Disruptive Innovation: A Case Study of BYD's Business Model Canvas

Logaiswari Indiran, Jingjun Lei, Shathees Baskaran, Teh Zaharah Yaacob, Umar Haiyat Abdul Kohar, Aslan Amat Senin

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v13-i9/17822  DOI:10.6007/IJARBSS/v13-i9/17822

Received: 13 July 2023, Revised: 17 August 2023, Accepted: 27 August 2023

Published Online: 19 September 2023

In-Text Citation: (Indiran et al., 2023)


Copyright: © 2023 The Author(s)

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: http://creativecommons.org/licences/by/4.0/legalcode
Disruptive Innovation: A Case Study of BYD's Business Model Canvas

Logaiswari Indiran, Jingjun Lei, Shathees Baskaran, Teh Zaharah Yaacob, Umar Haiyat Abdul Kohar, Aslan Amat Senin
Faculty of Management, Universiti Teknologi Malaysia, Skudai Malaysia

Abstract
This article explores the disruptive impact of Build Your Dream’s (BYD) Business Model Canvas on the electric vehicle (EV) industry’s innovation landscape. BYD, a market leader in electric vehicles, has revolutionized the industry with its strategic and comprehensive approach to business model innovation. This case study examines how BYD has disrupted traditional business models and created a new paradigm for sustainable mobility using the Business Model Canvas framework. The study delves into key Business Model Canvas components such as customer segments, value propositions, channels, customer relationships, revenue streams, key activities, resources, and partnerships. BYD has successfully positioned itself as a disruptive force in the market by strategically aligning these elements, challenging established players and driving industry-wide change. The findings shed light on BYD’s specific strategies and actions to disrupt the innovation landscape, demonstrating the company’s ability to leverage its strengths, cultivate key partnerships, and deliver innovative and sustainable EV solutions. This case study is a valuable resource for businesses looking to navigate and thrive in disruptive industries, highlighting the importance of a holistic and adaptable business model in driving innovation and success.

Keywords: Business Model Canvas (BMC), Disruptive Innovation, Build Your Dream (BYD)

Introduction
In the rapidly changing business environment, organizations continuously strive to develop innovative strategies to enhance their competitive advantage and succeed in their industries. At the heart of these efforts lies the concept of the business model, which acts as a roadmap for creating and capturing value. Understanding business models is of the utmost importance for business owners, managers, and researchers alike because it provides a comprehensive framework for analysing and improving the operations of an organisation (Magretta, 2002). Changes to business models have been shown to be one of the most sustainable types of innovation in a number of different research studies. Although it may appear that successful business models make a smooth transition from the ideation stage to the implementation stage, the fact of the matter is that new business models almost never achieve immediate success. Challenges can be encountered by those responsible for making decisions during both the exploratory and the implementation stages. During the stage known as "exploratory," managers are tasked with navigating the unpredictability and rapid evolution of markets. In addition, the cognitive limitations they have, which are caused by mental models of the environment that are either incomplete or imperfect, can make it difficult for them to make decisions. In the implementation stage, new business models require organisational realignment. This necessitates the mobilization of scarce resources, the development of unique competencies, and adjustments to organizational structures that
promote learning, change, and adaptation (Foss & Saebi, 2017). In addition, this necessitates
the development of unique competencies.

In the context of disruptive innovation, the business model plays a pivotal role in enabling and
capitalizing on the disruptive potential of new technologies or ideas. Disruptive innovation
refers to "an innovation that creates a new market and value network and eventually disrupts
an existing market and value network, displacing established market-leading firms, products,
and alliances" (Christensen, 1997). Therefore, disruptive business models usually provide a
one-of-a-kind value proposition that challenges the status quo and addresses unmet
customer needs. They introduce novel features, enhanced performance, cost savings, or new
customer experiences that set them apart from existing solutions. Disruptive business models
frequently target underserved or underappreciated market segments. They identify
underserved customer segments by incumbents and tailor their offerings to their specific
needs and preferences. Disruptive business models frequently leverage cost advantages over
incumbents to provide more affordable solutions. They reduce costs through innovative
approaches such as streamlined processes, efficient supply chains, or the use of disruptive
technologies, allowing them to offer competitive pricing. Disruptive business models embrace
and leverage new technologies in order to enable innovative solutions. They may use
emerging technologies such as artificial intelligence, blockchain, or the Internet of Things to
develop novel value propositions or to transform traditional industry practises. Disruptive
business models recognise the value of ecosystem collaboration and partnerships. They may
form strategic alliances, engage in open innovation, or build networks of complementary
products or services to create synergies and improve their overall value proposition.

