

PLAP 5993: The Charlottesville City Market, Food Politics, and Research Methods

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And a huge thank you and a we-could-never-have-done-this-without-you to all of our volunteers--most of whom were students and took the time to wake up early on Saturday mornings and stand at the corners of the market clicking and at our survey stations holding iPads in the bitter cold, for the good of the market. We also express our gratitude for the land, from which the vegetable and fruit bounty of the market is produced and on which the City Market and UVA now lie, and we acknowledge that it was stolen from the Monacan people some 400 years ago.

Abstract / Executive Summary

The Cville Market Research Team was founded in April of 2017 by three UVA students, one UVA professor and two farmers market managers for the purposes of data collection at the Charlottesville City Market on Saturday mornings. The team was spearheaded by the students, Emma Feinman, Gabby Levet and Allie Arnold, advised by professor Paul Freedman, and guided by market managers Justin McKenzie and Lucy Lamm. This research project has been structured by a previous research team, Have a Stake in the Market, who conducted crowd counts and customer surveys at the City Market in 2011.

The Cville Market Research Team conducted crowd counts and customer surveys across the two market seasons - 2017 and 2018. There has been a total of 9 crowd counts and 256 customer survey responses collected. The crowd counts were calculated by standing at the market entrances during particular and consistent intervals each hour. The customers who filled

out the surveys were randomly selected. The surveys have been approved by the Institutional Review Board for ethical research approval.

The students presented their research findings to the Charlottesville community, including the market managers and vendors, as well as to the University of Virginia community in the form of an Earth Day Expo Fair. The crowd count findings yielded that customers are more likely to attend the market when it is warm and sunny as well as when there is an event close to or on the Downtown mall, such as TomTom Festival. The customer surveys reflected a wide variety of information about customer behaviors, attitudes and preferences. The research shows that the market is lacking in racial and economic diversity, perhaps due to accessibility, affordability or sense of belonging concerns. The key takeaway from our research was a variety of future research questions including: How do we increase access for lower income populations? How do we welcome a more diverse population? How do we incentivize more sustainable habits? How do we increase revenue for vendors?

We recognize the limitations in our data set due to surveying and counting those who attend the market - this inevitably excludes the voices of those not in attendance. The team suggests that future research could include considerate and conscious engagement with populations that do not attend the market. In addition, vendor surveys could be a beneficial form of data collection. Due to the many unanswered questions and the need for continual data collection across seasons, the Cville Market Research Team pitched and won \$1500 to continue data collection over the summer of 2018. This is an exciting next step in the process of making this project a long-lasting endeavor with the proper infrastructure to support future researchers.

Our vision for the Cville Market Research Team includes: a consistent, reliable and sustainable UVA student team that works in respectful partnership with the City Market managers to collect needed and desired data about the Charlottesville City Market. We envision this team to be financially and academically backed by the University of Virginia and possibly Cville's Parks & Rec Department in order to support research positions throughout the market season. We hope that this research can be utilized by the market managers to inform City Market decision-making.

Independent Study Overview

This independent study provided an experiential approach to understanding farmers markets in the context of food politics. Under the guidance of food politics professor Paul Freedman and through direct partnership with the City Market managers, the three fourth-year undergraduate student researchers undertook research to inform the Charlottesville farmers market stakeholders of customer preferences, trends, and demographics of the Saturday City Market at Second and Water Street. The independent study structure included understanding & planning research methods, applying for IRB approval, implementation of research, creating visualizations of the data, and recording findings through a report and presentation. Selected

readings on research methods, farmers markets and food politics were interspersed throughout, including Alison Alkon's book *Black, White, and Green: Farmers Markets, Race, and the Green Economy*. We met with our advisor Paul Freedman every week to provide updates on research progress. Direct contact with the Charlottesville City Market managers guided us throughout both semesters in completing the final research product. This Spring semester we've analyzed the collected data and presented at CitySpace, a location adjacent to the market, engaging vendors and other stakeholders invested and interested in the City Market. We gained practical experience in academic research and data collection, building a set of skills that can be applied in studying farmers markets throughout the Commonwealth and beyond. A key goal of this semester has been to lay the foundation for future students to continue researching, in order to build on the knowledge we've gathered and synthesized -- and to do it better, learning from hurdles and mistakes we made in the process. In contrast to many UVA student led projects that go awry upon graduation, we strive for this foundation to continue the relationships we've built in an effort to create a sustainable, consistent and reliable support system for market data collection.

Course Objectives

The students aimed to:

- Understand food politics within the realm of farmer's markets, specifically centered on the Charlottesville City Market
- Learn and implement best practices for research and evaluation methods of farmer's markets
- Learn to collect, analyze, evaluate and present data
- Work collaboratively with a number of stakeholders in the Charlottesville City Market
- Help the City Market understand its strengths and weaknesses in order to improve the market as a whole
- Read and write reflections on assigned texts
- Participate and contribute to weekly group meetings
- Conduct surveys and crowd counts to gather data on designated market days
- Recruit and train volunteers to assist in conducting research
- Create a report that includes visualization of the data
- Present findings to Parks & Rec, city council and other relevant stakeholders
- Conduct interviews with City Market Managers to gain a comprehensive understanding about how a market is run (including funding, vendors, programs, etc.)
- Though our goals altered based on circumstances, our spring semester self-designated schedule and goals included:

Month	Task	Notes
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January	<ul style="list-style-type: none"> ● Investigate data analysis / Qualtrics ● Learn about Qualtrics Analysis w/ Paul ● Begin data analysis ● Touching base with JUICY regarding Interviews ● Outreach to other interviewees ● Decide themes of analysis (ex: food justice) 	<ul style="list-style-type: none"> ● Potential Interviewees: <ul style="list-style-type: none"> ○ Vendors ○ Cecile Richards ○ Parks and Rec ○ Farmers Market Coalition <ul style="list-style-type: none"> ■ Darlene ○ Food Hub
February	<ul style="list-style-type: none"> ● Data analysis <ul style="list-style-type: none"> ○ Keeping volunteers updated about analysis ○ Start creating concrete action plan/ offer suggestions based off the data analysis for our themes ● Solidify interview dates ● <i>February 12th -- Newcomb, In Defense of Food</i> ● Formulate interview questions <ul style="list-style-type: none"> ○ Do background research to be prepared ● Conduct interviews ● Book presentation space(s) <ul style="list-style-type: none"> ○ CitySpace, OpenGrounds, Jefferson School 	<ul style="list-style-type: none"> ● Show volunteers what the data analysis looks like
March	<ul style="list-style-type: none"> ● Conduct interviews ● Create presentation(s) <ul style="list-style-type: none"> ○ Powerpoint ○ Executive Summary ● Compile final report ● <i>March 21st -- Wasted screening at Alamo</i> <ul style="list-style-type: none"> ○ Present? Community outreach? ● Coordinate with Food Collaborative, City Market and OFS for presentation plans ● Solidify presentation plans - outreach 	<ul style="list-style-type: none"> ● Can we present at City Council meeting? <ul style="list-style-type: none"> ○ Reserve a spot to speak - options: <ul style="list-style-type: none"> ■ March 5 ■ March 19 ■ April 2 ■ April 16 ■ May 7 ○ Or work sessions
April	<ul style="list-style-type: none"> ● <i>April 12th -- What Lies Upstream screening at Jefferson-Madison Regional Library</i> <ul style="list-style-type: none"> ○ Present? Community outreach? ● Present at Food Symposium - Earth Week ● Present at City Space or elsewhere 	
May	<ul style="list-style-type: none"> ● Dinner party at Paul's with locally sourced 	

	<p>meal cooked by Emma, Gabby & Allie + Justin and Lucy</p> <ul style="list-style-type: none"> ● Attend Food not Bombs potluck on a Sunday ● Finalize our final report <ul style="list-style-type: none"> ○ Submit to Justin and Lucy ○ City Council 	
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Research History

“Have A Stake in the Market” Research

This independent study research was first centered around an updating of similar research done in 2011 by three UVA undergraduate students and one graduate student lead (Anne de Chastonay, Natalie Roper, Erica Stratton, and Carla Jones) called “Have a Stake in the Market.” They applied and were granted a Jefferson Public Citizens (JPC) grant to collect, analyze and share data in support of the Saturday Charlottesville City Market at Water and Second Street. At the time, the Saturday market was at a crossroads because City Council was considering redeveloping the market’s location. The researchers were interested in addressing the lack of information on shoppers’ spending habits, reasons for attendance, demographics, and social interactions, in order to make better-informed decisions about the market.¹ Three questions guided their research: “Who comes to this Market?,” “What do they love about it?,” and “What would make them love it even more?” The “Have a Stake in the Market” research, which culminated in 2012 with a published report, resulted in the first comprehensive and scientifically collected data on the Charlottesville City Market.

A brief description of their methodology for the population count and survey will follow in order to track the differences between our research and theirs. For the population count, a Market Central partner counted the number of people that passed the Market Central booth with a handheld tally clicker for five minutes each half hour for the duration of the market. The “Have a Stake in the Market” team multiplied each number by six to get an average count per hour and added those numbers together to estimate how many patrons visit the City Market on each Saturday. This process was repeated for five weeks and averaged. They found an average of 5,529 shoppers visited the City Market during seven consecutive Saturdays from July through September in 2011. For the survey, the “Have a Stake in the Market” team collected both randomized and public responses for the the same consecutive weeks at the market, with the first week acting as a pilot. After the third week of surveying, a second surveying location was added.

¹ Jefferson Public Citizens Journal, University of Virginia, 2012 (95). The Jefferson Public Citizens is a research grant program through the University of Virginia that integrates community service and research experiences. Student teams work together with a community partner to help complete research that would be valuable to the respective populations.

Every seventh adult that walked past a certain specified point was asked to take the survey with the script: “Hello, we’re working with Market Central to help collect data to inform future decisions of the Charlottesville City Market. We have a survey that, if you are willing to complete, you can be entered to win a \$25 gift certificate to use at the market.” Survey refusals and the reasons for refusing were recorded. Respondents who were simply interested in the topic or found the link via the news outlets or the web were entered into a public response dataset. The survey was offered electronically and on paper, with QR codes and links available for those who were too busy or on their way out. The researchers gave out eight \$25 gift certificates to raffle winners. Overall, 261 randomized responses were collected, with a total of 407 respondents (includes public responses).

The results from the “Have a Stake in the Market” survey were indicative of a disconnect between City Market shoppers and the City of Charlottesville population as a whole. They found that 71% of the Market shoppers were female, while the City of Charlottesville population at the time consisted of 52.3% females. Additionally, the most frequently found number range of shoppers’ ages at the market was 21-29 years old. 35% of shoppers at the market had a household income of above \$100,000, while the City’s median income was \$39,030. The market was found to be 83% white, while the City was 69.1% white. And 45% of market shoppers had a graduate degree or higher, compared with 43.3% of the City’s population having a bachelor’s degree or higher.

The following results are specific to the City Market and will be used as points of comparison during our research team’s analysis of our Fall 2017 market data later on in the report. The “Have a Stake in the Market” research team found that 1.6% of respondents reported using SNAP for City Market purchases. 21% of respondents walked and 65% drove to the market. A quarter of respondents brought children. 63.7% of respondents came with 1-2 people, while 29.9% came alone. 39.8% of respondents estimated to spend 30 minutes at the market that day, while 41.8% estimated to spend an hour. 31.3% of respondents estimated that they spend \$21-30 in an average visit (20.9% estimated \$11-20 and 16.9% estimated \$31-40). Over 75% sometimes or often combined their trip to the City Market with a visit to the Downtown Mall. Most shoppers traveled about 10 minutes to get to the City Market. 99.2% of respondents recorded that they use cash to pay at the market, with 4.8% using debit and 1.2% using SNAP/EBT. Fruits, vegetables, and prepared foods were recorded as the most popular City Market items. Finally, 33% of respondents attended the City Market every week.

