'Sneakernomics': Assessing The Successfulness Of Multifarious Sneaker Collaborations In The Sneaker Resale Market

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Abstract

Scarce-supply in conjunction with the advent of social media has resulted in the conspicuous consumption of sneakers—creating a sneaker resale market with lucrative investment opportunities for both sneaker brands and consumers. As sneaker brands continue to branch, the practice of collaborating with famed endorsers (e.g. celebrities and athletes) on coveted sneakers has become an increasingly profitable endeavor. Although, with a myriad of endorsers to collaborate with, data and information on the success of multifarious sneaker collaborations remains meager due to the nascent nature of the market. As a result, this study compared three sneaker collaboration categories—celebrity signatures, athlete endorsements and brand-brand collaborations—aiming to determine the most successful collaboration category from 2017-2021 on the StockX marketplace for sneaker brands. A total sample of 90 sneakers were collected from StockX's featured page, with 30 per category, and data on real transaction variables (12 month trading range, volatility, number of sales, price premium and average sale price) were noted for each sneaker. A two-part quantitative methodology was employed consisting of descriptive statistics on StockX sneaker data and inferential statistics on the mean price premium of a collaboration category. An ANOVA inference test with the null hypothesis that there is no difference in the mean price premiums and the alternative claiming there is, corroborated an insignificant p-value. Therefore, with no statistical significance in the mean price premiums, the study concluded that consumers on StockX were not extremely financially invested towards a particular sneaker collaboration, meaning each category was assumed to have equal resale market performance and therefore there wasn't an ultimate winner in terms of a most successful category. The managerial implications of this study contend that while there was no statistical significance, brand-brand collaborations did produce the largest raw mean price premium (179.23%)—60% more compared to the other two categories. Consequently, although notable brands may already engage in brand-brand collaborations, the findings of this study are more applicable and relevant for smaller, local-level brands that are struggling to grow. By collaborating with other brands on supply-scarce sneakers, smaller brands may be able to generate positive resale market performance that helps them craft a successful image amid a competitive fashion industry in a digitally-influenced economy.

Keywords: Sneaker resale market, endorsements, brand-brand collaborations, stockX marketplace, digitally-influenced economy

Introduction

Scarcity In The Sneaker Resale Market

In light of innovation in fashion over the past decade, companies in the sneaker industry have been pioneering new and unprecedented avenues by growing their branches through a variety of sneaker collaborations. A limited-supply of sneakers in conjunction with endorsements from celebrities, athletes, artists among other collaborators has fostered the burgeoning of the sneaker resale market and coveted sneaker lineups like the Jordans (BoPing, 2021). In essence, with the use of simple economics, brands have made a calculated manipulation of supply to fabricate a sense of artificial scarcity around sneakers—rendering them more and more exclusive. By employing supply-scarce production brands have induced a sense of excessive competition among enthusiastic consumers, arousing their desire for owning limited-edition sneakers (Cassidy et al., 2018). In fact, a study published by the Journal of the Academy of Marketing Science—investigating the effects of scarcity on consumers' buying behavior—reasons that scarcity enhances consumers' desirability by polarizing their subsequent preferences and judgments towards products (Hamilton et al., 2018). Referring this in the context of the sneaker resale market, sneakers' scarcity essentially activates a mental shortcut in the human brain, formerly known as a type of 'heuristic cue', that subconsciously reduces consumers' attention to the true value and quality of sneakers. In effect, consumers are left more prone to the product's appeal, thus increasing their purchasing intentions (Nürnberg O., 2015). As a result, with a consumer base invested both financially and socially, retail and consumer brands research analyst Josh Kernan of the Cowen Equity Research firm predicts a lucrative future for the resale market—projecting a $30 billion valuation by 2030 (Kenny et al., 2021). These market projections not only evidence an emerging market, but a market with growing capitalistic opportunities and untapped lucrative potential.

The Conspicuous Consumption Of Sneakers

With the advent of social media nurturing a hyperconnected world, the sneaker resale market has been further promulgated within society as the importance placed on appearance and fashion sense continues to grow among people (Matthews et al., 2021). In this regard, scarce-production has also been instrumentalized by suppliers to promote the conspicuous consumption of sneakers given that consumers have become increasingly conscientious of appearance, status and fashion sense on social media outlets and in everyday life (Gierl and Huettl, 2010). In the sneaker resale market the concept of conspicuous consumption simply represents the purchase of sneakers to signify social status, ownership of a collector's item or the desire to portray a contemporary, ultra-modern sense of fashion.

Sneaker Collaborations: A Valuable Growth Proponent For Brands

In regards to sneaker collaborations, the conspicuous consumption of sneakers—propagated by scarce-production—has incentivized several luxurious fashion brands like Dior and Louis Vuiton among others to endeavor fervently into the sneaker resale market by developing their coveted sneakers collections (Leeb et al., 2019). As more brands engage with the sneaker resale market, the emphasis placed on researching the economic trends, patterns, properties and models within such a dynamic market continues to garner interest among researchers. Specifically, exploring and understanding the sector of sneaker collaborations scrupulously has been emphasized given its more nascent emergence as a promising method to help brands succeed by branching their sneaker collections.

