1. Tesla Inc. is an American multinational automotive and clean energy company. They design and manufacture electric vehicles, battery energy storage, solar energy parts, and its associated services. Although Tesla has subsidiaries in other business sectors, the electric vehicle segment has been their main focus [1], producing its largest revenue [2]. Appendix A shows the 5 Forces + 1 analysis of Tesla Inc and the electric vehicle industry. The rivalry among existing competition is high as the traditional car manufacturers are increasing their offerings of hybrid gasoline-electric cars, as well as pure electric vehicles due to the potential of the EV market.

The threat of new entrants is considered low as the barriers to entry are high. The industry requires extremely high amounts of investment for mass production, as well as specialized knowledge & technology. In addition, the economies of scale that exist in the industry raises the barrier to entry. Tesla has developed its brand image as an innovative, high-tech automaker, and this makes the competition with Tesla even more difficult.

Moreover, Tesla had to deal with the shortage of semiconductors during the COVID-19 pandemic. In spite of their efforts to reduce the supplier risk in many areas, automobile production still requires a number of components and thus switching costs can be high due to unique design requirements. The power of suppliers should be considered a medium to high threat.

Tesla has been a leader in the EV industry due to their innovation and marketing. However, with an increasing number of competitors, Tesla's EV share is expected to decrease as the market expands. The electric vehicle industry remains attractive, as customers have become more environmentally conscious, and governments have

started to mandate the sales of electric vehicles. Fortune Business Insights estimated an annual growth rate of 24.3% for the worldwide electric vehicle industry, from $287.36 billion in 2021 to over $1.3 trillion in 2028 [3].

2. As Tesla optimizes their production, faces new competitors, and nears economy of scale, they're creating and capturing far more economic value by decreasing cost. Moreover, Tesla faces many big name competitors such as Ford, Toyota, Hyundai, and Porsche, making premium price points less feasible [4].

Tesla has the ability to return some supplier surplus to consumers, putting additional pressure against potential rivals to scale faster to achieve the same level of consumer value. Most recently, Tesla slashed prices in countries across the globe such as the United States at ~ 10% [5]. GM, on the other hand, *increased* costs of the 2023 Chevy Bolt [6]. This was not the case at Tesla's inception, when their economic value was driven by increasing their buyers' willingness to pay; decreasing cost was not feasible at production onset.

While Tesla's costs have decreased, they continue to focus on technological innovation by leveraging their development, building, and investment. For example, Tesla invests heavily in electric powertrain technology to achieve longer ranges and faster charging times than their competitors; their next gen powertrain is expected to cost half the price [7].

Once economic value is created through innovative technologies at lower price points, it is captured through its incorporation into products and services sold by Tesla where they receive economic profit optimized in pricing that also takes into account their buyers' surplus. A buyer may purchase a Tesla like the Model Y with upgraded

technologies, or upgrade a previous Tesla with an add-on package. For example, legacy Tesla users can purchase autopilot, enhanced, or full self-driving capability through the Tesla app which downloads all the software they need directly to their Tesla [8].

3. Tesla's largest advantage is their *focus on the critical*. Many strategic actions are focused on opening future doors rather than traditional challenges. Tesla focuses on software development and product quality as its core investment. Rather than building CAPEX intense manufacturing sites and scaled production, with legacy costs, Tesla partnered with Daimler, Toyota and Panasonic; getting access to available resources. In understanding that first mover advantage is critical Tesla has provided free access to its battery technology and charging infrastructure [9]. This drives consumers to choose compatible vehicles and also lowers technological barriers for other car manufacturers to expand the market. Consequently, Tesla has built a brand with high consumer value.