Origins of Our Research

The City Market managers reached out to Paul Freedman, Food Politics professor and our advisor, in late April of 2017 about getting data on the market, in order to better understand its current situation. Professor Freedman reached out to Gabby Levet, who in turn brought on Allie Arnold and Emma Feinman, to make up the lead student researchers for the newly-formed Charlottesville City Market Research Team. Numerous meetings between all of the

aforementioned stakeholders were convened in order to understand the goals and specifics of the questions the Market managers wanted answers to. Ultimately, the question the market managers were seeking an answer to was, “Who is the customer of the City Market?,” though they welcomed any data we, the student researchers, were interested in collecting, as well. The research was modeled off of the “Have a Stake in the Market” survey, as elaborated on above, retaining certain questions to make comparisons between the two. Edits to wording, changes to questions, and additions were made collaboratively to the original “Have a Stake in the Market” survey. This process, along with applying to the IRB and completing CITI training, was spread out over the end of the Spring and through the Fall 2017 semester, with a recess during the summer. We also presented at the UVA Food Collaborative’s Student Research Symposium on April 18th during the Office for Sustainability’s Earth Week Celebration, highlighting the beginning and focus of our work in an effort to share research goals and garner volunteer interest.

The majority of the work in the Spring of 2017 consisted of crowd counts, beginning Saturday, April 8th. In total, five crowd counts were collected -- three in Spring 2017 and two in the Fall. The crowd counts are helpful to the market managers to know about how many shoppers are at the market on any single Saturday. This information can inform the City Market’s impact on the Charlottesville community. The following sections outline our research methods and obstacles, as well as findings from the survey administered during late Fall 2017.

Project Timeline

2011-2012: Have a Stake in the Market Research

Spring 2017: Charlottesville Market Research Team established

- Crowd count day: 04/08/17
- Crowd count day: 04/15/17
- Earth Week Expo Presentation: 04/18/17
- Crowd count day: 04/22/17

Fall 2017: Independent Study Project began

- Meet with City Market managers: 09/12/17
- Crowd count day: 09/16/17
- Crowd count day: 09/23/17
- Submit IRB Application: 09/29/17
- Re-submit IRB Application: 10/05/17
- Pilot survey day: 10/07/17
- Pilot survey day: 10/14/17
- Pilot survey day: 10/21/17
- Volunteer training: 10/27/17
- Volunteer training: 10/28/17

- Receive IRB Approval: 11/02/17
- Surveying day: 11/11/17
- Surveying day: 11/18/17
- Surveying day: 12/02/17
- Surveying day: 12/09/17
- Surveying day: 12/16/17

Spring 2018: Independent Study Project continued

- Meeting with Justin and Lucy at the Parks and Rec office: 2/06/18
- Paul presents at City Market Vendor meeting: 3/03/18
- Meeting/interview with Cecile Gorham of Market Central at her office: 3/14/18
- Presentation of Preliminary Findings at CitySpace: 3/24/18
- Crowd count day: 4/7/18
- Crowd count day: 4/14/18
- Cville Market Research Team Interest Meeting: 4/16/18
- Research Poster presentation at the Earth Week Expo in Newcomb Ballroom: 4/17/18
- Sustainapitch Night to acquire summer internship funds: 4/19/18
- Crowd count day: 4/21/18
- Crowd count day: 5/5/18
- Final report compiled: 5/07/18
- Transition meeting with Justin, Lucy, Paul and potential interns: 5/9/18

*Next steps:

- Meet with Nina Morris from Office for Sustainability about acquiring and utilizing the Sustainapitch funds
- Coordinate with Justin and Lucy to select and notify raffle winners from previous semesters' survey raffle

Research Methods

Crowd Counts

Approach

We veered from the approach taken by the “Have a Stake in the Market” research team to estimate attendance at the City Market by collecting crowd counts. Instead of standing in one spot (like the 2011 methodology at the Market Central station), one person stood at each of the four entrance points to the market. Each entrance point was assigned a number 1-4, which remained the same across the study. For twenty minutes of each hour, specifically from minutes 10 to 20 and minutes 40 to 50, the researchers counted the amount of customers (aka those

bearing wallets) walking into the market from a specific entrance point using the clicker tool. Young children who were clearly with their parents were excluded from the crowd count numbers. Volunteers assisted the researchers in collecting the data. The majority of the counting time periods there were four volunteers at once: one at each entrance for the two ten-minute periods of each hour. After the ten-minute period, the researchers would record the data on the crowd count form (see Appendix A). After each hour, the researchers would sum the two amounts collected at each entrance for that hour, having separate totals per hour per entrance. The collected data was entered into the Excel spreadsheet at the end of the market (see Appendix B). We recorded circumstantial events per market day such as weather patterns and prominent Charlottesville/UVA events that could influence fluctuations in market attendance.

In order to collect crowd counts, we needed volunteers to assist at the different entrances. We recruited volunteers by spreading the word about our research through various outreach streams including sustainability related and food related organizations on Grounds. In addition, the market managers sent out some advertisements through the City Market social media/email list serves and we had a sign-up sheet at the market so that we could incorporate community members, if they were interested. We started a Facebook group and collected potential volunteer information through a Google form. In addition, we recruited students from Professor Freedman's first year seminar on Food, Society, and Sustainability. Also, we individually reached out to our peers, classmates and friends. Despite the extensive mediums of outreach, our dedicated volunteers usually stemmed from our personal contacts and acquaintances directly through text messages. At the beginning of each shift, we would train the volunteers on how to properly record the data and count the customers.

After conducting crowd counts in the spring and fall of 2017, we had learned a lot of tips and tricks that we implemented during this spring of 2018. When training volunteers, we used the phrase, "we are counting wallets" to succinctly remind volunteers that we were not counting young children. In addition, we realized that it was helpful to record data both on paper and on the spreadsheet during the market. This allows for a stronger institutional memory, since paper copies often get lost or misplaced over time and allows for flexibility if the early morning researchers don't have access to a printer. Also, we realized that recording the numbers per entrance per hour on the spreadsheet was helpful for further analyses. The more information recorded, the better! We found that an efficient and successful method for training volunteers included encouraging potential new leaders of the team to train the new volunteers. This enabled the upcoming team leaders to gain exposure to and practice in our roles while we were still there to facilitate and supplement with any missing information.

Obstacles

We had several obstacles to overcome when completing the crowd counts such as holding volunteers accountable, filling early morning shifts, and calculating missing gaps in data collection. We had various incentives, including giving out \$10 market bucks for 5 hours of

volunteering and free coffee, to encourage and retain volunteers. However, there were situations in which volunteers did not show up or when we couldn't fill the slots for the 7:00-8:00 am shifts. In these situations, we worked with the City Market employees and managers who assisted with the crowd counts when possible. Despite their generosity and our efforts, there were various times when we had missing data points from specific entrances. In those cases, we calculated the missing data based off of the other data collected from that day and from that entrance (see Appendix I). Although these missing data points hindered the true accuracy of our research, we used the best practices possible to calculate the missing gaps. Ideally, crowd counts would be collected more consistently throughout the season in order to note any changes or patterns in numbers of shoppers.

One of our main obstacles during the spring of 2018 included the transition to new lead researchers. Once we identified the volunteers that would be interested in taking over, we had to train these students on how to conduct successful crowd count research days. We've found that the most difficult part is recruiting beforehand, rather than implementation on the day of the market. In this transitional period, it has become clear that communication is key to effective research. With so many people (3 current research leads and 4 potential research leads), the issue of delegation has come to a head. The four future leads are still getting to know each other, how they work together and who will take on which roles. It will be imperative that these students learn to communicate openly and consistently while also being positively assertive in order to conduct effective research in the future!

Surveys

Approach and Obstacles

Method and strategy became the foundation of our research. To account for reliable data, we followed several guidelines and procedures. Ultimately, our team expanded upon research methods and strategies from the 2011 "Have a Stake in the Market." Our goal was to expand upon, create, and launch a comprehensive survey pertaining to consumer preferences using Qualtrics. The "Have a Stake in the Market" team created the first version of this survey, however to account for changes since 2011, we set up a series of meetings with the Charlottesville City Market Managers to better understand their current needs. We met with them on September 12th and compared the 2011 survey with an updated version that we created with our Independent Study advisor, Professor Paul Freedman.

Each survey question required attention to detail and specific wording; we carefully curated our entire survey so that we would receive unbiased results and reach a broad spectrum of respondents. We added questions relating to sense of belonging, sustainability, and if the participant was a college student in the community. Collaboration with the market managers was crucial during this step – they helped us curate the questions so that the results are most pertinent to what they wanted to know. After this meeting with the managers, we continued to meet on Tuesdays at 11am with Professor Freedman as well as conduct crowd counts at the Saturday City

Market. During our meetings we continued to update the survey and began the Institutional Review Board (IRB) approval process. Our survey eventually came to 48 questions, 13 more than the “Have a Stake in the Market” survey’s 35 questions. We sent the preliminary survey to numerous friends and acquaintances, in order to screen it for any confusing wording, to streamline skip logic, and to gauge the approximate amount of time needed to take the survey. We had 50 responses to the survey test run.

Prior to beginning our research, the three of us completed the Collective Institutional Training Institute (CITI) research training online for the IRB for Social and Behavioral Sciences approval. CITI training guided us through learning modules that cover the core issues for conducting IRB compliant research. To receive certification, we then had to take a short quiz following each module to ensure we had mastered the material.

After this step, we continued to make edits to the survey on Qualtrics as we awaited approval from the IRB. Qualtrics is based on a series of skip logic and required us to map out the series of questions respondents would see based on their previous answers. Once the IRB approved our final survey, we were able to begin training volunteers and plan a date to launch our survey.

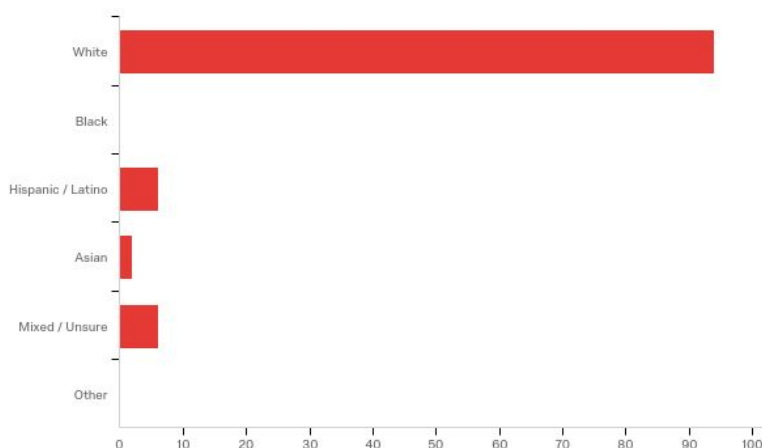
We selected 5-7 of our crowd count volunteers to help us launch the survey. To maintain consistency we trained these volunteers on two separate days. During the training process, volunteers 1) took the survey to familiarize themselves with the questions 2) learned how to randomly select respondents 3) practiced a short script to say when presenting the survey and 4) practiced presenting the survey to both us, and each other. We also addressed possible challenges that may arise when asking people to take the survey, and practiced handling those setbacks. The volunteers were not approved to administer the survey through the IRB, therefore their main priority was to help us with the random selection counting process, and answer questions that respondents had.