Literature Review

The Business Model: Primary And Secondary Sneaker 'Resale' Market

The business model of marketing supply-scarce sneakers in the primary market has led to creation of a secondary 'resale' market for sneakers. As limited supply instigates competition among consumers for ownership—enabling only a few to possess such sneakers—there is increasing demand to buy these sneakers through second-hand transactions (Newkirk, 2019). Bought in the primary market from retailers, limited-edition sneakers are instantly resold for upwards of two to

three times their original price depending on the situation (Burgess, 2020). An extreme example of this is the popular Nike Air and Off-White 'Prestos' collaboration, which sold on StockX, an online resale marketplace, for approximately $1340 after release—indicating a 737% price premium[1] (StockX, 2022).
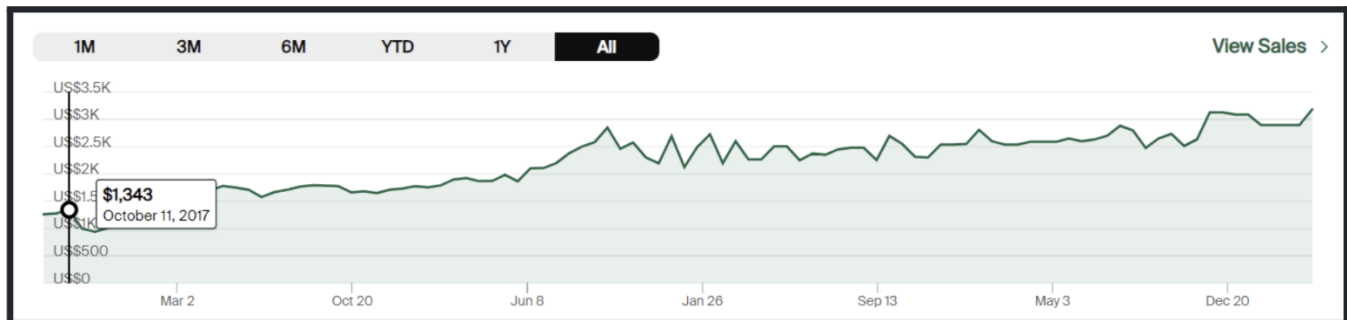

Figure 1. *Nike Air 'Prestos' Off-White Price History*

Note. After releasing in late September 2017 for a retail price of $160, the Nike Air 'Prestos' Off-White resold for more than tenfold at a price of $1,343 just a couple of weeks later on the StockX resale marketplace. Obtained from StockX.

With consumers continuing to pay exorbitant prices in a US sneaker resale market worth over $6 billion, brands have tremendously benefited from a primary market standpoint (Kenny et al., 2021). While brands do not directly benefit from the profits of secondary market sales—as they do not engage in secondary market activity—factors such as consumer interest, financial performance and social media headlines resulting from the resale market have been promising in guiding brands' success. Emeritus professor Peter Bug of Reutlingen University credits secondary market performance in terms of sales and consumer interest as critical growth components for brands in our modern economy (Lux & Bug, 2018). His explorative research claims that there is in fact a complementary relationship between sneaker brands and the resale market, where positive resale market performance is valuable to brands (Lux & Bug, 2018). Amid a booming sneaker resale market, the last several years have definitely maintained brands' interest in continuing to practice supply-scrace production that creates demand for a secondary market in the first place.

StockX: A Global Resale Giant
Famously known as the "Stock Market of Things", StockX—an online fashion resale marketplace—has revolutionized the commerce of sneakers and high-end fashion items. Co-founded by Josh Luber, Greg Shwartz and Dan Gilbert in March of 2015, StockX enabled people to resell their sneakers through a unique bidding system (HBS Digital Innovation, 2020). Essentially, the seller is able to set an asking price while the buyer offers a bidding price, ultimately allowing the seller to either accept the first matching-bid price or wait for higher bids. These types of transactions, especially for fashion items like sneakers, were unprecedented and thus democratized the idea of the sneaker resale market on a mainstream level (Greenwood, 2021). In 2020, StockX reported a trading volume of $1.8 billion in gross merchandise value as it closed 7.5 million trades throughout the fiscal year (StockX, 2021). In this regard, by facilitating a large volume of secondary market trading, StockX has cemented its reputation as the most popular and trusted online sneaker resale marketplace in the eyes of consumers. StockX regulating trades between sellers and buyers as an intermediary has contributed significantly to the aggregate growth and development of the sneaker resale market.

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[1] The price premium of a sneaker refers to how much more it sells for compared to its original retail price as a percentage. A price premium of 100% denotes a consumer paid twice as much as the original price.