BYD is a prominent Chinese electric vehicle (EV) company that has undergone significant
business model changes to establish its position in the EV industry. Initially, BYD began as a
manufacturer of rechargeable batteries and subsequently expanded into the production of
electric vehicles. BYD’s push into new markets and industries has marked its growth. Its early
adoption of electric car technology and collaboration with Berkshire Hathaway contributed
to its company’s success in the automotive business. In addition, BYD’s diversification into
solar panels and other renewable energy products has enabled it to withstand economic
downturns and emerge as the global market leader in green technology. Therefore, this case
study is a valuable resource for businesses looking to navigate and thrive in disruptive
industries, highlighting the importance of a holistic and adaptable business model in driving
innovation and success.

The Development of BYD
BYD’s electric vehicle (EV) car represents a significant milestone in the automotive industry.
BYD, a Chinese electric vehicle manufacturer, has gained recognition for its innovative and
environmentally friendly transportation solutions. The BYD EV car combines cutting-edge
technology, superior performance, and sustainable features to offer a compelling alternative
to traditional combustion engine vehicles. With zero tailpipe emissions and a long electric
range, the BYD EV car not only reduces carbon footprint but also addresses the growing concerns related to air pollution and climate change. Its sleek design, advanced battery technology, and smart connectivity features make it an appealing choice for eco-conscious consumers seeking a greener and more efficient mode of transportation. BYD's induction of the EV car signifies a significant step towards the electrification of the automotive industry and reinforces the company's commitment to a cleaner and more sustainable future. The evolution of BYD may be summarized as four phases

(i) Phase 1: 1995 to 2002
After researching the Japanese battery industry, BYD was created in 1995 in Shenzhen, China, as a maker of rechargeable batteries. BYD develops modularization solutions to address issues such as a lack of technology and labor. It may be able to get a foothold in the battery market following business model innovation. Philips, Panasonic, and others were among the customers. BYD began producing lithium-ion batteries in 1998, which were more advanced than the nickel-cadmium batteries that were widespread at the time. BYD then began manufacturing mobile phone batteries and became a key supplier to Nokia. In 2002, it went public and was listed in Hong Kong.

(ii) Phase 2: 2003 to 2007
BYD entered the car business in 2003 when it purchased Qinchuan Auto, a bankrupt state-owned automaker. Flair was BYD's first car after two years of development. Because of its low cost and good performance, it is the taxi driver’s preferred pick. BYD released its new fuel car, the F3, in 2006, and it quickly became one of China's best-selling vehicles. It featured Toyota engine technologies and became the best-selling vehicle in the Chinese automobile market in 2007, selling over 100,000 units per year. And it was the same year. The BYD Electronic company Ltd is a spin-off of the BYD company Ltd, which is the main battery supplier to Nokia and Motorola and is traded on the Hong Kong stock exchange.

(iii) Phase 3: 2008 to 2018
Warren Buffett's investment firm Berkshire Hathaway bought a 10% stake in BYD for $232 million, which helped to boost the BYD's profile and reputation in 2008. At the same time, the F3DM, the world's first mass-produced plug-in hybrid vehicle, was introduced by BYD and this vehicle employs the most recent breakthrough in propulsion technology, a combination of oil and electric power. It purchased a Chinese solar panel manufacturer in 2009 and began producing solar panels. BYD unveiled the e6, an all-electric taxi used in Shenzhen and other Chinese cities, in 2010. In 2015, it eclipsed Panasonic as the world's biggest manufacturer of rechargeable batteries and began supplying batteries to automobile manufacturers such as Tesla. BYD established a facility in California in 2016 to manufacture electric buses for the American market. It was the first manufacturer to release its automotive hardware system and intelligence development platform in 2018. Throughout this time, it grew into a global vehicle manufacturer with a solid industrial basis and core technology.