Next, we acquired iPads from the Frank Batten School of Leadership and Public Policy’s Gaming and Simulation Center. We picked up 5-8 iPads on Friday before each market research day, kept them secure over the weekend, and returned them again on Monday morning. The City Market does not have strong WiFi connection, therefore we downloaded the Qualtrics offline app onto each iPad. This offline version of the app allowed us to administer the survey, save the data on the app, and then upload the data when we returned to a strong WiFi connection. In order to access Qualtrics accounts on the offline app, users must generate an API token. The instructions for generating this token can be found in Appendix J.

Before we launched our survey we mapped out the market and determined the two best locations to administer the survey. We strategically mapped out shopper’s paths throughout the market and found two spots that had 1) steady foot traffic 2) a natural place to slow down, or stop, to take the survey. On our survey days we set up a table and chairs at one of the two locations and welcomed respondents to use the table and chairs if they needed to set items they were carrying down. This helped make the survey experience more enjoyable for respondents.

We took a specific approach to randomly selecting respondents in order to gather an unbiased set of results. At both locations we chose a constant line that shoppers passed, and crossed, and counted as people passed by. Each seventh person that passed this point was selected to take the survey if they were willing. We found that it was often challenging to keep track of shoppers passing by, therefore having volunteers was crucial to our success. If people were willing to take the survey they were entered into a raffle for a drawing to win a gift basket of market goods valued at \$100. Upon completing the survey, we had a separate link that allowed participants to fill out their contact information - this separate link allowed us to keep the survey results anonymous yet still provide an incentive to take the survey. We would only use the contact information if that person was selected to win the raffle. We had 216 people fill out the raffle entry.

Some people who were randomly selected to take the survey did not agree. Therefore, we made another survey link called “Survey Refusals.” Each time someone refused to take the survey at the market, we first offered them a Take Home Slip (see Appendix G) which was a slip of paper that included a link to the survey they could take at home on the computer, and then recorded a “Survey Refusal.” We tried to capture as much observable information that we could about individuals who were not willing to take the survey to catch any systematic similarities among the people who refused. We recorded 108 survey refusals but there were likely more refusals that were not recorded due to errors in the recording process amidst the hustle and bustle of the market. The survey refusals were based on our observations, though we recognize the flaws of such observation. In some ways, the refusals reflected the demographics of our actual survey responses. In the survey refusals report, there was a diverse age range that refused to take the survey, but the largest amount of refusals came from the 51-70 years old range. In addition, 64 females and 44 males refused the survey. Here is the breakdown of survey refusals based on *perceived* race:



Some of the recurring reasons for refusing included: having children with them, being in a rush/not having enough time, walking in a group, survey being too long, having already taken the survey, being too cold*, from out of town, didn't speak English*, being a vendor.*

*Based off of these responses, there are a few key steps for the next round of surveys:

- Conduct surveys in warm, pleasant weather
- Offer surveys in Spanish
- Decide whether or not you will allow vendors to take the survey and stick with one consistent decision

Some people volunteered to participate in our survey. Rather than sending them away, we created a version of the survey called “Volunteer Survey.” We made sure that anyone who *asked* to take the survey took this version so that their responses wouldn’t skew the randomized data. We had 26 volunteer responses. 23 of the 26 respondents had attended the market prior to this instance. 6 out of the 26 had experienced economic barriers, though 11 out of 26 experienced no barriers. 7 out of the 26 respondents reported that they spend \$51-100 on a market visit. There was overwhelming support that strongly or somewhat agreed that the City Market serves the Charlottesville community in a variety of ways. 22 of the 26 were interested in the zero styrofoam policy. There was a strong sense of belonging among these respondents as well, with 23 feeling at home, 21 feeling like they belong, 24 liking the market and 18 not feeling out of place at the market.

As more and more people took the survey we noticed several trends and how to account for them. First, it helps to move people out of the busy sections of the market and closer to our table. Second, some people need assistance such as holding the iPad as they go along, or reading the questions together. Third, many participants provide valuable feedback while taking the survey. We noticed trends in the questions that caused confusion and took note to change the wording in the future. For example, it might be beneficial to bold minor details within similar questions so that participants can easily identify the differences. Fourth, our survey is quite extensive and thorough therefore many participants complain that it is “long” as they approach the end. We found that it was helpful to let them know that if they felt like it was “long” they were probably just about to finish up.

For future survey research with City Market customers, we recommend utilizing this similar survey for comparison and consistency. If the upcoming researchers can find a way to get added to our current IRB status, it would be a smoother and less laborious transition than re-applying for IRB approval. This would require keeping the survey the exact same. However, if future researchers are interested in surveying a different target audience it will be necessary to create a new survey.

Ethics

Approach

In order to complete our research, it was necessary to receive Institutional Review Board approval for the surveying to ensure ethical practices would be employed on the human subjects. The crowd counts, on the other hand, were exempt from IRB approval because it did not require interaction with human subjects. The three of us each completed the CITI training modules before applying to the IRB for Social and Behavioral Sciences.

We worked alongside Professor Freedman to fine tune our IRB application (see Appendix F). Upon completion and submission of our application, an IRB assistant guided us along the process and provided feedback to improve on before the official review. We revised our application accordingly and received IRB approval through the exemption process (see Appendix D).

Some of the key elements to our ethical approach included keeping the survey completely anonymous and confidential as well as allowing participants to stop the survey at any time. In addition, we must stick to our randomized survey method in order to control for biases.

Obstacles

Our biggest obstacle related to IRB approval revolved around the delay in our application process. The team intended to submit the IRB application at the outset of the semester, however, it took longer than expected to solidify our survey. In the end, our survey evolved into a more comprehensive, well thought out questionnaire from the extensive revisions and editing process. Since we received approval later than expected, we have not been able to collect as much data as preferred.

Our other main obstacle includes our method for incorporating volunteers into the research. As mentioned previously, we trained a cohort of volunteers to administer the surveys at the market. However, we realized that these volunteers had not completed the CITI training and were not registered as researchers on the IRB application. We have confirmed with the IRB that in order to conduct the surveys, these volunteers must complete the training and be added to the official IRB documents. In an effort to include our volunteers, they have continued to assist in our research by making sure that nobody walks off with an iPad, filling out the survey refusals form, helping us complete the randomized sampling counts, and assisting the survey takers in filling out the raffle entry survey. The three of us were able to recruit survey takers through our randomized method and then the volunteers were able to help with these listed tasks that do not require IRB approval. We would recommend that in future iterations of the survey data collection, it would be ideal to inform volunteers of the CITI training and add volunteers to the IRB application at the outset of the project.

Market Days

The following is documentation from the five crowd count days, three pilot survey days, two training days, and five surveying days.



April 8th and 22nd: Crowd Counts

7 volunteers



Volunteer Training Days: October 27th and 28th



First survey day: November 11th
Five iPads





Second Survey Day: November 18th



Third survey day: December 2nd

Five iPads (functioning)



Findings

We've collected **256** customer surveys and **9** crowd counts at the City Market.

Crowd Counts: 2017

	Event?	Sunny?	The Details
1 5,001 people		✓	<ul style="list-style-type: none"> April 8th, 2017 40-60 degrees Fahrenheit
2 7,143 people	✓		<ul style="list-style-type: none"> April 15th, 2017 Tom Tom Festival
3 3,693 people		✗	<ul style="list-style-type: none"> April 22nd, 2017 Overcast, slight drizzle
4 4,023 people		✗	<ul style="list-style-type: none"> September 16th, 2017 Overcast, muggy
5 4,572 people	✓		<ul style="list-style-type: none"> September 23rd, 2017 Bright and warm TomToberFest

Crowd Counts: 2018

	Event?	Sunny?	The Details
1 3,066 ppl	✗	✗	<ul style="list-style-type: none"> 4/07/18 Opening day - snow in forecast
2 7,041 ppl	✓	✓	<ul style="list-style-type: none"> 4/14/18 TomTom Festival
3 4,542 ppl	✓	✓	<ul style="list-style-type: none"> 4/21/18 Dogwood Festival
4 tbd	✗	✓	<ul style="list-style-type: none"> 5/5/18 A bit cloudy

Survey

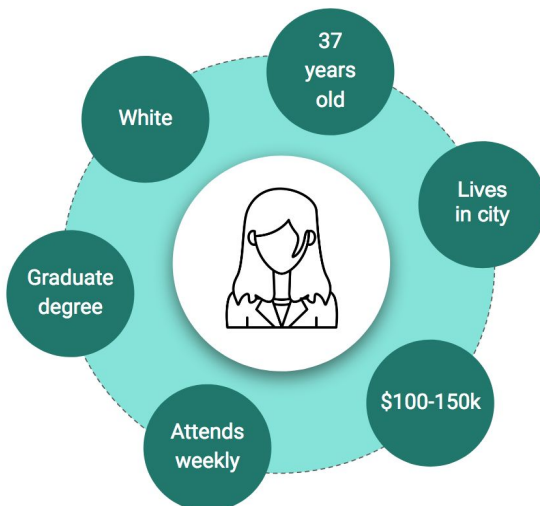
Statistics:

- 256 respondents
- 108 refusals
 - 20 were given take-home slips
- 26 volunteer responses
- 216 raffle entries

The following details key findings of the survey, with the complete raw dataset found in Appendix L entitled Topline Data.

Typical Customer Demographic

Meet Jennifer:



Is the market representative of Charlottesville? - *Charlottesville median demographics in red, juxtaposed with the market demographics based on our survey, in black.*

Charlottesville Demographics

Female - 62.4% → **51.6%**

White - 86.3% → **69%**

Median Age - 37 → **31**

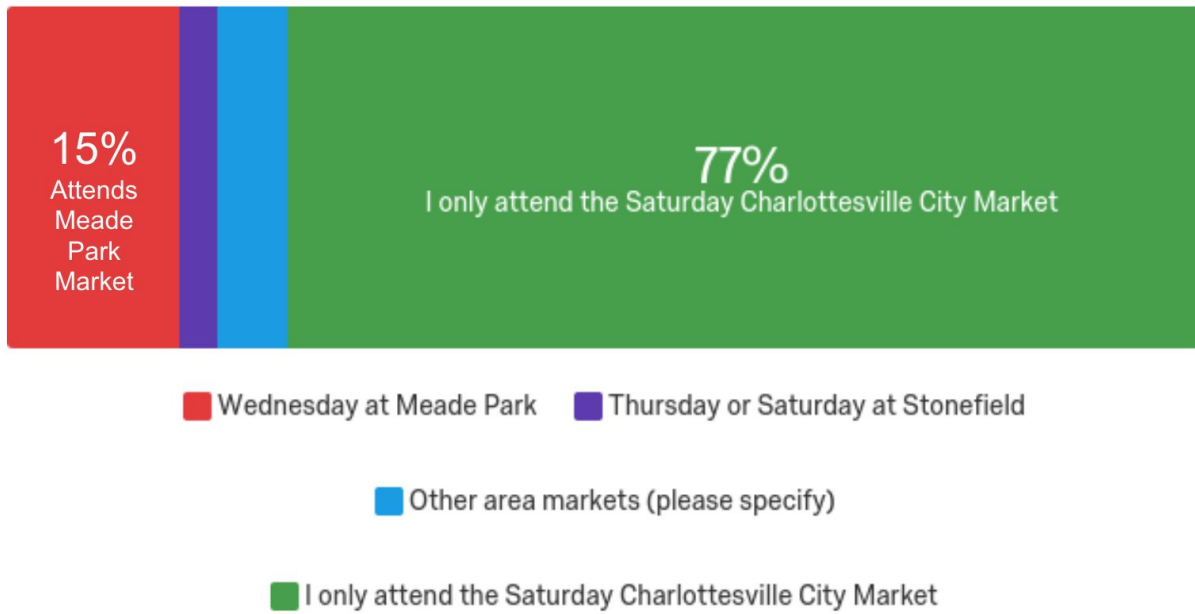
2 adults in household - 71% → **2 adults per household average**

