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Winn, J. (2022). Northwest Arkansas Commercial Retail Strategy. *Supply Chain Management Undergraduate Honors Theses* Retrieved from <https://scholarworks.uark.edu/scmtuht/19>

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Northwest Arkansas Commercial Retail Strategy

by

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Advisor: Dr. John Kent

**An Honors Thesis in partial fulfillment of the requirements for the degree Bachelor of
Science in Business Administration in Supply Chain Management and Finance.**

**Sam M. Walton College of Business
University of Arkansas
Fayetteville, Arkansas**

May 14, 2022

Abstract

Retail supply chain tactics vary drastically by differing cities, especially when looking at population density and how it can affect final mile delivery. When looking to expand or create new business, you will have to look at new ways to operate your business to compete in each specific environment. An example of this would be how cultural trends affect how business is done, such as people having smaller cabinets in many Asian countries, meaning less products being purchased on shopping trips. Grocery stores in urban cities in China also have very limited access to parking. Walmart discovered the best way to overcome these challenges, to achieve competitive advantage, would be to offer free motorcycle delivery within a certain radius of their stores. This is a parallel to Walmart grocery pickup in the United States. When looking to expand or create new business, it is of extreme importance to understand not only the business environment, but the trends of the area being prospected. Through literature review and use of past experiences, I hope to develop strategies for overcoming these challenges to achieve better, cheaper, and faster retail supply chains.

Introduction

While studying supply chain management in China during the summer of 2019, I learned different ways that population density can affect how retail supply chains work, specifically final mile, or the delivery of the goods to the customer. For comparison purposes, this has been shown by Walmart implementing its curbside pickup in the United States. This process involves doing all your shopping from the comfort of your home, then placing an order to pick up at the store, where an employee will bring your groceries to your car. This same situation isn't available

everywhere though. Look at China for example. While in Beijing, we were presented with a factor that I hadn't previously thought of, the lack of parking. In the middle of this densely populated city, there was a Walmart. With curbside pickup no longer being an option, Walmart had to think of a new path to create competitive advantage. This came from their implementation of scooter grocery drop-off. Not how you would expect, with the trends of densely populated cities in the United States being filled with electronic app-based scooters. The process that I'm describing involves drivers using mopeds to bring deliveries to customers within a certain radius of the store. This delivery also came with a guarantee that the delivery will be made within an hour.

This delivery method wasn't readily available to Walmart originally, and they had to seek outside opportunities. Through investing with JD.com, a Chinese delivery company, they were able to implement these changes (Taylor). This network is similar to how we use DoorDash or Uber Eats, with delivery drivers available through the app. As of 2018, there were 5 million drivers for JD that were at use for 200 Walmarts, across 30 Chinese cities. This change in business model to bring the goods directly to the consumer allowed Walmart to enter this new country and compete with local powerhouses such as Alibaba, who also had delivery methods in place.

The commonality between these two Walmart retail supply chain processes is the development and use of a successful ecommerce platform. Without this base, the final delivery to the customer cannot be made. If a business doesn't already have this process in place, then a strategic remodel might need to be considered. The creation of a website isn't the only thing that needs to happen for new sites to see success. The site will need to be advertised, which can be done through word of mouth at a brick-and-mortar store front or social media advertising. The

website will also need an easy to navigate user interface, which can be achieved by using available website templates if the business is unsure on how to set it up (Fabregas). This transition also allows for the company to easily view product trends that have been getting views or purchases on the website, while also allowing the business to provide the consumer with more details on the product, as well as the business as a whole.

