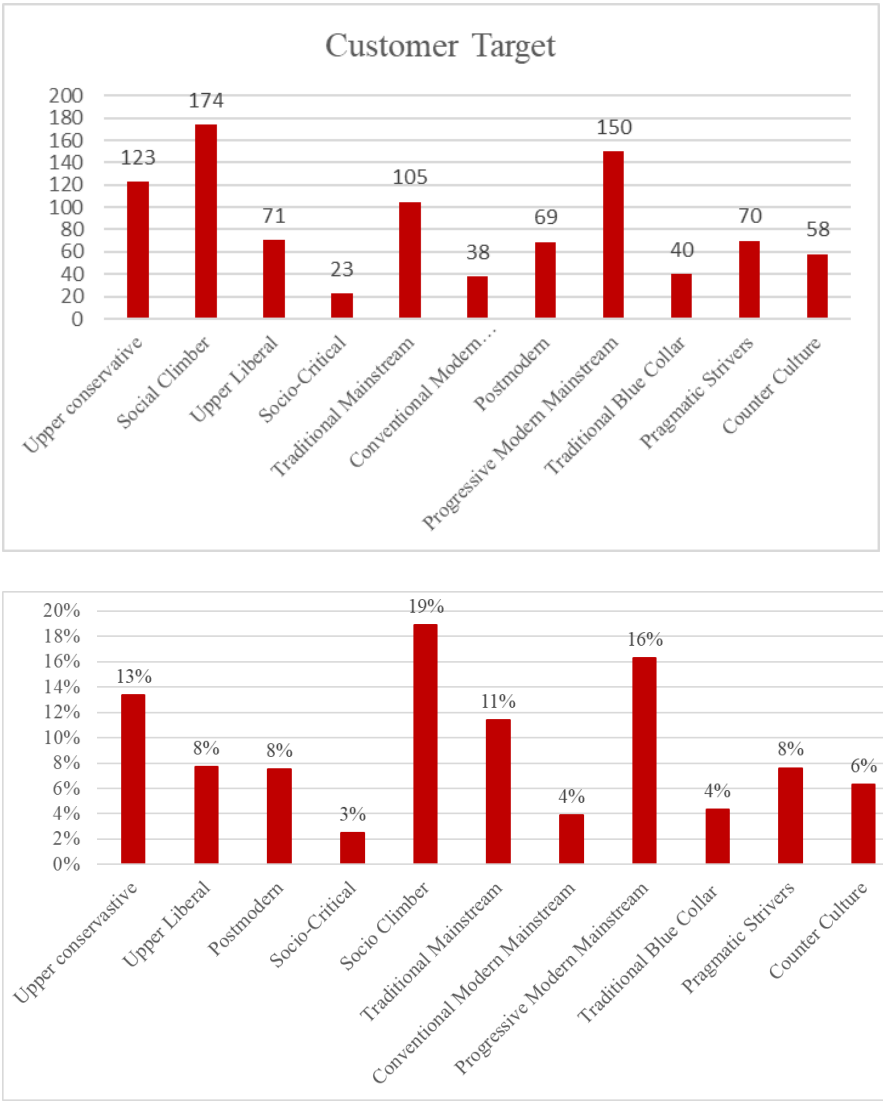
Graph 29: Alfa Romeo old target's hobbies

To sum up, Alfa Romeo's current business model centers on catering to premium, upscale customers who are willing to invest in higher-priced products for superior quality.

In particular, Alfa Romeo Junior aims to target social climbers, progressive modern mainstream and upper conservative (Graph 30). These categories are identified based on the Social value groups identified in Table 26.

These discerning clients typically seek out conspicuous items and are well-versed in Alfa Romeo's rich history and heritage, sharing the brand's core values.

Looking ahead to 2024, the objective is to broaden the brand's appeal beyond its traditional customer base and target modern and post-modern clusters to broaden the audience.



Graph 30: Customer target

More specifically, the target customer for each version are as follows:

- Alfa Romeo Junior Hybrid: Individuals in suburban and extra-urban areas looking for their first electrification experience and those who have previously rejected electric vehicles (EVs).
- Alfa Romeo Junior Hybrid Q4: Premium customers with a high spending capacity who seek all-wheel drive (AWD) functionality and are brand loyal to Alfa Romeo (Q4).
- Alfa Romeo Junior Electric: Mainly urban users, including commuters, with access to private recharging facilities.
- Alfa Romeo Junior Elettrica 240: High-spending customers interested in a sporty vehicle, mostly as a secondary car.

