

# Research on Global Bicycle Market and Development Trend

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**Abstract.** In the past decades, the global bicycle market has experienced great changes and development. This is partly due to increased awareness of the environment and traffic jams. Furthermore, the demand for bicycles surged during the COVID-19 pandemic since people starts to care more about their health. Therefore, there exists great prospect and importance to carry out in detailed research about the bicycle market. However, current research about the bicycle market focus only on certain segment or part of the area. By studying market data and examining brand and regional difference, this article aims to find the key factors that drives the industry, and therefore make recommendations for enterprises. This article will discuss the development status and future trends of global bicycle market. It analyses technological advancements, market competition, and regional difference over the world. The result shows that global bicycle market has a great prospect and makes several recommendations to bicycle companies. Bicycle companies should invest in new technologies, expand sales channel, focus on market segmentation, and establish strong brand influence.

## 1 Introduction

In recent years, the global bicycle industry has undergone significant growth and changes, making it a subject that worth in-depth study [1]. Due to the increasing environmental awareness, cycling, as an eco-friendly way of transportation, is favoured by the government and consumers [2]. Especially during the pandemics, the demand of bicycles increases sharply, further driving the industry. Moreover, popularity of healthy lifestyle and increased demand of entertainment makes cycling not only a way of transport but also a symbol of fashioning lifestyle. In addition to these factors, the advancement of new technologies further transforms the industry. The sharing bikes and e bikes that emerge in recent years makes cycling a lot easier and more convenient. These new products allow people to give consideration to both the environmental issue and convenience at the same time. In China, more and more people are leaning towards sharing bikes to solve the “last mile issue”. Therefore, studying the development of global bicycle industry, gives us a deep understanding of the regional market, consumer behaviour, and future development trends. This not only helps enterprises grab opportunity in fierce market competition, but also provides government with key data and references for policy making.

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## 2 Bicycle market development status

### 2.1 General information

The global bicycle market has continuously grown and made many changes over the past decade. Some causes include increase in awareness of environmental issues, technological inventions, and modification in consumer behaviour. This section analyses in detail the current situation and regional developments of the global bicycle market.

The bicycle market has been strong especially in the cities where people cycle for both transportation and entertainment. As serious climate changes and environmental problems took stage, there is now increased attention on reducing carbon emissions. As a result, demand for bicycles rose since cycling is an eco-friendly mode of transportation. Rising health consciousness has boosted the market further ahead, as the pandemic and other health problems made people aware about their body. More and more people have tended towards cycling to exercise and keep fit.

According to a report by Grand View Research, the size of bicycle market is predicted to reach 58 billion dollars in 2022, and will exceed 82 billion dollars by 2027, growing at a compound annual growth rate of 7.2%. There exist a lot of factors for such development. Firstly, increasing popularity for e-bikes provides convenient alternatives to traditional bicycles. Secondly, improved urban cycling infrastructure makes it possible to cycle in even crowded city areas. This is important because an increase in cycling time significantly reduces the appeal of cycling, especially in mixed traffic [3].

Therefore, great cycling infrastructure is one of the key reasons for people to choose cycling as their mode of commute. Moreover, governments around the world are imposing supportive policies for cycling as it is a green way of transportation.

### 2.2 Technology innovation

Various technological innovations have influenced the bicycle market, especially the development of electric bicycles. An e-bike is a bike with electric power assistant in pedalling. This will bring easiness and efficiency for the cyclers. Compared to other electric vehicles, e-bikes has many advantages. It is lighter and easier to carry, and in most countries, it doesn't require a license [4]. By developing e-bikes, cycling activities becomes open to a much bigger portion of people: the elder or even disabled.

Other than e-bikes, new technology innovations are making bicycles lighter, stronger, and more aerodynamic. For instance, carbon fiber frames have been widely adopted due to its high strength and light weight. Moreover, the use of smart technology such as GPS tracking, fitness apps, and connectivity to smartphones has enhanced cycling experiences even further.

### 2.3 Regional difference

The development trends of bicycle market differ from one region to another. In Europe, for example, the bicycle market is booming because of its government support. Old cycling cultures in Europe also promotes the bicycle industry. The Netherlands, Denmark, and Germany are in the lead, with cycling deeply rooted in people's daily lives. In those countries, huge ownership and usage rate of bicycles is seen. According to Statista, there is an average of 1.4 bikes per person in Netherlands. In these countries, bicycles are the major mode of transportation that the extensive cycling structure has enabled.

Compared to Europe, North America is also developing a bicycle market, though quite slowly. There have been increased sales of bicycles in the United States and Canada. The e-

bikes market is booming, as people favours them for their commutes and leisure activities. However, a significant growth of cycling as a mode of major transportation has remained stunted in this region. This is due to the limited cycling infrastructure and high usage of cars [5].

Another large bicycle market is the Asia-Pacific region. Countries like China and India are leading both in production and consumption. Cycling has recently regained popularity in China. This is mainly due to government efforts to reduce pollution and promote sustainable transportation. Shanghai, the largest city in China, saved 8358 tons of fuel by bike sharing programs [6]. While in India, demand is impelled by the rural population, for whom bicycles are the principal way of transport. It is also impelled by the rapidly growing urban middle class seeking inexpensive and effective mobility solutions.

