Clovette: Predicting Preferences for Flowers

By

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Flowers are often gifted for major holidays and personal holidays, for both personal and corporate purposes. Today’s solutions in the market are abundant but scattered, with many players offering products of varying quality at a range of price points. To command higher prices and stay relevant in the market, florists need to distinguish themselves through high quality and/or niche product and ease of service. The goal for this project is to map the current competitive landscape and supply chain of the flower industry, and to determine whether predictive modeling in the floral industry is feasible as a point of difference for new gifting company Clovette. Data collection through distribution of a survey called “Discovering Floral Preference” assessed the potential for prediction. Furthermore, the project explores Clovette’s brand identity and potential “good” business development through sustainability initiatives and supply chain optimization.

Keywords: random forest, predictive modeling, flowers, gifting, sustainability

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Introduction

Motivation & Goals

In January 2011 I launched Blush Designs LLC (blushdesignsny.com), a boutique floral and event design company based in Manhattan. Through Blush, I constantly “meet and talk flowers” with New York City brides who vary in their planning approach, from obsessive and particular to relaxed and flexible. They are all educated and employed urbanites, usually between 25 to 35 years in age, with robust personalities, personal styles, and aesthetics. My job is to use my intuition and to ask the right questions, in order to create and sell a bride a design concept she loves.

I now have an instinctive process, much based on a bride’s personal style and personality, to determine her floral preferences. I question whether this instinctive process can be translated into a recommender system, one that can correlate a user’s behavioral characteristics and preferences, such as for fashion or home décor, with floral taste.

I arrived at MIT Sloan in Fall 2014 determined to identify scalability opportunities and disruption potential in the floral industry; I wrote in my application essay to Sloan earlier that year, “I foresee...a stronger online presence for the floral industry...by bringing innovation visualization methods...[the] possibility [to] go deeper in the supply chain to bring benefits more directly to the end summer...[the] promise to offshoot into an educational resource.” These arbitrary thoughts culminated in Clovette LLC (clovette.com), a floral gifting startup I hope to launch by Fall 2016. If achievable, a recommender system can be Clovette’s significant point of difference in the saturated New York City flower market.

Furthermore, Clovette may have the potential to distinguish itself in a crowded market through a “good” business model. Flowers can be categorized as a credence good, in that it is
difficult to communicate its value to the consumer. The value of flowers lies in their beauty, impermanence, emotional utility, and complex journeys from farm to table. This journey is colored by a number of stakeholders in the floral supply chain: the small and large players in hybridization, the growers (and farm workers) who must work within a framework set by history and their country’s policies, the wholesalers who make swift transitions in a dynamic marketplace, and the uneducated consumers who don’t realize that their decisions make enormous ripples in the global floral economy. Active and ongoing exploration of this chain could be a competitive advantage for Clovette.

The goal for this project is to determine whether predictive modeling in the floral industry could be possible, as well as to explore Clovette’s brand identity and potential “good” business development through sustainability initiatives and supply chain optimization.

Problem Statement

Flowers are often gifted for major holidays (Valentine’s Day, Mother’s Day, Administrative Appreciation Day) and personal holidays (birthdays, anniversaries, recoveries), for both personal and corporate purposes. Today’s solutions in the market are abundant but scattered, with many players offering products of varying quality at a range of price points. Today’s consumers also differ in their purchasing habits from consumers of past generations; consumers in their mid-20s through mid-30s are less able to distinguish freshness and quality, and altogether don’t perceive the meaningfulness of flowers as gifts compared with older peers (Carter, 2015, p. 15). To command higher prices and stay relevant in the market, florists need to distinguish themselves through high quality and/or niche product and ease of service.

Ultimately, these factors lead to following problem statement:
Could Clovette achieve a recommender system through predictive modeling? And, how can Clovette utilize such a system and other points of difference to create salience in a crowded market and lead the brand toward resonance in the long-term?

Project Design

The approach for this project began with a thorough examination of the market’s landscape, players, trends, and supply chain. The initial insights from this research led to the development of the hypothesis for a recommender system as a potential method of personalization, explored through data collection to determine correlation of user behavior and floral taste. Finally, overall brand development was explored through visual design and other creative, a beta launch, and good business development considerations. The scope of this project will focus on the New York City market, though it will also take other urban U.S. markets into consideration during expansion and scalability assessment.
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Background

Industry Overview

Flowers comprise a crowded industry, which includes many types of retailers from brick and mortar shops to ecommerce entities. Over the past five years, brick and mortar shops have experienced reduced demand as floral consumption has quickly moved online or to supermarkets, many of which have expanded its floral offerings. As shops have closed due to declining revenues, at an annualized rate of 1.9% over the past five years, 70% of business has gone to supermarkets or other competitors (Carter, 2015, p. 7). Figure 1 reflects the declining growth prospect of this market.

Industry at a Glance

Florists in 2015

<table>
<thead>
<tr>
<th>Key Statistics</th>
<th>Revenue</th>
<th>Annual Growth 10-15</th>
<th>Annual Growth 15-20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$5.8bn</td>
<td>-1.2%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Profit</td>
<td>$185.6m</td>
<td>$1.2bn</td>
<td>35,343</td>
</tr>
</tbody>
</table>

Figure 1. Florist Industry at a Glance *Does not include supermarket and ecommerce (Carter, 2015)

On the other hand, ecommerce solutions, capitalizing on the prevalence of online shopping overall, have increasingly taken market share from brick and mortar shops. The online shops benefit from competitive advantages, such as the lower overhead of operating without a physical retail store, and are expected to increase revenue at an annualized 5.1% to $4.5 billion by 2020, as seen in Figure 2.
Specifically in New York City, floral consumer behavior has become so varied that it has created a “floral gap”. The following is an excerpt from *The Economist* that paints the landscape of the New York consumer market today:

Transient, superfluous and beautiful, flowers decorate the pinnacle of New York society. The city’s wealthiest, whose Upper East Side penthouses can be spied from the Met’s roof, might spend $10,000 a week on them…At the other end of New York’s social spectrum, flowers are poignant leftovers of an age before the impersonality of the internet and the stagnation of wages. In the bodegas on upper Broadway Korean shopkeepers sell fume-choked bunches for five bucks, with the implicit promise they won’t wilt until midnight and might save your marriage (The Economist, 2014).

The New York Flower Market

The New York “wholesale” flower market has evolved in response to changing consumer behavior. Today’s flower market still remains in the heart of Manhattan’s expensive Chelsea neighborhood on 28th Street between 6th and 7th Avenues, but it is no longer a wholesale center that sells by the box or bucket; rather, it can be more accurately described as a cash-and-carry market, where anyone can come and purchase by the bunch. The flower market has been dwindling for more than a decade now, and at present day is loaded with construction of new developments; in the past decade alone, four hotels opened between 6th and 7th Avenues (Kinetz, 2004) (Ogorodnikov, 2015).
According to Casper Trap of Dutch Flower Line (dutchflowerline.com), one of the notable New York floral wholesalers today, since the 2008 market crash, retailers and end customers have increasingly avoided the middleman, putting pressure on wholesalers to sell to almost anyone (personal communication, December 3, 2015). After the 2008 downturn, sales dried up and unleashed a chain of events: Florists who left the business couldn’t fulfill their accounts payable to wholesalers, who in turn went bankrupt. Remaining florists, some who were too embarrassed to return to wholesalers they owed, reduced costs by purchasing directly from Holland. More wholesalers were pushed out. Though many of Trap’s major customers still shop in the market today to “feel the product and market”, many utilize webshops. These webshops provide similar access that wholesalers have to order with suppliers.

Today, Trap’s customers include other institutions such as photographers, caterers, and hair salons. Trap feels compelled to sell to “The Really Nice Restaurant Guy” who is trying to cut costs and buy directly to decorate. He often turns away “Mrs. Park Avenue” who sends her butler to the market and arranges on her own at home. He also notes a growing group of “The Brooklyn Girls”, freelance florists who choose select clientele and have virtually no overhead. Individually the Brooklyn Girl is a smaller customer, though altogether the group comprises a good portion of Trap’s clientele.

Wholesalers like Trap have and continue to respond to the market changes by tailoring their target market and inventory decisions. Gary Page of G. Page (gpage.com), another major wholesaler on 28th Street, strategizes through specialization, of both materials and customers (personal communication, November 19, 2015). “The range of material is so massive...you can’t bring everything to everybody. Bringing material into New York City into a central location is also very difficult. We don’t go to mass markets. We make a conscious effort to go to better
florists and decorators,” Page said. Likewise, Trap notices that the market is becoming “more boutique and specialized” with novelty niche material that is difficult to purchase directly from suppliers. Furthermore, he offers the best service that fits his customers’ lifestyles, such as allowing next-day orders to be texted over. Operationally, he purchases smaller amounts every day or every other day to have more control over inventory, and he promises the best quality.