Regarding, instead, customer benefits for each version:

- Alfa Romeo Junior Hybrid: Offers CO2 savings (-22% compared to equivalent ICE vehicles) and pure electric drive for parking and driving.
- Alfa Romeo Junior Hybrid Q4: Features automatic AWD activation, an EV driving experience, and does not require plug-in charging.
- Alfa Romeo Junior Electric: Provides a full EV driving experience with the silence of electric propulsion.
- Alfa Romeo Junior Elettrica 240: Offers the best driving experience for a compact EV with Alfa Romeo's DNA (Dynamic, Natural, Advanced Efficiency) showcased through the instrument cluster.

The graph below (Graph 31) illustrates that the new primary audience for Alfa Romeo Junior is predominantly reachable through web, radio, television and social media channels (Source: Starcom via Wekosmos Data).

As a result, its marketing and advertising program will be strategically aligned with these platforms to effectively reach and engage with the target demographic.

This targeted approach allows to tailor Alfa Romeo messaging and creative content to suit the characteristics and dynamics of each platform, maximizing the ability to capture the attention and interest of the audience.

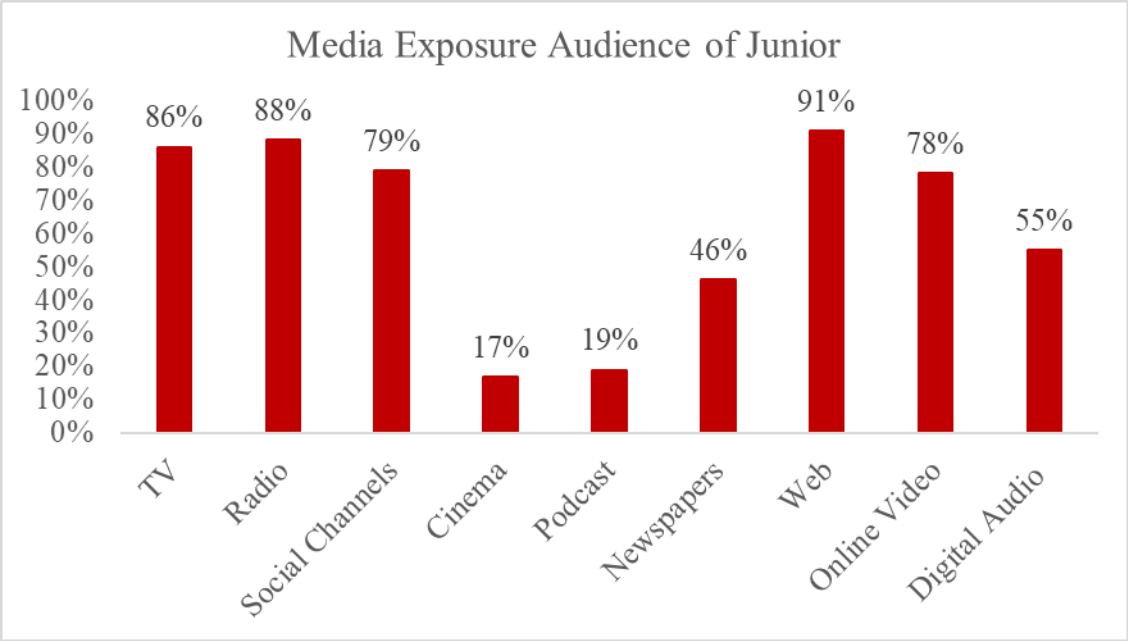
The media audience presents a plethora of opportunities derived from Alfa Romeo Junior new target demographic.

Firstly, they can leverage a robust video strategy, capitalizing on the high exposure afforded by television and online video platforms (OLV), like TikTok, that resonate with target audience's media consumption habits.

Secondly, digital and social media platforms offer avenues to enhance visibility through targeted campaigns, engaging their audience where they spend a significant portion of their time online.

In addition, radio and digital audio platforms can be effectively utilized to further amplify Alfa Romeo message.

A smaller portion of the marketing budget will also be allocated to cinema, podcasts, and newspapers.



Graph 31: Distribution channels

9.5 Customer experience

Customer experience encompasses every interaction a customer has with a company, extending beyond customer care to include advertising, product and service features, ease of use, and reliability. Despite its importance, many companies undervalue customer experience. Some fail to prioritize it, while others collect data but neglect to act on the insights.

A survey by Bain & Company highlighted this issue, revealing a significant disconnect between perception and reality. Out of 362 companies surveyed, only 8% of customers rated their experience as "superior," while 80% of the companies believed they were delivering a superior experience (Meyer and Schwager, 2007).

This challenge is further complicated by the increasing number of choices and channels available to consumers. Although many companies measure customer satisfaction and gather vast amounts of data, understanding how to improve satisfaction requires more than just measurement.

Customer satisfaction is the cumulative result of multiple experiences, where the overall experience is determined by the balance of positive and negative interactions. Achieving satisfaction involves narrowing the gap between customer expectations and their actual experiences (Gentile et al., 2007).