(iv) Phase 4: 2019 until now
In 2019, BYD introduced the Tang EV, a premium SUV that can travel up to 373 miles on a single charge. BYD announced plans to invest $20 billion in a new battery facility in China, one of the world's largest, in 2021. During this time, it entered the intelligent process. Due to the development of new technologies, BYD surpassed the Volkswagen Group in third place with
US$128.8 billion. It outsold Tesla by 8000 units in the first half of 2022. BYD has surpassed Toyota as the world’s largest manufacturer of electric vehicles and the fourth-largest battery manufacturer. Their industries include automotive, electronics, renewable energy, and railway. By 2022, the company’s market value would be HK$950.77 billion, or US$121.16 billion. BYD’s growth has been defined by consistent expansion into new markets and sectors. The success of the company in the automotive industry can be attributed to its early adoption of electric vehicle technology and partnership with Berkshire Hathaway. Furthermore, BYD’s diversification into solar panels and other renewable energy products has enabled it to weather economic downturns and emerge as a global leader in green technology.

**Business Model Canvas – BYD Co. Ltd.**

**Customer Segment**

As stated by Osterwalder and Pigneur (2010), the Business Model Canvas defines customer segments as "distinct groups of individuals or organizations that an organization intends to reach and serve" (p. 20). The identification of customer segments is crucial as it enables businesses to associate a value proposition with a specific group of customers who share similar needs. In a well-designed business model, Peter Drucker’s fundamental questions of "Who is the customer?" and "What does the customer value?" must be answered. Moreover, it is essential to address the underlying economic logic that outlines how value can be delivered to customers at a reasonable cost (Osterwalder & Pigneur, 2010; Coes, 2014). Customer segmentation practices encompass a range of considerations, including demographics, geography, psychographics, and behavioral tendencies. These considerations span different market types such as mass market, niche market, segmented, diversified, and multi-sided market (Coes, 2014).

**BYD’s Customer Segments**

During the initial BYD’s venture into selling phone batteries in the early years, its primary customer segments were original equipment manufacturers (OEMs) within the mobile phone industry. BYD supplied batteries to various OEMs who incorporated them into their devices, serving as the main customers for BYD’s phone batteries. As BYD expanded its product offerings to include electric vehicles (EVs), the customer segments underwent a transformation. The company began attracting a diverse range of customers, including individuals, commercial enterprises, government agencies, and other interested parties.

As BYD expanded its business to include the launch and sale of batteries for electric vehicles (EVs) and even EV cars themselves, their initial target market consisted of environmentally conscious individuals who valued energy efficiency and were interested in electric vehicles. BYD’s strong reputation for delivering high-quality, environmentally friendly, and innovative designs and features played a significant role in attracting customers to their EVs. This positioning appealed to individuals who sought sustainable transportation options and were enthusiastic about embracing new technologies that aligned with their environmental values.

Subsequently, BYD expanded its focus to commercial customers seeking electric vehicles and renewable energy-powered products for their fleets. The company’s offerings provided advantages such as lower operating costs and emissions reduction, attracting a substantial customer base. Furthermore, BYD targeted public sector organizations aiming to promote sustainability through the purchase of electric vehicles and renewable energy-related
products. BYD’s consistent delivery of superior products that met or exceeded customer requirements solidified its reputation and attracted customers from various sectors. Finally, BYD intends to target other automotive and renewable energy stakeholders, such as automakers, battery technology firms, and solar panel producers. These stakeholders are drawn to BYD because of its reputation for innovation and ability to produce cutting-edge goods and technology.

In the competitive landscape, BYD positioned itself against other companies in the automotive and renewable energy industries, including battery technology specialists and solar panel manufacturers. BYD’s reputation for innovation, high-quality products, and proven track record generated interest from these industry players. Overall, BYD’s customer segments have evolved from OEMs in the mobile phone industry to encompass individuals, commercial enterprises, government agencies, and organizations in the public sector seeking environmentally friendly and innovative solutions in electric vehicles and renewable energy.