Sabir Taheraly opened destination florist supply store Jamali Floral & Garden Supplies (jamaligarden.com) in the New York market 19 years ago. Jamali is not a wholesale store, but what Taheraly calls a “trade store”, serving a diverse clientele of designers, photographers, producers, and stylists. He has also survived because of specialization; Taheraly travels the world to work with over 300 suppliers who produce handcrafted custom-designed items for Jamali (personal communication, April 11, 2016). Jamali’s products cannot be bought anywhere else in the flower market or online aside from Jamali’s e-commerce shop. Taheraly, who diligently curates his line, offers new products every season, and actively engages with his customers to source product they want. Taheraly’s 5-year plan looks outside of the New York market to a stronger ecommerce presence, which has already achieved considerable demand from even California customers willing to pay high shipping costs to ship cross-nation. The New York scene he says has changed, as “the whole thrill of the flower market has gone. It’s not like before when you used to have hundreds of florists coming in from Connecticut, Pennsylvania, or New Jersey.” Taheraly notes that the remaining wholesalers, perhaps the safeguard of the shrinking New York flower market, are those who own their properties and can stay amidst the many changes.
The Flower Supply Chain

The Global Cut Flower Supply Chain

A single bouquet can essentially be a melting pot of flowers from countries all over the world. Figure 3, a small bouquet of five types of flowers, reflects five countries’ products, all of which journeyed in distinct ways to reach my studio in the New York flower market.

Netherlands and South America, specifically Colombia and Ecuador, have historically been the largest producers in the global market, as shown in Figure 4. In recent years, the Dutch share has decreased, whereas South America continues to expand its reach: from 2003 to 2013, Holland’s global share declined from 58% to 52%, whereas Colombia and Ecuador’s combined market share increased from 20% to 24%. By 2013, the US, whose floral output is almost entirely sold domestically, lost its 1% share (McCormack, 2015, p. 13). Smaller players, including Ethiopia, Kenya, and Malaysia, are quickly increasing share due to favorable growth conditions, rising demand for competitively priced flowers, and improved logistics (van Rijswick, 2015). In fact, most recent numbers suggest that Kenya may be the world’s third largest producer of cut flowers (The Economist, 2016).
For simplicity purposes, I'd like to compare and contrast the traditionally top three global producers: Netherlands, Colombia, and Ecuador, who together comprise more than 75% of global cut flower production. Historical, cultural, economical, and political characteristics of these countries shape these countries’ industry and supply chain; their industry practices can be particularly meaningful for upcoming players like Kenya.

Holland growers espouse a vastly different mode of production from its counterparts in Colombia and Ecuador, as shown in Figure 5. The Holland grower tends to own a significantly smaller farm than the South American grower, and he may specialize in specific floral species. On the other hand, the South American grower may own several larger-scale farms and produce mostly standard product, specifically the rose, which fares exceedingly well in South American climate and geography. Ultimately, even though Holland growers and South American growers cumulatively farm similar volumes of land, Holland is more productive in dollars per hectare: Holland produces flowers with an approximate export value four to six times that of Colombia and Ecuador, respectively (Ziegler, 2007, p. 63). This is mainly due to Holland growers’ ability to focus on very specialty blooms, whose selling price can be four to five times higher than standard products.
Furthermore, Holland growers work in an established and regulated system, bolstered by a stable political and economical climate. Holland’s floral industry, over a century old, is comprised of smaller farmers who utilize camaraderie among other growers and the Dutch auction at Aalsmeer – where some 60% of the world’s cut flowers are bought and sold – to help market, sell and transport products. Ecuador’s floral industry, a few decades in the making, consists of fewer growers; these growers don’t share a support system or cooperation, and often have to handle all components of the sales process alone (Ziegler, 2007, p. 85).

Figure 5. Holland, Colombia, and Ecuador’s Varying Modes of Production. Created with information from (Ziegler, 2007)

<table>
<thead>
<tr>
<th>Country</th>
<th>Share of global cut flower market, 2003</th>
<th>Number of farm growers, 2003</th>
<th>Average farm size</th>
<th>Average production in $/hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holland</td>
<td>58%</td>
<td>6,700</td>
<td>Less than 1 hectare</td>
<td>583,000</td>
</tr>
<tr>
<td>Colombia</td>
<td>14%</td>
<td>500</td>
<td>10-12 hectares</td>
<td>140,000</td>
</tr>
<tr>
<td>Ecuador</td>
<td>6%</td>
<td>250</td>
<td>10-12 hectares</td>
<td>89,000</td>
</tr>
</tbody>
</table>

Figure 6. Holland and Ecuador’s Agricultural Profiles. Created with information from IMF, (Conofrey, 2015), (Schuetze, 2014) and (Ziegler, 2007)

<table>
<thead>
<tr>
<th>Country</th>
<th>Profile of country</th>
<th>Profile of farmer</th>
<th>Transportation</th>
<th>Recent trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holland</td>
<td>• 2015 GDP per capita: $43,603 (#15)</td>
<td>• Self-employed</td>
<td>• Schiphol Airport and linked highway system adjacent to the Aalsmeer auction</td>
<td>From 2008-2013, FloraHolland cooperative membership drops from 5,100 to 4,600 growers</td>
</tr>
<tr>
<td></td>
<td>• Flowers &gt; than 5% of gross GDP</td>
<td>• Expert in growing one flower species</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Established industry started in 1900</td>
<td>• Farm likely less than 1 hectare</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Historically, state agricultural support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>• 2015 GDP per capita: $6,071 (#82)</td>
<td>• Manager of larger enterprise, usually family-owned private companies</td>
<td>• A new airport Mariscal Sucre in Quito opened in February 2013, still inconvenient with limited road infrastructure; previous airport plagued with deficiencies, increasing costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Flowers &lt; than 1% of gross GDP</td>
<td>• Usually from the wealthy entrepreneurial landowning class</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Young industry started in mid 1980s</td>
<td>• May own several farms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Historically, limited regulation and support. State failure to stabilize bank lending rates</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Though Holland's global share is in decline, perhaps due to upcoming players and the changing climate of consumer behavior, Dutch growers are still supported by strong established infrastructure. For example, Aalsmeer auction serves as a major distribution center that can easily transport product to Schiphol Airport through a linked highway system. On the other hand, Ecuador's growers are challenged and limited by a deficient highway system leading to the newly revamped Mariscal Sucre airport in Quinto.

The traditional supply chain for both Holland and South American growers can involve numerous steps and a multitude of stakeholders. Figure 7 starts the chain with flower hybridizers, and then moves through the chain from both a Dutch and Colombian/Ecuadorean lens. The majority of product from these countries is processed through wholesalers before moving to retail and end customer.

The chain

![Diagram of the floral supply chain, Dutch vs. Colombia/Ecuador. Created with information from (Ziegler, 2007)](image-url)
Recent years have compressed this chain in several areas. For example, for the past five or so years, the Aalsmeer auction has experienced a massive shift in how flowers are sold and bought, primarily because smaller players have exited the industry. As both buyers and sellers have become increasingly larger, they’ve started to work directly together, weeding out the auction’s role. This direct interaction has reduced lead time, another competitive advantage for larger buyers. In addition, technological advancements have changed the auction dynamic, prompting speculation on the future of auction. Whereas flowers used to be brought out to the auction floor for buyers to feel and see, they’re now kept in cold storage; purchase is based on photos alone (Schuetze, 2014).

The supply chain has been affected in other ways by companies looking to reduce cost. These strategies will be explored later on in our study of the competitive landscape. However, Figure 8 shows a simplification of the South American process. Though the timeline is the same, the flowers are exchanged over fewer hands, reducing overall cost.

This global floral supply chain will continue to become more efficient as advancements are made in the cold chain, the transportation of temperature sensitive products. For growers and wholesalers, getting the right flowers at the right time to the right location is as important as low costs (Bogataj, Bogataj, & Vodopivec, 2005). Damage in the form of bent stems, uneven
opening, and botrytis – a type of mold – can occur at any point of the transportation process, during grading, bunching, packing, storage, transport, and unpacking. Since cut flowers lose about 15% of their value every day, delay in shipping is costly. Essentially, the more hands flowers pass through during the chain, the more opportunities for damage or delay to occur. Damages have heavy costs on the products, ranging from 5-10% reduction for a single minor remark to 50% for a major or multiple minor remarks (van der Hulst, 2004).

Due to complexities and limitations of the cold chain, factors such as weight and fragility of blooms can impede growers from farming certain species. Thus, breakthroughs in transportation can and will positively impact countries’ global share. For example, transportation by sea container is half the cost of airfreight, and has positively affected trade flows. Although transport of flowers by sea containers is not a novel concept, the number of sea shipments has grown due to better knowledge of container transport and more control of shipment conditions, additional availability of port facilities, and growing attention on sustainability issues. In 2013, 15% of cut flower exports from Colombia was shipped by sea, likely a factor in Colombia’s price competitiveness and subsequent global share. A single 40-foot container can contain up to 150,000 stems of chrysanthemums; Figure 9 below shows 700 containers shipped from Colombia to the UK alone of mainly chrysanthemums.

Figure 9. Colombia’s Lead in the Global Cut Flower Trade by Sea Container (van Rijswick, 2015)
The Domestic Cut Flower Supply Chain

Foreign flowers, which comprise 80% of the US cut flower consumption, have strained domestic growers, who watched industry revenue fall from 2010 to 2015 at an average annual rate of 4.8% to $12.5 billion, as seen in Figure 10 (Blau, 2015, p. 6). Domestic growers will likely continue to struggle due to intense price competition from South American imports.