Customer experience is the internal, subjective response customers have to any direct or indirect contact with a company. Direct contact typically happens during purchase, use, or service, while indirect contact might come through unplanned interactions with the company's brand via word-of-mouth, advertising, news reports, or reviews (Meyer and Schwager, 2007).

A successful brand consistently shapes customer experiences by embedding its value proposition into every facet of its offerings.

Alfa Romeo claims that they want to “Push the limits to the edge. With a better EV experience, better driving dynamics, and higher versatility”, that is much more than a slogan. It delivers emotional touches, like style, and premium execution, among which materials, while also providing undeniable improvements compared to its "sister cars."

The Alfa Romeo customer is extremely demanding in terms of design, functionality, technical aspects, and technology. This drives Alfa Romeo to strive for the best possible balance in dynamism and versatility. The company also has urged its partners to develop Junior with the best technical package possible, comprehensive in every aspect to ensure the best customer experience and benefits.

It is important to understand that customer experiences are not solely shaped by the brand's messages or the company's actual offering. Companies must closely monitor their customers and meticulously analyze their feedback. This requires a closed-loop process where every department is focused on delivering a positive experience, ensuring that the entire organization is aligned towards this goal.

In fact, customer experience is shaped by a series of interactions between a customer and a product, company, or organization, evoking a spectrum of reactions. This experience is deeply personal, engaging the customer on multiple levels; rational, emotional, sensory, physical, and even spiritual.

The quality of this experience is evaluated based on how well the actual interactions align with the customer's expectations across various touchpoints, forming what can be termed as the “customer corridor”.

Companies must meticulously map this corridor of touchpoints and vigilantly monitor for any issues to excel in customer experience. At each touchpoint, the gap between customer expectations and actual experience determines whether the customer is delighted or disappointed. Moreover, people's expectations are shaped by their previous experiences, market conditions, competition, and the customer's personal circumstances. In fact, customers instinctively compare each new experience, whether positive or negative, with their past encounters and assess it accordingly. Even when expectations are established by the company's own brand, there remains a risk of disappointing the customer.

In this scenario, Alfa Romeo strives to elevate the customer experience by aiming to develop the most athletic compact B-SUV available, going beyond solely leveraging its established brand reputation.

To achieve this goal, it introduced several features, among which front and rear anti-roll bars for precise turn entry, a sporty set-up with a 25mm reduction, fixed brake calipers for enhanced performance, direct Alfa Romeo steering with a 14.6 ratio and V-shape calibration, and a torsen differential to ensure optimal traction.

As consumers increasingly prioritize enhancing their everyday experiences, crafting compelling value propositions that align with customer needs becomes crucial.

Consequently, Alfa Romeo Junior aims to address two critical customer needs: compactness for city maneuverability, facilitating easy parking and navigation within urban centers, and spaciousness for family usage, including ample trunk space.

Moreover, Alfa Romeo Junior is designed with the objective of satisfying consumers’ desires for dynamism, sportiness, and elegance, ensuring they stand out in the bustling urban environment of daily life. It seeks to embody a blend of sporty, metropolitan, and contemporary design elements, meticulously attending to details that harmonize tradition with a modern twist.

In addition to design and functionality, Alfa Romeo elevates customer experience by offering service contracts, previously mentioned, and including a Wall box in the price for the electric version of the Alfa Romeo Junior Speciale (Figure 18).

Figure 18: Alfa Romeo Junior Speciale in Blu Navigli color

In addition, always with the focus on enhancing customer experience, Alfa Romeo ensures that only fully trained salespeople are allowed to sell the Alfa Romeo Junior. This approach emphasizes comprehensive knowledge of all aspects of hybrid and electric vehicles, the improvement in behavioral skills for interacting with premium customers and includes the possibility of providing test drives for customers so potential buyers can thoroughly understand the vehicle they want to purchase.

Sales representatives must adhere to a specific process to effectively sell the vehicle. They start by greeting the interested customer in a friendly and engaging manner. Next, they have to clearly explain the design features of the Alfa Romeo Junior, describe the onboard experience and connected services, including ADAS, performance, and driving pleasure, and provide a comprehensive explanation of how to recharge the electric vehicle. They also have to detail the commercial offer, highlighting the advantages of Alfa Romeo Junior compared to competitors.

To ensure the sales team is well-prepared, Alfa Romeo has organized three face-to-face training modules, that are Junior USPs & Emotional Presentation (WS 1), Electrified & Connected by Alfa Romeo (WS 2), and Go-to-Market 360° (WS 3). These training sessions confirm Alfa Romeo's commitment to improve customer experience, recognizing the importance of touchpoints like salespeople. Additionally, to training modules, salespeople must also participate in interactive experiences, including Comparative Touch & Feel Walkaround (WS 1), Technology for BEV Mobility (WS 2) and Public Charging Experience (WS 3), and they must be also informed about Alfa Romeo Junior's main competitors and their technologies, especially for the BEV competitors, among which Volvo EX30 and the Smart #1.

