RESEARCH ARTICLE

ANALYZING THE CAUSE AND PREDICTING FUTURE OF SPORTSWEAR AS FASHION TREND

*Sion Park

Saint George's School, 372 Purgatory Rd. Middletown, RI 02842, USA

ABSTRACT

The market scale of sportswear keeps increasing globally. As it increases, not only the variety of the products is broadened, but also the definition of sportswear is broadened. Sportswear now refers to functional clothes for fierce activities as well as clothes for daily life. In this report, by going over theories explaining factors of fashion trend changes, drastic increase of sportswear sales in China is explained. Fashion trend is a tendency of fashion which is influenced by tremendous factors like significant or meaningful incidents. The incidents can be political events, economic depression, and social conflicts. In this report, economic factor will be mainly discussed. For economic factors, macroeconomic index such as GDP per capita and PPP per capita show positive relationship with sales of clothes. Moreover, economic situation also has some relationship with the use of color and design patterns. Applying regression analysis to China case study, this research was not able to figure out meaningful relationship due to extremely rapid growth of Chinese sportswear market. However, experts state that economic growth has significantly contributed to the increase of market scale considering governmental policies and situational evidences. For these reasons, the estimated growth rate of sportswear market is optimistic.

INTRODUCTION

Sportswear domain has been continuously growing, which can be expressed by the growth of sportswear industry size. United States' sports industry size was 348 million dollars in 2017, which was a 75% increase from 200million dollars in 2009. Korea also has been showing a steady increase since 2015 in sportswear industry. Even in China, inclination for sportswear has increased. According to the Chinese Institute for Industrial Economics and Trade, sportswear industry recorded 1.879 billion yuan and is expected to reach 3.4 billion yuan by 2022. Besides these countries, according to KOTRA, even countries with high obesity rates like Chile have high interest in sportswear. In 2012, market size was approximately 14.7 million dollars with average consumption rate of 84.7 dollars on sportswear per year. The results of 2012 were 35.5% increase from those of 2007. Sportswear industry is expected to grow significantly. According to Market Insider report in America, fitness clothing market is anticipated to reach 2.4 billion dollars by 2024. This type of trend increases participation rate in sports and fitness activities, which can lead to healthier lifestyles. In addition, Global Industry Analysis stated that advancement in technology created more functional and comfortable types of clothes. Although more thoroughly discussed in main paragraphs, Asia-Pacific region has the highest rate of sportswear market growth, which is over 6.9%.

Thus, sportswear market size may be a reflection of both increase in economic growth and quality of life. In addition to market size growth, number of sportswear brand is expanding. For example, an urban athletic apparel brand, RYU Apparel Inc.'s second semester of 2017 profit was $64,1231, which is 113% increase of that of previous year. In addition, companies like Under Armour and Dick's Sporting Goods have also grown significantly due to market growth. Because the market is growing, companies are producing products that consumers want. In order to do that, they must analyze the trend. In this research paper, trends setting, current trends, and prediction of future trends are discussed.