Coveted Sneakers: 'Sneakerheads' And Investment Opportunities

With StockX creating mainstream trading channels for sneaker resale, consumers have utilized this opportunity to create new lucrative sources of income. People practicing the trade of coveted sneakers are now formally referred to as sneaker resellers. A case study from the Business Insider on Chris Holbrok, known as 'Sneaker Jesus', revealed that his reselling empire amassed $1.5 million in gross revenue in 2019 (Ciment, 2020). Figures like these portray the business of sneaker reselling in a more promising light, rendering the practice comparable to professional full-time jobs. Over time, the business of sneaker reselling has propelled sneaker culture from "a type of underground subculture to a full-blown frenzy" (Ma & Treiber, 2020). Consumers immersed in sneaker culture have coined themselves as 'sneakerheads'—fanatic sneaker collectors spearheading the development of the sneaker world. The evolution of sneaker culture to the forefront of mainstream media has elevated sneakers into a completely different type of asset class altogether. Among sneakerhead communities, sneakers are now perceived as iconic fashion staples, status pieces and investments (Ma & Treiber, 2020).

The Prominence Of Sneaker Collaborations

The sneaker resale market has been largely successful and profitable due to the power and influence of popular endorsers (e.g. celebrities and athletes) collaborating with sneaker brands to induce high demand scarcity that provokes the conspicuous consumption of sneakers. Generally speaking, products are desirable if they hold value, offer unique features or are a necessity among consumers. In regards to sneakers, one would assume sneakers to be scarce and popular based on factors such as comfort, durability and style, however consumers' scarcity preferences are rather driven by other motives. A 2018 study Nichollas Cassidy of Appalachian State University highlights these more appealing motives; the study surveyed 191 respondents on three sneaker scarcity types—demand scarce, not scarce and supply-scarce sneakers (Cassidy et al., 2018). The results of the study concluded that a majority of consumers prefer supply-scarce sneakers that are collaborations with hip-hop artists, celebrities and athletes (Cassidy et al., 2018). On the other hand, additional evidence from StockX co-founder Josh Luber corroborates this idea with a different setting in place, referencing celebrity Kanye West's Adidas Ultra Boost sneaker selling out after he wore them for a performance (Luber, 2016). While the sneaker was widely available to the public, the high-demand among consumers was latent until the sneaker was affiliated with West. Both examples together emphasize the paramount role of endorsers and thus the sneaker collaborations of endorsers in creating high-demand in the sneaker resale market. Analyzing the role of sneaker collaborations in terms of resale market performance, evidence from Moritz Lux and Peter Bug further illustrated the dominance of collaborative releases compared to general sneaker releases. Their analysis on data collected from StockX confirmed that the collaboration releases significantly outperformed general releases in terms of average profit margin per sale by more than 50% (Lux & Bug, 2018).
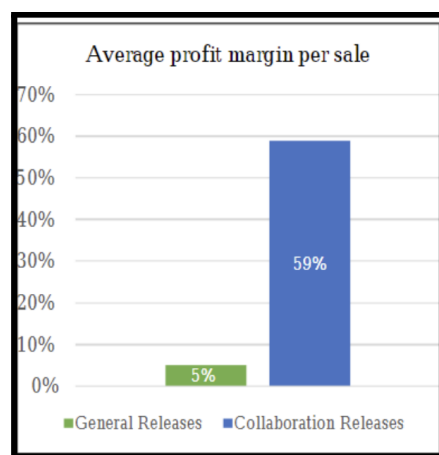

Figure 2. *General and Collaboration Releases Average Profit Margin per Sale Comparison*

Note. This bar chart highlights the disparity of average profit margin per sale between general releases and collaborative releases on the StockX resale marketplace, indicating collaborative releases generate 54% higher profit margins on average compared to general releases. From "Sole value – the sneaker resale market : an explorative analysis of the sneaker resale market," by M. Lux and P. Bug, 2018, Reutlingen University, p.16.

Exploring the dominance, influence among other patterns and trends pertaining to sneaker collaborations in the resale market has become increasingly valuable. Given the sheer amount of money, consumer interest and popularity, the opportunity to collaborate on sneakers with other entities is slowly becoming an inevitable option for sneaker brands. However, with several plausible endorsers to collaborate with, ranging from celebrities, athletes, musicians, social media influencers and other brands, there remains a gap within the body of knowledge that compares the successfulness of multifarious sneaker collaborations. In essence, with the current evidence and information available, brands continue to experiment with several different endorser-types on sneaker releases. While collaborating with a diverse array of endorsers is not unusual, brands' marketing strategists and scholars like Kevin Ma and Matthew C. Treiber of Duke University advise comparing several types of sneaker collaborations with resale market data as a method of gleaning information on collaborative releases' success. Thus, this paper's research begs the question regarding which type of sneaker collaboration has been the most successful between 2017-2021 for sneaker brands on the StockX marketplace? The use of sneakers' StockX resale market data to measure success is essential because, as mentioned previously, there exists a complementary relationship between brands and the sneaker resale market; brands succeed through positive resale market performance as consumers' fascination and interest grows from the resale market. For the purpose of this study, the three sneaker collaboration categories of celebrity signatures, athlete endorsements and brand-brand collaborations were chosen for comparison. These categories were selected for comparison on the basis that they are the most relevant, underexplored and intriguing sneaker collaborations within the resale market. Further, the scope of the study has been limited to the last five years as a measure of gathering data that was a more current representation of this emerging resale market. While previous research by Moritz Lux and Peter Bug along with Kevin Ma and Matthew C. Treiber has analyzed the importance of sneaker collaborations and differences in sportswear collaborations respectively, research that comprehensively compares a variety of sneaker collaborations is yet to be done (Lux & Bug, 2018; Ma & Treiber, 2020). Sneaker collaborations that are across industry and include multifarious endorser types remain to be comprehensively compared and evaluated.