10. Versions strategy

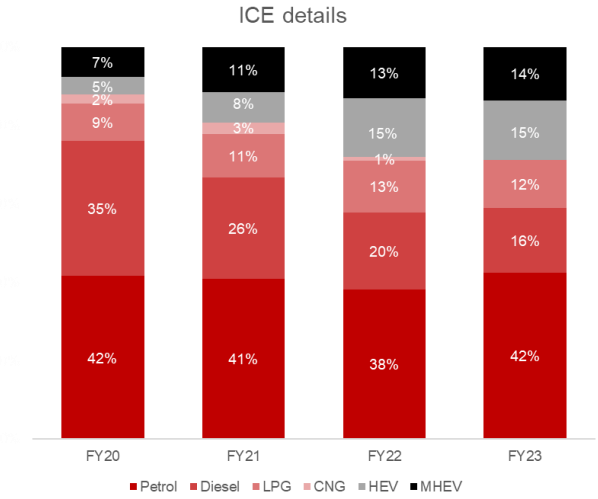
As already said, the Alfa Romeo Junior is available in two distinct versions: one electric and one hybrid.

This strategic decision is motivated by both environmental considerations and strategic objectives.

Regarding the strategic considerations behind the decision of producing both a hybrid vehicle and an electric one, it is because the most requested power supply in the B-UV segment is ICE, accounting for 97% of the total fuel mix demanded in 2023 (Graph 32).

In particular, Petrol and Diesel account for 60% of ICE, while MHEV 14% (Source: Stellantis Worldwide Product Segmentation & Segment Forecast, Dataforce FY23 and Dataforce aprile 2024).

The difference with respect to ICE and the advantage of MHEV is that the latter fuel is expected to grow in the following years. This is forecasted based on the fact that from 2020 to 2023 the demand for Mild-Hybrid vehicles is doubled.



Graph 32: ICE sales in 2020-2021-2022-2023

According to the environmental considerations, instead, the introduction of Battery Electric Vehicles (BEVs) in the automotive sector represents a marketing strategy aimed at capitalizing on consumers' growing preferences for environmentally friendly and low-impact vehicles.

This strategy is based on consumer perceptions of the environmental and economic benefits derived from adopting electric vehicles.

This strategy also aims to communicate the social and ecological value of choosing an electric vehicle, highlighting the environmental benefits and active role in reducing environmental impact and social costs.

Mild hybrid systems, in addition to conventional internal combustion engines, include features like engine start-stop systems, regenerative braking to recharge the battery, and a small electric motor for acceleration assistance. While mild hybrid vehicles cannot operate solely on electric power due to the limitations of the electric motor and battery size, they can achieve fuel efficiency gains ranging from 10% to 15% compared to traditional internal combustion engine vehicles (Hacker et al., 2009).

Electric vehicles operating in electric mode, instead, produce zero tailpipe emissions of harmful air pollutants like particulates, nitrogen oxides, and volatile organic compounds. Additionally, they substantially reduce noise emissions in urban driving scenarios because electric motors operate much quieter than internal combustion engines. However, quieter electric vehicles may pose challenges to road safety for pedestrians, who rely on sound as a warning system for approaching traffic.

The reduction of emissions due to the adoption of electric vehicles is well-documented.

Studies from organizations like Eurelectric estimate that electric cars emit around 80 g/km of CO2, assuming the current carbon intensity of the European electricity sector, compared to about 160 g/km emitted by an average conventional passenger car. By 2030, with an expected reduction in the carbon intensity of the EU grid mix, electric vehicles could emit less than 30 g of CO2 per kilometer (Requia et al., 2018).

WWF compared the impact of different national grid mixes on the overall CO2 benefit of EVs versus conventional gasoline and diesel vehicles. In regions with carbon-intensive, mainly coal-based power mixes, CO2 emissions from EVs are comparable to conventionally powered vehicles. However, in areas with low-carbon energy supplies, EVs can achieve emission reductions of more than 70%. The average EU grid mix still implies a CO2 emission reduction of about 60%, while the US average, with a higher share of coal-fired power plants, reduces the emission benefit of EVs compared to conventional vehicles by approximately 40%.

Studies, such as those from the American Council for an Energy-Efficient Economy (ACEEE), indicate that electric vehicles generally exhibit improved nitrogen oxide (NOx) emissions compared to conventional vehicles, particularly nitrogen dioxide (NO2), volatile organic compounds (VOCs), and carbon monoxide (CO).