Before starting the paper, definition of sportswear must be set. Sportswear, in a narrow sense, means clothes meant for athletic pursuit or athletic achievement. However, the definition has gotten a much more broader sense lately; sportswear is clothing/fashion which is suitable for social situation including sports participation and sports events. Thus, there was a change in paradigm for sportswear and sportswear industry. Rise of casual and fashionable "athleisure" caused a decrease in Nike share, while doubling those of Adidas. In addition, sportswear is now part of fashion item. Thus, in the main paragraphs, sportswear was categorized as a part of fashion trend. This research paper also analyzed fashion trends, changes in trends, factors behind sportswear and potential future trends.
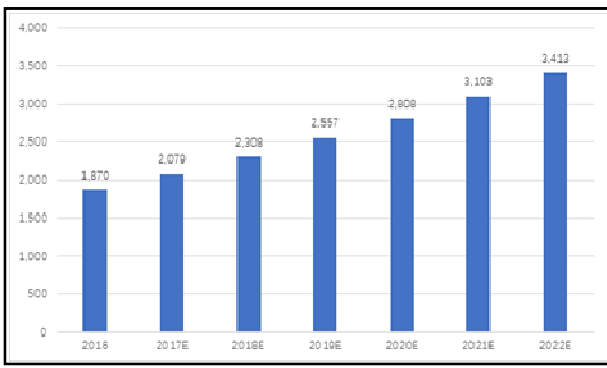
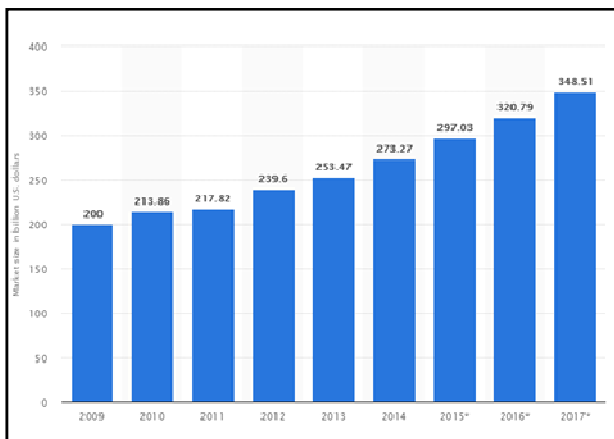**Figure 1. Current Chinese Sportswear Market Size and Prospective Size**
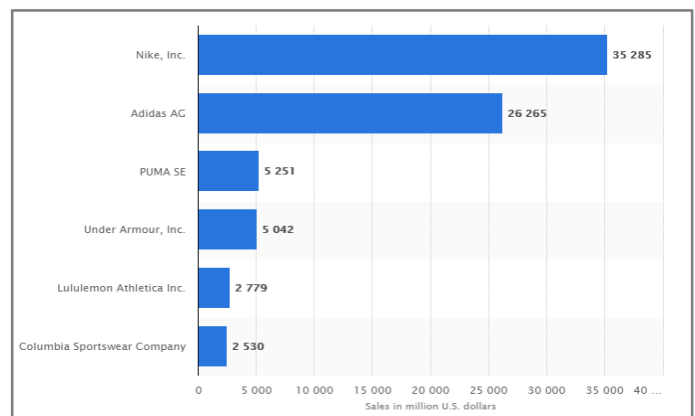

Figure 2. US Sportswear Market Size

Concept and Historic definition of Fashion Trend

Definition of Fashion Trend: 'Fashion' originated from a Latin word, 'Factio', which means "action" and "motion". According to a modern dictionary, fashion is a popular trend, especially in styles of dress and ornament or manners of behavior. However, the definition of fashion changes along with time. Nystrom defined fashion as a trend that many people want to follow. Robinson viewed fashion as a desire for new and change, while King defined it as a social contagion that causes people to consume for more. Ansparkstated that fashion continuously changes along with people's wanting for differenceIt can be inferred that scholars believe that fashion is style that has a power to dominate over society as people search for originality. Trend is defined as new item, or the desire to change as socially collective phenomenon. Common definition of trend is a general direction in which something is developing or changing. Thus, trend is not a momentary happening, but rather a combination in political, economic, social, cultural and psychological flow. Fashion trend is a combination of fashion and trend. In short, it means the continuous "fashion directionality". A dictionary definition of fashion trend states that it is an unconscious flow and amalgamation of societal phenomenon that drives people. So, trends and fashion can change depending on societal situations, weather, change in preference, and technological advancements.

Changes of Fashion Trend: The topic of "Changes of Fashion Trend" is written based on a research paper named "Analysis of Changes in Beauty Design by Time". Fashion trend is heavily influenced by the time period's dominant thoughts, and economical situations.