**Value Proposition**

The value proposition (VP) pillar holds immense significance within a business model as it encompasses the array of products and services offered to generate value for a specific customer segment (Chin et al., 2021). A value proposition encompasses a diverse range of features, including novelty, performance, customization, accomplishing a task, design, brand/status, price, cost reduction, risk reduction, accessibility, and convenience/usability (Ojasalo & Ojasalo, 2018). Grönroos and Ravald (2011) emphasize that value propositions serve as indications and predictions of the impact customers can anticipate from the proposition on their practices. They provide customers with an understanding of the benefits and advantages they can expect to derive from the offered products or services. By effectively crafting a compelling value proposition, businesses can effectively communicate the unique value they bring to their target customers, differentiating themselves in the market and attracting their desired customer segment.

When an entrepreneur sells his or her offering, the "value proposition" emphasises the importance of capturing what the customer truly buys. This was one of the most difficult blocks to redesign due to its abstract nature. This block reflects how the company’s world interacts with the customer’s world, as well as how the service becomes embedded in the customer’s context, activities, practises, and experiences (Heinonen et al, 2010). Grönroos (2006, 2008) offers an alternative viewpoint, service logic, which contends that customers create value during value-generating processes and value-supporting interactions. Customers, in other words, not only determine but also control value creation in their processes (Grönroos and Ravald, 2011; Heinonen et al., 2010; Voima et al., 2010; Ojasalo and Ojasalo, 2018).

**BYD’s Value Proposition**

In early stage, BYD provide cell phone manufacturers with a competitive advantage by offering them a reliable source of batteries that meet their specifications. BYD’s batteries are known for their high performance and durability, making them a dependable energy storage solution. The key value that BYD promises to their customers area
High-performance batteries where BYD provides cell phone manufacturers with batteries that offer excellent performance, longer battery life, and faster charging capabilities,

- Reliability and safety where BYD ensures the production of safe and reliable batteries, meeting international safety standards, and

- Cost-effectiveness where BYD delivers competitive pricing to cell phone manufacturers while maintaining high-quality battery products.

BYD offers a wide range of battery products for various applications, including electric vehicles, renewable energy systems, and industrial applications. BYD’s battery technology is at the forefront of innovation, utilizing advanced materials and engineering techniques to deliver efficient and long-lasting energy storage solutions. Their batteries are designed to provide optimal performance, with high energy density and fast charging capabilities. Moreover, BYD’s batteries are highly versatile, suitable for different industries and use cases. Whether it’s powering electric vehicles, storing energy from renewable sources, or supporting industrial operations, BYD batteries can adapt to various requirements and provide reliable power supply.

During the period of expanding business, BYD has embraced disruptive innovation by centering its core value propositions on providing affordable electric vehicles and promoting accessibility to a broader range of customers. By leveraging disruptive innovation, the company is committed to making electric vehicles more affordable, thus making them a practical and disruptive alternative to traditional gasoline-powered cars. Moreover, BYD prioritizes the production of high-quality electric vehicles and renewable energy solutions, employing cutting-edge technology and manufacturing techniques to not only meet but exceed customer standards. Another aspect of BYD’s disruptive innovation is its diverse product selection, which caters to the varied requirements and preferences of customers. This comprehensive range includes electric passenger cars, buses, lorries, and solar panels.

Lastly, sustainability is a crucial element emphasized by BYD as it strives to minimize the environmental impact of its products. Through lower overall energy consumption and reduced pollutant output compared to conventional vehicles and energy sources, BYD’s electric vehicles and clean energy solutions align with the principles of sustainable development. The successful delivery of these disruptive value propositions has solidified BYD’s position as a global leader in the electric vehicle and renewable energy markets.

Channels
In the Business Model Canvas (BMC), the channel plays a critical role as it represents the means by which a business delivers its value proposition to customers. It encompasses communication, distribution, and sales channels through which the company interacts with its target market (Osterwalder & Pigneur, 2010; Ojasalo & Ojasalo, 2018). The key functions of channels include raising awareness, facilitating customer evaluation of the value proposition, enabling purchases and delivery, and providing post-purchase support (Osterwalder & Pigneur, 2010; Verrue, 2014). Effective channel design is essential for effectively reaching the target market, delivering the value proposition, and creating customer awareness and engagement. It involves adjusting communication methods, sales strategies, and distribution approaches to ensure a strong customer understanding and appreciation of the offered value. In terms of channel types, there are two categories: direct
channels, where products or services are sold directly to end-users, and indirect channels, which involve third-party intermediaries that assist in the movement of products from the manufacturer to the end-user to achieve market coverage.