0 children in household - 73% → **80% have 0 children in household**

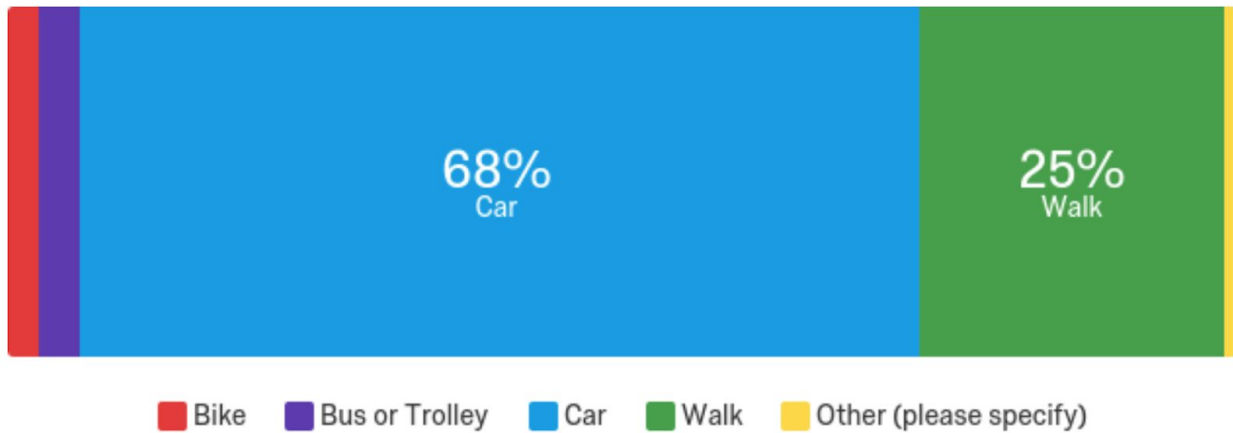
Income of \$100,000 or more - 42.5% → **\$52,234**

SNAP users - 1.1% → **10.3% enrolled families**

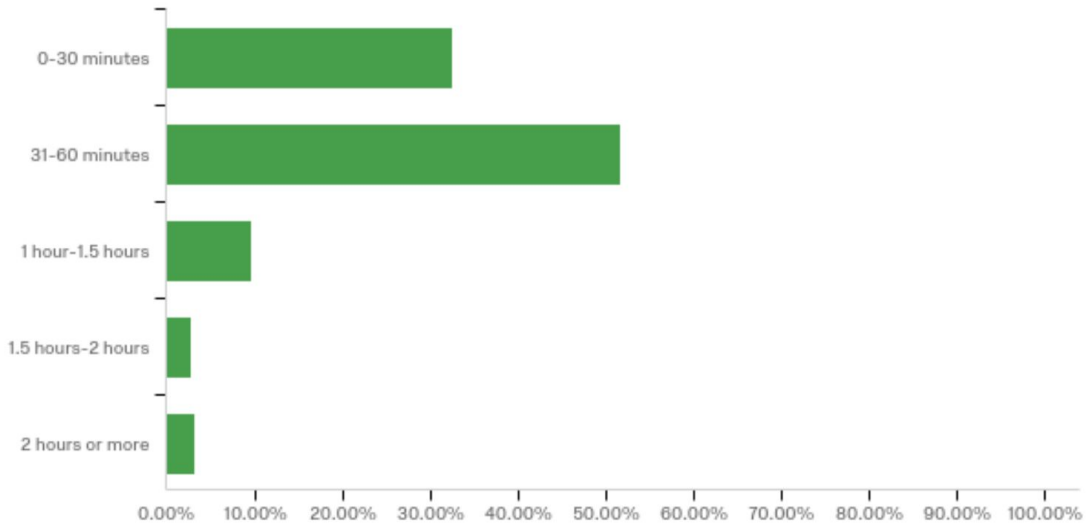
Market Attendance - *What percent of Saturday market goers attend which markets?*



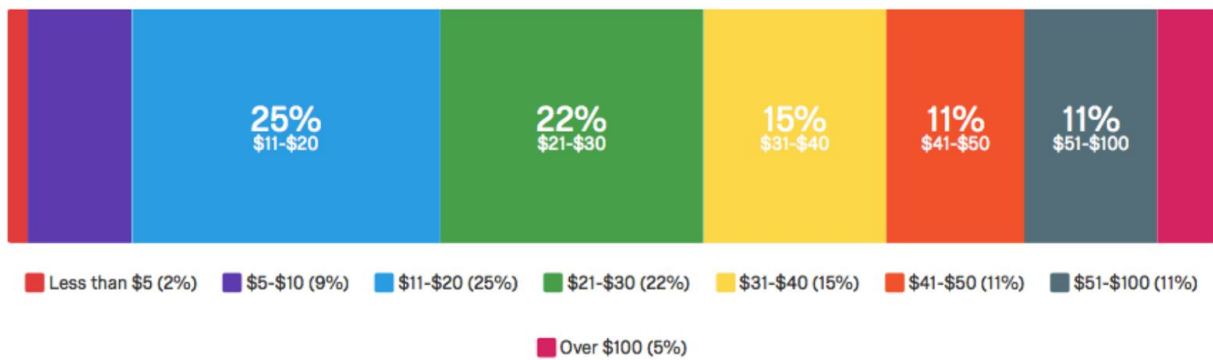
Transportation - *How do Saturday market goers get to the market?*



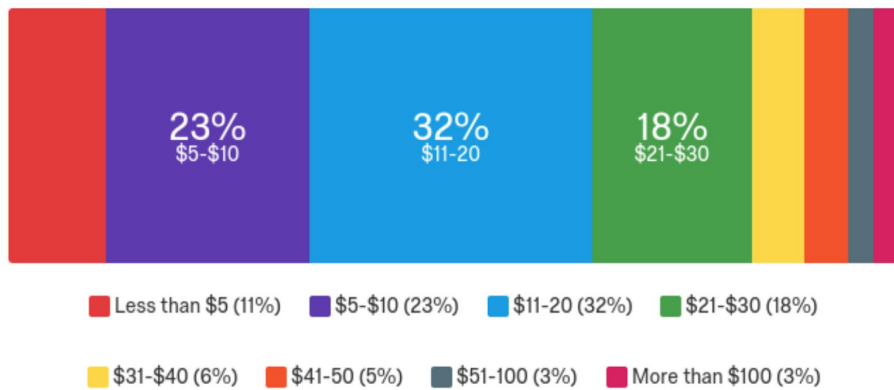
Time Spent at Market - *How long do Saturday market goers stay at the market?*



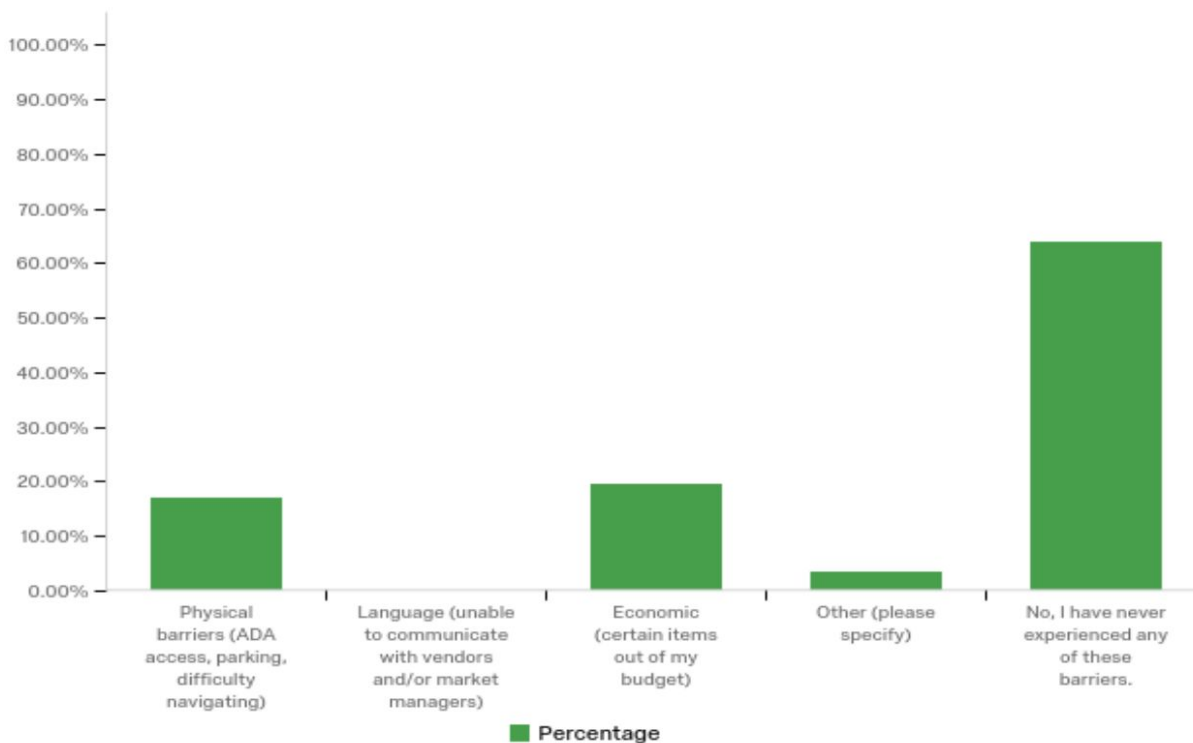
Money Spent at Market - How much money do Saturday market goers typically spend in a visit?



Money Spent Downtown - If market goers spend time downtown in combination with their trip to the market, how much do they spend on downtown activities?

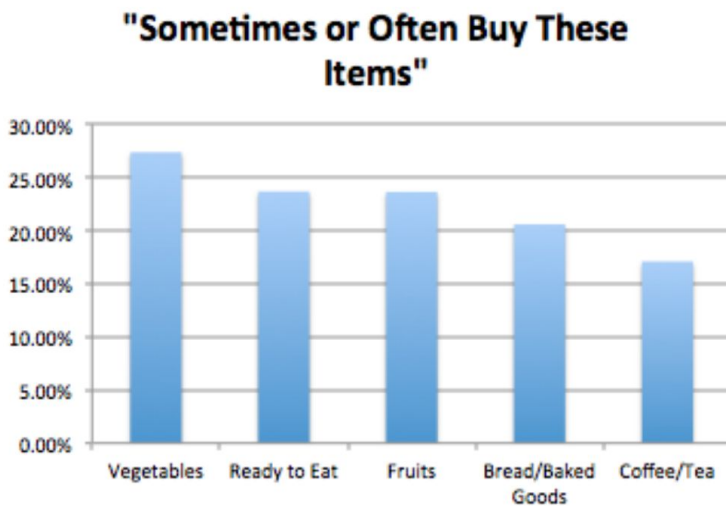


Barriers - What barriers do market goers face at the market?

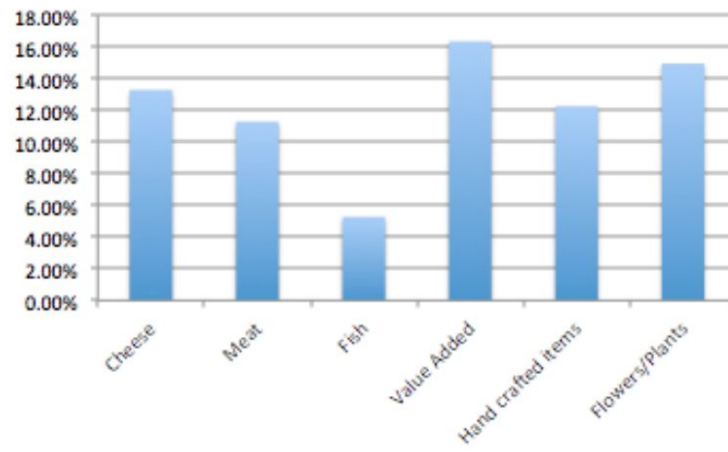


- An important caveat is that we only surveyed those who were already at the market, so these numbers do not account for any ultimate barriers that would keep people from coming entirely.