Industry at a Glance

<table>
<thead>
<tr>
<th>Key Statistics</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$12.5bn</td>
<td>$11.6bn</td>
<td>$11.7bn</td>
</tr>
<tr>
<td>Annual Growth: 10-15</td>
<td>-4.8%</td>
<td>-4.2%</td>
<td>-4.5%</td>
</tr>
<tr>
<td>Annual Growth: 15-20</td>
<td>0.7%</td>
<td>0.8%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Export</td>
<td>$2.1bn</td>
<td>$1.9bn</td>
<td>$2.0bn</td>
</tr>
<tr>
<td>Imports</td>
<td>$340.0m</td>
<td>$330.0m</td>
<td>$335.0m</td>
</tr>
<tr>
<td>Business</td>
<td>35,252</td>
<td>34,752</td>
<td>35,052</td>
</tr>
</tbody>
</table>

Figure 10. Domestic Grower Market (Blau, 2015)

Colombia by far is the top importer of cut flowers, with 65% of US’s total domestic imports in 2014, shown in Figure 11. Although in recent years Colombia started producing more specialty products, such as exotic orchids, anthurium, and birds of paradise, the rose is still by far the country’s biggest seller (Haragan, 2015). According to Mr. Page, most of Colombia’s material is standard and reaches supermarkets and chains that tend to want the same material for most of the year. Chains such as Walmart and Safeway who purchase from international growers drag down US farmers’ prices, volumes, and revenue (McCormack, 2015, p. 6). Wholesalers, on the other hand, need material with seasonality and interest to sell to retailers and therefore have to extend their supply chain to many countries and domestic growers (personal communication, November 19, 2015).
Until 2013, Colombia and Ecuador benefited from the Andean Trade Preferences Act (ATPA) passed in 1991, which eliminated all tariffs on flowers from Colombia, Ecuador, Bolivia, and Peru (U.S. Customs and Border Protection, 2015). The ATPA helped trigger the growth of the Colombian and Ecuadorian flower industries in the 1990s, much to the detriment of US growers. By 2003, the US was importing more flowers than it was growing domestically. Demand for international flowers continues to be on the rise: In 2015, U.S. Customs and Border Protection processed 976 million cut flower stems during the 2015 Valentine’s season, January 1 to February 14\textsuperscript{th}, a 21% increase from the 801 million stems from 2014 Valentine’s season (U.S. Customs and Border Protection, 2016).

Domestic growers depend on uncontrollable factors, such as preferable climate conditions and competitiveness of the US dollar. Drought conditions can damage yield, and appreciation of the US Dollar can boost the domestic industry’s price competitiveness and curb exports (McCormack, 2015, p. 5). Since most output is sold domestically, the most important demand determinant for US growers is the level of flower consumption in the states.

California produces 75\% of domestic production. To compete with imports, Californian growers have incentive to offer perishable and fragrant rarities that South American growers
cannot offer (Lawrence, 2012) (Ziegler, 2007, p. 62). In the early 1990s, there were over 500 farmers; today, just over 200 remain (Dawson, 2016).

Domestic growers have utilized advancements in the cold chain to increase business. For example, refrigerated planes and freight trucks now make it possible for products to be shipped cross-country. The larger growers have established themselves as efficient nationwide suppliers who can offer competitive prices and product variety, and smaller domestic growers have exited the industry or switched to other crops (McCormack, 2015, p. 7).

In line with the declining revenue of domestic growers, revenue for the downstream domestic flower and nursery stock wholesale industry decreased at 1.8% from 2010-2015, as seen in Figure 12. Furthermore, the number of wholesale establishments, which sell flowers, nursery stock, and florist supplies to retailers, decreased at 1.4% to a total of 10,193 (Blau, 2015, p. 4).

Industry at a Glance
Flower & Nursery Stock Wholesaling in 2015

<table>
<thead>
<tr>
<th>Key Statistics Snapshot</th>
<th>Revenue</th>
<th>Annual Growth 16-17</th>
<th>Annual Growth 15-20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$10.5bn</td>
<td>-1.8%</td>
<td>0.9%</td>
</tr>
<tr>
<td></td>
<td>$358.2m</td>
<td>$1.6bn</td>
<td>10,193</td>
</tr>
</tbody>
</table>

Figure 12. Domestic Wholesale Market

The domestic wholesale market, similar to the New York market, is facing changing consumer behavior and must respond to consumers who engage in a practice called wholesale bypass, the practice of sourcing directly from growers to reduce costs (Blau, 2015, p. 8). Large commercial retailers, in particular, exercise wholesale bypass; these retailers pose a threat as they continue to draw price-conscious consumers away from more expensive traditional floral brick-and-mortar shops. Due to lower demand, many wholesalers have exited the market.
Other wholesalers have entered with a different model. Brett Green works for Mrs. Blooms Direct (mrsbloomsdirect.com), a company that resists what Mr. Green calls the “old-school wholesale business” (personal communication, April 19, 2016). Mrs. Blooms keeps very little inventory, only standard go-to products such as hydrangea and orchids that they consistently sell out. Rather, the company seeks specific orders from clients – mostly floral and event companies with large orders – and sources directly from farms globally. Mrs. Blooms works with clients across the nation, and can avoid expensive overhead such as a brick-and-mortar wholesale shop or wasted inventory. Green mentions that old-school wholesalers and retailers are hurting most due to grocery stores that offer good-enough quality product.

Despite wholesale bypass, “old school” wholesaling still offers a quality control layer that is irreplaceable. In the industry, relationship building is key to getting the best product and prices. “The depth and breadth of relationships that wholesalers have, they can get us [florists] out of a pinch,” says Cameron Hardesty, Head of Products at UrbanStems (personal communication, April 29, 2016). “Wholesalers filter out a lot of bad product. They know how to bake it into their pricing – it’s an art and skill. Product is generally better because wholesalers have quality control. Whereas when sourcing directly from farms, no one has checked the product since its left Bogota.”
Competitive Landscape

A market, as defined by Robert S. Pindyk, is a collection of buyers and sellers that, through their actual or potential interactions, determine the price of a product or set of products (Pindyck, 2012, p. 1). For the purposes of defining Clovette’s competitive landscape, offerings accessible in New York City are considered within the greater domestic lens.

I discovered that creating an attribute space—such as a sweetness and crunchiness attribute space for cereal—for flower arrangements to be challenging, particularly because arrangements seasonally evolve in design, scale, and color. And, floral companies, each of which offer a unique assortment of products, have varying value propositions—such as degrees of convenience, freshness and quality, assortment, on-demand delivery—that draw customers. Ultimately, these value propositions are subject to perception, and are points of parity for long-term sustainability in the industry.

Instead, I decided to review possible points of difference of macro-players in the industry to define possible markets. These macro-players, which will be more closely defined later on, are: 1) brick and mortar retail stores with local reach only, 2) ecommerce platforms with national reach who pass on fulfillment to local brick and mortar retail shops, 3) ecommerce companies, many professionally funded and with national urban reach, 4) supermarkets and chains, and 5) major retailers. Possible points of difference among these macro-players are eco-friendly practices/offerings and specialized product. Figure 13 looks at a product attribute space comparing eco-friendly practices/offerings and specialized product. According to this attribute space, Clovette’s competitors may include brick and mortar, ecommerce platforms, and ecommerce shops.
As we review the macro-players, I constructed an “ops diamond” – which considers quality (of product and service), time (to customer), flexibility (assortment of options), and price of each category – as well as the market and challenge(s) for each.

**Local brick and mortar stores**

*Ops Diamond:*

![Diagram](image)

**Market:** Local market, B to B and B to C

**Challenge(s):** High overhead, limited market reach

The number of retail stores in the US has been rapidly declining over the past decade. From 2005-2014, nearly 35 percent of florist shops in the US disappeared, with fewer than
14,000 establishments reported in the most recent US census data in 2014. Consequently, the number of paid employees has also decreased by almost 40 percent, as seen in Figure 14.

<table>
<thead>
<tr>
<th>Geographic area name</th>
<th>2012 NAICS code</th>
<th>Meaning of 2012 NAICS code</th>
<th>Year</th>
<th>Number of establishments</th>
<th>Paid employees for pay period including March 12 (number)</th>
<th>First-quarter payroll ($1,000)</th>
<th>Annual payroll ($1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>4531</td>
<td>Florists</td>
<td>2014</td>
<td>13,765</td>
<td>61,170</td>
<td>251,785</td>
<td>1,066,699</td>
</tr>
<tr>
<td>United States</td>
<td>4531</td>
<td>Florists</td>
<td>2010</td>
<td>16,182</td>
<td>70,575</td>
<td>262,664</td>
<td>1,118,397</td>
</tr>
<tr>
<td>United States</td>
<td>4531</td>
<td>Florists</td>
<td>2005</td>
<td>21,135</td>
<td>101,861</td>
<td>346,133</td>
<td>1,454,059</td>
</tr>
</tbody>
</table>

Figure 14. Number of Floral Establishments in 2005, 2010, and 2014. United States Census Bureau (United States Census Bureau, 2014)

In New York City, all five boroughs have 403 reported florists, but the concentration of establishments and sales are in Manhattan; Manhattan (New York County) alone accounts for 49% of total florists who make 66% of total sales in the five boroughs. Details can be seen in Figure 15, which shows number of establishments and sales for New York City (all five boroughs), Brooklyn, and Manhattan. The 2012 NAICS code for "Florists" is defined as: "primarily engaged in retailing cut flowers, floral arrangements, and potted plants purchased from others. These establishments usually prepare the arrangements they sell."