**BYD’s Channel**
BYD’s channel strategy is centered around delivering high-quality electric vehicles and clean energy products to customers through a diverse range of distribution channels. The four primary distribution channels employed by BYD are direct sales, partnerships, dealerships, and online platforms. To begin with, BYD directly provides its products to customers through retail stores and online shopping portals, allowing for greater control over the customer experience and fostering deeper customer connections. Additionally, BYD has established partnerships with various companies in the automotive and renewable energy industries, including car manufacturers, battery technology specialists, and solar panel manufacturers. These collaborations enable BYD to expand its distribution network and reach new customers across different global locations. Furthermore, BYD makes its products available for purchase through a network of authorized dealerships, ensuring convenient access for customers in various regions while also contributing to brand recognition and customer loyalty. Lastly, BYD leverages multiple online channels, including its own e-commerce site and third-party platforms, to distribute its products. This online presence enables broader communication with a larger audience and facilitates easier access to BYD's diverse range of goods and services.

**Customer Relationships**
The customer relationships building block serves as a crucial link between the value proposition and customer segment in the Business Model Canvas (BMC) framework (Osterwalder & Pigneur, 2010). Customer relationships encompass the various types of relationships a company establishes with specific customer segments, aiming to enhance customer loyalty, foster lasting connections, and attract new customers (Osterwalder & Pigneur, 2010; Chin et al., 2021). These relationships define how customers are engaged with a company and involve a wide range of tasks, from addressing daily inquiries to developing long-term strategies for customer success. Effective customer relationships can lead to positive outcomes such as improved client connections, higher customer retention, and increased customer lifetime value (CLV). Managing interactions with past, current, and potential customers is an integral aspect of customer relationships. It includes both reactive and proactive functions carried out by customer care teams. Reactive functions involve addressing customer concerns and resolving issues raised by customers through support staff, ensuring that unexpected obstacles are overcome to build enduring relationships. On the other hand, proactive functions focus on ensuring long-term customer success by continuously meeting evolving consumer needs. Customer success teams achieve this by providing product information and updates, as well as highlighting special discounts and offers to promote ongoing customer satisfaction and loyalty.

**BYD’s Customer Relationship**
BYD focuses on building long-term alliances with its customers by offering high-quality electric vehicles and sustainable energy solutions that are customized to meet their specific needs and preferences. The company places great importance on providing excellent customer service and support. BYD maintains primary customer partnerships with four different
companies, ensuring that customers receive comprehensive support services for the servicing and maintenance of their electric vehicles and renewable energy products (BYD Company Limited, 2021). This includes technical support, access to online resources, and any other assistance required. Customer loyalty is another key factor for BYD, as the company has cultivated a strong brand image in the electric vehicle and renewable energy sectors. This reputation has enabled BYD to establish enduring relationships with customers who value the high quality and durability of BYD's products (BYD Company Limited, 2021).

Revenue Streams
In the Business Model Canvas (BMC), the revenue stream refers to the way a company generates income from its value propositions and customer segments. This block also focuses on analysing for which benefits the customer is willing to pay and it represents the cash inflows resulting from the sale of products or services to customers or other revenue sources, such as licensing fees, subscription fees, or advertising revenue. The revenue stream is a crucial component of the business model as it directly impacts the company's financial viability and sustainability. The key elements of the revenue stream in BMC include pricing mechanisms, revenue models (e.g., one-time sales, recurring revenue, usage-based fees), and revenue channels (e.g., direct sales, online sales, partnerships). By effectively identifying and optimizing its revenue streams, a company can ensure a stable and profitable business operation. The revenue stream block in the BMC provides a clear overview of how the company generates revenue and monetizes its value propositions (Osterwalder & Pigneur, 2010).