Having favorable cost structure, first mover advantage, strategic partnerships and high brand recognition is both valuable and rare in the EV space. In order to imitate/substitute such success, competitors are spending $1.2 Trillion to compete with Tesla, with Tesla still reporting 74% of EVs sold in the US [10,11]. Lastly, organizationally Tesla is well set up to continue sustaining its advantage. With its headquarters in Silicon Valley, close to other tech companies, Tesla can continue to invest with better expectation of future resource value. Tesla has also imposed path dependence on its competitors through previous investments and brand development. While many companies can close the technical and branding gaps, it's unlikely that they can duplicate the success Tesla has enjoyed.

Appendix A
5 Forces + 1 Analysis: Tesla

High

- Number of competitors: **High**
- Market concentration: **Medium**
- Industry growth: **High**
- Industry's product differentiation: **High**
- Exit barriers: **Medium-High**

Low

- Barriers to entry: **High**
  - Economies of scale: **High**
  - Network effects: **High**
  - Buyers' switching cost: **Low**
  - Capital requirements: **High**
  - Incumbent advantages: **Medium**
  - Access to distribution channels: **High**
  - Government policy: (e.g., approval from FDA) **Medium-High**

Threat of new entrants

Med-High

- Suppliers' market concentration: **High**
- Industry's' switching costs: **High**
- Suppliers' product differentiation: **Low**
- Threat of forward integration: **Low-Medium**

Bargaining power of suppliers

Rivalry among existing competitors

Bargaining power of buyers

Low-Medium

- Buyers' market concentration: **High**
- Buyers' switching costs: **Medium**
- Industry's product differentiation: **High**
- Threat of backward integration: **Low**

Complements

Threat of substitutes

Low

- Bargaining power of complementors: **Low**

Medium

- Price-performance trade-off offered by substitute: **Medium**

REFERENCES:

[1] “Top Company Profile: Tesla Inc, Austin TX.” NAICS Association, https://www.naics.com/company-profile-page/?co=8331.

[2] 10-Q, https://www.sec.gov/Archives/edgar/data/1318605/000095017021002253/tsla-20210930.htm.

[3] “Electric Vehicle Market Size, Share & Forecast, 2021-2028.” Electric Vehicle Market Size, Share & Forecast, 2021-2028, https://www.fortunebusinessinsights.com/industry-reports/electric-vehicle-market-101678.

[4] “Competitors Chip Away at Tesla's Dominance in U.S. Electric Vehicle Market.” CBS News, CBS Interactive, 29 Nov. 2022, https://www.cbsnews.com/sanfrancisco/news/tesla-ev-market-competitors-chip-away-ford-chevrolet-hyundai-kia-vw-nissan/.

[5]: Loveday, Steven. “Tesla's Massive Price Cuts Send Shockwaves across Auto Industry.” InsideEVs, InsideEVs, 23 Jan. 2023, https://insideevs.com/news/632699/tesla-massive-price-cuts-shocks-auto-industry/.

[6]: Edelstein, Stephen. “GM Hikes 2023 Chevy Bolt EV Price as $7,500 Tax Credit Returns.” Green Car Reports, 4 Jan. 2023, https://www.greencarreports.com/news/1138326_gm-hikes-2023-chevy-bolt-ev-price-as-7-500-tax-credit-returns.

[7]: Lambert, Fred. “Tesla Is Working on next-Gen Electric Car Platform for Half the Price.” Electrek, 20 Oct. 2022, https://electrek.co/2022/10/20/tesla-next-gen-electric-car-platform-half-price/.

[8]: “Autopilot and Full Self-Driving Capability: Tesla Support Other Europe.” Tesla, https://www.tesla.com/en_eu/support/autopilot.

[9] Frank T. Rothermel and David R. King, Tesla Motors Inc., McGraw Hill Education, March 12, 2015

[10] Paul Lienert, “Exclusive: Automakers to double spending on EVs, batteries to $1.2 trillion by 2030”, Reuters, Oct 2022

[11] Jamie O’Donoghue, “Tesla’s Competitors: The Other Players in the Electric Vehicle Industry”, MyWallSt, Jan 2023