## **2.4 Brand difference**

The bicycle market is highly fragmented, with large multinationals and SMEs constituting it. A few leading brands such as Giant, Trek, Specialized are at the core of this segment. These large brands has a wide product range—from entry-level bicycles to high-performance bicycles. Their broad product lines and strong global marketing allows them to maintain a competitive edge all over the world, building up strong brand recognition over different regions.

Apart from established players, the market has seen the entry of a large number of start-ups and niche brands that only target parts of the market. Usually, these brands only focus on a single product, such as the electric bikes or custom-made bicycles. Quite often, these companies go to Direct to consumer (DTC) sales models and online platforms to reach their target audience. Using the DTC sales model enables brands gain more benefits since they can keep the profits that normally goes to the retailers. It also allows brands to get direct feedback and custom experience more easily [7]. By personalizing their products and services, they are able to meet the unique needs of every cyclists.

## **3 Market competition**

### **3.1 General information**

The competition in the global bicycle market is quite complex and diversified. In general, different brands have various performances in different regions and segments. This is due to various physic conditions such as proportion of young people, city size and people's race [8]. As the market grows extremely fast, the competition between brands becomes fiercer and fiercer, and major manufacturers compete with each other to get a bigger share through increasing their innovation and marketing, such as developing e-bikes and new materials. The detailed analysis of major global bicycle brands is stated below in terms of competition, market share, technological innovation, and the regional difference in markets.

### **3.2 Leading brands**

Firstly, concerning the global market, there are dominant brands such as Giant, Merida, Trek, Specialized, and Canon. These brands lead the global market with important market shares because of their high-quality products, services, and technological innovations. According to research by Zippia, Trek Bikes has the largest bicycle market share in the U.S, at 22.5%. Following it was Giant, which own 10.5%of bicycle share. After that, it was Specialized and Redline, with 9.5% and 6% of the market. This shows that while the global bicycle market is

highly competitive, some big brands still dominate in the market.

### **3.3 Technological competition**

In the field of technological innovation, major brands continue to invest in research to improve their results and user experience. In recent years, Giant has made large advancements in the technologies of carbon frames and electric bicycles. Their lightweight frame and long-distance endurance electric bicycles have been widely praised by consumers throughout the market. Merida has a very high market share in mountain bicycles and off-road products. Its product is highly reputed for its strength, durability, and good controllability. In addition, both Giant and Merida's sponsored professional teams got good victories in top level races, further gaining reputation for the brands. In contrast, Trek and Specialized fiercely fight over the high-end road bicycle market. Both of the brands have introduced several lines of their high-end road bicycle suitable for professional racing. These bikes focus much on aerodynamic design and weight reduction to improve its race performance, however losing some comfortability at the same time. Therefore, they have both introduced new top-level bikes that focus on casual cycling experience. These bikes focus more on comfortability and lightweight to provide consumers with a good cycling experience instead of speeds.

### **3.4 European market**

In the premium market segment in Europe, leading brands include Giant and Trek, while at the local level, brands like Bianchi of Italy and Canyon of Germany remain strong with increased uniqueness in design and production processes. In particular, the company Canyon uses the model of direct sales, when products are supplied directly to the consumer through the Internet, thanks to which it successfully bypasses the traditional retail channels, cuts the expenditure on sales intermediaries, and captures a significant part of the competitive European market. Big rivals in the North American market are represented by two: Trek and Lightning. The two brands not only seize the high-end road car market but also manufacture a great lot of mountain bikes and electric bikes, which are now in cutthroat competition with each another. Therefore, the increasing demand for high-performance bicycles from North American consumers pushes these brands toward innovation for staying ahead of the market. In Asian's market, the market region is wide shared by the Giant and Merida, which with the origin advantage and high production capacity.

### **3.5 New emerging trends**

The high adoption of sharing bicycle trend in recent years had made Chinese market grew up so fast, which created a new market possibility for indigenous brands like Permanent and Phoenix. These brands have further extended their market influence by cooperating with the bike-sharing apps. Nevertheless, the advantages Giant and Merida hold in China are still not easy to shake off with this upsurge in consumer demand for high-end bicycles.

In addition to traditional brands, new brands keep emerging in the global bicycle market. For example, VanMoof in Netherlands and Rad Power Bikes in the USA focused on the e-bike market and quickly attracted a large group of young consumers. Among them, VanMoof is particularly outstanding for its tasteful design and intelligent features, becoming the ideal bicycle for modern city commuting. Rad Power Bikes grew very well in the North American market with its new, versatile, and cost-effective products.