BYD's Revenue Stream
The primary driver of BYD's revenue growth is the sale of electric vehicles. BYD offers a comprehensive range of electric vehicle models tailored for various purposes, including passenger transportation and cargo delivery. These vehicles are sold to private individuals, commercial enterprises, and public institutions, contributing significantly to the company's revenue stream. In addition to electric vehicle sales, BYD generates revenue through the sale of clean energy products. This includes solar panels, energy storage systems, and charging stations for electric vehicles. These products are designed to help individuals reduce their carbon footprints and achieve their sustainability goals. By offering these clean energy solutions, BYD taps into a growing market demand and generates additional revenue streams. Furthermore, BYD diversifies its revenue sources by providing a variety of ancillary services. These services include financing options, maintenance, and repair services for its electric vehicles and clean energy products. By offering these value-added services, BYD not only enhances customer satisfaction and loyalty but also creates new revenue streams for the company. Lastly, BYD leverages its partnerships and joint ventures with other businesses in the automotive and renewable energy industries to generate revenue. These collaborations can take various forms, such as joint ventures, licensing agreements, and technology transfers, allowing BYD to expand its market reach and unlock new revenue opportunities through strategic alliances.

Key Activities
According to Foss et al (2008), the value of a company is created by incorporating diverse activities and diverse mental models. This concept is referred to as "Key Activities" in the Business Model Canvas, which represents the crucial tasks that a company must perform to
ensure the success of its business model (Osterwalder & Pigneur, 2010). Key Activities are essential for developing and offering a value proposition, reaching target markets, establishing and maintaining Customer Relationships, and generating revenues (Stragizer). Companies engage in various activities to create value, including production, problem-solving, and network activities (Osterwalder & Pigneur, 2010; Coes, 2014).

Production activities encompass the processes of designing, manufacturing, and delivering products in significant quantities while ensuring superior quality. On the other hand, problem-solving activities involve developing innovative solutions to address individual customer problems, particularly in service-oriented organizations. This also encompasses knowledge management and continuous training to enhance problem-solving capabilities. In addition, networks play a crucial role, as they can serve as platforms for organizations, enabling them to connect and interact with various stakeholders. These networks can take the form of matchmaking platforms, software systems, or even brands, particularly for organizations involved in platform management, service provision, and platform promotion.

**BYD’s Key Activities**

One of the key activities for BYD is the design, manufacturing, and production of electric vehicles and clean energy products. This involves the assembly of components, quality control, and ensuring efficient production processes. Besides, BYD emphasizes innovation and invests in research and development activities to enhance its electric vehicle technology and renewable energy solutions. This includes conducting research, testing new technologies, and improving existing products. BYD engages in sales and distribution activities to reach its target customers and expand its market presence. This involves establishing partnerships with dealerships, distributors, and online platforms to facilitate the sale of its electric vehicles and clean energy products. In addition, BYD focuses on marketing and promotional activities to create awareness and generate demand for its products. This includes advertising campaigns, digital marketing strategies, participating in industry events, and building brand reputation. Providing excellent customer service is crucial for BYD. This involves offering after-sales support, maintenance services, and technical assistance to customers. BYD also invests in building long-term relationships with customers through loyalty programs and personalized support. Finally, BYD engages in strategic partnerships and collaborations with other companies in the automotive and renewable energy industries. This includes joint ventures, technology sharing, and collaboration on projects to leverage synergies and expand market reach.

**Key Resources**

The concept of "Key Resources" in the Business Model Canvas (BMC) refers to the critical assets required to ensure the success of a business model. These resources can be categorized into different types based on their nature and role within the business. Physical resources encompass tangible assets such as manufacturing facilities, buildings, vehicles, machinery, and distribution networks. Intellectual property resources, although challenging to develop, can provide significant value when successfully created. Human resources are essential and include the team members, partnerships, and professional networks that contribute to the company's capabilities. Lastly, financial resources, such as cash reserves, lines of credit, or stock options for key employees, play a crucial role in providing the necessary financial stability and support for the business (Osterwalder & Pigneur, 2010; Verrue, 2014; Barney,
In summary, the key resources in the BMC encompass a range of physical, intellectual, human, and financial assets that are essential for a business to effectively create, communicate, and deliver its value proposition. These resources serve as the foundation for sustainable competitiveness and are closely interconnected with other building blocks in the business model (Ojasalo & Ojasalo, 2018; Coes, 2014).

