

Brand, Design, Trademark and Patent Analysis of Nike

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Abstract

Design, trademark and patent are the intellectual properties that influence each other and become the core assets and ultimate commercial weapons of the companies.

In this study, we researched the designs, trademarks and patents of Nike in depth. The secret of Nike brands are built up on the high technology. Nike also had very successful brands in the apparel and footwear industry. In 2006, Interbrand ranked Nike as 31th brand in the world. Nike kept the most critical design and advanced technology in US. This research utilized design, patent and trademark analysis to discover more core assets of Nike. Correlate patent classification to the goods classification, we could possibly demonstrate the future direction of Nike.

We concluded that Nike protected its brands through patent and trademark. Design was one of the key to company's success. Intellectual property could provide protective umbrella for brands and keep away the imitators. From this study, we also find out that Nike is developing more and more equipment products instead of traditional sneaker. Nike also tried to promote casual life, like one of the slogan - If you have body, you can athletes.

Keywords: Intellectual property, Design, Patent, Trademark, Core value, Brand, Nike

1. Introduction

The success of the Nike brand was rooted in design and high technology in the footwear. Nike utilized design patents and trademarks to protect the core value of the brands. Over the last three decades, Nike had thousands of U.S. intellectual property rights covering components, features, and designs used in various athletic and leisure shoes, apparel and equipments.

The focus point of Nike patents was in the "Air Technology" which was licensed from NASA in group. Nike applied this exclusive, worldwide license right to make and sell footwear and related goods. In 1997, some of the air technology patents had expired and competitors swamped into the market with similar technology. The remaining air technology and continuation-in-part patents will remain enforceable until 2026. Key point is that Nike keeps following an established policy of filing patent application whenever possibly and utilize to improve the value of brands.

For trademarks, Nike treated the Nike and swoosh design trademarks as the most valuable assets and had registered them over 100 countries. All trademarks showed distinctive property and reflected by the commercial goods. It is a very traditional concept, you see the goods, you identify the source of goods right away. Nike always defended the trademarks against any infringement vigorously.

Industrial design, patent, trademark and other intellectual property rights become more importance for Nike in recent years. Intellectual property rights management becomes a core strategic part of corporate operation[7].

Analyzing the intellectual property data of a company can find information about future opportunities, reveal potential risks and get deep insight into the intangible asset value of the company[6]. Intellectual property information has been an analytical tool for a long time. Van Steen had noted that patents

were technology policy indicator since 1970s[11]. Holger Ernst used patent information for competitor monitoring, technology assessment, R&D portfolio management, identification and assessment of potential sources for the external generation of technological knowledge, especially merger and acquisition, and human resource management[4].

Most notably, the branding and trademark are symbiosis. Companies seek to protect their proprietary brand name rights through trademark registration. Trademark is a legal driven concept. On the other hand, brand is marketing driven concept. The importance of trademarks is that it generate a source of revenue through licensing, crucial component of franchising agreements and may be useful for financial purposes[3]. World Intellectual Property Organization (WIPO) indicate that businesses often use a portfolio of trademarks for diversifying and meet the expectations of different target groups in the same or different countries[8]. Building a strong brand image is no easy task. It includes endless trademark utilization, application and marketing.[1].

These days, the economists interested in mapping intellectual property rights of R&D. Several indicators of intellectual property and models of concept extraction portfolio are described in references [5,9].

However, few studies reported the interaction between intellectual property and brand. In this study, we attempted to find out the whole picture of intellectual property of Nike and see what trend Nike wants to set up.

2. Methodology

We collected patent and design information from Jan., 1976 to March, 2007; trademark information from Jan., 1999 to March, 2007.

Stepwise collection procedures were shown below:

2.1 Database Selection

In this study, we limited our research in the United States Patent and Trademark Office (USPTO) is the selected database. Both utility and design patents were included.

The difference between utility and design patents was that a "utility patent" protects the way an article is used and works (35 U.S.C. 101), while a "design patent" protects the way an article looks (35 U.S.C. 171)[10]. Both design and utility patents may be obtained on an article if invention resides both in its utility and ornamental appearance. While utility and design patents afford legally separate protection, the utility and ornamental of an article are not easily separable.

In US, industrial design is a kind of types of patent and is called design patent. In the other countries, industrial design is belonged to intellectual property, not belong to patent.

The design patent consists of the visual ornamental characteristics embodied in, or applied to, an article of manufacture. Design patents protect only the appearance of the article and not structural or utilitarian features.