In 1960, ideas of democracy like gender equality swept through the nation, which introduced unisex clothing lines like jeans. In addition, minimalism and pop-arts regarding mass production and monophasic life affected fashion. Examples of experimental and far-out fashion trends developedultra-miniskirts, metal stockings and long boots. The hippy trend of 1960s reflected into the fashion trend of that era. The biggest fashion trend in 1970s was 'punk', a form of rebellion for increase in unemployment rate and the Vietnam War.Punks tend to wear rubber or plastic-like material pants and boots with studs. On the other hand, Yves Saint Laurent created "Le Smoking", women pants suit, thatset a big fashion trend in pants fashion. Lastly, casual look of sweaters, jeans, and t-shirt increased as well as layered looks and oversized outfit. In the late 1980s, there was an economic boom. So, fashion trend also sought for lifestyle advancement. Natural fiber was preferred over polyesters and new fabrics types and designs began to develop. In addition, increase in health awareness developed sportswear. When oversized look was the main trend, people wore loose style coats, and long shirts. In 1990, free combination of previous styles became the trend. Due to the rise of environmental movements and naturalism, recycle fashion rose. Meanwhile, in the late 1990s, sense of anxiety was reflected via hippy look or mods look, while sense of expectation was reflected via cyber look. WSGN introduced 2019 trend as the following. First, it is minimalism. Minimalism applies to both lifestyle trend and design trends. "Buying less, but buying better, renting some sequined occasion-wear rather than buying pieces that will last across seasons" became the main phrase of the time. Designers also began to focus on the durability and interiors. WSGN editor also picked out "neo-mint" as the main color. Like pastel colors, neo-mint allows both youthful and futuristic image. Consumption rate seems to be very similar to those of 2018.

Current market scale of sportswear: Like mentioned previously, sportswear allowed functionality in daily clothes into fashion item. This trend can be shown by the size of sportswear market. If sportswear was only for certain professionals or group of people, the size of the market wouldn't be this big. It is valid to say that sportswear is part of the fashion trend according to the data.

According to Statista, top 6 brands in sportswear brand consists of 7.6152 billion dollars

Figure 3.

Factors for fashion trend change

Political Factor: Political incidents heavily influence fashion trends. Long and flowy pants like the military uniforms during the French Revolution became popular amongst the people post revolution. So, political events like liberation and change

in politics get reflected peoples' lifestyles. For example, after the Vietnam War, Southeast Asia became the center of world's attention, which popularized kimonos, knots, and other oriental looks. Citizens of the United States during the Gulf war began to wear clothes with US flag as an expression of nationalism. Political agencies and political ceremonies also influence fashion. For examples, the government can demand a fashion company to use fabrics from local areas. Or, animal rights organizations like PETA can boycott against the use of animal fur and leather for clothes. In addition, fashion of the first lady influences the trend significantly. Starting from Jackie Kennedy to Michelle Obama and MelaniaTrump, fashion of first ladies have gotten plethora ofmedia's attention. Prime minister Theresa May and Chancellor of Germany Angela Merkel have received media's attention for their fashion looks as well.

Economic Factor: According to the "Influence of Factors on Clothing Sales and Its Future Trend: Regression Analysis and Time Series Forecast of Clothing Sales" report, there was a correlation between GDP per capita and clothing stores sales.
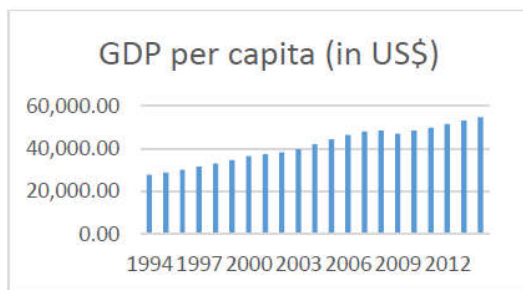

Figure 4.

GDP per capita in US from 1994 to 2012, besides the Great Depression, grew steadily; clothing stores sales grew steadily besides 2009. It can be shown by the following regression analysis.
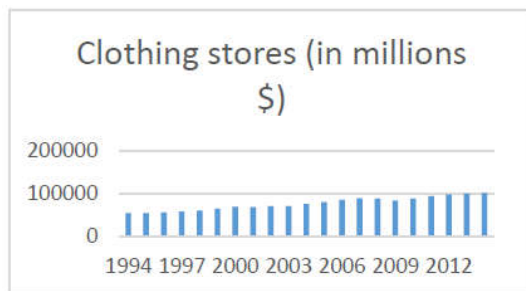

Figure 5.