Examples of each type of sneaker collaborations are as follows:
1. Celebrity: In 2015, artist Kanye West's collaboration with Adidas, valued between $3.2 billion to $4.7 billion today, led to the development of the renowned YEEZY brand—considered to be a driver of the modern day reselling market (Bhasin, 2021).
2. Athlete: In 1923, the first exhibit of an athlete endorsement occurred in a collaboration between basketball player Chuck Taylor, and Converse. 90 years later and Taylor's endorsement still remains an iconic sneaker design (Schauder, 2012).
3. Brand-Brand: In 2017, footwear giant Nike and popular fashion label Off-White collaborated on the Nike x Off-White "The Ten" drop (Nike, 2017).

Research Purpose
In aggregate, the purpose of the research is to support brands and investors of the sneaker resale market by providing useful data and information on sneaker collaborations. By determining the successfulness of different collaborations, brands can benefit by gaining a better understanding of the most lucrative types of endorsers. Consequently, brands can tailor their marketing strategies in accordance with success data. Similarly, sneaker resellers could also utilize the findings of this study to make data informed investments into the resale market. The research of this study helps promote the

growth and development of an emerging resale market by contributing data on an underexplored topic concerning sneaker collaborations.

METHODOLOGY

Method Overview

This paper attempts to determine the most successful sneaker collaboration category between celebrity signatures, athlete endorsements and brand-brand collaborations from 2017-2021 on the StockX marketplace. The StockX resale marketplace was chosen as the subject of this study as it satisfies several requirements. Primarily StockX contains publicly available datasets that are accessible to analyze, a healthy level of trading activity with 7.5 million trades in 2020, and further was also accredited by other researchers in the body of knowledge (StockX, 2021; Raditya et al., 2021; Wu & Auerbach, 2020). In order to achieve the research objectives, a two part quantitative methodology was implemented. First, descriptive statistics on StockX sneaker data was collected, which was followed by statistical inference using the ANOVA test to analyze data significance at alpha level 0.05.

Extracting Data From StockX

In order to minimize sampling variability, so that a variety of endorsers within each collaboration category are represented, this paper will use a method implemented by Northwestern's Roger Wu, where sneakers are selected from StockX's featured page (Wu & Aucherbach, 2020). Although there are underlying reasons, unbeknownst to the researcher, as to how StockX sorts their featured page, this method will hopefully prevent similar collaborations and induce an element of randomness that eliminates variability. The sample size for each of the three collaboration categories will be 30 sneakers, thereby totalling the study's sneaker count to 90 sneakers. When surfing StockX's featured page, the relevant years between 2017 and 2021 will be selected (StockX, 2022).
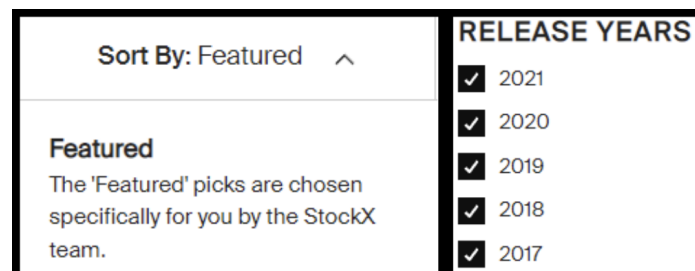

Figure 3. *Display of Random Sampling Methods*

Note. Filters on the StockX marketplace in the forms of the "featured" option and "release years" were toggled to generate a random selection of sneakers for the study sample. Obtained from StockX.

Sneakers from these pages will be selected for all three categories until each sneaker collaboration category has a total of 30 sneakers. The classification of a category to celebrity, athlete or brand-brand collaboration was implicitly determined by the researcher. Although, in most cases the type of collaboration was obvious due to the sneaker name, title or was stated in StockX's description of the sneaker.

Measuring Success With StockX Sneaker Data

In order to measure the success of a sneaker collaboration, StockX data that highlights resale marketplace performance will be collected on the 30 sneakers selected from each collaboration category. Resale marketplace performance is a credible measure of success as it takes into account consumers' vested financial interest in sneakers and accounts for the

harmonious relationship between sneaker brands' success and positive resale performance on secondary markets. The specific StockX variables that will be analyzed for the descriptive statistics include the 12 month trading range, volatility, number of sales, price premium and average sale price. Below is an example of the aforementioned variables on StockX for a sample sneaker (StockX, 2022).

Figure 4. *Converse Chuck Taylor All-Star 70 Hi Off-White Sample StockX Data Variables*

Note. This is a sample of the relevant study variables that were collected as a part of sneakers' StockX data. Obtained from StockX.