From 2002-2012, the net number of established, value of sales, and annual payroll in New York City declined. The period 2002-2007 reflects an increase on all accounts, but the New York City industry has not recovered since the 2008 market downtown. This reinforces the notion that flowers are a discretionary good, linked to disposable income.

<table>
<thead>
<tr>
<th>Geographic area name</th>
<th>NAICS code</th>
<th>Meaning of NAICS code</th>
<th>Year</th>
<th>Number of establishments</th>
<th>Value of sales, shipments, receipts, revenue, or business done ($1,000)</th>
<th>Annual payroll ($1,000)</th>
<th>First-quarter payroll ($1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2012</td>
<td>403</td>
<td>216,877</td>
<td>42,062</td>
<td>10,100</td>
</tr>
<tr>
<td>Kings County (part), New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2007</td>
<td>449</td>
<td>249,907</td>
<td>46,824</td>
<td>1,807</td>
</tr>
<tr>
<td>Kings County (part), New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2002</td>
<td>511</td>
<td>195,949</td>
<td>37,891</td>
<td>1,812</td>
</tr>
<tr>
<td>New York County (part), New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2012</td>
<td>99</td>
<td>27,467</td>
<td>5,193</td>
<td>1,338</td>
</tr>
<tr>
<td>New York County (part), New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2007</td>
<td>103</td>
<td>35,269</td>
<td>6,347</td>
<td>314</td>
</tr>
<tr>
<td>New York County (part), New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2002</td>
<td>107</td>
<td>28,269</td>
<td>5,388</td>
<td>281</td>
</tr>
<tr>
<td>New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2012</td>
<td>198</td>
<td>142,077</td>
<td>27,834</td>
<td>6,604</td>
</tr>
<tr>
<td>New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2007</td>
<td>216</td>
<td>171,269</td>
<td>31,826</td>
<td>1,046</td>
</tr>
<tr>
<td>New York City, New York</td>
<td>4531</td>
<td>Florists</td>
<td>2002</td>
<td>227</td>
<td>122,820</td>
<td>24,050</td>
<td>977</td>
</tr>
</tbody>
</table>

Figure 15. Florist Establishments from 2007-2012. United States Census Bureau (United States Census Bureau, 2016). Note: New York City (all five boroughs), Kings County (Brooklyn), and New York County (Manhattan)
Online wire services that leave fulfillment to local florists

*Ops Diamond:*

![Diagram](image)

*Market:* Nationwide, two-sided market that must attract both florists and end customers

*Challenge(s):* Quality control of florist clients, growth and retention of user base

With the exception of 1-800-Flowers.com, these online platforms don’t have brick and mortar retail shops. Rather, they take online orders and partner with local florists for fulfillment. The industry’s big three services, which include 1-800-Flowers.com, FTD.com and Teleflora.com, incur revenue from both membership fees from local florists who use their service, and from a percent of every order fulfilled (Carter, 2015, p. 6); these fees and percentages-off-the top add up to almost 30%, barely leaving enough buffer for local florists to break even. Though these platforms may help florists to create lead generation, florists are locked into certain styles and prices dictated by the platforms, as well as negative reviews from unhappy customers who haven’t received flowers similar to the photos online (Cowley, 2016).

New startups, namely BloomNation (bloomnation.com), are attempting to change this landscape. BloomNation charges a 10% flat fee on all fulfilled orders and the company allows local florists to dictate their own styles. BloomNation was founded in 2011 and has raised $7.15 million in funding. The company boasts approximately 1,500 shops in its network, is growing

Ecommerce startups with multi-city reach

*Ops Diamond:*

![Ops Diamond Diagram]

*Market:* Mostly nationwide, B to C

*Challenge(s):* Supply chain optimization, low margins

These ecommerce startups are not platforms utilizing local florists for fulfillment, but essentially function as an *almost* on demand florist – delivering same day to next day, depending on a customer's location – without a brick and mortar presence. Currently, the major names in this market include BloomThat (bloomthat.com) UrbanStems (urbanstems.com), The Bouqs Co. (thebouqs.com) and Farmgirl Flowers (farmgirlflowers.com). In the New York market, other shops gaining traction include Ode a la Rose (odealarose.com), which received an undisclosed professional investment in 2014, Landeau (givelandeau.com), which originally launched in
Vancouver in 2014; these shops offer uniquely packaged floral gifting options, to be discussed in more detail during our marketing discussion.

The major players – BloomThat, UrbanStems, The Bouqs Co., and Farmgirl Flowers – originated in different geographic locations and have varying value propositions, but all have multi-city if not national reach. Most importantly, these shops are looking to change or optimize the supply chain. Figure 16 compares these four players.

<table>
<thead>
<tr>
<th>Shop</th>
<th>Launch Date</th>
<th>Funding</th>
<th>Annual Revenue</th>
<th>Headquarters</th>
<th>Reach</th>
<th>Sourcing</th>
<th>Pricing</th>
<th>Delivery Fee</th>
<th>Delivery Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>BloomThat</td>
<td>2013</td>
<td>$7.6 million through Series A</td>
<td>$5 million in 2015</td>
<td>San Francisco</td>
<td>National</td>
<td>American farms only</td>
<td>$30-$86</td>
<td>$10-$24</td>
<td>Same day next day</td>
</tr>
<tr>
<td>UrbanStems</td>
<td>2014</td>
<td>$1.5 million seed funding; completed Series A for $6.8 million in April 2016</td>
<td>Undisclosed</td>
<td>Washington D.C.</td>
<td>DC and parts of NYC</td>
<td>South American</td>
<td>$35-$105</td>
<td>Free</td>
<td>Same day</td>
</tr>
<tr>
<td>The Bouqs Co.</td>
<td>2012</td>
<td>$19.1 million seed funding</td>
<td>Undisclosed</td>
<td>Los Angeles, CA</td>
<td>National</td>
<td>American + foreign</td>
<td>$40-$90</td>
<td>Free</td>
<td>Same day to several</td>
</tr>
<tr>
<td>Farmgirl Flowers</td>
<td>2010</td>
<td>Bootstrapped</td>
<td>$4.5 million in 2015</td>
<td>San Francisco</td>
<td>National</td>
<td>American farms only</td>
<td>$50-$195</td>
<td>$10-$25</td>
<td>Same day to next day</td>
</tr>
</tbody>
</table>

Figure 16. Comparison of Ecommerce Shops. Created with information from company websites, and (Allen N., 2016) (Dawson, 2016) (Marinova, 2016) (Steinmetz, Mother’s Day Flowers: 6 Blooming Startups to Try This Year, 2016)

BloomThat, a YCombinator startup launched in 2013, originated in San Francisco, moved into the New York market in mid-2015, and launched a nationwide offering in early 2016. UrbanStems started in Washington DC in February 2014, and reached the New York market first in December 2014 before BloomThat (Kabas, 2014). According to Hardesty, Head of Product at UrbanStems, the company has stayed focused on the on demand model in DC, Manhattan, and Brooklyn (personal communication, April 29, 2016). With their recent Series A funding of $6.8 million in April 2016, Urban Stems will expand their on demand model to Philadelphia and Baltimore (Ferguson, 2016). On the other hand, BloomThat’s national reach
restricts the company to on demand offerings only available in certain major cities including San Francisco and Manhattan.

Both BloomThat and UrbanStems offer a streamline assortment of seasonally changing products of bouquets and arrangements, as well as aesthetically similar offerings, which include cut flowers wrapped with burlap sold at an industry low price point that ranges between $30-$105. Though BloomThat started with production onsite at their domestic warehouses, they have since changed their distribution model to accommodate their nationwide reach – the company creates designs at headquarters and trains farms to fully assemble the bouquets on site (Marinova, 2016). UrbanStems also has certain designs manufactured internationally at farms but others are created stateside; the company has distribution centers in New York and Washington. UrbanStems, believing that couriers are the face of the company and that wraparound customer service is their value-add to the market, handles all deliveries in-house on bike messenger (Hardesty, personal communication). BloomThat outsources delivery to FedEx (Constine, 2015). Both companies draw customers with their easy and reliable services, quick deliveries, and low prices.

The Bouqs Co. overtly communicates the eco-friendly farm-to-table ethos of the company, and offers a much larger array of seasonally changing bouquets designed and fulfilled by domestic and South American farms. Flowers are cut the day of the order, and customers can add-on a vase with most orders to assemble the flowers when delivered. Delivery time from domestic farms can be within one day, and delivery from South American farms occur within a week – currently, the company does not have an on demand model. The company works exclusively with farms certified by Veriflora and The Rainforest Alliance, and asserts a
sustainable mission of waste reduction, since flowers are shipped directly from farm to customer, which eliminates potential damage from wholesalers and retailers (Allen N., 2016).

Farmgirl Flowers works solely with American growers, and fulfills all orders from an outpost in the San Francisco market. The company typically offers one “designer’s choice” bouquet option a day, and customers can select based on scale, from a small bouquet starting at $45 to the largest bouquet at $195. Customers actually don’t see what they’re buying, though they can see photos of previous arrangements so they have a sense of the company’s aesthetic and scale (Steinmetz, Inside the Startups Making it Easier to Buy Flowers, 2016). Most of the offerings for orders outside of San Francisco are unarranged cut flowers wrapped in burlap, with options for add-ons that include chocolate, candles, baked goods, gummies, and of course vases for recipients to use for assembly. Owner Christina Stembel bootstrapped the company from $56,000 revenue in 2010 to $4.5 million revenue in 2015 (Decker, 2015).