The regression analysis showed R-square value as 0.9918, which confirmed that the GDP per capita and sales of clothing stores have a strong correlation. So, it can be stated that 70% of GDP was by consumption.

Like the correlation between economic growth and sales of clothing brands, there is a correlation between change in economy and change in certain fashion trends.

Hemline Theorem stated that as US stock market value increases, lengths of skirts tend to decrease. Because the stock market is heavily incorporated in the economy, it showed that economic situation and fashion trend have tight relations. During the time of economic boom like 1920 and 1960, there

was a boom in miniskirts while 1930 and 1940 were mainly long skirts.

Meanwhile, the following correlation can also be applied to those of Korea. According to "Economic Decline and its Impact on Fashion" research paper, economic situation influences fashion tendency, color and material. During the times of economic depression in Korea, Silhouette look and various fashion trends emerged; while economic boom popularized bilateral trends of both sexy look, body conscious look like tight pants and other skin-tight clothes, and classic and traditional looks. In addition, types of material are heavily influenced by economic situations. For example, during the 1973 Oil shock, the price of polyester and synthetic fabric sky rocketed, which caused a boom in natural- wear like jeans and corduroy. In 2008, there was a sublime mortgage loan crisis, which was reflected as the recession chic. During this time period, designers produced clothes without the high price tag but fashionable items.
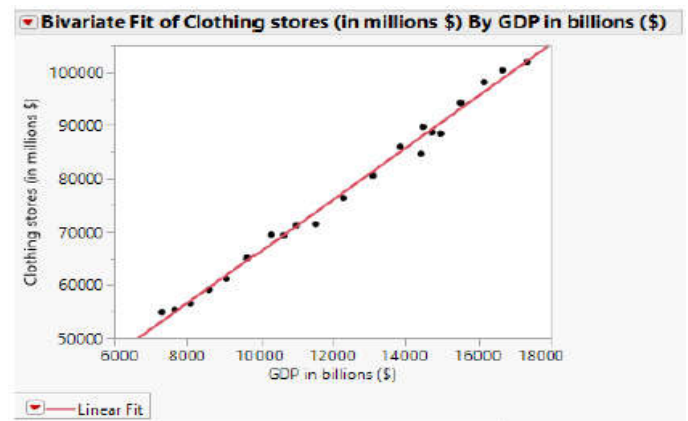

Figure 6.

During 2008, as Hemline Theorem mentioned, long skirts and vibrant colored casual wears became popular.

Social Factor: There are three main social factors that can influence fashion trends. First, the triple-down theory states that fashion directionality is from top to bottom. Thorstein Veblen stated that fashion is a mean of expression and display. He believed that fashion trends of upper class get passed down to lower class. According to the Simmel research, upper class is staple in growth of fashion. Thus, fashion trend is influenced by the needs of society, which upper-class controls. According to the "Fashion: On Individuality and social forms", fashion of upper class can never be the same as those of lower class. It is because when lower class follows the upper-class fashion, upper class finds something better and new. Thus, fashion trend is the result of social equalization and individual differentiation. Upper class has the desire for distinction while lower class wants to mimic those of upper class. The pyramidal structure of the society creates this type of cycle. Second is the triple-across theory, which resulted as a contradiction to the previous theory. Herbert Blumer said during the collective selection theorem that customers who participate in the production line create a trend. In another word, social classes don't affect trends. In addition, King stated that people encounter products via commercials, so it is hard to find correlation between class and trend. The emergence of technological advancement allowed faster trends. Last is the trickle-up theory. George A. Field mentioned in "The Status Float Phenomenon – The Upward

Diffusion of Innovation" that trends as cend from lower class to upper class through bubble-up, and bottom-up effect. In order to deviate from monotonous lives, youth market was created, which further influenced other generation clothes. In reality, there are many cases where trends from lower class affected those of upper class. A perfect example is denim jeans. In 1950, James Dean became the symbol of rebellious teens. By 1960s, jeans became very popular and by 1970s, it became a ubiquitous outfit for all classes. This is a case where white collar and blue collar both were subjected to the same type of clothes.