For example, studies examining EV adoption scenarios in cities like Milan suggest that replacing 50% of light vehicles with EVs could lead to notable reductions in NO2 and NOx concentrations, demonstrating the potential impact of electric mobility in mitigating air pollution and associated health risks.

All the benefits of electric vehicle over 10 years and 120.000 miles are displayed in the figure below (Figure 19).

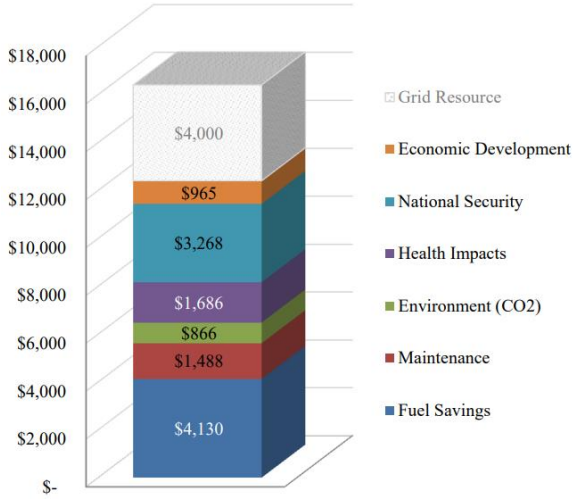


Figure 19: Compiled EV Benefits

Despite the aforementioned advantages of electric and hybrid vehicles, it is also crucial to address their negative aspects, particularly concerning emissions during production and challenges related to battery disposal or recycling under a cradle-to-cradle approach.

In terms of emissions during production, conventional fuels contribute relatively little emissions (about 15% of total life-cycle emissions) in comparison to the considerably higher emissions associated with electricity supply for electric vehicles.

A study comparing the cumulative energy demand and GHG emissions for BEVs and ICEVs found that manufacturing a BEV demands around 120 GJ, whereas an ICEV requires only 94 GJ. Within the BEV's production, the base vehicle accounts for 54% of these emissions, the lithium-ion battery for 26%, and the remaining electric powertrain components for 20% (Nordelöf et al., 2014).

Additionally, the high use of materials like copper, nickel, and gold in batteries and electric motors contributes to increased disposal of mine tailings containing sulfides.

The energy consumption and emissions from extracting and preparing battery raw materials are significant contributors to the overall environmental impacts of lithium-ion batteries, responsible for 10% to 40% of these impacts (Christensen et al., 2021).

Moreover, the environmental benefits of EVs heavily depend on factors such as the energy pathway, energy generation profile, type of air pollutants and GHGs, and the type of EV. In regions where electricity is predominantly generated from non-renewable sources like coal or oil, the potential of EVs to reduce air pollutants and GHGs may not be fully realized. For example, in China, where coal is the primary electricity source, EVs could significantly increase emissions of SO2, NOx, PM10, and PM2.5 compared to gasoline-powered internal combustion engine vehicles, due to the sources and raw materials used in electricity production and EV component fabrication (Nordelöf et al., 2014).

Additionally, EVs contribute to non-exhaust emissions due to their heavier weight compared to conventional vehicles, resulting in increased ground-level O3 levels.

To addressing the disposal issue, instead, a recent life cycle assessment (LCA) study on lithium-ion battery recycling using pyrometallurgical and hydrometallurgical recycling showed that the former method can pose high environmental risks due to electricity consumption, estimated to be more than 1300 kWh, GHG emissions and incineration of plastics, with the formation of toxic gases and further CO2 (Lai et al., 2022; Christensen et al., 2021).

11. Network Externalities

Another economic theory that will be treated into this section is network externality, which can significantly impact the adoption rate of new technologies like BEVs.

Network externalities refer to the phenomenon where the value or utility of a product or service increases as more people use it. In other words, the benefits derived from a product are influenced not only by its inherent features but also by the number of other users (Sartzetakis and Tsigaris, 2004).

This concept is particularly relevant in industries where products or services are interconnected or rely on a network of users for their effectiveness.

In the automotive sector, network externalities play a crucial role in shaping consumer preferences and market dynamics. One prominent example is the adoption of electric vehicles (EVs) and the associated infrastructure, such as charging stations. As more consumers choose to drive EVs, there is a corresponding increase in the demand for charging infrastructure. This, in turn, makes it more convenient for EV drivers to charge their vehicles and encourages further adoption of EVs, creating a positive feedback loop (Li et al., 2017).

Policymakers can harness this loop to achieve desired outcomes. For instance, providing subsidies allocated to expand the network of charging stations can expedite the deployment of charging infrastructure, subsequently fostering the adoption of electric vehicles (EVs).

Similarly, incentives tailored to EV purchases have the potential to stimulate demand, thereby incentivizing investments in charging infrastructure and perpetuating the positive feedback loop.