All these players have optimized the supply chain in various ways, and each must work within the framework set by their distribution decisions. Manufacturing bouquets on site at farms limit companies to the floral offerings of that particular farm. Columbian and Ecuadorian farms offer cost-effective material and labor, but their material is mostly standard and not as specialized. Hardesty from UrbanStems mentions, “Though these farms are great on moving flowers and transportation logistics, big farms move really slowly on trends. They want to go with the same bet, and it’s harder to get on-trend product.” Likewise, Farmgirl Flowers is limited by the product offering produced by domestic farms. In addition, all the players with nationwide reach have to outsource delivery; they must depend on their partnerships with companies like FedEx to ensure timely delivery of perishable product.
Supermarkets and Chains

*Ops Diamond:*

![Graph showing quality, time, price, and flexibility dimensions.]

*Market:* Mostly nationwide, B to C

*Challenge(s):* Entering higher end gifting or floral event markets

Supermarkets and chains are rapidly taking a share of the market. According to the Society of American Florists, 73% of consumers typically purchase flowers for themselves at supermarkets, versus 61% who purchase from a local shop (Carter, 2015, p. 4). In the past five years, supermarkets have expanded the assortment of floral offerings, drawing price-sensitive customers who don’t require delivery services typical of gifted items.

John Agnew is a Senior Buyer at Whole Foods Market who oversees flower departments in 34 stores in the Northeast region. According to Agnew, Whole Foods Market is “always trying to make sure we’re offering what customers want, that they’re wowed, and that they’re getting fair pricing” (personal communication, April 28, 2016). Agnew sources mainly from local and domestic growers for seasonal product, only importing what he can’t get locally. He credits buying power and traffic flow as two of Whole Foods Market’s main competitive advantages compared to brick and mortar shops. Convenience and price competitiveness also seems to be incentives. For example, some stores have a section called “3 for $15”, offering three bouquets
for $15; if a customer wanted to combine the bouquets, a Whole Foods employee would combine and wrap.

**Etailers with floral collection**

**Ops Diamond:**

![Ops Diamond Diagram](image)

**Target Market:** Nationwide, price-sensitive

**Challenge(s):** Unknown

Amazon launched a collection in September 2013 called Benchmark Bouquets (amazon.com/benchmarkbouquets). At the time going to print, I was unable to finalize a call with Amazon to understand their move into the market.

**Consumers**

Flowers are a discretionary item, so demand is linked to consumer sentiment, price, seasonal fluctuations, and particularly disposable income and consumer spending. Supermarkets, chains, and cost-effective online retailers draw price-sensitive consumers. Substitutable goods include other gifted items such as wine and high-end sweets like chocolates and macarons. Spending is very seasonal, with peaks during holidays such as Valentine’s Day and Mother’s Day (Carter, 2015).
Sentiment for flowers, willingness and ability to pay, and overall shopping behavior range significantly based on generation. According to Figure 17, for brick and mortar flower shops, the two buckets of consumers – under 30 years of age and between 31-44 years of age – each account for only around 10% of the total market. Alternatively, the segment of consumers aged 45-64 accounts for 20.7% of the market. This segment has a higher regard for flowers, and tend to shop locally for higher quality products. Interestingly enough, there is a fairly equitable split for online flower retailers: Generation Y (ages 16-31) accounts for 27%, Generation X (ages 32-50) accounts for 32%, and Baby Boomers (ages 51-69) accounts for 24%. Consumers under 34 years of age are price-sensitive and don’t perceive flowers to be as meaningful, so typically purchase at supermarkets and online retailers. Consumers aged 35-44 have more spending power, but less time; though they perceive flowers to be more meaningful than their younger counterparts, they purchase at online retailers for convenience (Carter, 2015). On a quick side note, I think it’s valuable to note that regard for flowers among the younger generation, particularly those in their mid to late 20s and 30s, may be shifting. If Instagram or Pinterest is any indicator, there is much enthusiasm for beautiful flowers and the profession of floristry.

Figure 17. On Left, Market Segmentation for Florists (Carter, 2015) vs. On Right, Market Segmentation for Online Flower Shops (Lerman, 2015)

Furthermore, consumer behavior is impacted by gender. In order to get a better sense of the market, I conducted basic primary market research during the spring of 2015. The research consisted of 25 interviews over the phone with 14 men and 11 women between the ages of 29-
This research indicated that females tend to gift more often to friends than men gift to others, and that females are the majority end-user of flowers. My research is corroborated by ecommerce shops who have also reported at least 75% of their customers are female; though men usually send flowers on holidays such as Valentine’s Day and Mother’s Day, they don’t on a daily basis (Steinmetz, Inside the Startups Making it Easier to Buy Flowers, 2016) (Decker, 2015).

Regardless of consumer reports that claim younger generations don’t have appreciation flowers, for male consumers – particularly in their later 20s through 40s – there is perceived value in gifting during holidays such as Valentine’s Day (Lerman, 2015) (Rihn, Yue, Behe, & Hall, 2011). According to a recent survey by the National Retail Federation, of the 54.8% of consumers who celebrate Valentine’s Day, a little over a third said they would purchase flowers and would spend an average of $40.57. In Figure 18, men exceedingly purchase flowers above all other gifted items. Overall though – across all gifted items that include candy, jewelry, an evening out, and clothing – $146.84 was spent on average for Valentine’s Day gifting (Allen & Reynolds). Perhaps by bringing more value to male purchasers, willingness to pay could increase during holidays such as Valentine’s Day.

![Figure 18. Valentine's Day Consumer Behavior (Soergel, 2016)](image-url)
Data Collection and Analysis

Consumer Preferences Survey

The purpose of this survey is to test whether there is correlation between a user’s characteristics and preferences, such as for fashion or home décor, with floral taste. Before I assembled the survey, I decided to first research the offerings available to the New York City market, as well as discover the scope of preferences among New York City friends and colleagues.

Lookbook. I began my research by creating a Flower Lookbook of six categories that reflect the varying offerings in the New York market today. I chose to look at designs by specialty upscale retail and event design shops, and ignored the bodegas and ecommerce shops. The upscale shops typically display a signature look that can be clearly defined, whereas the bodegas and ecommerce shops often offer an assortment of “less designed” looks.

Growing up in a small town in Northern California, I recall choosing between two local florist brick and mortar retailers who offered standard options for prom corsages and boutonnieres. However in New York City, floristry is more of an art; each florist can fall under a category of “style” with subtle differences within the category. There is a florist for every type of aesthetic, ranging from the most modern to the traditional. For example, one look is a modern style offered by florists such as L’Olivier Floral Atelier (lolivier.com); flowers are typically designed in a cleaner or clustered manner, in clear glass vessels of varying shapes. Another look is a more traditional aesthetic offered by florists such as Putnam & Putnam (putnamflowers.com); flowers are usually designed in a looser manner with blooms of more neutral shades, in a traditionally shaped vase such as a pedestal. The differences in aesthetic and mood can be observed in Figure 19 below.
Modern aesthetic, by L'Olivier Floral Atelier

Traditional aesthetic, by Putnam & Putnam

Figure 19. An Example of Stylistic Differences in the New York Market

**Friends and Family Pinterest Test.** While creating the Lookbook, I simultaneously sought out New York City residents, female friends and colleagues from various professions, to pin their favorite categories of home décor, fashion/celebrity style, travel destinations, and flowers. Though the Lookbook provided an organized categorization of the market offerings as I saw in the market, I wanted to see others’ overall preferences for flowers to ensure I was covering the breadth of options. Furthermore, I was curious about current trends and preferences for home décor, fashion style, and travel destinations. And, about whether I would initially be able to identify any correlation between those preferences and floral taste.

Each person was sent an email with the following: “We are looking for help in creating our Lookbook profiles. How you would help is by using Pinterest and pinning your favorite things in the following categories: Travel Destinations, Flowers, Home Decor, and Fashion/Celebrity Style. You can pin as many things as you want (we do ask for a minimum of 5 pins in each category) and do it at your own leisure.”

I received complete Pinterest boards from ten respondents. These boards provided me with valuable insight that each respondent did have a particular and overall consistent taste. Figure 20 provides an example of a Pinterest page from one respondent. This respondent has a preference for scenic travel, for classic fashion styles with textured material, for a contemporary...
and clean home décor. Regarding floral taste, this respondent mostly chose semi-loosely designed arrangements in a similar pinkish berry color palette with some contrasting color and mixed tones. One caveat regarding this Pinterest test is that Pinterest’s algorithm tends to show its users similar images based on images they’ve already pinned. So, a number of pinned images, say of actress/entrepreneur Jessica Alba, may not necessarily mean that a user loves Alba. It could simply be that the user pinned one image of Alba, and Pinterest made suggestions for other similar images in Alba’s likeness.

**Survey.** I compiled all the imagery from the Lookbook and Pinterest boards to review as I assembled the survey. The survey, called “Discovering Floral Preference” was built on Sawtooth Software and consisted of three parts: Part One, with six questions, determined a respondent’s preferences for fashion style, fashion brands, home décor, travel destinations, art, and music. Part Two, with 11 questions, inquired about floral preferences. Part Three, with six questions, captured demographic information. Altogether, the survey had 23 questions.
I’m a fan of BuzzFeed (buzzfeed.com) quizzes; these quizzes are lighthearted, fun, quirky and very visual. Overall, I wanted to create a fun experience with a playful tone and beautiful imagery so respondents would be incentivized to complete a lengthy survey.