Case Study: China

Current state of affairs of sportswear market in China: Sales of clothes and shoes are increasing yearly in China; the growth rate is steadily within 5% range. Although it is lesser than the average growth rate of 5.4%, there has been a consistent increase.
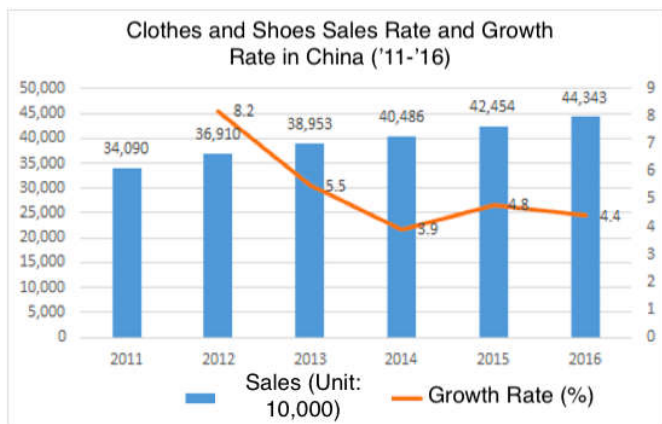

Figure 7.

Amongst growth rates, sportswear had the most exponential rate in 2014, while clothes and shoes industry were declining.
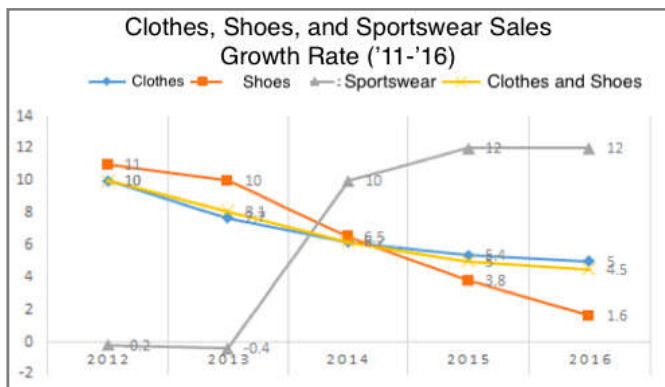

Figure 8.

The differences can be recognized easily by number of sales. According to Euro monitor, like Americans, Chinese responded that they wear sportswear not just during workouts but also during everyday lives (40%), errands (39%), quick dinners or movies (33%). Sportswear brands like Nike, Adidas, Anta and Li-Ning record high market shares. Nike set a record during single's day for selling over 10 million yuan just on T-MALL platform. ANTA, which recorded third on profit sales on single's day, recorded 6.7 million dollars. ANTA continuously increases their sales by targeting basketball manias by including famous basketball players like Klay Thompson, and Kevin Garnett for commercials.

Factors of increased sales of sportswear: First, as consumption takes up 70% of GDP, GDP growth rate and clothes market can be correlated. The following is the regression analysis.
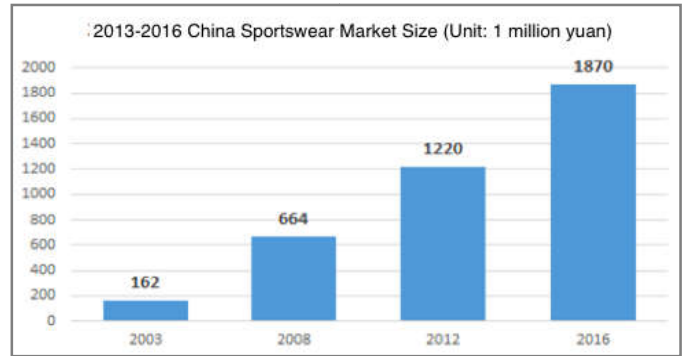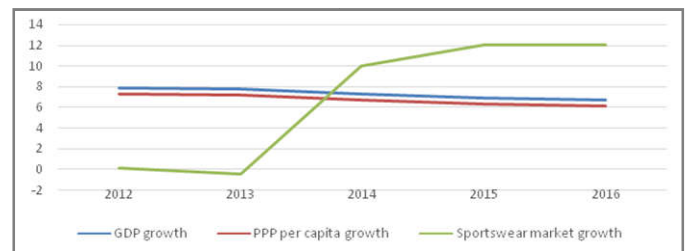

Figure 9.