Referring to Alfa Romeo Junior, the electric version benefited at the end of May of 11.000€ of government incentives, whilst the hybrid version benefited of 3000€ of government incentives.

Obviously, petrol or diesel vehicles were excluded from these incentives, who's aim was promote the adoption of less pollutant vehicles.

The concept behind network externalities in the EV market is that when a user enters the market after the introduction of clean (electric vehicle) technology, denoted as time $t \geq T^*$, he/she faces a decision between adopting the clean or dirty technology automobile based on the choices of previous users. The Nash equilibrium is defined by the network effect, also known as the bandwagon or installed-base effect in literature. Essentially, if more users continue to opt for the dirty technology even after the clean technology is introduced, it becomes increasingly challenging for the latter to gain traction.

Following the introduction of the new technology, in an extreme case, just two outcomes are possible: adoption, where all users switch to the clean technology, and non-adoption, where no user adopts the clean technology. Adoption constitutes a subgame-perfect Nash equilibrium if the user entering the market at $T*$ selects the clean technology automobile. This occurs when the user's discounted future benefits from the expanding network of clean technology exceed those from the network of the dirty technology, so when $C(T*) \geq D(T*)$.

If the user at $T*$ finds it advantageous to adopt the clean technology, it's certain that all subsequent users will follow suit, making adoption the subgame-perfect Nash equilibrium.

Conversely, if $D(T*) > C(T*)$, then all users will continue to purchase the dirty technology, making non-adoption the subgame-perfect Nash equilibrium.

Assuming the clean technology is introduced after the maturity of the dirty technology's network, network effects make the introduction of the clean technology infeasible. In this scenario, non-adoption becomes the unique equilibrium and is also deemed efficient.

Also because, upon the introduction of clean technology, the dirty technology is offered at a lower price (petrol or Diesel vehicles cost less than electric vehicles) and has reached its maximum service network.

So, without regulatory intervention, the clean technology will not be adopted. This is because the initial users of clean technology bear a disproportionately high share of the costs and thus opt to purchase the dirty technology.

However, accounting for the environmental cost of dirty technology, the non-adoption equilibrium may become socially inefficient, necessitating corrective policy intervention.

Also the introduction of a Pigouvian tax could not be enough to incentivize the adoption of clean technology as Nash equilibria. This tax τ_m should compensate for the difference between the service prices of clean and dirty technology. If the benefits of using the dirty technology are significant, then the tax needed to induce adoption will surpass the standard Pigouvian taxation, $\tau=\epsilon$. Formally, $\tau_m > \tau$.

Unfortunately, most taxes, except for a very high one, will be ineffective and merely serve to increase government revenue.

Furthermore, network externalities are evident in the development and adoption of connected and autonomous vehicles (CAVs). These vehicles rely on a network of sensors, communication systems, and data-sharing platforms to function effectively. As more CAVs populate the roads, the efficiency of traffic flow improves, leading to reduced congestion and safer driving conditions for all road users.

In addition, the loop effect is also present in the automotive sector because as more people choose a specific car model, its visibility and popularity increase, prompting even more consumers to make the same choice. This phenomenon occurs because the appeal of a car is influenced not only by its intrinsic features but also by its social presence. In other words, the more frequently a new car model is seen on the streets, the more likely it is that others will be encouraged to consider and eventually purchase it. This visibility creates a feedback loop: increased sales lead to greater visibility, which in turn drives even more sales.

Recognizing the power of this loop effect, Alfa Romeo has strategically decided to launch the Alfa Romeo Junior in a wide range of countries, maximalizing the car's visibility on a global scale, across various urban landscapes.

The map below illustrates where different versions of the Alfa Romeo Junior will be available, taking into account each country's regulations on motorization and emissions (Figure 20).

Figure 20: Junior versions available per Country

12. Negative externalities

Besides network externalities also negative externalities are treated, emphasizing the need for sustainable practices to mitigate environmental impacts.

Externalities occur in various interactions within the economy, including between producers, consumers and the interaction between producers and consumers. These externalities represent the impacts of production or consumption activities that are not fully captured by market prices and can be either negative or positive.

Specifically, negative externalities arise when one party's actions impose costs on another party. This results in a marginal external cost, which is the additional cost borne by individuals due to the externality, and a marginal social cost, which combines the marginal cost and the marginal external cost. An externality implies that a firm is producing an output that is higher than the efficient one.

In the automotive industry, negative externalities stem from vehicle emissions, contributing to air pollution and imposing public health costs not reflected in the production or consumption costs of cars (Hacker et al., 2009).

The combustion of gasoline generates carbon dioxide (CO2), a greenhouse gas linked to climate change. To assess the climate benefits of reducing CO2 emissions, the U.S. Environmental Protection Agency (EPA) and other federal agencies use the Social Cost of Carbon (SCC). This metric aims to quantify the economic impacts of climate change, encompassing changes in agricultural productivity, human health, property damage from increased flood risk, and shifts in energy system costs (like heating and air conditioning expenses) (Requia et al., 2018).