The "All-Time Trade Range" variable was not collected as a part of the study for each sneaker as it is more subject to skewness and variability due to the fact that it measures a trading range over the entire life-period of the sneaker. This range could have included data that was unrepresentative of the more current resale activity for the sneaker, thereby eliminating the reason to collect data on sneakers' all time trading range. To clarify, while sneakers released from 2017 to 2021 were collected as a part of the sample to narrow the focus of the study and contain a variety of sneakers, performance for sneakers was measured using their last 12 months historical data to represent more current resale activity. Once all the above variables were manually inputted into Excel spreadsheets by collaboration category, descriptive statistics were computed using the five summary statistics feature.
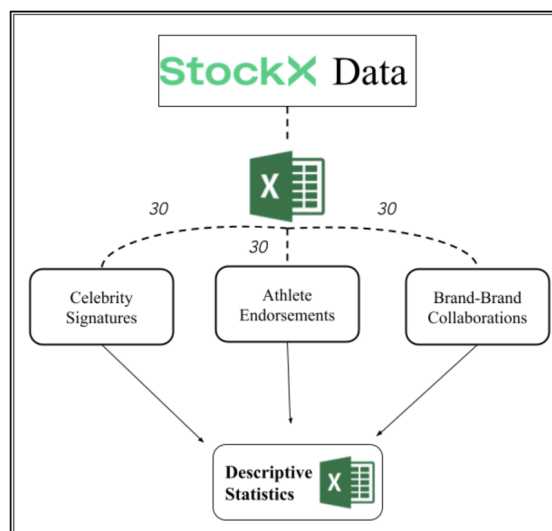

Figure 5. *Visual Diagram of Study Design*

Note. StockX data for 30 sneakers was collected and manually noted in Excel for each of the three collaboration categories, after which descriptive statistics were computed using Excel software features.

Statistical Inference: Analysis Of Variance (ANOVA) Test Using Price Premiums

To determine whether the data was statistically significant the single factor Analysis of Variance (ANOVA) test was chosen as the statistical inference procedure. The single factor ANOVA test enables you to measure statistical differences in the means of a parameter between and within two or more independent data groups which fit the requirements of study's three independent collaboration types. In the case of this study, the mean variable utilized for statistical inference was the mean price premium of the 30 sneakers collected in a sneaker collaborations category. The price premium variable was chosen for inference as it was the strongest measure of resale market performance and hence the success of a sneaker in the resale market. Moreover, the price premium is a relative measure of performance as it compares the selling price to the original retail price for a particular sneaker, which is beneficial when comparing a multitude of sneakers with varying retail prices. Furthermore, by detailing how much above the retail price a consumer is willing to invest, the price premium also emphasizes a consumers' vested financial interest in the sneaker, which is a good measure of resale market performance in regards to consumers' perception of the sneaker. For context, a price premium value of 100% signifies that a consumer paid twice as much as the original retail price. Greater price premium values for sneakers imply strong levels of resale market performance and are indicative of convincing success. The null hypothesis for the ANOVA test assumes that there is no difference in the mean price premiums between the three sneaker collaboration categories, while the alternative hypothesis claims that there is a difference in the mean price premiums between categories.

These hypotheses align with the research goal of determining whether there is a most successful sneaker collaboration type as a difference in the mean price premiums—rejecting the null hypothesis—would signal that the mean price premium of a category was statistically greater or significant enough compared to the other two categories. Such a result would suggest that consumers paid significantly higher above the retail price on average for a particular sneaker collaboration category. If the null hypothesis is rejected, meaning there is a difference in mean price premiums, a post-hoc ANOVA analysis will be conducted to determine which collaboration category contained the extreme mean price premium as the single factor ANOVA test is unable to indicate which group provoked the difference in the parameter.

Results

The scraping obtained links to 90 pairs of sneakers from StockX—30 per collaboration category—and these links provided more than 48,000 data entries of sneaker transactions. A preliminary examination of the dataset for the three sneaker collaboration categories revealed that brand-brand sneaker collaborations have the highest mean price premium of 179.23% compared to the other two categories. Thus, highlighting that on average a consumer is willing to pay upwards of three times the original retail price for brand-brand sneaker collaborations. The datasets below report descriptive statistics on the collected numeric variables from StockX for 30 sneakers in each collaboration category.