Figure 10.

	GDP growth	PPP per capita growth	Sportswear market growth
2012	7.856	7.332152	0.2
2013	7.758	7.22604	-0.4
2014	7.298	6.755807	10
2015	6.9	6.358848	12
2016	6.7	6.123848	12

(unit: 1000000000 yuan)

Figure 11.

By putting the values of the chart into a table, values of p were0.460985, and 0.501521, which didn't show any particular correlation. Rapid growth might be the reason for no correlation. Rapid growth made it hard to deduce direct statistical correlation, however, Chinese scholars believed that economic growth will lead lifestyle increase, which will increase sales of sportswear. The following can be supported by continuous increase in gym openings and other policies for more facilities. According to "Sports Industry Improvement and Consumption Report" from October 2014, the government is hoping to set the sports industry to approximately 50 billion yuan by 20225. In addition, with the improvement in economy, there has been an increase in people interested in sports like hiking, running and skiing. According to IBISWORLD, China's gym revenue increased 11.8% yearly between 2011 and 2016. With this, it can be inferred that people are interested in healthy lifestyle than ever. Like this, sportswear industry is expected to grow. The following chart is an estimate of the growth by Euromotor.

Case Study: Korea: Korea seems to be following the world keynote. According to Korean Fashion Association, global fashion industry is expected to grow 2.4%, and sportswear has an especially high growth rate. Sportswear industry in Korea was worth 7.4 billion won in 2015 with 7.8% yearly growth rate. Rapid growth seemed to have much relation with "athleisure" trend.

Figure 12.

	2018	2019	2020	2021
Sports Apparel	106.2	113.1	120.5	128.6
- performance apparel	34.7	37.4	40.5	44
- outdoor apparel	17.8	19.3	21.1	23.3
- sports-inspired apparel	53.7	56.4	58.9	61.3
Sports Footwear	112.3	122.1	131.8	141
- performance footwear	38.3	42.2	46	49.6
- outdoor footwear	7.6	8.2	9.1	10.1
- sports-inspired footwear	66.4	71.7	76.7	81.3
SUM	218.5	235.2	252.3	269.6

Both high end brands and smaller companies are producing sportswear clothing and even celebrities are launching their own designs. Currently, Nike is leading the market share, with Adidas leading next. Unlike before, outdoor brands market share has been declining as athleisure lines increase. It is inferred that consumers taste changed. Consumers want clothes that can perform both sports and functionality and practicality of regular everyday lives. Thus, many sportswear brands are changing their clothes to be more diversified. These lifestyle-like sportswear clothes are most popular amongst younger generations. Thus, the target audience for many brands are getting younger. For example, Adidas Korea recorded 1.4 billion won profit for sports related promotion targeted for younger generations, which was 115% more than those of previous year.

Conclusion

Sportswear industry has been expanding worldwide; countries like US, Korea, China and Chile are increasing in their sportswear sales. In this research paper, definition of trend, trend tendency and change, and Chinese market change were discussed to identify the origin of sportswear trend. Trends have been affected by numerous factors; thus, it is hard to pinpoint the exact origin. Trends are affected and reflected by political and social structures, as well as political incidents. When focusing on economical factor, it was evident in this research paper that individual GDP and consumption rate were highly correlated. There were many cases where political circumstances influenced not only changed sales but also style and trends. Also, theories behind social structures and their effects on fashion trends were discussed. All these ideas were incorporated in China case study. However, on regression report, there seem to be no exact correlation between sportswear industry sales and GDP. However, many Chinese scholars believe that rapid growth of this trend caused errors in data. Like this, Euro-motor as well as KOTRA believe that Chinese sportswear industry will continue to grow and that there is a need to focus on this industry.

REFERENCES

Ap, Tiffany 2015. "China Makes Moves to Boost Consumption". *Women's Wear Daily*.