Upon arrival at the survey, respondents first saw an introduction letter. The letter, as seen in Figure 21, sets out to introduce myself, explain the topic of my research, manage expectations on timing to complete, and thank respondents. Also, it was meant to limit the survey to only females for two reasons: Firstly, Clovette’s target market, for reasons to be discussed later on, is female. Second, as mentioned before, many of the ecommerce startups have reported that at least 75% of their customers are female (Steinmetz, Inside the Startups Making it Easier to Buy Flowers, 2016).

Welcome!
My name is Jeeyun Lee and I’m an MBA student at the MIT Sloan School of Management.
Currently I’m researching whether it’s possible to determine floral preferences of individuals. If you love receiving or sending flowers, I’d love your input!
The survey will start by asking you a few questions about your preferences, such as for fashion, home decor, travel, and art. Then, it’ll move on to questions about your preferences for flowers.
The survey should take you no more than 10 minutes of your time. No worries, your responses are anonymous and confidential.
Please note, this survey is only for the ladies. That’s because more than 3/4 of floral customers are female.
If you have any questions or feedback, please feel free to drop me an email at jeeyun@mit.edu
Thanks for your time, and happy flowering!
Cheers,
Jeeyun

Figure 21. Introduction to Survey

For Part One of the survey, I chose to survey fashion style, fashion brands, home décor, art travel destinations, and music. Through my work with clients, I’ve noted that fashion style may have implications on flower preference. For example, a client who works in advertising and wears edgy and fast fashion styles may also prefer a more geometric, streamline, and clean floral palette. Home décor, as seen in Figure 22, seemed an obvious characteristic to test, particularly because flower gifts are often sent to either an office or a home and should complement a space.
I chose to test art for the same reasons as home décor; art is a component of home décor and could possibly signal flower preference. Travel and music were toss-up characteristics, but ones that almost all individuals enjoy.

*Which home decor style best represents your taste?*

![Survey Question on Home Decor](image)

For Part Two of the survey, I first brainstormed all the ways of categorizing any flower arrangement. I developed nine overarching categories, and within them subcategories. For example, one main overarching category when categorizing an arrangement is color. Color can be defined in various ways; one can observe overall color palette, ratios and numbers of colors, or even certain colors of an arrangement. Figure 23 reflects the color category and its subcategories: palette, ratios, and rainbow.

<table>
<thead>
<tr>
<th>COLOR 1 Palette</th>
<th>Natural (green, white)</th>
<th>Pastel</th>
<th>Bright and Bold</th>
<th>Deep and Dark</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLOR 2 Ratios</td>
<td>Single color</td>
<td>Monochromatic</td>
<td>Contrast</td>
<td>Mixed</td>
</tr>
<tr>
<td>COLOR 3 Rainbow</td>
<td>Red</td>
<td>Orange</td>
<td>Yellow</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Blue</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Purple</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>White</td>
</tr>
</tbody>
</table>

*Figure 23. Subcategories of Color*
Of the nine overarching categories, I tested six. Within the color category, I chose to test both palette and ratios.

For almost all of Part Two questions, I decided to:

- Show more than one image per option to encourage respondents to see past personal likes and dislikes of any particular arrangement.
- Ask respondents to “pay attention to” certain elements, and to “ignore” others.
- Utilize the constant sum format, a collection of “ratio” data, so the data expresses the relative value of the options.

Figure 24 reflects a question on color palette; this question provides numerous images per option, asks the respondents to “pay attention to” and to “ignore” certain aspects, and utilizes the constant sum format.

Claude Monet said, “Colour is my day-long obsession, joy and torment.” We agree -- we’re obsessed with all flower colors. Tell us your inclination for the COLOR PALETTE you’d prefer. Points have to add up to 100.

Pay attention to - tones of the flowers
Ignore - scale, style, types of blooms

Natural
Pastel & Soft
Bright & Bold
Deep & Dark
Total

Figure 24. Survey Question on Flower Color Tones
In addition to testing the preferences for flower aesthetics, Part Two asked several logistical questions regarding the role of flowers on certain holidays, preferences among types of floral gifts (plants, floral arrangements, floral bouquets with no vases), gifting behavior, and overall shopping behavior.

For Part Three of the survey, six demographic questions sought information on age, geographic locations, and profession.

Survey Distribution Analysis and Results

The survey was published on a Monday in Spring 2016, and received 152 responses within a 48-hour period. Aside from a few outliers, respondents took on average about 20 minutes to complete. The demographic portion of the survey shows a range of ages, with the majority of respondents in Age Groups 1, 2, 3; Group 1: 18-25 years old, Group 2: 26-30 years old, Group 3: 31-35 years old. See Figure 25.

I initiated the survey distribution with personal emails to approximately 50 friends, family, and colleagues, most whom reside domestically. In my emails, I encouraged everyone to send to any girlfriends, particularly ones who love flowers.

In order to parse through the data, I used a random forest with categorical independent variables. Random forests are a type of recursive partitioning method that involves a set of
classification (or regression) trees that are calculated on random subsets of the data, using a subset of randomly restricted and selected predictors for each split in each classification tree (Shih, 2011). Random forests is best in accuracy among current algorithms, can provide estimates of what variables are important in the classification, and can better examine the contribution that each predictor has (Breiman & Cutler) (Shih, 2011).

To begin data analysis, I first prepped the data, converting much of the data set received from Sawtooth into binary variables. Next, I split the data set of 152 respondents: the first 76 respondents served as a training data set, and the second 76 respondents as the test data set. Then in R, I set the seed for reproducibility, using a random number, n=2000. I applied the random forest algorithm with the training data set, utilizing data from Part Two of the survey (a floral characteristic) as the dependent variable, and data from Part One of the survey (fashion style, fashion brands, home décor, art travel destinations, and music) as the independent variables. I made a prediction using the test data set, and ran the data through R to compare the test data set’s predictions with actual results. Finally, I made a variable importance plot to visually see which independent variables were important to a particular dependent variable.

Figure 26 represents 20 sample predictions and a variable importance plot for dependent variable “ColorPalette_Natural” from Figure 24. For the 20 sample predictions, the column “Prediction” reflects the algorithm’s predictions, and the column “Actual” reflects the actual score that respondents provided. Moving to the variable importance plot – Rule of thumb for the left side graph with X-axis labeled %IncMSE (MSE = mean square error) is that variables can be considered informative or important if their variable importance value is above the absolute value of the lowest negative-scoring variable. The rationale is that the importance of irrelevant variables varies randomly around zero (Shih, 2011). Thus, for “ColorPalette_Natural”, the lowest
negative-scoring variable is for “HomeDecor_Modern”, valued at -5. Any independent variable above the absolute value of -5 can be considered important, such that the mean square error will increase by X% when that variable is randomly permuted. These independent variables of importance include the top six, from “Art_PopArt” through “Art_PostImpressionism”. The graph with the X-axis labeled “IncNodePurity” is another measure of variable importance, determined by the Gini index from splitting on the variable averaged over all trees. For “ColorPalette_Natural”, the independent variable “Travel_Adventure” is of significant importance.

For “ColorPalette_Natural”, shown in Figure 26, the lowest negative-scoring variable of the left side graph is for “Art_PopArt”, valued at around -6. On the %IncMSE graph, any independent variable above the absolute value of -6 can be considered important. These variables include the top five, from “Travel_City” through “HomeDecor_Modern”. “Style_Edgy” seems fairly close. There is overlap in %IncMSE’s significant variables and IncNodePurity’s variables, though the variables are ranked differently.
For “ColorPalette_DeepDark”, shown in Figure 28, the lowest negative-scoring variable is for “HomeDecor Traditional”, valued at around -6 or -7. On the %IncMSE graph, any independent variable above the absolute value of -7 can be considered important. These variables include the top five, from “Brand FastFashion” through “Travel Beach”. “Brand Preppy” through “Brand Contemporary” seem fairly close. Though there is overlap in %IncMSE’s significant variables and IncNodePurity’s variables, the graphs are in disagreement over independent variables “Travel Nature” and “Travel Beach”. 
For “ColorPalette_BrightBold”, the lowest negative-scoring variable is also for “HomeDecor_Traditional”, valued at around -6. On the %IncMSE graph in Figure 29, any independent variable above the absolute value of -6 can be considered important. These variables include just three variables, from “Travel_City” through “Music_Country”. These variables are also of importance on the IncNodePurity graph.

Figure 29. For ColorPalette_BrightBold, 20 Sample Predictions and Actuals, and Variable Importance Plot

For the color subcategory “ColorPalette”, I assessed the independent categories of importance among the dependent variables. I compared the important variables in %IncMSE to IncNodePurity and discovered they were fairly similar, as shown in Figure 30 below. Overall, Travel Destinations and Art are the biggest predictors, with Music and Brand following, and Home Décor and Style last. This finding surprised me; before data collection I had hypothesized that Style, Brands, and Home Décor features would have more predictive power than the others.