Variable	Mean	St.Dev	Min	Max	Count
52 Week Low Price	251.7	190.18	25	850	30
52 Week High Price	533.6	358.82	142	1,541.00	30
Volatility	0.15	0.07	0.01	0.36	30
Number of Transactions	206.57	499.07	2	2,665.00	30
Price Premium	1.16	1.2	0.27	4.79	30
Average Sale Price	361.9	251.15	96	1,101.00	30
Retail Price	180.4	47.98	80	250	25

***Table 1.** Celebrity Signature Collaborations*

Variable	Mean	St.Dev	Min	Max	Count
52 Week Low Price	589.24	1,188.70	26	6,045.00	29
52 Week High Price	1,830.52	3,206.30	95	16,000.00	29
Volatility	0.24	0.11	0.07	0.57	30
Number of Transactions	1,141.77	2,879.12	2	13,880.00	30
Price Premium	1.79	2.05	0.08	9.29	30
Average Sale Price	964.2	1,799.52	88	8,232.00	30
Retail Price	307	429.08	70	2,000.00	30

Table 2. *Brand-Brand Collaborations*

Variable	Mean	St.Dev	Min	Max	Count
52 Week Low Price	151.77	123.23	46	632	30
52 Week High Price	485.23	386.38	130	2000	30
Volatility	0.25	0.2	0.01	0.95	30
Number of Transactions	267.43	952.13	2	5247	30
Price Premium	1.2	1.81	-0.35	9.56	30
Average Sale Price	276.57	222.67	83	997	30
Retail Price	151.67	51.82	70	260	30

Table 3. *Athlete Endorsement Collaborations*

However, comparing the raw mean price premiums, the resulting P-value of 0.288 from the single factor Anova test corroborated that the mean price premium data was not statistically significant at the 0.05 level. As a conclusion, the categories' mean price premium are assumed to be equal.

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	75,181.67	2	37,590.83	1.2605	0.2886	3.1013
Within Groups	2,594,435.93	87	29,821.10			
Total	2,669,617.60	89				

Table 4. *ANOVA: Single Factor*

Note. p > 0.05 alpha significance level, therefore ANOVA test was not statistically significant.

Given that the Anova test was statistically insignificant, leading the researcher to reject the alternative hypothesis, a post-hoc ANOVA analysis was not conducted. After obtaining the results from the descriptive statistics data, it became apparent that there was a strong presence of outliers for the price premium parameter that could have potentially skewed the data and thus the outcome drawn from the ANOVA test. By graphing the price premiums from each collaboration category on Microsoft Excel with a 3D line chart, outliers in the forms of price premium peaks and negative price premium values were identified.
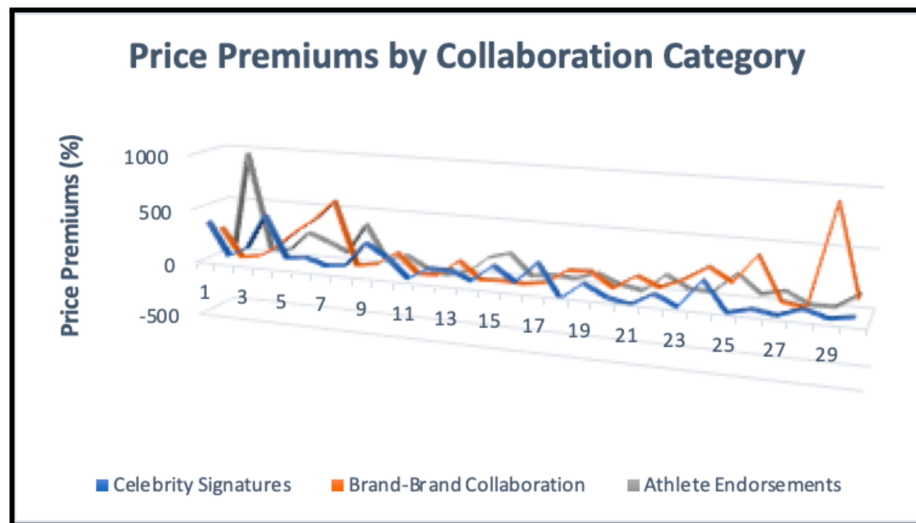
Figure 6. *Price Premiums by Collaboration Category*

As a result, a subsequent single factor Anova test excluding outliers was conducted with the same hypotheses. A resulting P-value of 0.3 and F-statistic within the 95% confidence level assured that data was not statistically significant at the 0.05 level without outliers.
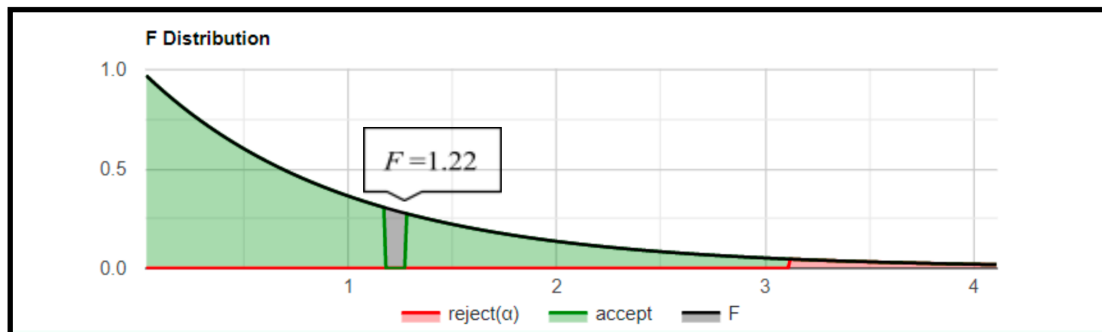