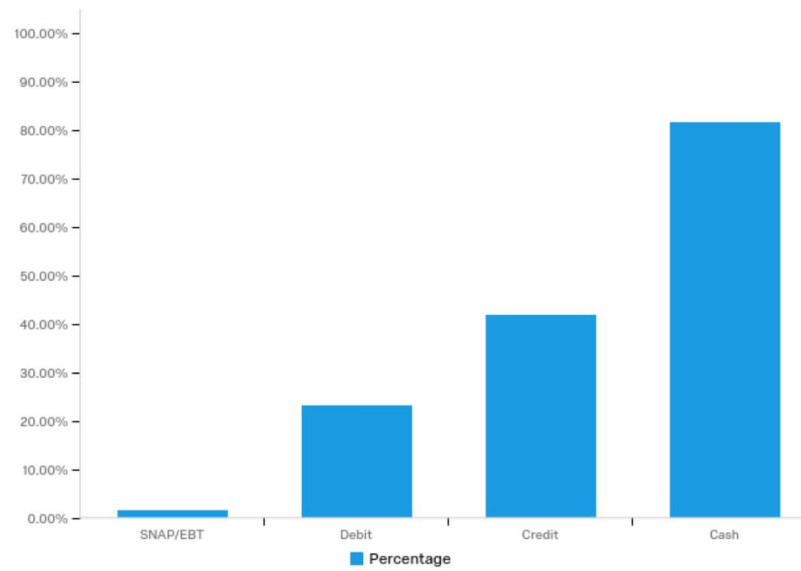
Items Purchased - *How often do market goers purchase certain items?*



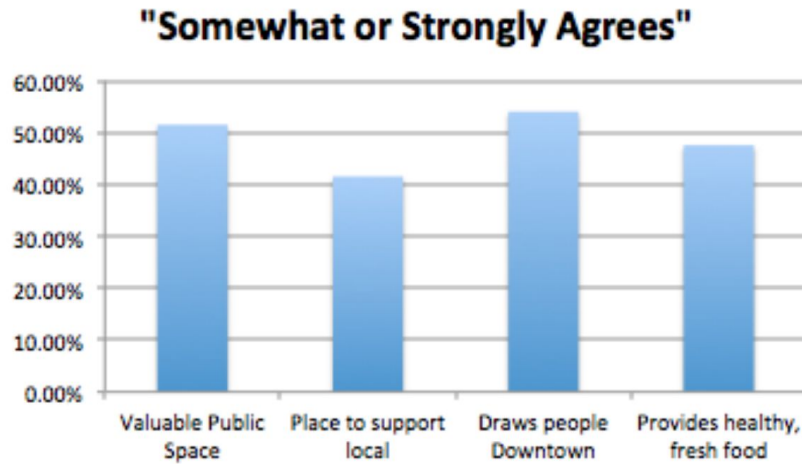
"Sometimes or Often Buy These Items"



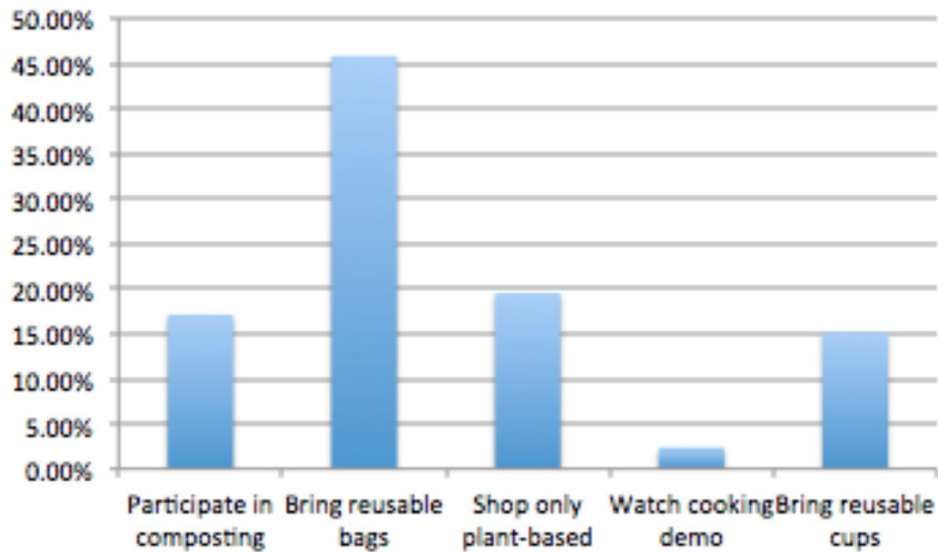
Payment Methods - How do market goers pay at the market?



Community - How does the market serve the community?

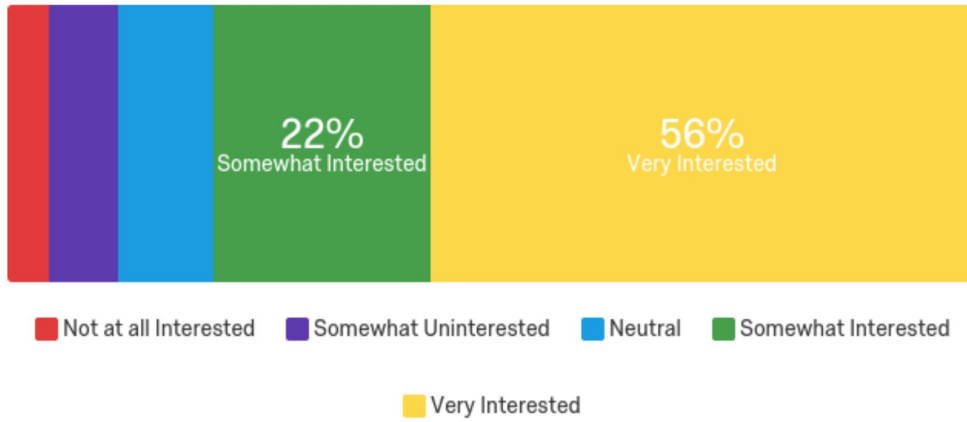


Sustainable Behaviors - How often do market goers participate in certain sustainable behaviors?

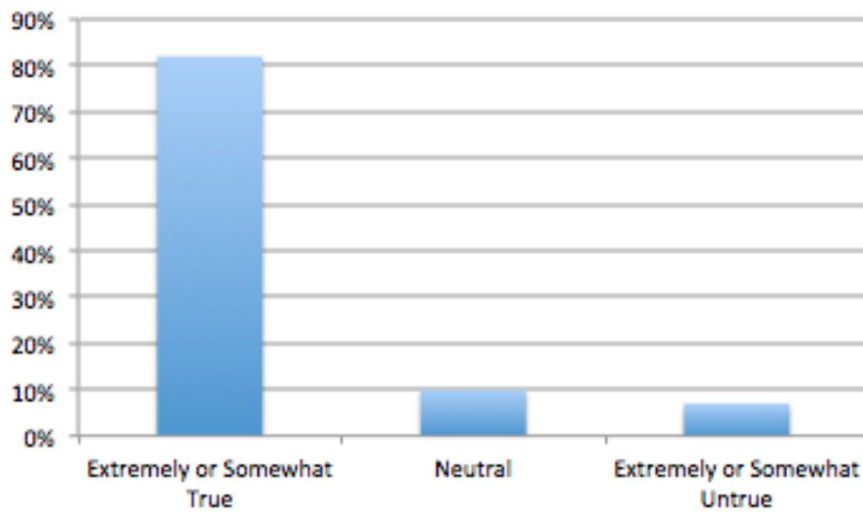


- Almost half of respondents bring their own reusable bags and about one fifth of people participate in the free composting program.

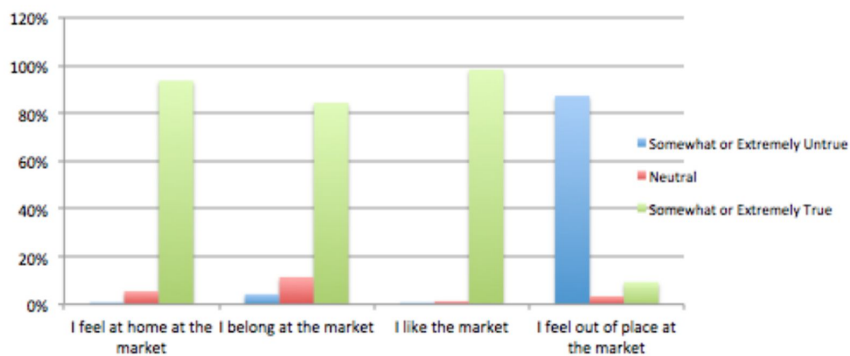
Zero Styrofoam Policy - How interested are market goers in a policy that eliminates styrofoam from the market?



Vendor Connection - How important is the added personal connection with vendors to market goers?



Sense of Belonging - How much do market goers feel a sense of belonging at the market? Who feels more or less “at home” at the market?



“I belong at the market”

- Black: 60% extremely true, 20% somewhat true, 20% neutral
- White: 55% extremely true, 30% somewhat true, 11% neutral

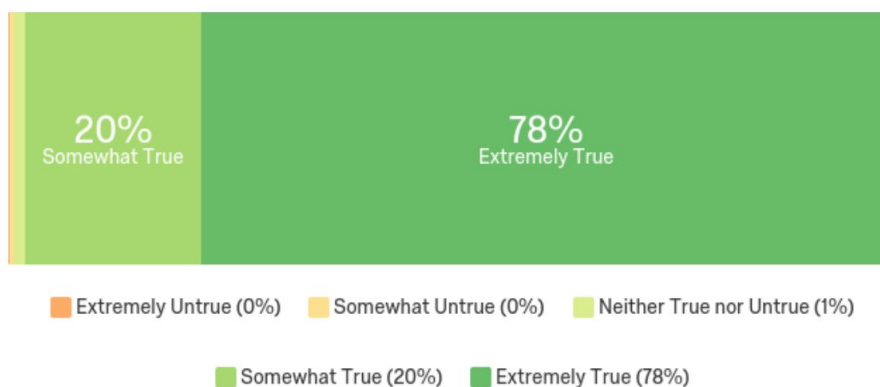
“I feel at home at the city market”

- Black: **80% extremely true**, 20% somewhat true
- White: **64% extremely true**, 29% somewhat true
- Spanish: **62% extremely true**, 37% somewhat true
- Asian: **50% extremely true**, 37% somewhat true

“I feel out of place at the market”

- Black: **20% extremely true** (1 person), 80% extremely untrue (4 people)
- White: **5% Extremely true**, 2% somewhat true, 2% neither, 11% somewhat untrue, 77% extremely untrue
- Asian: **6% somewhat true** 6% neither, 31% somewhat untrue, 56% extremely untrue
- Spanish, Hispanic, Latino: **11% somewhat true**, 12% neutral, 25% somewhat untrue, 50% extremely untrue

“I like the Charlottesville City Market”



- 98% of survey respondents indicated that they like the City Market.

What three things would you change at the market?



- The full list of suggestions is found in Appendix L in the topline data document.