According to the U.S. government's interagency working group on the Social Cost of Carbon, the SCC was estimated at $42.30 per ton in 2015. However, recent modifications by Stanford researchers to an Integrated Assessment Model (IAM) considering slower economic growth rates linked to climate change yielded a new SCC estimate of $220 per ton (Christensen et al., 2021).

Opting for an electric vehicle over a comparable gasoline-powered vehicle could result in reducing carbon emissions by about 4,096 pounds annually. Over a 10-year lifespan, the value of reduced carbon emissions based on the Stanford estimate of SCC would amount to approximately $4,506. Using the more conservative EPA value, this equates to savings of over 20 tons of carbon, translating to avoided costs of $866.

The tables below report the externalities costs and the ownership costs associated with Petrol and Diesel vehicles (ICEV), Hybrid electric vehicles and electric vehicles, in 2015 (Table 27).

Petrol and Diesel vehicles are the ones with the highest costs of ownership but also with the higher externalities cost.

Whilst EVs have the lowest externalities cost and HEV the lowest cost of ownership (Christensen et al., 2021; Mitropoulos et al., 2017).

Table 27: Externalities (left) and Total cost of ownership (right) in 2015

	ICEV	HEV	EV
GHGs	1,899	1,003	1,195
Air quality	2,619	2,541	1,883
Time cost	1,482	1,152	899
Total externalities cost	6,001	4,696	3,978

	ICEV	HEV	EV
Retail cost	27,130	27,642	31,590
Fuel cost	11,024	5,053	3,367
Operation cost	24,497	21,820	23,840
Total cost of ownership	62,651	54,515	58,797

Looking at the two tables, the most appealing vehicles for consumers are HEVs, followed by EVs and ICEVs. However, the high initial purchase cost and limited charging infrastructure contribute to low penetration rates (Mitropoulos et al., 2017; Malmgren, 2016).

In order to reduce the externalities associated with ICE vehicles, governments can use different public instruments, among which quantity regulation policies through emission standards, imposing the optimal quantity of externalities, or emission permits.

Emission standards for cars set limits on allowable emissions of pollutants like carbon dioxide and nitrogen oxides, whilst subsidies, rebates or tax credits encourage a shift towards cleaner transportation options, reducing the negative externalities associated with conventional vehicles.

Additionally, policies like incentives to promote the production and use of electric vehicles, along with restrictions on not electric or not hybrid cars from city centers, as seen in cities like Milan (source Comune di Milano web site), serve as political tools to mitigate externalities.

Conclusion

The launch of the Alfa Romeo Junior represents a strategic move by Alfa Romeo into the premium B-SUV market.

This new model aims to boost overall sales for the brand, enhancing the visibility and appeal of the Junior alongside other models such as Tonale, Stelvio, and Giulia.

One key objective is, indeed, to attract customers from the upper mainstream market and encourage them to upgrade to a premium vehicle. With its competitive pricing and sporty features, the Junior is designed to be an appealing option for these potential buyers.

The thesis starts examining price competition and entry barriers that characterized the oligopolistic environment in which Alfa Romeo operates. In an oligopolistic market, where price wars can significantly erode profit margins, an aggressive approach is pivotal. By leveraging its brand heritage and distinguishing itself with cutting-edge technologies and premium features, the company aims to gain market share while maintaining profitability. Moreover, the Alfa Romeo Junior is offered in both hybrid and electric versions, aligning with global trends toward electrification and environmental sustainability.

Subsequently, the thesis highlights the importance of Alfa Romeo's customer loyalty strategies in a competitive market. Effective Customer Relationship Management (CRM) systems and loyalty programs, through tailored packages, are essential for retaining existing customers, minimizing the risk of losing them to competitors, and attracting new ones.

Additionally, the thesis includes a thorough market analysis, featuring demand curves, elasticity studies, and benchmarking, that provides insights into consumer behavior, in response to a change in price, and market dynamics. This analysis has allowed Alfa Romeo to refine its pricing strategies, ensuring that Alfa Romeo Junior remains competitive. The choice to benchmark against a successful model within the Stellantis group (Jeep Avenger) demonstrates a practical approach to demand forecasting and sales target setting.

Regarding production strategies, the thesis examines Alfa Romeo's decision to relocate production to Tychy, Poland, as a measure to reduce costs. This move supports the broader strategy of maintaining competitiveness through cost efficiency while delivering a product that meets the high standards of the premium segment.

Moreover, the application of market segmentation theory, along with rational choice and utility maximization theories, illustrates how Alfa Romeo has tailored its marketing efforts to specific customer segments, enhancing its market penetration strategy.