Figure 7. *ANOVA: Single Factor Excluding Outliers*

Discussion

Implications

In the context of this study, both ANOVA tests implicated statistically insignificant results that support the null hypothesis and suggest there is no difference in the mean price premiums between the sneaker collaboration categories. Therefore, consumers do not pay more above the original retail price on average for any of the studied sneaker collaborations even though, numerically from the raw data, brand-brand collaborations had the highest raw mean price premium by far—more than 60% above the other two categories. Observing the results from a logical standpoint, the brand-brand mean price premium appeared to be unexpected and in some sense counterintuitive. Typically, one would speculate celebrity signatures or athlete endorsements to draw more attention, secondary market revenue and thus higher price premiums per transaction. This hypothesis of celebrities and athletes outperforming brand-brand collaborations is further substantiated by the modern influencer-follower relation model described by Dr.Kadekova and Dr.Holienčinová, both professors in the Department of Marketing and Trade at Slovak University (Kadekova & Holienčinová, 2018).
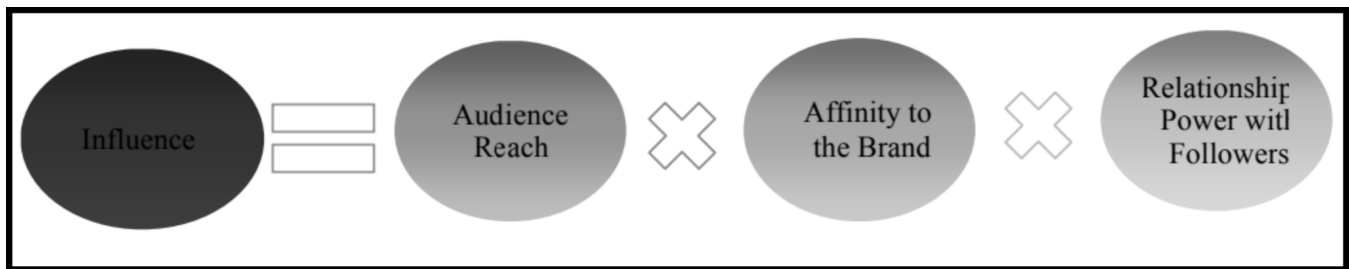
Figure 8*. Mathematical Expression of the Influencer Follower Relation*

Note. This influencer-follower relationship expression was produced by professors at Slovak University, modeling the components—audience reach, affinity to brand and relationship with followers—that impact endorsers' influence. From "Influencer marketing as a modern phenomenon creating a new frontier of virtual opportunities," by Z. Kádeková and M. Holienčinová, 2018, Communication Today, 9, p.96.

According to their model, endorsers' influence is generated through three integral components: audience reach, affinity to the brand and relationship power with followers. By these criteria, celebrity and athlete collaborations are most probable to have a greater influence compared to brand-brand collaborations due to their more prominent relationship with fan bases coupled with a generally larger audience reach. In this regard, assuming that greater endorser influence generally provokes more conspicuous consumption among consumers, celebrity signatures and athlete endorsements should have dominated the brand-brand category in terms of the mean price premium variable.

Although, with raw data extremely contradictory of the expected results, the results of this study reason that brand-brand collaborations may in fact have greater influence through the brand affinity component, as this is the most logical ingredient that could enable brand-brand collaborations to achieve a larger presence of influence on consumers' purchasing behavior of sneakers.

Managerial Implications

Generalizing the implications of this study to the larger population, the results are relevant and applicable for brands specializing or branching in the sneaker industry. At the current state of the market, brands should continue to practice supply-scarce production that disseminates conspicuous consumption among consumers and creates high-demand in resale markets. However, with the newly obtained data described in this study, brands' marketing strategists could also decide to experiment branching through co-branding efforts with other brand entities. On a macroscopic level, although, it's important to note most brands already engage in some form of brand-brand collaboration, therefore centralizing marketing efforts towards collaborative brand-brand releases may result in unproductive or perhaps even counterproductive results with regards to generating success in the primary market.

Disregarding bigger brands or known brands, the results of the study may be more relevant for smaller brands struggling to grow or brands looking to enter the sneaker resale market. Keeping in mind 179.23% mean price premium for sneaker collaborations, from their perspective, collaborating with a local brand while simultaneously maintaining an element of scarce-production could potentially spur growth by generating secondary market success. Success as a general principle can help these smaller, local-level brands in cultivating brand-image, values and long-term customer affinity. Though, overall, with insignificant results on the mean price premium variable along with a myriad of uncontrollable factors in the

sneaker resale market, the results do not produce conclusive managerial implications for brands of the sneaker industry but rather raw data that can be instrumentalized for experimental purposes, especially for smaller brands.

Sneaker Reselling Implications

Contrary to the managerial implications proposed for brands, the study evidences more applicable conclusions for sneaker resellers and investors of the market. Resellers and investors may view strong brand-brand mean price premiums as an opportunity to increase average profit margins on their brand-brand sneaker holdings as consumers are willing to pay exorbitantly for the category. In the event of this, the initially shown 50% gap difference in average profit margin per sale between general releases and collaborative releases may widen due to the higher margins achieved on brand-brand collaborations.