**BYD’s Key Resources**

In the Business Model Canvas (BMC), key resources are the strategic assets necessary for effective operation and value delivery to customers (Osterwalder & Pigneur, 2010). BYD, as a leading electric vehicle and clean energy company, relies on several key resources that are vital to its business model. These include its manufacturing facilities and infrastructure, which encompass production lines, assembly plants, and advanced manufacturing technologies (Verrue, 2014). BYD’s heavy investment in research and development contributes to their technological and intellectual property resources, allowing them to develop innovative solutions in electric vehicles, battery technology, and renewable energy (Osterwalder & Pigneur, 2010; Verrue, 2014). A well-established and efficient supply chain is also critical to BYD’s operations, ensuring the timely delivery of their products through reliable suppliers (Coes, 2014). Skilled employees, such as engineers, designers, and technicians, form another essential resource, contributing to the development, manufacturing, and maintenance of BYD’s electric vehicles and clean energy products (Verrue, 2014). Furthermore, BYD’s strong brand and reputation in the electric vehicle and renewable energy industries serve as intangible resources, enabling customer attraction, trust-building, and differentiation from competitors (Coes, 2014). Lastly, adequate financial resources, including capital investments and funding access, support BYD’s growth, research and development efforts, manufacturing operations, and strategic initiatives (Coes, 2014). These key resources collectively empower BYD to develop and deliver high-quality electric vehicles and clean energy solutions, ensuring their competitive position and value creation for customers.

**Key Partners**

According to Osterwalder and Pigneur (2010), in the Business Model Canvas (BMC), the key partner element pertains to external entities with which a company collaborates to enhance its business model and create value for customers. These partners can encompass suppliers, manufacturers, distributors, strategic alliances, and other organizations that offer essential resources, expertise, or market access. The involvement of key partners contributes to the company’s achievements by complementing its resources and capabilities, expanding its market reach, reducing costs, mitigating risks, and fostering innovation. Key partners play a critical role in leveraging external strengths, addressing resource deficiencies, and maximizing the overall efficiency of the business model. They are instrumental in supporting key activities such as procurement, production, distribution, marketing, and customer support, ultimately driving the company’s competitive advantage and long-term sustainability (Osterwalder & Pigneur, 2010).

**BYD’s Key Partner**

BYD collaborates with suppliers to source the necessary components and materials for the production of electric vehicles and clean energy products. This includes suppliers of batteries, electronic components, charging infrastructure, and other relevant parts. Besides, BYD forms partnerships with distributors and retail partners to expand its market reach and ensure the
availability of its products to customers. These partners can include dealerships, distributors, and online platforms that facilitate the sale and distribution of BYD’s electric vehicles and clean energy solutions. In addition, BYD may collaborate with technology partners to enhance its product offerings and stay at the forefront of technological advancements. This can involve partnerships with companies specializing in battery technology, software development, connectivity solutions, and other areas relevant to electric vehicles and renewable energy. BYD also often works closely with government entities, municipalities, and public transportation agencies to provide electric buses, taxis, and other electric vehicle solutions for public transportation purposes. These partnerships can involve contracts, subsidies, or joint initiatives aimed at promoting sustainable transportation. BYD may collaborate with research institutions and universities to drive innovation, conduct research and development, and explore new technologies and applications related to electric vehicles and clean energy. These partnerships can contribute to BYD’s technological advancements and strengthen its position in the industry. It’s important to note that specific partnerships can vary over time as BYD expands its operations and explores new opportunities in the electric vehicle and renewable energy sector.

Cost Structure
In the Business Model Canvas (BMC), the cost structure represents all the expenses associated with operating a business model. It encompasses the various costs incurred by the company and helps determine the profitability and sustainability of the business. The cost structure can be characterized based on the specific business model as either cost-driven or value-driven and can include both fixed costs and variable costs. Fixed costs are expenses that remain constant regardless of the level of production or output, such as rent, salaries, and equipment. Variable costs, on the other hand, fluctuate in proportion to the volume of goods or services produced, such as raw materials and energy consumption. Understanding and effectively managing the cost structure is crucial for businesses to optimize their operations, maximize profits, and maintain a competitive edge in the market.