Figure 30. Frequency of Important Variables in Survey Results for “ColorPalette” Feature
Taking the data from the color features “ColorPalette” and “ColorRatio”, I decided to determine the strength of the models. Figure 31 shows MAE, or the mean absolute error of each “ColorPalette” and “ColorRatio” feature.

Overall, MAE is reasonable across the board. Comparing the MAE of the subcategories “ColorPalette” and “ColorRatio”, I determined that a potentially stronger assessment of color is “ColorPalette”. This comparison is reflected in the rightmost graph of Figure 31.

![Figure 31. MAE: ColorPalette Options, ColorRatio Options, and ColorPalette vs. ColorRatio](image)

Also to note, though analysis saw that there are predictors for all the subcategories of the dependent variable “ColorPalette”, there were other dependent variables that did not show any predictors. For example, for the dependent variable “FlowerStyle”, respondents were provided with three options: Loose, Semi Loose, and Tight. Figure 32 shows that for the variable “FlowerStyle_Loose”, on the %IncMSE graph, no independent variables met the threshold of importance.

![Figure 32. On Left, Survey Question on Flower Style. On Right, Variable Importance Plot for “FlowerStyle_Loose” variable.](image)
The survey also provided insight for other floral preferences. For example, both brick and mortar floral retailers and online flower shops report that floral arrangements take the lead over plants and unarranged cut flowers, as shown in Figure 33 (Lerman, 2015).

![Figure 33. On Left, Products and Services Segmentation for Florists (Carter, 2015) vs. On Right, Product and Services Segmentation for Online Flower Shops (Lerman, 2015)](#)

My survey data results corroborate such a ranking, though the category called unarranged cut flowers, noted as “Flowers No Vase” in Figure 34, is not significantly less preferred than arranged flowers.

![Figure 34. On Left, Survey Question on Preferred Flower Gift for Oneself; On Right, Box Plot Reflecting Preferences from Survey Data](#)

The preference for arranged flowers is further substantiated in the responses from Figure 35. This survey question asked which of four arrangements would a respondent prefer to send to her best friend. Though the respondents weren’t aware, the four arrangements were offerings from the major ecommerce shops we discussed earlier on. Option 1: The Bouqs Co., Option 2:
BloomThat, Option 3: Farmgirl Flowers, and Option 4: UrbanStems. Perhaps BloomThat’s product offers the best bang for your buck – flowers designed and arranged in a vase. There are other factors that could influence preference such as: floral palette and design, type of vase add-on for unarranged flowers, and the perceived quantity of blooms.

You want to send your best friend one of these bouquets. Tell us your inclination for the FLORAL BOUQUET you’d prefer to send. Points have to add up to 100.

Pay attention to - flowers, colors, scale

Figure 35. On Left, Survey Question on Preferred Flower Gift to Send. On Right, Box Plot Reflecting Preferences from Survey Data
Brand Development & Marketing

Clovette (clovette.com) is a combination of the word “clover” and suffix “-ette”, which is old French for “little”. The word essentially means “little clover.” The name has several positive connotations, which include 1) a sense of luck with every gift, 2) the color and concept of green, 3) the idiom “to be (or to live) in clover,” which means to live a carefree live of ease, comfort, and prosperity, 4) the word “love”, and 5) the word “covet”.

Clovette should define luxurious, personalized gifting: an easy seamless process for the buyer and a heartfelt emotional moment for the recipient. Clovette’s initial product offering will be seasonal floral arrangements for New York City delivery, as I currently have quality control, knowledge, and access to this market through Blush Designs.

For Clovette, product differentiation and specialization is key: this entails significant focus on product development and branding. To begin brainstorming what product differentiation and specialization could entail for Clovette, I started with primary market research, dabbled in visual design and observability, attempted a BETA launch in February 2016, and explored good business opportunities for competitive advantages.

Primary Market Research

The primary market research from the spring of 2015 helped me to gauge pain points in the current marketplace and set goals for Clovette. Conversations with 25 New York residents – 14 men and 11 women between the ages of 29-50 helped 1) define Clovette’s target market of females, 2) bring attention to seasonal and specialized product offerings, 3) flag the need for creating products of more lasting value, and 4) consider how to create value to the purchaser. Key takeaways from my research and impact on Clovette can be seen in Figure 36.
KEY TAKEAWAYS FROM PRIMARY MARKET RESEARCH

- Females are the majority end-user of flowers.
- Females tend to gift more often to friends than men gift to others.
- When gifting, females want to introduce friends to something new, and will often move on to a new product when too many of their friends have bought in.
- Primary economic buyers are disappointed by the difference between the photo and actual product.
- Primary economic buyers and end users sometimes cannot reconcile spending money on a perishable item.

IMPACT ON CLOVETTE

- Females will most likely be beachhead market.
- Seasonal refresh of products to continually engage customers.
- Customer service should include feedback loop back to primary economic buyer.
- Packaging can be of more lasting value.

Figure 36. Takeaways from Primary Market Research

I believe that the target market of females is essential to validating Clovette, particularly because women purchase on a more consistent basis and gift frequently to friends, colleagues, and family. Furthermore, women frequently employ word of mouth. Claims from ecommerce shops echo my findings; these shops claim that at least 75% of their customers are females sending arrangements to other females (Steinmetz, Inside the Startups Making it Easier to Buy Flowers, 2016) (Decker, 2015).

The target profiles for Clovette's user and end customer are the same. This persona, as seen in Figure 37, is also the same for Blush Designs.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>30-50</td>
</tr>
<tr>
<td>Income</td>
<td>$100K</td>
</tr>
<tr>
<td>Location</td>
<td>NYC</td>
</tr>
<tr>
<td>Motivation</td>
<td>Work/Life Balance, Social perception/Status</td>
</tr>
<tr>
<td>Hero</td>
<td>Her mom, successful women with style</td>
</tr>
<tr>
<td>Summer Weekends</td>
<td>Martha's Vineyard, Hamptons</td>
</tr>
</tbody>
</table>

Figure 37. Clovette Target User Persona
Visual Design & Observability

Though Clovette’s target market will be female, Clovette is a flower gifting company, which inherently feels very feminine. My Clovette business partner Kova Jurn and I agreed we did not want the logo design to look and feel overly feminine. Our expectations were for the logo design to be 1) sleek and simple, 2) with a standalone graphic image that could be used apart from the company name, 3) and observability of a color (such as, the Tiffany Blue and Hermes Orange) or pattern (Burberry Plaid) specific to Clovette. Figure 38 shows the most recent logo design at time of going to print.

![Clovette Logo Design](image)

Figure 38. Clovette Logo Design

Part of the resistance to floral gifting is that the lifetime value of a particular arrangement is limited to a short lifeline of the blooms. A challenge for Clovette is to discover an innovative way to increase the lifetime value of its floral gift, and hopefully increase willingness to pay for purchasers, especially those who cannot reconcile spending as much on a perishable item. Packaging is one way to extend the lifeline of the products, while also simultaneously increasing brand observability. Branded packaging can start with the flowers: such as, a specific type of bloom that is in every arrangement. It can move to the vessel, and then to giftwrap, gift card, and delivery. Diptyque (diptyqueparis.com) has a very classic black and white logo design and a branding mechanism that it sticks (literally, a sticker) to its candleholders. Once the candle wax is depleted, the holder can be reused as an organizational tool, as seen in Figure 39; Diptyque has
created enough value in its branding to create value and appreciation for its simple glass candleholders.

For the past few years I have seen branded packaging in Asia – such as The Beast in Shanghai (thebeastshop.com) or Agnes B in Hong Kong (agnesb-fleuriste.com/flhk/) – as well as in Europe – such as Maison Des Fleurs. These companies use boxes to package or create their flower arrangements, and charge a premium. Figure 40 compares three product offerings available in NYC, in order of pricing: Landeau, Ode a la Rose, and the The Bouqs. Landeau charges more than 2X that of The Bouqs Co., and the point of differentiation (aside from delivery and perceived quality of blooms) is the packaging. Next steps for Clovette could be to produce a conjoint analysis survey for our target market, to test value on packaging.

<table>
<thead>
<tr>
<th>Landeau</th>
<th>Ode a la Rose</th>
<th>The Bouqs Co.</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 roses + Box</td>
<td>24 roses + Box from Figure 37</td>
<td>24 roses</td>
</tr>
<tr>
<td>Price: $149.00</td>
<td>Price: $94.99</td>
<td>Price: $60</td>
</tr>
<tr>
<td>Grand Total: $162.22</td>
<td>Delivery: Same Day NYC $14.99</td>
<td>Delivery: Next Day NYC $10</td>
</tr>
<tr>
<td></td>
<td>Grand Total: $119.74</td>
<td>Grand Total: $80.00</td>
</tr>
</tbody>
</table>

Figure 40. Comparisons among New York product offerings
Beta Launch

In January 28, 2016, Kova and I launched Clovette (clovette.com) in beta with a Valentine Collection of five simple SKUs for delivery in Manhattan, as shown in Figure 41. The goals of the beta launch were 1) to test the market 2) to understand the potential challenges and complexities of launching product in an ecommerce space, and 3) to attempt Valentine’s Day.

![Clovette Beta Launch SKUs](image)

**Figure 41. On Left, Clovette Beta Launch SKUs. On Right, the SKUs together**

Though I’ve worked on Blush Designs for five years, the operations and competencies of Blush’s business are vastly different from Clovette. Blush’s offerings are customized to each customer, and I purchase material on an as needed basis resulting in almost zero waste: Clovette, on the other hand, would have an assortment of seasonally changing looks, and for this particular launch I would have to purchase in advance for Valentine’s Day without any indicator of demand.