A complete trademark registration collection is available on-line. Pending, registered, and dead trademarks are available through the Trademark Electronic Search System (TESS).

2.2 Data Collection Procedure

Data collection procedure consisted of three steps. There were many search techniques involved in the patent and design search.:

- The first step was to identify the corporate structure of Nike, especially subsidiaries and previously M & A companies. Corporate information was obtained from Nike annual report and other commercial databases, such as Delphion and Dialog.
- The second step was to eliminate expired and withdrawn intellectual property from the list obtained from step 1. In other words, we studied only the legally existed intellectual property.
- The third step consisted of analyze the data from step 2 carefully. We tried to build up the connection between intellectual property and products. Through this kind of analysis, we could pick up the most important intellectual property and figure out the strategy direction Nike wants to execute.

We generated a patent map. Both qualitative and quantitative analysis data were presented.

2.3 Classification

Design, patent or trademark has its own classification system, respectively. Each system contains classes and subclasses in well organized manner as to facilitate the search and retrieval of specific technical information disclosed in the documents.

2.3.1 Design

For design patent, we used both UPC (United States Patent Classification) and Locarno system as search tools. The Locarno Classification system was developed by members of the Paris Convention for the Protection of Industrial Property and is administered by the WIPO. A Locarno International Classification designation consists of two pairs of numbers separated by a hyphen. The first pair of numbers designates a design class; the second pair of numbers indicates a particular subclass within the

design class.

The UPC contains 130,000 subclass and is one of the most powerful search tool in the world.

2.3.2 Derwent Patent Classification Index (DWPI)

Even though many patent and design classification existed, such as ECLA (European Patent Classification), UPC and FI (File Index). But DWPI offers one advantage over other classification systems. DWPI record shows commercial use and advantage of patents. It also matches the patent trend with industrial development. For statistical purpose, DWPI offers consistent key words and maintains unique term for different technology. Therefore a powerful subject classification system is essential for effective patent analysis[2]

Derwent patent classification index was used for analyzing the Nike utility patent in this study. It revealed the non-obvious technology difference that could not be identified by traditional international patent classification (IPC). In general, derwent patent classification index can detect significant difference, such as purpose, advantage, among patents documents.

In DWPI, patents are divided into three broad areas, Chemical, Engineering and Electronic and Electrical Engineering. DWPI includes 21 subject sections that are designated A-M (Chemical); P-Q (Engineering); and S-X (Electronic and Electrical).

2.3.3 Trademark

In marketing, people can easy recognize the brands. Behind brands are trademarks. USPTO adopts both US trademark system and international trademark classification system (Nice classification). The Nice classification is currently in the 9th edition. The Nice classification is divided into classes of Goods (classes 1 to 34) and Services (classes 35 to 45). Each class number is represented by a heading giving general information about the type of product or service that belongs to it.

Trademark data collection period was from January 1999 to March 2007. In principle, the trademark/products analysis was based on the Nice classification. We assumed that trademark was a leading indicator and could be used as an early signal of new products. That is to say, forecasting can be made by extrapolating registration of trademarks.

3. Results and Discussion

Nike, Inc. had 44 wholly-owned subsidiaries. Seven subsidiaries operated in the United States and 35 operated overseas. The line of business included the design, marketing distribution and sale of athletic and leisure footwear, apparel, accessories, and equipment.

From marketing point of view, Nike's innovative ability was outstanding. Figure 1 showed intellectual properties of 5 important parent company and subsidiaries. Bauer Nike Hockey Inc. was an important asset for Nike and directed the new products development for Nike. Instead of footwear business, Nike wanted to expand business into golf and hockey. Canstar Sports Groups Inc. and Cole Hann were two representative companies. Converse Inc. originally was Nike's competitor. Now it becomes one important brand of Nike. Analyze all 44 subsidiaries, it was very obvious that Nike was eager to develop new business lines.