## 4 Recommendations and outlook

In the first place, bicycle companies should keep investing in innovation and new technologies, especially new products that emerged in recent years, such as the electric bike and smart technology. For instance, companies could invest to create an e-bike that can connect with smart phone apps. These e-bikes could connect to smart phone apps to track fitness goals, battery lives, and plan out the best routes. It not only provides consumers with a convenient choice of smart mailability, but also puts the company on a leading position in smart technology area. Moreover, bicycle companies should also invest on new research methods. For example, by using the BCI model, researchers are able to evaluate and improve a road that is being rebuilt to achieve a higher level of service by adjusting lane widths or adding bike lanes to improve bike compatibility [9].

Secondly, bicycle companies should strength their after-sales and services. This is a important way to improve consumer stickiness. Bicycle companies can improve consumer satisfaction by providing long term warranty and free reparation. For example, Trek Bikes provide lifetime warranty for their bicycle frames. For the Bontrager (Trek's subsidiary brand) wheels, consumers can get a free replacement when the wheel in broken for two years. In addition, Trek has a large number of shops all over the world. These after-sales advantage is an important reason for Trek's success. Other large bicycle companies such as Giant and Chinese brand XDS opens numerous shops in their core sale region to ensure a good after-sales for their buyers. Cycling companies can also provide consumers with related service, such as bike fitness service, which is important for safe and comfort cycling experiences [10].

Thirdly, companies should expand their sales channel. In recent years, online shopping emerges quickly. Each bicycle companies opened their official website to promote and sell their products. This brings new opportunities for small and new brands. For instance, Germany brand Canyon uses direct sale model of online shopping. After consumers order online, the products will directly mail to their homes. This ensures conveniency. More importantly, the direct sale model helps bicycle companies and consumers save money since there is no expanses opening shops. Thereby, consumers can get cheaper products while bicycle companies have more money to invest and improve their products. In addition to directly selling on the official website, another sales channel, especially for the low-end brands, is by using the new media, such as social media broadcast or online video content.

In addition, bicycle companies should focus on market segmentation and establish a diversified product line to meet the needs of all population. For example, for those who want to enjoy themselves in free time, the company should develop comfortable bikes; for urban commuter, the company should design convenient foldable bikes or e-bikes. Also, with people's growing awareness of environmental issue, the company should also focus on developing eco-friendly products, such as using renewable materials to attract environmentally conscious consumers. Furthermore, companies should establish strong brand identity. Nowadays, the major bicycle companies all build up their own brand identification due to their characteristics. For example, Italian brand Pinarello is identified as a "luxury brand" due to its unique design. This allows Pinarello to sell the bicycles at a very high price. Similarly, Colnago's demand and price also increased sharply due to the success of its sponsor rider Pogacar. Therefore, it is essential for bicycle companies to establish their own brand influence because it not only pushes up the bicycle's value, but also increases user stickiness.

Cycling companies can also set up a strong brand recognition and gain benefits by sponsoring a professional cycling team. Trek and Specialized, for example, gains huge benefits from sponsoring. For example, Trek sponsored the American team US Postal Service Pro Cycling Team and it won seven Tour De France (the largest cycling race) victories from 1999 to 2005. Though his victories were cancelled by Union Cyclist Internationale later due

to the use of performance-enhancing drugs, he still brought Trek bikes with enormous profits and exposure. These capitals allow Trek to invest huge amount on innovations and establish a strong reputation, finally becoming one of the largest bicycle brands in the world. Similarly, specialized currently sponsors three Tour De France teams, and it has ten Tour De France victories over the past twenty years. Any brand that sponsors a team in the Tour De France is seen to be good brands by consumers. In addition, sponsoring pro teams can also help brands that are limited to a single country or region expand their sales region to all over the world. For example, Chinese brand XDS recently purchases the Astana Qazaqstan Team, to expand their sale and brand influence to all over the world.

Lastly, it is important for companies to focus on environmental issues. Consumer today have increased environment awareness, and they prefer to support brands that do well in environmental sustainability. A study by TheRoundUp shows that 78%of consumers feel that sustainability is important and 55% of consumers are willing to pay more for eco-friendly brands. Motor vehicles are responsible for approximately 40% of greenhouse gas emissions in Europe and around 20% in the United States. In contrast, bicycles are one of the most sustainable way of mobility. Therefore, bicycle companies can improve their reputation by further adopting environmental protection actions, such as using renewable material and reducing carbon emission during production. In addition, government around the world is imposing strict environmental regulations. Companies that focus more on environment issues may get tax cuts or even subsidies.

## 5 Conclusion

The global bicycle industry is a fast-developing industry that has great prospect. With people's increasing awareness of the environment issue, technology advancements, and severe traffic jams, the demand for bicycles quickly surged. In traditional cycling nations, the number of cyclers continue rising. In Asian countries such as China and India, cycling has regain popularity due to its convenience and supportive government policies. However, the fast development also brings challenges to the industry, such as fierce competition between enterprises. Therefore, in order to survive in the competitive market, several suggestions are made for the bicycle companies. Firstly, bicycle companies should keep investing in new technologies. Secondly, companies should strengthen their aftersales and services. Thirdly, companies should expand channel. Moreover, bicycle companies should focus on market segmentation. Lastly, companies should focus on environmental issues and establish a eco-friendly production zone.

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