2016 Valentine’s Day fell on a Sunday of a holiday weekend (President’s Day), likely translating to reduced demand. Knowing 2017’s Valentine’s Day would fall on a Tuesday, I
thought it would be helpful to whet Kova and my capabilities before a possibly more hectic holiday.

Frankly, the launch proved challenging given time constraints and my inexperience with retail flowers and Valentine’s Day. I first experimented with materials. Even within the pink and red flower palette, rose varieties are numerous and vary in rates of blossom, color tones, stem length, and bud size. I tested with many types and sizes of vases, and chose options that could easily convey scale relative to one another when photographed together.

Also, logistics for Valentine’s Day is a whole other ball game. Flower orders with wholesalers, similar to the holiday season, must be made weeks in advance; I could not anticipate demand and therefore made a minimum order. Among the five SKUs, there were four types of vessels, which I also ordered in advance. Finally, I put two contractors “on hold”, one to handle production for three days leading up to Valentine’s Day (since I was away in Cambridge for school), and another to make deliveries.

In order to keep costs down, Kova rented a small space for two hours through Breather (breather.com); Kova photographed, another freelancer styled, and I served as the hand model. I used the images to create a simple ecommerce site on Squarespace (squarespace.com); through the process I realized that Squarespace has many limitations, and that custom web development will be necessary for Clovette’s actual launch. Other challenges I encountered while creating the website included creating a compelling user experience as well as striking a consistent and appropriate voice in the copy for the website, Instagram, and marketing shown in Figure 42. I also struggled with color consistency on the website, perhaps set off by the chartreuse splash from the logo.
Once Clovette launched on January 28, Kova and I employed word of mouth marketing and sent out personal emails to a segment of colleagues and friends. To trace orders, we used a discount code for different segments, such as for MIT, Wellesley, Instagram, and Facebook. Kova dabbled a bit in Facebook digital marketing running from February 8-11, 2016, spending about $58.69 to reach 4,690 people, with 54 clickthroughs as seen in Figure 43.

Overall the beta launch proved a remarkable learning experience. It was a wakeup call regarding the challenges, time commitment, and costs that will be necessary for a proper launch. It also sparked ideas on how to create a user base from untraditional experiential marketing practices. We received an overwhelming amount of feedback from our peers, an example seen in
Figure 44; this feedback has and will continue to influence our next steps for Clovette’s product development. The feedback also reminds me how important it is to communicate with customers to understand their needs and wants, and of course to iterate.

“Good” Business Opportunities

Wholesaler Gary Page from the New York Market said to me, “Very few people get the understanding that magnificent flowers cost money. Flowers can give you an incredible feeling, evoke all kinds of emotions. You can create a tremendous bond with flowers. Beauty doesn’t last, in every aspect of nature. It’s important for the industry to understand things better, to understand where flowers come from” (personal communication, November 19, 2015).

I can’t say if and how much customers currently find value in knowing floral origin. In fact, in my primary market research, it was unclear whether folks had a desire for that knowledge at all. However, I believe that provenance matters, not only as a point of communication between the company and the customer. It matters because there are many stakeholders of a flower’s
origin who are affected by retailer and customer responses to dynamic market conditions. Customers should make educated decisions about their purchases, and the current solutions on the market don’t provide enough information.

On Valentine’s Day 2012, The Atlantic ran an article called “There’s a 1 in 12 Chance Your V-Day Flowers Were Cut by Child Laborers” (Fisher, 2012). “Consumers are still a little too indifferent, and most of our trade has no Colombia-style labor rights requirements. Americans will still spend over a hundred million dollars on flowers cut by child laborers today, and they won't even know it,” the article claims. Aside from child labor, there’s also pesticide use – one study revealed that Colombian flower workers could be exposed to 127 different chemicals from pesticides – particularly harmful for pregnant women; and women dominate the worker population (Haragan, 2015). Even more, there are concerns about pollution from greenhouse production and transportation across the globe, below-living wage, and overuse of water (Story, 2016).

Currently, there are several flower certification programs that floral shops and customers can use to vet eco-friendly or organic product, among them: VeriFlora (veriflora.com), Rainforest Alliance (rainforest-alliance.org/work/agriculture/ferns-flowers), Fair Trade (fairtradeusa.org/products-partners/flowers-plants), and USDA’s National Organic Certification (ams.usda.gov/rules-regulations/organic/labeling). These certifications provide agricultural sustainability and worker protection certification. To help customers identify domestic products, California growers often label their flowers with "CA Grown" stickers on plastic-sleeved flower bunches they sell to participating retailers, such as Trader Joe's and Whole Foods Market (Lawrence, 2012). Purchasing by certifications are great for customers, but in my opinion likely not sufficient for companies in pursuit of a truly “good” business.
“Good” business can mean something different for each company/industry, but at baseline requires continual exploration and commitment to provide value and positive impact. I believe that Clovette as a “good” business could mean that it should 1) have a company manifesto, 2) consciously source material, 3) focus on one target market, and 4) control distribution.

A manifesto will set a mission statement and framework for culture. Though certifications can initially be a good starting point, Clovette’s manifesto will encompass specifically Clovette’s mission and identity, and openly communicate Clovette’s motivations, practices, and sustainability goals to customers and vendors. The code should identify standards for floral production (composting, recycling, and water and waste reduction). It should also determine a process for vetting partnerships and vendor relations. Whole Foods abides by its own program, called Whole Trade® to ensure better wages and working conditions, to practice environmental responsibility, and support community development (wholefoodsmarket.com/mission-values/whole-trade-program).

Furthermore, Clovette should use ethically sourced material (meaning, the company is conscious of labor conditions, child labor, pesticides, and the environment) and track its carbon footprint. The search for and commitment to eco-friendly material should extend to the blooms themselves (seasonality could determine ratio of domestic to international flowers used), the vessels, and the packaging. The company could also be conscious of ethically sourcing materials, including their vehicles and within their production space.

Also, Clovette could start with a focused target market – perhaps niche – which will allow the company to have a streamlined product portfolio and therefore a smaller supply chain. Partnering with a smaller chain of suppliers, and perhaps creating long-term contracts with them,
may allow Clovette to build strong partnerships and influence a supplier’s commitment to eco-friendly practices; suppliers who know that Clovette is committed to working together in the long-term may find their investments in sustainability worthwhile. Caveat: Long-term real change, such as work conditions and safety measures in Colombia and Ecuador, require government action as the state has the authority to enforce legislation that promotes citizens’ rights. Poor working conditions and weak labor standards occur from global buyer’s responses to dynamic market conditions (Locke, 2013).

Finally, Clovette could aim for “vertically integrated” distribution channels (only direct to consumer platforms) to ensure that the life cycle of sustainability extends past supply chain and production, into purchase channels and post-purchase.

I’ve learned that intentions and objectives may be well meaning but have unintended consequences. Thus, it’s important to consider scale – impact doesn’t have to be on a large scale. Clovette may not be able to transform the way that all consumers approach flowers; my target market may simply be a segment of the NYC market. However, by starting with a target market, Clovette will be able to determine how best to communicate effectively to that consumer set, and iterate from there. More importantly, there should be consistency, authenticity, and purpose in the company’s approach to engagement and education.

All the while, I do believe what makes flowers (and retail) fascinating is that there is a sense of magic, of mystery. In a way by creating a more transparent model in pursuit of education, that magic fades. That’s why it’s imperative to consider that quality always has to be a primary consideration to bolster Clovette viability in the long term.
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**Conclusion**

As the market for flowers becomes more crowded with players offering cost-effective options, it’s essential for Clovette to determine how best to set itself apart. Data collection of the survey results from “Discovering floral preferences” did show that predictive modeling is possible for flowers. However, further and more thorough data collection and analysis is necessary to understand the strength of all the independent variables. Certain survey results were surprising; independent variables, such as Fashion and Brands, that I thought would be significant for flower color features were not. In fact, for flower color features, the “toss up” characteristics of Art and Music were found to be the more important variables. Next steps include continual pursuit of data collection and analysis to determine potential for Clovette to achieve a recommender system through predictive modeling.

This thesis not only helped me to map the competitive landscape for Clovette, but it also brought attention to the ever-evolving supply chain of flowers. In many ways, the flower industry stands at a crossroad. In the last few years, many new players have entered the industry and are in real time “disrupting” the supply chain. These players have the potential to alter customer behavior and expectations of price and quality. I believe it’s crucial to consider the major ramifications that customer behavior will have on the upstream stakeholders along the chain, and on the longevity of the flower industry. As Clovette enters the New York market later this year, I will work within the “good” business framework set in this thesis.
Works Cited


Allen, N. (2016, 02 20). Tulips To Table? These MBAs Try To Disrupt FTD. Retrieved 03 01, 2016, from Poets and Quants: http://poetsandquants.com/2016/02/20/the-mba-floral-delivery-platform/


Haragan, B. (2015, 02 13). *Columbia's Bloom Boom.* Retrieved 01 01, 2016, from Slate: http://www.slate.com/articles/news_and_politics/roads/2015/02/columbia_s_flower_industry_on_farms_outside_bogota_valentine_s_day_is_less.html


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