In addition to the basic data visualizations, our team analyzed the numbers provided by the Qualtrics Data & Analysis section. We decided that race would be a central factor that we wanted to cross-tabulate with other factors. Firstly, here are the percentages and numbers of survey respondents based on race:

- Black or African-American - 2.02% - 5
- American Indian or Alaskan Native - 0% - 0
- Asian - 6.45% - 16
- Native Hawaiian or other Pacific Islander - 0% - 0
- Spanish, Hispanic, or Latino - 3.23% - 8
- White - 86.29% - 214
- Other (Middle Eastern/Arab, Mixed, 2 race, 2 or more, Mixed) - 2.03% - 5

Here is an example of a cross-tab that compares race with income:

		Please describe your race or ethnicity. (Select all that apply.)							Total
		Black or African-American	American Indian or Alaskan Native	Asian	Native Hawaiian or other Pacific Islander	Spanish, Hispanic, or Latino	White	Other (please specify):	
In 2016, what was your total family income from all sources, before taxes?	Less than \$20,000	5.88% 20.00%	0.00% 0.00%	5.88% 6.25%	0.00% 0.00%	0.00% 0.00%	94.12% 7.80%	0.00% 0.00%	100.00% 7.39%
	\$20,000 to less than \$35,000	0.00% 0.00%	0.00% 0.00%	12.50% 12.50%	0.00% 0.00%	12.50% 25.00%	75.00% 5.85%	0.00% 0.00%	100.00% 6.96%
	\$35,000 to less than \$50,000	0.00% 0.00%	0.00% 0.00%	10.53% 12.50%	0.00% 0.00%	5.26% 12.50%	79.95% 7.32%	5.26% 20.00%	100.00% 8.26%
	\$50,000 to less than \$75,000	3.45% 20.00%	0.00% 0.00%	13.79% 25.00%	0.00% 0.00%	0.00% 0.00%	79.31% 11.22%	3.45% 20.00%	100.00% 12.61%
	\$75,000 to less than \$100,000	0.00% 0.00%	0.00% 0.00%	5.56% 12.50%	0.00% 0.00%	5.56% 25.00%	91.67% 16.10%	2.78% 20.00%	100.00% 15.65%
	\$100,000 to less than \$150,000	5.00% 40.00%	0.00% 0.00%	2.50% 6.25%	0.00% 0.00%	5.00% 25.00%	95.00% 18.54%	0.00% 0.00%	100.00% 17.39%
	\$150,000 to less than \$200,000	0.00% 0.00%	0.00% 0.00%	9.52% 12.50%	0.00% 0.00%	4.76% 12.50%	90.48% 9.27%	0.00% 0.00%	100.00% 9.13%
	\$200,000 or more	0.00% 0.00%	0.00% 0.00%	5.41% 12.50%	0.00% 0.00%	0.00% 0.00%	94.59% 17.07%	2.70% 20.00%	100.00% 16.09%
	Don't know	6.67% 20.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	0.00% 0.00%	93.33% 6.83%	6.67% 20.00%	100.00% 6.52%
Total		2.17% 100.00%	0.00% 100.00%	6.96% 100.00%	0.00% 100.00%	3.48% 100.00%	89.13% 100.00%	2.17% 100.00%	100.00% 100.00%

The red numbers represent the row percentages and the blue numbers represent the column percentages. Of the black survey respondents, 20% have an income less than \$20,000, 20% make \$50,000-<\$75,000, 40% make \$100,000-<\$150,000 and 20% don't know. The respondents identifying as Asian had the largest percentage responding with \$50,000-<\$75,000 but each income level had a wide-spread response range of 6.25-25%. Among the Latino respondents, 25% brought in an income of \$20,000-<\$35,000, \$75,000-<100,000, and \$100,000-<\$150,000 respectively. Lastly, white respondents were dispersed throughout the income levels but had the largest percentage of 18.54% responding with \$100,000-<\$150,000. In total 58.26% of respondents make \$75,000 or more, demonstrating the lack of economic diversity. Due to low response rates from a racially diverse audience (86.29% white), we found it quite difficult to interpret some of the cross-tabulations, thus demonstrating a clear lack of diversity as shown in the previous statistics.

Other cross-tabulation breakdowns can be found in Appendix N and the cross-tabulation report/data set will be sent to the market managers for future analyses.

Further visualizations of our findings include: The slides from the CitySpace public presentation on March 24th, 2018 (Appendix L) and the research poster for the Earth Week Expo on April 17th, 2018 (Appendix K).

In addition, our team created some customer profiles to lump related data into categories. Though these profiles are generalizing, it is based in fact off of the modal responses to the

customer survey. This is simply one way, though imperfect, to interpret and consolidate the information gleaned from the survey. One can locate these customer profiles in Appendix M.

Interview with Cecile Gorham of Market Central

Cecile Gorham is the chairwoman of Market Central, a nonprofit that “engages the Charlottesville City Market community of vendors, consumers and administrators through programs and outreach, to enrich the local market experience.”² Most commonly to customers, Market Central is known for administering the wooden token currency at the market to SNAP eligible customers as well as customers seeking tokens to pay vendors that do not take credit/debit cards. Our team met Cecile at the City Market during our research days and established a relationship as we sipped our coffee, counted the crowd and administered surveys. This spring, we met with Cecile in her co-work space, shared with Wild Virginia, on the Downtown mall to learn more about Market Central and her work with the organization.

Paul had provided good advice before the interview: “don’t ask any questions that you can find on the website.” We went into the interview, having conducted prior research on Market Central and Cecile, with the following questions in mind:

- What data sources does Market Central use in making decisions?
- What have been some successes in engaging SNAP users?
- What have been some failures in engaging SNAP users?
- What is Market Central’s stance on the lack of SNAP users at the market?
- What is your process of engaging SNAP users, specifically for the market?
- Is Market Central actively engaging SNAP recipients to use the benefits at the market?
- Which stakeholders are important in making your organization function well?
- How do we reconcile the lack of diversity at the market?
- How can data about the market inform your organization’s decisions?
- How can our data be of use to you?
- How do you reach lower-income community members? What’s the relationship?
- How can the market best serve lower-income community members? Why the current gap?
- For future surveys, what questions would you like our team to ask?
- For the new market plans, what do you think the new market should look like?
- What is the preferred plan of Market Central? Were the vendors behind this?
- How do you characterize the differences between Market Central and the vendors’ opinions?
- Really great data, could you share with us?

²“Make Your Market More.” *Market Central*. 2018. <http://marketcentralonline.org/>.

However, the conversation took a natural course, with Cecile conversing with us about a variety of topics and issues among the City Market. Cecile showed us the data set that she had presented at the previous vendor meeting. She described how her team, mostly including herself, would complete accounting records for each transaction at the City Market to keep track of tokens and payment. She was not able to share the exact information with us, though it provided insights into how SNAP customers are tracked. We learned that the IRC's New Roots and Market Central partnered together for the incentive grant for double up coupons. Unfortunately, at the start of this market season, the USDA has caused Cecile administrative barriers in administering the token currency. Market Central has yet to make an appearance at the market this season, though Cecile claims they should be up and running soon enough. This dependency on government actors for funding, resources and regulatory approvals demonstrates the fragility of nonprofits and markets while serving low income populations. Typically, Market Central is a reliable entity for SNAP users but due to agency intervention the nonprofit has been hindered for frivolous reasons and creates a hindrance to SNAP users at the market. This is not uncommon -- at the Carytown Market in Richmond, VA one of our team members has experienced a similar issue with barriers to administering SNAP benefits. In this particular case, the SNAP/EBT machine needs to be updated but the Carytown Market is simply waiting on the state/federal agencies to reallocate the machines. Since the start of the market season on April 22nd, the Carytown Market has had to confront and let down SNAP users that come to the market expecting to utilize the SNAP/EBT machine.

An important piece of the conversation revolved around the eligibility of SNAP users. Since lower income individuals and families have fluctuating income levels, their eligibility for SNAP benefits fluctuates as well. Market Central offers double up coupons to SNAP eligible recipients but finds difficulty in reaching SNAP eligible recipients and maintaining lasting relationships with these populations, due to the ever-changing nature of SNAP. Our team found this to be reflected in our customer survey data which showed that 1% of market patrons who responded to our survey paid using SNAP/EBT. Cecile mentioned how certain SNAP recipients would have a friend or family member go to the market for them to acquire the market goods because they felt embarrassed to do it themselves. A key missing piece in our understand of the SNAP program was the fact that SNAP eligibility changes frequently and we do not want to promote a reliance on SNAP benefits, because that implies the recipient is not making enough to reach the poverty line. Lastly, we learned that there is a significant number of individuals and families that are eligible for SNAP but do not take advantage of this eligibility and the double up coupon program. This is a piece for further research and inquiry. In our opinion, potential SNAP eligible populations, current SNAP recipients and low income populations that are not eligible for SNAP need to be further engaged and incorporated into the City Market through incentive programs and subsidized produce programs.

In addition to obstacles surrounding the Supplemental Nutrition Assistance Program, Market Central faces financial barriers due to the lack of funding and infrastructural support. Cecile mentioned the difficulties of being a nonprofit without enough funding - wishing that Market Central could acquire funding through the City. In our assessment of the situation, it sounds as though Market Central needs to be taken under the wing of the Parks and Recreation department, the home of the City Market infrastructure. Since the market is funded by the Charlottesville City, it would be ideal to have an alignment between their market programs to reach and serve a larger number of Charlottesville residents. In a time in which Charlottesville is grappling with its identity and its need to provide support for their diverse population, this would be a positive step in the right direction. In next year's budgetary allocations and public participation periods, this could be a potential topic to bring up in order to bolster food justice and take direct steps to provide healthy, local food to a racially and economically diverse population shifting from a majority white, wealthy farmers market patron base.

Our one hour interview with Cecile offered us more insights than we could have ever predicted and opened us up to a wide scope of possibilities for future research and action. Our Cville Market Research Team believes that it is crucial to continue to grapple with these concepts of food justice, food access, food equity and more in future iterations of the research. As our customer survey research and interview outcomes depict, the City Market has a long way to go in achieving "diversity" at the farmers market. We highly recommend that the next researchers take on this challenge and approach these concepts with significant sensitivity and humility.

Conclusions

Crowd Counts

Market attendance varies greatly depending upon weather, as well as major events happening in close proximity to the market. TomTom Founders Festival may have significantly increased attendance at the market, though it was held during a particularly sunny and warm day. While TomTom may have upped the number of people coming through the market, we've heard directly from vendors and City Market officials that the event can often be more stressful and appropriate than beneficial.

Survey

The findings of the survey given in late fall of 2017 indicates that the market thrives for many, but efforts toward inclusion and accessibility is vital. The market trends toward a largely white, highly educated (almost half with a graduate degree), and high earning demographic. The people that are at the market feel like they belong and are at home at the market. However, this market is not representative of Charlottesville as a whole. Lower income people, black, hispanic and non-white people, and other marginalized groups like refugees (of which there are around

4,000 settled in Charlottesville) are excluded from the City Market likely due to higher prices than fast-food establishments and chain grocery stores, as well as a lack of sense of belonging because the space is primarily filled with people who do not necessarily look like them.

Further, there is significant interest in sustainable behaviors of current market goers, but a lack in action. Respondents indicated that they want less packaging and styrofoam (a material that never fully breaks down, thus contributing to the greenhouse gases and groundwater contamination from landfills). The free composting service is underused, with only about 15 percent of market goers participating.

Important to account for is that the number of respondents were not necessarily statistically significant for the scope of the research, especially for cross-tabulation with race and other demographics.