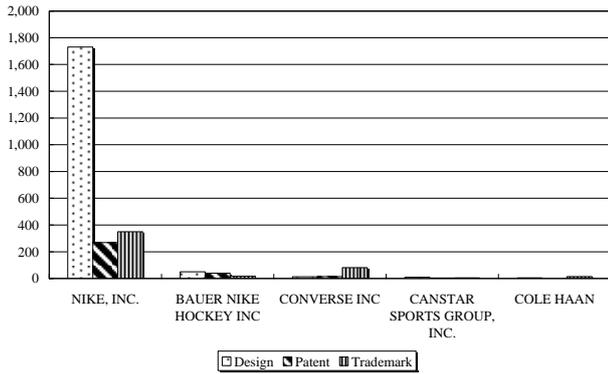


Fig 1 Design, Patent, Trademark vs. Assignees

Figure 2 presented the statistical result of Nike's designs and patents. Even though that most of the design and patent were concentrated on footwear, equipment was catching up. Most of the equipment intellectual property belonged to golf, sport game and toys. So far, intellectual property of textile and garment were not significant. The point was Nike emphasized the importance of functional fabric and would like to purchase and license related patent and design.

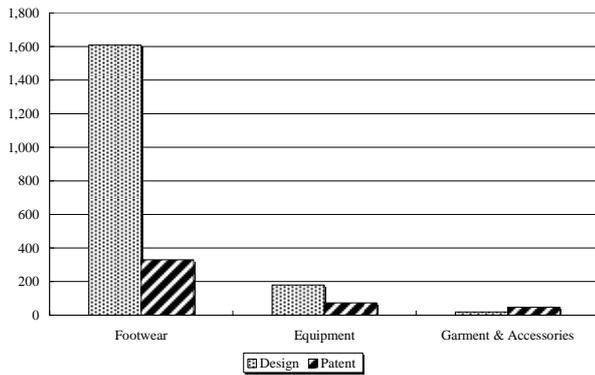


Fig 2 Design/Patent vs. Products

Figure 3 presented that most of the products developed were concentrated on footwear by Nike and Bauer Nike Hockey Inc. We found out that Nike wanted to expand brand application and enter into other footwear related business. This strategy didn't work very well so far. Intellectual property obtained from Converse Inc. might help, but not enough.

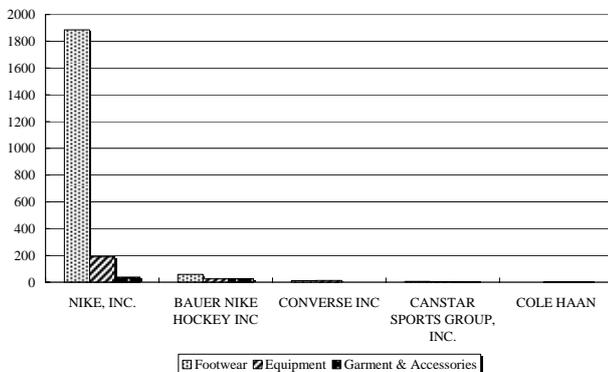


Fig 3 Products vs. Assignees

3.1 Trend Analysis

Figure 4 showed the application of intellectual property in the past ten years. Design was sharply decreased from 1997 to 2001. In coincidence, 1997 was also the year that key "Air Technology" patents were expired. This was the down period for Nike, both financially and intellectual property related innovation. Design was climbing steadily from 2003 to 2005, then followed steep decrease in 2006. Did it mean another strategy change? We don't know yet. But we thought that after 2001, Nike would like to go back to the old, successful business and create new market later.

In contrast, patent application increased steadily from 1999 to 2003, then decreased significantly between 2003 and 2006. US applied early publication system in 2001, application number would change a lot during 2001 and 2006. In fact, patent was not very significant for Nike. Design was the core intellectual asset.

Trademark application activity was increased slightly. In 2001, 2002 and 2003, there was only a couple of footwear trademark registered in US. (see Table 1) Start from 2004, the Registered trademarks were toward life style and other sports, such as earn your spot, body knowledge and tailwind. From the diversity of trademarks and trend of registration, we thought that Nike will put more emphasis on trademark and brands.