In conclusion, the Alfa Romeo Junior's launch strategy is a comprehensive approach that combines aggressive market entry tactics with long-term brand positioning. The success of Alfa Romeo Junior in the B-SUV segment will depend on Alfa Romeo's ability to adapt to market conditions, optimize pricing strategies, and maintain customer loyalty.

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Appendix

Appendix A: Demand and price of electric vehicles

Model	Demand (units)	Price (€)	Month
Jeep Avenger	667	39.400 €	June
Volvo EX30	486	35.900 €	June
Peugeot 2008	220	38.949 €	June
Fiat 600e	101	35.950 €	June
Smart #1	82	37.548 €	June
MINI Countryman	20	40.705 €	June
Opel Mokka	17	39.000 €	June
DS 3	5	42.150 €	June
Volvo EX30	206	35.900 €	April
Jeep Avenger	191	39.400 €	April
MINI Countryman	88	40.705 €	April
Smart #1	66	37.548 €	April
Fiat 600e	41	35.950 €	April
Opel Mokka	22	37.900 €	April
Peugeot 2008	22	38.949 €	April
DS 3	4	42.150 €	April
MINI Countryman	25	40.705 €	May
Fiat 600e	206	35.950 €	May
Volvo EX30	181	35.900 €	May
Jeep Avenger	179	39.400 €	May
Peugeot 2008	101	38.949 €	May
Smart #1	68	37.548 €	May
Opel Mokka	24	37.900 €	May
DS 3	1	42.150 €	May

Appendix B: Demand and price of hybrid vehicles

Model	Demand (units)	Price (€)	Month
Toyota Yaris Cross	3293	28.650 €	June
Jeep Avenger	1498	26.200 €	June
MINI Countryman	559	34.905 €	June
Peugeot 2008	463	30.150 €	June
Fiat 600	408	24.950 €	June
MINI Countryman	406	34.905 €	April
Toyota Yaris Cross	2218	28.650 €	April
Jeep Avenger	160	26.200 €	April
Fiat 600	25	24.950 €	April
Peugeot 2008	0	30.150 €	April
MINI Countryman	577	34.905 €	May
Toyota Yaris Cross	3299	28.650 €	May
Jeep Avenger	1319	26.200 €	May
Fiat 600	358	24.950 €	May
Peugeot 2008	164	30.150 €	May

Appendix C: Number of registrations in the first quarter (YTD) of 2024, number of registrations in the firs quarter of 2023 (YTD) and the corresponding percentage increase/decrease

Model	Sum of YTD24	Sum of YTD23	Delta%
Jeep Avenger	13176	2626	402%
Toyota Yaris Cross	12721	13198	-4%
Ford Puma	11150	9603	16%
VW T-Roc	11029	11940	-8%
Renault Captur	10433	10569	-1%
MG ZS	10122	3788	167%
Dacia Duster	10087	11487	-12%
Peugeot 2008	9464	6462	46%
Fiat 500X	8752	10757	-19%
VW T-Cross	8384	8353	0%
Jeep Renegade	6733	14464	-53%
Citroen C3 Aircross	5204	5579	-7%
Nissan Juke	5176	3075	68%
Toyota C-HR	5121	3821	34%
VW Taigo	4720	4176	13%
Opel Mokka	4486	4622	-3%
Suzuki Vitara	4416	3411	29%
Audi Q2	3573	1927	85%
Skoda Kamiq	3297	2716	21%
Suzuki SX4 S-Cross	2843	2149	32%
Hyundai Kona	2711	1792	51%
Kia Stonic	2619	2820	-7%
Opel Crossland X	2603	1976	32%
DR 5.0	2552	4531	-44%
SEAT Arona	2545	2206	15%
Hyundai Bayon	1805	977	85%
MINI Countryman	1562	3712	-58%
Honda HR-V	1226	498	146%
EVO 5	1066	77	1284%
DR 4.0	1008	2364	-57%
DR 3.0	976	397	146%
Volvo EX30	814	0	NA in 2023
EVO 3	511	1298	-61%
smart #1	264	0	NA in 2023
Lexus LBX	253	0	NA in 2023
Fiat 600e	249	0	NA in 2023
DS 3	215	336	-36%
EVO 4	175	95	84%
SsangYong Tivoli	45	26	73%
Sportequipe 5	35	3	1067%
Fiat 600	19	0	NA in 2023
Beijing Zhida X3	3	0	NA in 2023
Ford Ecosport	2	833	-100%
Mitsubishi Pajero Pinin	1	0	NA in 2023
JAC other	0	2	-100%
Fiat Sedici	0	3	-100%
Citroen C4 Cactus	0	2	-100%
Total	**174435**	**158671**	**10%**