BYD’s Cost Structure
In the Business Model Canvas (BMC), the cost structure of BYD, a prominent player in the electric vehicle and renewable energy industry, encompasses all the expenses associated with operating its business model. BYD’s cost structure is influenced by its focus on developing and manufacturing electric vehicles and clean energy products. This includes costs related to sourcing components and materials from suppliers, establishing distribution and retail partnerships for market reach, collaborating with technology partners for product enhancement, working with government entities and public institutions for sustainable transportation solutions, and engaging research and academic institutions for innovation and technological advancements. BYD’s cost structure reflects its commitment to minimizing costs while delivering value to customers through environmentally friendly solutions, efficient production processes, and strategic partnerships.
Discussion and Conclusion
The initial aim of this research was to discover a business model canvas driven by disruptive innovation, with BYD serving as a case study. This leads to a fundamental question on ‘What is the relationship between disruptive innovation and BYD’s BMC’?

The term "disruptive innovation" refers to the introduction of a new product, service, or technology that significantly alters an industry or market by either displacing previously implemented solutions or creating entirely new markets. Disruptive innovations typically begin by focusing on customer segments that have been underserved or ignored and gradually improve to the point where they can compete with established players. While A
strategic tool that offers a visual framework for developing, describing, and analyzing a business model is known as the Business Model Canvas (BMC). It is composed of nine essential building blocks that address the most important aspects of a company, including its value proposition, customer segments, channels, revenue streams, cost structure, and more. Entrepreneurs and businesses can get assistance from the BMC in mapping out their existing or future business models and understanding how the various components interact with one another. As a result, this case study demonstrates how BYD's BMC incorporates innovative practices that are disruptive.

(i) The Discernment of Potential Opportunities
The BYD Business Model Canvas (BMC) was used as a tool to investigate the possibility of disruptive innovations by analyzing the current state of the market, the requirements of BYD's customers, and the company's existing business models. BYD is able to identify areas of its business model in which disruptive innovations could result in significant changes or open up new markets because the company has mapped out the components of its business model.

(ii) Promoting Creativity and Innovation
A change in the way businesses operate and produce value is necessary in order to accommodate disruptive innovation. As a result, BYD's Business Model Canvas (BMC) offers a methodical framework for the company to innovate and experiment with a variety of business model configurations that are in line with the disruptive innovation they are seeking to achieve.

(iii) Adaptability and Flexibility in Response to Change
Innovations that have a disruptive effect frequently result in shifts in the business environment and the behaviors of customers. The Business Model Canvas gives companies the ability to modify and improve their existing business models in order to maintain their relevance, seize opportunities presented by disruption, and reduce the risks associated with disruption.

(iv) Validating the Market Fit
Through testing and iterating the value proposition, channels, and customer segments, the BMC can assist BYD in validating their disruptive ideas. It makes it possible for business owners to understand how a disruptive innovation fits within the context of the overall business model and how it aligns with the requirements of customers.

(v) Resources Allocation
The BMC provides assistance in arriving at well-informed decisions regarding the distribution of resources and the order of importance of investments. It is helpful for BYD to determine which aspects of the business model are essential for sustaining the disruptive innovation and where resources should be allocated in order to achieve the greatest possible effect of the innovation.

In conclusion, BYD's Business Model Canvas reflects a comprehensive and strategic approach to the electric vehicle (EV) industry. The canvas highlights key aspects such as customer segments, value propositions, channels, customer relationships, revenue streams, key activities, resources, and partnerships. BYD's focus on environmentally conscious individuals and its reputation for delivering high-quality, innovative EVs have positioned it as a prominent
player in the market. The collaboration with key partners, including battery suppliers, automotive manufacturers, charging infrastructure providers, technology partners, and government agencies, has played a crucial role in BYD's success. These partnerships contribute to resource acquisition, market expansion, technological advancements, and regulatory compliance. BYD's strong value propositions, such as performance, sustainability, and cost-effectiveness, combined with an effective distribution channel and customer-centric approach, have enabled it to establish a competitive advantage. Overall, BYD's Business Model Canvas showcases a well-rounded and strategic approach that has propelled its growth and established its position as a leading player in the EV industry.

Acknowledgments
This research was funded by Universiti Teknologi Malaysia, UTM ER, cost centre number Q.J130000.3855.20J45

Reference