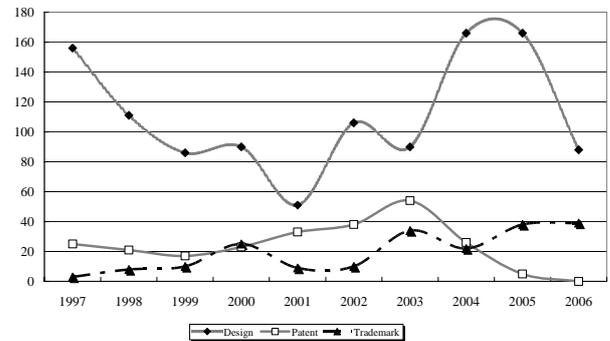


Fig 4 Applications of design, patent and trademark s from 1997 to 2006

Table 1 Live Trademark from 1999 to 2007

Year	Trademark
1999	WAFFLE RACER, STORM-FIT, NIKE GOLF, NIKE INNER ACTIVES, STARTER, S, S STARTER, N-DORFIN, TEAM STARTER, BRACKETVILLE, DRI-STAR, FOOTENT, BOING, PHYLITE, STARTER, PRESTO, LOOK FOR
2000	THE STAR, TNP, NIKE SHOXS, HYPERION, STORM-CLAD, WELCOME TO BRACKETVILLE, WELCOME TO BRACKETVILLE. STAY AS LONG AS YOU CAN, PRESTO, STARTER S, S, TUUK T-LOCK, LOOK FOR
2001	THE STAR, STARTER, PRESTO, DRI-FIT, PRO 80, SPEEDTACK, NIKE SPHERE, G-TACK, D-TACK,
2002	MAGNIGRIP, HOUSE OF HOOPS, S STARTER, S, ASPHALT LEGEND, STARTER, KING JAMES, 90, M7, L23, TA2, NIKE VAULT, SWOOSH FLEX, PE2GO, AEROW, R9, FLIGHT, TOUR
2003	ACCURACY, VENOM, TRIAX, NIKE GRIND, THERMA-STAR, RUN HIT WONDER, STAR FLEX, A S, STAR FLEX, STARFIT, STAR-GUARD, STAR-FIT, TEAM STARTER, TUUK, NIKE, SASQUATCH, NIKE
2004	MAXSIGHT, STARTER LEGENDS, STAR-SAFE, STAR-MAX, 71, COOPER, STAR-VENT, NIKE SHOXS, STARTER, STARTER O-FLEX, S STARTER, STORM-STAR, CLIMA-STAR, DURA-STAR, S, S STARTER, HEADSMART, FIPES, 10//2, LBJ, GET LONG. GET FEEL. GET DOWN., STARTER, LEBRON, THE EYES LEAD THE BODY, GET HOT,
2005	JOGA BONITO, LEBRON, 10/2, FEATHERTHANE, NIKEFREE, KING JAMES, DISKI, BROOKHATTAN, TEAM STARTER, S STARTER RACING, EARN YOUR SPOT, NINEMILLION, POWERSONG, NIKE RECOVERY, R9, S, S STARTER, ATHLETICS WEST, LUNARLITE, NIKE LUNARLITE, NIKE IHM, NIKE STABILFLEX, LET ME PLAY, FEATHEROAM, PHYLAR, FEATHERLON, R9, NIKE FREE, HATPHONES,
2006	RUN4EVER, RESPECT THE PAST REPRESENT THE FUTURE, UNCONQUERED, STARTER, DRI-STAR, STABILFLEX, TRANSFORMER, TUNE YOUR RUN, DON'T TREAD ON THIS, BELLOTTIBOLD, 10R, BODY KNOWLEDGE, DAYBREAK, PERFIT ZIP, PERFIT HUG, PERFIT LIFT, PERFIT, MIDBRID, THE STING, EB,
2007	PACEKEEPER, RECORDSETTER, KARMA, T TAILWIND, PERFIT SMOOTH, TAILWIND, VAPOR, G ZONE, NIKEGOLF

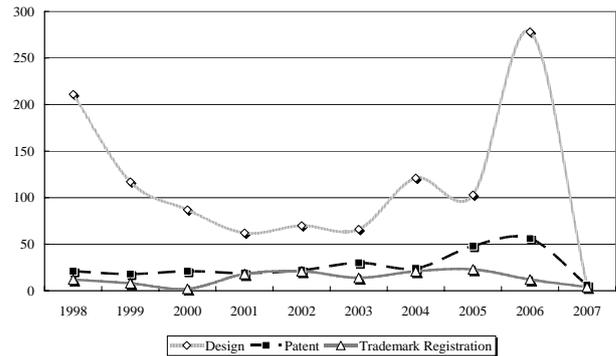


Fig 5 Publications of design, patent and trademark form 1998 to 2007

3.2 Design

In the past, Nike believed that success depended on design. Footwear contained 89% of the intellectual property. (Fig 6) From the product point of view, footwear included athletic-type; sandal-type; boot, overshoe, protector; legging and gaiter; equipment included sports equipment; dial, indicator hand, carrier, storage container; video or audio transmission, recording, playback equipment; ophthalmic article; regulating or indicating; garment included protective covering, apparel support, hand or arm or headwear covering watch, wristwatch or case.