Reflections

Reflection: Allie

The fall semester made me realize the ease of forming new connections among farmers and small businesses who are vendors at the Charlottesville City Market, the slow nature of research, and even more the exclusionary foundations of farmers markets. All the way back in April I received an unexpected call from Gabby in the early evening as I was on the way to a meeting. She eagerly told me about an opportunity to do research with the farmers market, and if I was interested, I could join her as a co-partner leading a research team. I was hesitant at first, knowing I typically say yes to more responsibilities than my mind and body can handle at a time, but as I asked more questions it sounded more and more like something to which I would could meaningfully contribute my time and knowledge I already had on local food systems. I had been both the CSA Manager and co-director of Morven Kitchen Garden, director of Greens to Grounds, and worked with Tanya Denckla Cobb on the Virginia Food Heritage trail, in addition to working on a local food project my first semester in the class Global Sustainability with Carla Jones. I also was often a shopper at the Saturday City Market -- certainly not a regular, but a part of my ideal monthly food shopping -- I knew where to get the cheapest free-range eggs and the best ready-to-eat caribbean food. I had mused on not only the environmentalism, but also the elitism of the City Market. It reminded me of my own at home, the Falls Church farmers market that I frequented with my mom on Saturdays: bustling with mostly white people who could afford BMWs and liked to cook with the best-quality ingredients; and I realize that I fit into that group identity. I thought I knew deep down why there weren't more people of color or lower-income individuals: the food and goods sold were expensive and the market wasn't created or run by these communities. But now I had the opportunity to really understand markets like these through actual methodical, thorough research here in Charlottesville alongside the City Market managers. Research that could unearth data bringing us closer to understanding exactly

who was coming to the market, what they were doing while there, and why they came in the first place.

The crowd counts were fun and easy enough to accomplish, though difficult getting college students up early enough to be downtown at the 7 o'clock hour. Formulating and finalizing the survey, and getting the research project approved by the IRB took longer than I (or any of us) expected. We were already in April talking about getting IRB approval and working on completing the CITI training modules during the summer. Of course, when we were all back at school, I found out in September that the modules I had done weren't the correct ones for the research we were applying for, so I had to do a whole other set of module trainings. Those trainings certainly increased my knowledge on ethics and best practices of research with human subjects, but they took longer than I would have expected to finish. Further, we had many rounds of survey edits. We compared our survey questions to those of the "Have a Stake in the Market" research, updating some questions, deleting others, and adding new questions all together. Back and forth it seemed to go, between us student researchers, Professor Freedman, and the market managers. More rounds of polishing, editing, and the inclusion of skip logic pushed the submission to the IRB back farther. Back and forths of the actual Protocol form for the IRB also bogged down the process. Eventually, though, it was all submitted, approved, and we were ready to begin surveying. At this point it was already November.

We didn't delay in training volunteers to help us administer the surveys and during pilot days, began scoping out possible issues and complications we would have when surveying. Overall, we were well-prepared for our first official surveying day, though I wish we could have started earlier and had more respondents. Additionally, I'm pleasantly surprised at the amount of vendors I know and casually chat with now that the market has been such a regular part of my schedule this semester. Our volunteer name-tags invited many conversations, and the vendors were genuinely interested and excited at the the data we gathered and analyzed. In the Spring semester, I wish we could have engaged more stakeholders, interviewed more individuals, and given more presentations of our findings. Research means little if no one uses it. But I am hopeful that the new team of researchers we have been transitioning are more than capable of meaningfully expanding upon and engaging with the research we completed.

Reflection: Gabby

After over a year of conducting farmers market research, I have confirmed my love for data collection, food systems and academic research for the purposes of bolstering sustainable and local food systems. I am convinced that we need to continue implementing data collection into farmers markets across the state and country to be able to keep up with current global market trends and patterns. I am fascinated by the fact that grocery stores keep track of consumers' every purchase yet farmers market goers are hesitant to even fill out one survey. The ease of research in supermarkets and grocery stores provides a stark contrast to the laborious, energy-intensive process of research at farmers markets. Hopefully, this research process and

final report demonstrates the necessity of such research for farmers markets, local food hubs, CSAs and more to begin to combat the missing gaps in these alternative, sustainable food systems. I look forward to continuing my work with farmers markets during this upcoming market season with three farmers markets in Richmond, VA. I'm appreciative of Justin for connecting me with state-wide market managers and informing me of this phenomenal opportunity! These markets work in collaboration with the Farmers Market Coalition and depend on the market managers and intern (me), to conduct the data collection. However, all three of these markets are of much smaller scale than the City Market, with only one or two entrances and less than 2000 customers at each market. I suspect that this concept of food justice, or rather, a current state of food *injustice*, will be a common theme across my future work in the food system. I hope to address and begin to tackle food injustices by exploring and learning from various food actors. I plan to get involved with actors ranging from large supermarkets to small farms, seeking to synthesize this knowledge into cohesive solution building and effective policymaking. For now, I know that I have so much more to learn but I hope to take this garnered knowledge and apply it to a role in the food policy realm after extensive exploration. I plan to be an advocate for sustainability within the food system and believe that targeting the policies and programs within the Farm Bill, specifically within the Horticulture and Nutrition Titles, will be an effective route. Thank you, Professor Freedman, for inspiring this path of food politics and food research due to your Politics of Food course and the ensuing year of market research!

Reflection: Emma (Fall 2017; Spring 2018 coming soon!)

I have never been so thrilled about the work required for a “class” at UVA. Throughout my educational experience I have always aimed to excel in my academic pursuits, however I have also constantly engaged in activities outside the classroom. These experiences are what drive my personal growth, challenge my beliefs, inspire me to form new opinions, and lead me to develop lasting relationships. Constant success and perfection seems to dictate every next step in so many of my peers’ trajectory. I believe that so much of education is lost in this pursuit. We end up trying to get into the “best classes” and earn the “best grades” so we can have the “best GPA.” I encourage myself, and any incoming students, to *focus on the element of education*. We are at this university to broaden our perspectives, challenge our beliefs and discover new ideas. That is exactly what this semester has taught me, and I have a long way to go to fully understand the cultural underpinnings of the way the world works.

Throughout my four years at UVA, and more specifically this semester, I have developed social relationships with vendors at the City Market, changed my own consumption habits, and thought more critically about the choices I make. I have also seen the consequences of unintended, but very real, social barriers that restrict marginalized groups from participating in these local food systems. Both in this research and in my other core curriculum classes, I have learned that socioeconomic and racial identities play a large role in the availability, accessibility,

and affordability of food. These factors contribute to certain groups' ability to produce and purchase food.

In the book Black, White, and Green, the issue of Environmental Justice arises alongside other more popular sustainability movements. Environmental Justice is described as the right of *all people* to safe, healthy, and clean environment, and their right to participate in environmental decision making. Many marginalized, low-income groups of people are barred by the exclusivity of sustainability initiatives, however by paralleling these efforts alongside justice activism, the green economy can provide both social and economic opportunities on a broader spectrum.

Public space can play a part in motivating movement and encouraging these broader, more encompassing interactions. The layout of the Charlottesville City Market made me curious about how it might be possible to revolutionize the food industry through education platforms and social spaces. I encourage myself to make more thoughtful and purposeful decisions, and think about how I can contribute to healthy, sustainable food systems while also remaining wary of the societal barriers to the green economy. Through our direct experiences and observations every weekend at the market I have only further realized these troubling social constructs. As I move forward, I want to challenge myself to be active in engaging in spaces that even I do not feel most comfortable in. I want to form new connections and unlikely friendships, to push my limits and expand my boundaries, and to fully immerse myself in what I am passionate about.

Reflecting back to the beginning of our research (crowd counts in April), I see how my own sense of belonging at the Charlottesville City Market has grown and intensified. I am motivated to make this a reality for more individuals; I want to make a difference in the world – and that starts right here in our local community.

Further Research

While our year of research comes to an end, we've laid the foundation for a new crop of students to take on and further what we've started. We didn't complete everything we wanted to during the past two semesters and also now have ideas for new directions in which to take this research. By engaging former volunteers who were interested in continuing what we started and pitching for money to fund summer fellowships at the SustainaPitch where we won the large project for \$1,500, we have a new team of researchers who will stay in Charlottesville over the summer to undertake further research. If they choose to, the researchers could take an independent study in the Fall and Spring to finish carrying out research and analyze and present their findings, much in the same model as our past year.

Further research could be centered on a number of topics and use various strategies for implementation. Some questions that were drawn out from our conclusions include how to increase access to lower income populations, how to welcome a more diverse population, how to incentivize more sustainable habits, and how to increase revenue and economic stability for vendors. A more thorough and continuous data collection would benefit research on the market,

especially focusing on the months from May to September, during peak harvest season. Further iterations of this research should be available in multiple languages (Spanish, Arabic) in order to reach the largest number of people in Charlottesville. Additionally, increasing the number of survey respondents is essential in order to draw meaningful conclusions from the data. Future research should strive to reach a statistically significant number, based off of a percentage of market patrons, as designated by the team and guided by Paul.

In order to fully understand the barriers that prevent people from coming to the market, research that centers populations that don't represent the demographics at the market (people of color, lower-income, lower educational attainment, refugees) is necessary. We strongly advise future researchers to be sensitive of these populations and determine what financial or other significant benefit could be provided in exchange for asking for time, resources, or other information.

These summer internship positions will be a phenomenal time for the new research leads to identify where they want the research project to focus efforts next. What are their top priorities? How can they build upon the structures and relationships we've made? We strongly suggest that the incoming research leads take an in-depth look at the Farmer's Market Coalition's Market Metrics Guide to learn about scientifically backed approaches to farmers market research.³ In addition, it may be advantageous for the City Market to create an account in future months or years. The Farmers Market Coalition offers a phenomenal opportunity for markets to celebrate their achievements and acquire funding through data collection.

Lastly, we feel extremely lucky and proud to have been given the opportunity to contribute and spearhead this rewarding project. We hope that the foundation we've built for the team will carry the project forward into future years to keep our vision of reliable, consistent and sustainable data collection alive! Thank you Professor Freedman, Lucy and Justin for your endless support and tireless efforts to make our team better and stronger!

³ "Farmers Market Metrics Guide." *Farmers Market Coalition*. 2018.
<https://farmersmarketmetrics.guide/>

Bibliography

“Farmers Market Metrics Guide.” *Farmers Market Coalition*. 2018. <https://farmersmarketmetrics.guide/>

Jefferson Public Citizens Journal, University of Virginia, 2012 (95). The Jefferson Public Citizens is a research grant program through the University of Virginia that integrates community service and research experiences. Student teams work together with a community partner to help complete research that would be valuable to the respective populations.

“Make Your Market More.” *Market Central*. 2018. <http://marketcentralonline.org/>.