Limitations

Apart from the rejection of the alternative hypothesis, there were several limitations in the study worth noting. Primarily, the sizing of the sneakers is a vital factor that could have impacted the resale value of sneakers, given that different brands release sneakers in varying quantities for a particular size group. However, given that StockX does not openly provide complete data on sneaker transactions and thus the collected variables by size group, the study did not account for sneakers' different sizes, which may have affected the results. An important drawback in this case would be the fact that the availability of sneaker sizes limits the amount of resale activity for said sneaker in the first place. Limited resale activity may therefore correspond to increased variation in the price premium of a sneaker, as scarcity provokes increased demand leading to higher prices and thus higher price premiums.

Next, time as a contextual variable in measure and influence was another uncontrollable factor. Sneaker collaborations are often carefully planned and released during "hyped periods" meaning that certain sneakers may produce more attention and hype during their release period—leading to hype-driven sales on StockX that incites variability in the price premium variable. Therefore, the researcher operated under the assumption that all resales and StockX activity resulting from media attention among other external influencers (e.g. events like a concert) are directly produced from the initial marketing. To put the power of external influences into context, StockX data evidences that the death of popular fashion designer Virgil Abloh[2] in late 2021 provoked massive increases in his sneakers' resale value, not only inflating the price premium but general hype around his sneakers as shown in the price history graph Below (StockX, 2022).
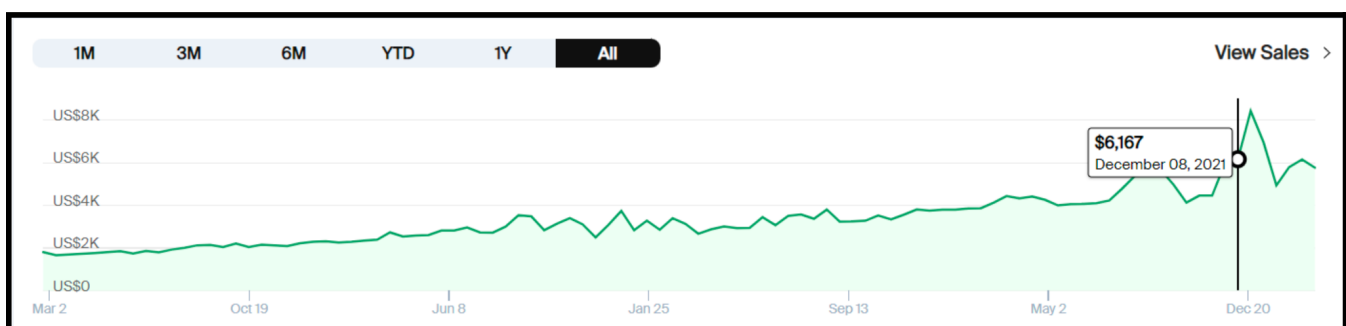

Figure 9. *Off White's Jordan 1 Retro High White Price History*

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[2] Virgil Abloh is the founder and designer behind the notable luxury fashion label Off-White

Note. After the passing of designer Virgil Abloh, founder of Off-White, in late November of 2021, the price of his Off-White Jordan 1 Retro High White sneaker—in collaboration with the Jordan brand—skyrocketed to approximately $6100 from its previous standing of around $4000. Obtained from StockX.

The price history graph above from StockX explicitly illustrates the ability of external factors directly influencing the resale value of sneakers. In this case, the spike in the price of the Off-White Jordan 1 Retro High White sneaker was not motivated by consumers' vested financial interest but rather emotional sentiment acting as an external influence on consumers' purchasing behavior and decisions. Given that the resale value of a sneaker is directly related to its price premium, if any of the endorsers for the 90 collected sneakers passed away between 2017-2021 or other external events indirectly influenced sneakers' resale value, it may have caused variability in mean price premium parameter used for statistical inference.

Future Considerations

As the sneaker resale market continues to emerge and develop, additional research is crucial in order to continue to provide relevant data for brands and investors of the market. In regards to the study's investigation of determining the most successful sneaker collaborations, similar studies could be conducted where each time the secondary market success indicator—in this study the mean price premium of a sneaker—is altered to measure success in different ways. Measuring success with different indicators is vital because complex factors such as social media play an integral role in influencing consumers' purchasing behavior. Therefore, measuring an endorser's capacity to influence purchasing through social media can also be an indicator of success. In recent times, complex and moderately efficient algorithms have been developed to gauge and analyze public sentiment on social media platforms like Twitter and Instagram. Consequently, they can be utilized in conjunction with resale market performance data to perform linear regressions tracking correlations between public sentiment and the price premium of a sneaker. This type of analysis can help provide further insight into the motivational power of endorsers to persuade consumers' mood concerning sneaker interest. Overall, measuring the success of a collaboration category with several indicators will allow researchers to comprehend through what success is generated—allowing brands in the future to adapt and inform their marketing strategies based on success data along with investors who can make data-informed investments.

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