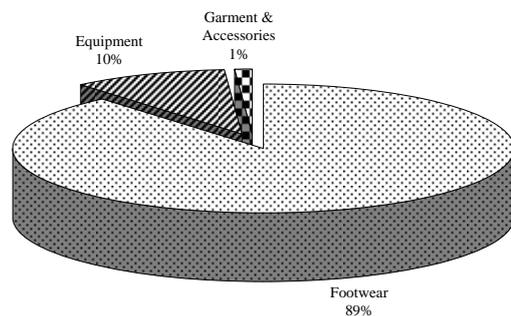


Fig 6 Design vs. Product

Analyze all designs carefully and transfer the claims to products. From figure 7, it demonstrated clearly that over 60% of designs were on upper part of shoes. Other important categories included sole, heel, insole, cleat, caulk antislip attachment, welt, seam, and edge detail.

Figure 5 showed the publication of intellectual property in the past ten years. It demonstrated the similar message compared to Fig 4.

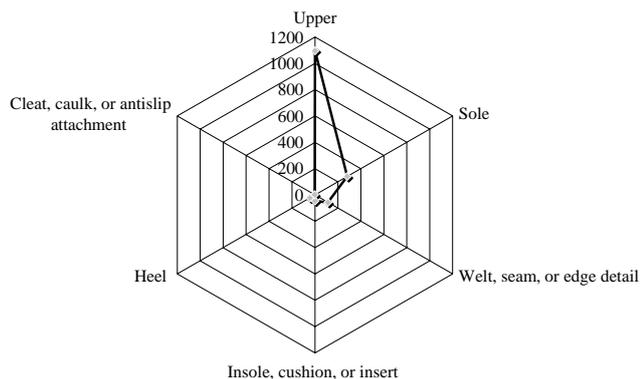


Fig 7 Footwear Design

3.3 Patent

From figure 8, it showed 73% of utility patents belonged to footwear. Recently, Nike emphasized material research on footwear related materials. Two subsidiaries were in charge of manufacturing “AIR-SOLE” cushioning materials and components. One was Nike IHM, Inc. and the other was Nike (Suzhou) Sports Company, Ltd. The principal materials used in footwear products were natural and synthetic rubber, plastic compounds, foam cushioning materials, nylon, leather, canvas and polyurethane films. Nike was very strong in picking up next generation footwear materials. This specific feature often overlooked by other companies.

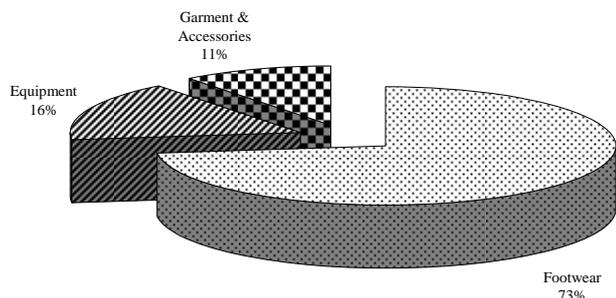


Fig 8 Patent v.s Products

3.3.1 Air Technology

“Air Technology” used by Nike was the process utilized pressurized gas encapsulated in polyurethane. Originally, it was developed by NASA and license to Nike exclusively. When “air technology” patents expired, so did the revenue of Nike. Nike still owned additional “air technology” patents, but not so powerful as developed by NASA. In fact, Nike already lost advantage in this technological field and competitors swamped in to erode the market share of Nike in footwear.

3.3.2 Patent Characteristics

Normally, it was difficult to evaluate the materials hidden in the patent documents. In this study, we took advantage of DWPI data and analyze this secondary information carefully. We could show that the principal materials used in Nike patents were couplings, clutches, brakes, springs, polymers and plastics textiles, wearing apparel, optics, layered products...etc. (Fig 9) We could use SciFinder to dig more information and know exactly the real structure of these materials.