Appendices

Appendix A: Crowd Count Form

Charlottesville City Market Research Team

Count Collection

Date: ___/___/___

7:10-7:20am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

7:40-7:50am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

Hour 1 Total: _____

8:10-8:20am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

8:40-8:50am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

Hour 2 Total: _____

9:10-9:20am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

TRY TO KEEP SAME ENTRANCE ON ONE SHEET

9:40-9:50am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

Hour 3 Total: _____

10:10-10:20am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

10:40-10:50am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

Hour 4 Total: _____

11:10-11:20am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

11:40-11:50am

Entrance # ___ Total Entrances Covered: _____

on Counter: _____

Appendix B: Crowd Count Data

Here is an example of our data records from 4/8/17

4/8/17					Weather / Misc.
	Entrance Totals (for 20 minutes) x3		Estimate Totals	Percent of Whole Day Total	Avg. Temperature (degrees Fahrenheit)
Hour 1 (7-8am)	88		264	5.00%	40
Hour 2 (8-9am)	183		549	11%	45
Hour 3 (9-10am)	362		1086	22%	50
Hour 4 (10-11am)	545		1635	33%	55
Hour 5 (11-12pm)	489		1467	29%	60
			5001	Whole Day Total Estimate	Sunny
~0-5 Customers pre 7:10am					
~153 Vendors pre 7:10am					
^ not included in Whole Day Total Estimate					

For the extensive results, click here:

https://docs.google.com/spreadsheets/d/1_m_Fim1PzYASTVpf5E369pWbwhuTHnx6_RYeVQAFW3E/edit?usp=sharing

Appendix C: Volunteer Training Materials

The link to the volunteer training materials can be found here:

https://docs.google.com/document/d/1WwfJA1U_C4lcUeEpRwmvYYix_gqJDwHjoXlZMxn82E8/edit

Appendix D: IRB Acceptance


UNIVERSITY of VIRGINIA
 OFFICE OF THE VICE PRESIDENT FOR RESEARCH
 INSTITUTIONAL REVIEW BOARD FOR THE SOCIAL AND BEHAVIORAL SCIENCES

In reply, please refer to: Project # 2017-0489-00

November 2, 2017

Gabrielle Levet and Paul Freedman
 Global Development Studies
 29 West Lawn
 Charlottesville, VA 22903

Dear Gabrielle Levet and Paul Freedman:

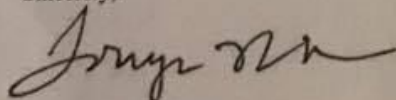
Thank you for submitting your project entitled: "Charlottesville City Market Research" for review by the Institutional Review Board for the Social & Behavioral Sciences. The Board reviewed your Protocol on November 2, 2017.

The first action that the Board takes with a new project is to decide whether the project is exempt from a more detailed review by the Board because the project may fall into one of the categories of research described as "exempt" in the Code of Federal Regulations. Since the Board, and not individual researchers, is authorized to classify a project as exempt, we requested that you submit the materials describing your project so that we could make this initial decision.

As a result of this request, we have reviewed your project and classified it as exempt from further review by the Board for a period of four years. This means that you may conduct the study as planned and you are not required to submit requests for continuation until the end of the fourth year.

This project # 2017-0489-00 has been exempted for the period November 2, 2017 to November 1, 2021. If the study continues beyond the approval period, you will need to submit a continuation request to the Board. If you make changes in the study, you will need to notify the Board of the changes.

Sincerely,



Tonya R. Moon, Ph.D.
 Chair, Institutional Review Board for the Social and Behavioral Sciences

One Morton Drive, Suite 500 • Charlottesville, VA 22903
 P.O. Box 800392 • Charlottesville, VA 22908-0392
 Phone: 434-924-5999 • Fax: 434-924-1992
www.virginia.edu/vpr/irb/sbs.html

Appendix E: Official Survey

The link to the official survey can be found here:

https://docs.google.com/document/d/1ROfKadFRcRvRCKh20QF_2GhQ-a7035bXrWhv7vy1pH4/edit

Appendix F: IRB Application

The link to the IRB Application can be found here:

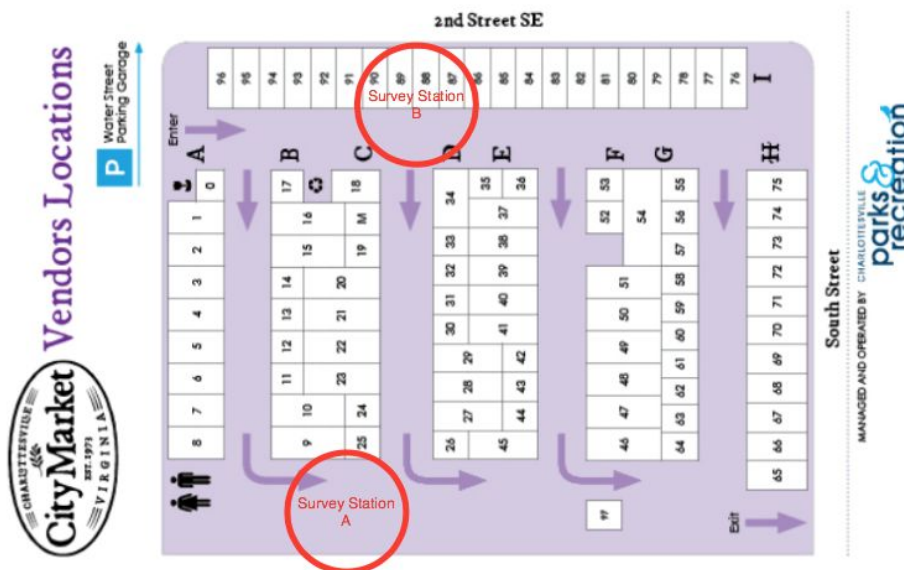
https://docs.google.com/document/d/1uzRdC8D_HEAZ4cqTYIIP-b7josKO39Px3VBWsYIRA1s/edit#heading=h.gjdgxs

Appendix G: Surveying Materials

Name Tag



Survey Station Map



Take Home Slip

ONLY TAKE SURVEY IF YOU WERE RANDOMLY SELECTED. PLEASE DON'T SHARE THIS SLIP WITH ANYONE ELSE. THANKS FOR YOUR HELP!

- Thanks for agreeing to complete our survey:
<http://tinyurl.com/citymarketsurvey>
- Please fill out this form to win a farmer's market gift basket:
<http://tinyurl.com/marketsurveyraffle>

Appendix H: Comparable Survey Questions

The link to the comparable survey questions spreadsheet can be found here:

https://docs.google.com/spreadsheets/d/1WKwMcxO1Uj7of0EeMaLD13tga_I9xXuxrSpDg08Svlg/edit#gid=0

Appendix I: Data Calculations

9/23/2017	Entrance Totals	x3	Estimate Totals	Percent of Whole Day Total	
Hour 1 (7-8am)	73		219	5.30%	5%
Hour 2 (8-9am)	191		573	14%	13%
Hour 3 (9-10am)	332		996	24%	22%
Hour 4 (10-11am)	483		1449	35%	32%
Hour 5 (11-12pm)	445	3	1335	21%	29%
			4,572	Whole Day Total Estimate	
		Entrance 3	Entrances 1,2,4		
11:10-11:20	244	80	164		244
11:40-11:50	66	66	135.3		201.3
	310	0.825	299.3		
	Entrance 1	Entrance 2	Entrance 3	Entrance 4	
11:10-11:20	48	61	80	55	244
11:40-11:50	39.6	50.325	66	45.375	201.3
			0.825		445.3

Bright, sunny, very warm!! Tomtober Fest

NOTE ADJUSTMENT

Appendix J: API Token Instructions

Instructions for setting up the offline Qualtrics App:

Before you get started, you must have Brand Administrator Permission to use the app. To find out if your account has access to the app, you can contact your Brand Administrator to make sure the Use Offline Mobile App permission is turned on for your account.

1. Log into Qualtrics
2. Select Account Usage tab

3. Brand Administrator contact information should be here
4. Once you have permission, your username will include a “#” to be used for logging into the offline app

** Note: our Brand Administrator is qualtrics@virginia.edu, if they do not respond contact James Cobb in the Batten School IT department at jac2tu@virginia.edu **

Instructions for Generating an API Token

1. Log into Qualtrics
2. Click the silhouette in the upper right corner of your account
3. Select Account Settings tab
4. Click Qualtrics ID tab
5. If there is no API Token, click Generate to receive a token

Instructions for Logging Into the Offline App

1. Type your username and password into your regular Qualtrics Account
2. Tap Go
3. Select Account Settings and remain in the User Settings tab
4. Navigate to Recent Logins, copy your full username, look for a # at the end of your username
5. Open the Offline App
6. Triple Tap the user silhouette to view hidden fields
7. Enter your complete username (include the “#” followed by your Organization ID; ex: MyUsername#qualtrics)
8. Leave the “Password and Datacenter Fields” blank and enter the API token you generated (it helps to email this to yourself and then copy and paste it)

Click [here](#) for more information directly from the Qualtrics Support Webpage.

- 80% black strongly agree
- 20% black somewhat agree
- 12.5% asian somewhat disagree

Race and Venue for Farmers

- 89% white strongly agree
- 62.5% spanish/hispanic strongly agree, 25% somewhat agree, and 12.5% neutral
- 6.25% asian somewhat disagree
- 80% black strongly agree

Race and Supports Surrounding Businesses

- 60% strongly agree, 20% somewhat agree, 20% neutral
- Asian: 62% strongly agree, 25% somewhat agree, 6.25% neutral, 6.25% somewhat disagree
- 1 white person strongly disagrees
- White: 61.72% strongly agree, 29% somewhat agree, 8% neutral
- Spanish: 12.5% somewhat disagree, 50% somewhat agree, 37% strongly agree

Race and Provides Healthy, Fresh Food

- Asian: 6.25% somewhat disagree, 12.5% neutral, 6.25% somewhat agree, 75% strongly agree
- *about 75-80% across the board strongly agree

Race and Composting

- Black: 40% often, 40% sometimes, 20% never
- White: 18% often, 50% never
- Spanish: 50% never
- Asian: 20% often, 40% never

Race and Reusable Bags

- White: 50% often, 22% sometimes
- Black: 80% often, 20% rarely
- Spanish: 62% often, 12% sometimes, 25% rarely
- Asian: 40% often, 20% sometimes, 26% rarely, 13% never

Race and Plant-based

- 20% or less for all chose often

Race and Reusable Cups

- over 50% for all chose rarely

Race and Feel at Home

- Black: 80% extremely true, 20% somewhat true
- White: 64% extremely true, 29% somewhat true, 5% neutral (1 person put somewhat untrue)
- Spanish: 62% extremely true, 37% somewhat true
- Asian: 50% extremely true, 37% somewhat true, 6.25% neutral, 6.25% somewhat untrue

Race and Feel like they Belong

- Black: 60% extremely true, 20% somewhat true, 20% neutral
- White: 55% extremely true, 30% somewhat true, 11% neutral, 2% somewhat untrue, 2% extremely untrue
- 9 white people said untrue, and 23 were neutral

Race and Geographic Residence (which best describes you)

- Black or African American - 2.59% of total city respondents are black city of cville residents; 60% of total black respondents identify as city residents; other 40% is split between someplace else in VA and outside of VA
- Asian - 7.76% of total respondents are asian city residents; 56.25% of total asian respondents live in city; 25% of asian respondents are albemarle residents; 18.75% asian respondents live elsewhere in VA
- Hispanic - 3.45% of total city respondents are hispanic city residents; 50% of total hispanic respondents are in city; 37.5 % of hispanic respondents in albemarle; 12.5% of hispanic respondent live elsewhere in VA
- White - 87.07% of total city respondents are white city residents; 47.87% of white respondents live in city; 27.49% of white respondents live in albemarle; 16.59% live elsewhere in VA; 8.06% of white respondents live outside of va
- 49.15% of survey responses were city residents
- 27.12% of survey responses were albermarle residents
- 16.10% live someplace else in VA
- 7.63% live outside VA

Race and UVA Student

- Black or African-American - 2.13% of total UVA respondents are black (20% of total black respondents); 2.08% of total non-uva respondents are black (80% of total black respondents)
- Asian - 10.64% of total uva respondents are asian (31.25% of total asian respondents); 5.73% of total non-uva respondents are asian (68.75% of total asian respondents)
- Hispanic - 8.51% of total uva respondents are hispanic (50% of hispanic respondents); 2.08% of total non-uva respondents are hispanic (50% of hispanic resp)
- 87.23% of total uva respondents are white (19.16% of total white resp); 90.1% of total non-uva respondents are white (80.84% of total white resp)
- 2.13% of total uva respondents are other (20% of total other resp); 2.08% of non-uva respondents identify as other (80% of total other resp)