Avoni Gharde, 2016. "Influence of Factors on Clothing Sales and Its Future Trend: Regression Analysis and Time Series Forecast of Clothing Sales." *Journal of Textile and Apparel, Technology and Management*, vol. 10, no. 2.

China GDP per Capita PPP. 2019. " *Kenya Government Debt to GDP | 1998-2018 | Data | Chart | Calendar*, TRADING ECONOMICS, Feb. tradingeconomics.com/china/gdp-per-capita-ppp.

Chul Goo Kang, Hye Won Kim. 2017. "2018년Industry Prospect." *Korea Corporation Evaluation*, 12 Dec.

Factors Influencing Fashion Trends.." *Korea Fashion Industry Association*, 2 Feb. 2015, www.koreafashion.org/info/info_content_view.asp?num=832& pageNum=& cataIdx =803&clientIdx=887&SrchItem=&SrchWord=&flag=2

GDP, PPP (Constant 2011 International $)." *Literacy Rate, Adult Female (% of Females Ages 15 and above) | Data*, World Bank, data.worldbank.org/ indicator/ NY.GDP. MKTP. PP.KD.

Hyun Joo Yoo. 2014. "KOTRA Foreign Market News."*England Makeup Industry- kotra Foreign News*, KOTRA, 3 Apr. news.kotra.or.kr/user/globalAllBbs /kotranews/album/2/globalBbsDataAllView.do?dataIdx=13 0518&column=&search=&searchAreaCd=&searchNationC d=&searchTradeCd=&searchStartDate=&searchEndDate= &searchCategoryIdxs=&searchIndustryCateIdx=&page=14 07&row=10.

Kinsella, Ana. 2019. "Five Trends Set to Take Over in 2019." *An Other*, An Other Magazine, 3 Jan. 2019, www.anothermag.com/fashion-beauty/11397/five-trends-set-to-take-over-in.

Kye, Edwin. 2017. "The Sportswear Industry: A Paradigm Shift?" *Seeking Alpha*, Seeking Alpha, 12 June, seekingalpha.com/article/4080883-sportswear-industry-paradigm-shift

Leading Sportswear Companies by Sales Worldwide 2018 | Statistic." *Statista*, Statista, July 2018, www.statista.com/statistics/900271/leading-sportswear-and-performance-wear-companies-by-sales-worldwide/.

Lim Hyun Suk. 2009. "A Study on the Fashion Trend under Depression." *The Korean Society of Fashion Design*, vol. 9, no. 4, pp. 61–75

Maria Mackinney-Valentin. 2010. "On the Nature of Trends: A Study of Trend Mechanisms in Contemporary Fashion.

Rissman, Rebecca 2016. Women in Fashion. ABDO. ISBN 9781680774856.

Size of the Global Sportswear Market 2009-2017 | Statistic." *Statista*, Statista, Sept. 2016, www.statista.com/statistics/613169/size-of-the-global-sportswear-market/

Sportswear for daily lives..Street Fashion· Mustang Fashion Invasion." *Dailian*, 26 Jan. 2019, www.dailian.co. kr/news/ view/768245.

Sung Eun Kim. "A Study on Modern Fashion System and Fashion Trend Change." Feb.

The Growth of Sales in Sportswear." *Market Insider*, PRNewswire, 8 Oct. 2017, markets.businessinsider.com/ news/stocks/the-growth-of-sales-in-sportswear-100 22497 34.

The Status Float Phenomenon The Upward Diffusion of Innovation." *Neuro Image*, Academic Press, 18 Nov. 2004, www.sciencedirect.com/science/article/pii/0007681370901 576.

Young Suk Kim. 2018. "Current Chinese Fashion Industry and Prospect." *KOTRA*, 6 Feb., news.kotra.or.kr/user/ globalAllBbs/kotranews/album/2/globalBbsDataAllView.d o?dataIdx=164649&searchNationCd=101046.

Yun Imsuk. 2018. "Study on the Temporal Change of Beauty Design According to the Fashion Trend." 2007, pp. 21–40

****