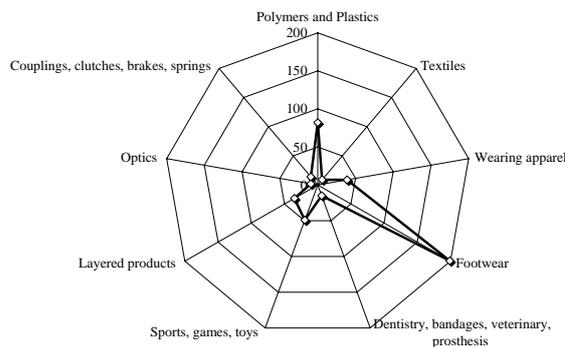


Fig 9 Technology Analysis

3.4 Trademark

From Fig 10, we found out that Nike manipulated trademarks very smartly. Every year, Nike would evaluate all trademarks and adjust the trademark registration accordingly. Dead of trademark contains abandonment and cancel. Results of Table 2 would confirm above statement. In table 2, it showed the registered trademarks frequency. Most notable ones were third place: luggage; fourth place; computer peripherals...etc; fifth place; watches of all types; seventh place: providing on-line physical fitness services and ninth place: product research and development for others...etc.

Trademark analysis results were not totally consistent with patent analysis. But the overall direction was the same-expand the business field.

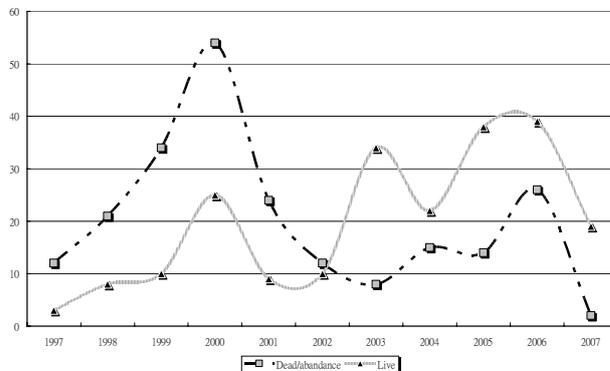


Fig 10 Live and Dead Trademarks

Table 2 Registered Trademarks Frequency

No	Product Area	Frequency
1	Footwear; headwear; apparel	203
2	Sporting goods	103
3	Luggage	47
4	Computer peripherals; computer hardware; electronic devices	41
5	Watches of all types	28
6	School supplies	13
7	Providing on-line physical fitness services	13
8	Retail services and on-line retail services featuring computer peripherals	11
9	Product research and development for others; product development consultation for others	9
10	Padding and cushioning materials made of plastic, rubber, polyurethane, or ethyl vinyl acetate for use in footwear	8
11	Sport bottles sold empty	5
12	Personal care products and cosmetics	3
13	Artificial surfaces and underlayments	2
14	Contract manufacturing in the field of polymers; plastic fabrication and finishing services; die cutting services for others	2
15	Flooring underlayments for indoor and outdoor sports and recreational surfaces with cushioning and padding.	1

4. Conclusion

Most of the companies in footwear and retail industry don't have many intellectual properties. Nike is an exception. In the beginning, Nike built its empire through licensing "air technology" from NASA. When key patents expired, Nike shifted its focal point to trademark and hoped to expand business lines. From the design, patent and trademark database, we saw the synergistic effect of different intellectual property. Figure 11 showed that Nike thought design was the top priority, then trademark, and finally patents. In the next few years, we concluded that the priority sequence would become trademark, design and patent. (see *Italic words*)

We combined the different secondary patent database to create a new methodology to analyze patent data. DWPI worked well with free database, such as USPTO and EPO. By this way, patent engineers or information professional scientists can expand their vision without specific domain knowledge.

It will be interesting to know whether Nike can transform itself from footwear giant to life style giant. Not many companies choose this direction. P & G is an example. But the intellectual properties of these two companies are totally different.

We will analyze the claim chart of key patents of Nike and performance of different trademarks at different time line. These new data should help us to understand the success and failure of Nike in the past twenty year.

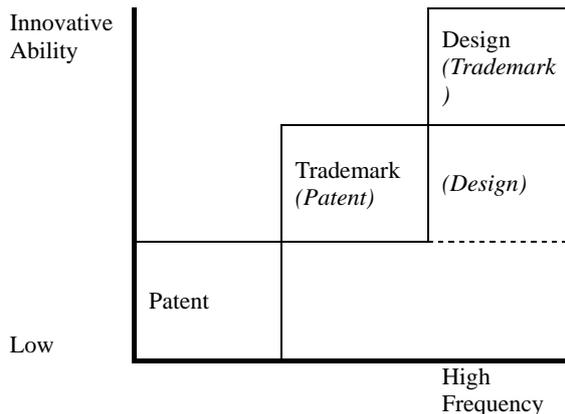


Fig 11 Innovative ability and IP frequency of Nike

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