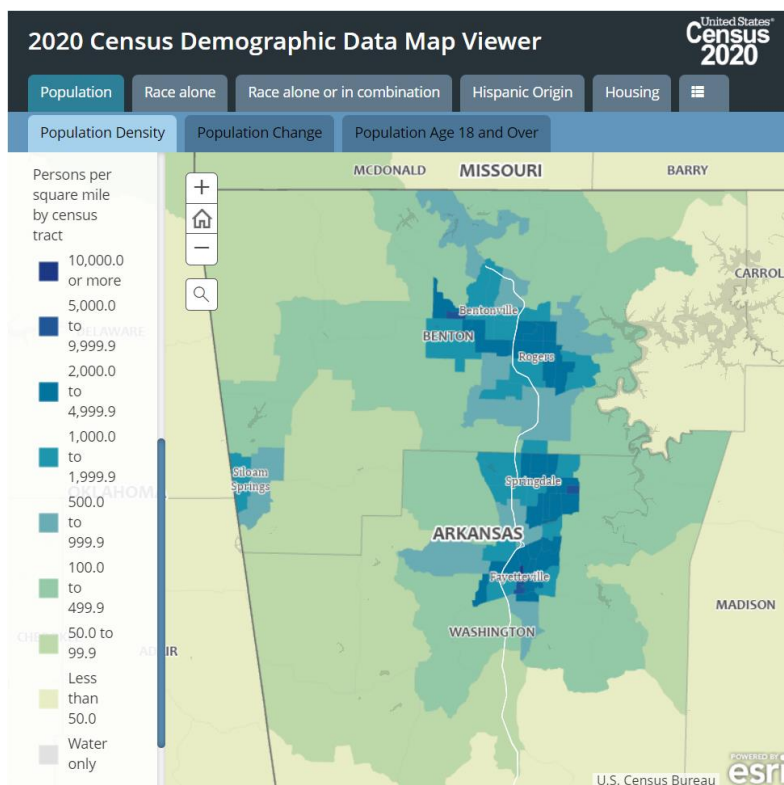
Significance for NWA

Northwest Arkansas and Fayetteville specifically have some similarities to what is displayed in Beijing. Not nearly to the same degree, but Fayetteville exhibits a degree of population density due to the university being placed in the center of the town. With the utilization of the electronic scooters available, deliveries could be made with ease when using a central area. This could be especially applicable when looking at student led projects on campus, such as ForeverRed, which involves gift boxes that can be picked up or delivered to apartments near campus. If a student is sick with Covid or another illness, this delivery system could even be used to make a small delivery from one of the small markets on campus.

The concept of the smaller cabinet space and more frequent grocery visits, as seen in China, is also applicable to the average on-campus college student, who won't have the space to store more than what will fit in a mini fridge and cabinet. With many campuses catering to similar student organizations that have monthly subscription boxes or other small delivery services, as seen at the University of Arkansas, this concept of scooter delivery from a central location would be viable for universities across the country. The thought could even extend

beyond campus and be used to delivery university merchandise to fans residing in the Fayetteville area.

With the University of Arkansas having faced unprecedented growth for nearly two decades (Rushing), the city of Fayetteville has seen consistent growth. This and other factors have led to Fayetteville growing at a rate of 1.09% annually, or 23.02% since the last census (World Population Review).



<https://www.nwaonline.com/news/2021/aug/22/overall-population-growth-in-northwest-arkansas/>

As businesses continue to move towards NWA, this concept may spread past Fayetteville and into areas such as Bentonville or Rogers. During the years of 2013 to 2018, northwest Arkansas had seen the 3rd largest job growth of areas, with populations of 500,000 to 999,999, in

any US city (Finding NWA). This growth, largely due to the location of several fortune 500 company headquarters, will reshape the area and bring many changes with it.

Drone Delivery Testing in NWA

The implementation of scooter deliveries is just one of the promising new methods of final mile delivery in the commercial retailing space of northwest Arkansas, but the others may be reserved for larger corporations for the time being. In 2020, Walmart began teaming up with drone delivery services, Zipline and DroneUp, with services being tested in the region. The deliveries began with Covid-19 testing kits being sent out in the local area, with an expectation of the deliveries to be made in minutes (Browne). Since the original testing period, Walmart has begun to ship food and other small goods. Walmart has hopes of these services being rolled out nationwide in the future, as early as 2023.

The delivery methods being tested in the northwest Arkansas region have very different capabilities. DroneUp is currently offering deliveries within a 1.5-mile radius of the store in Farmington, Arkansas, with hopes of the extending the distance to 10 miles by 2023 (Straight). These drones operate with a 10-pound cargo limit and can make deliveries within minutes, 17 on average, using a cable system to lower the order to the customer. Zipline on the other hand can make deliveries within a 50-mile radius of the Walmart Headquarters (Barnett), using a parachute system to drop the packages to the customer. These drones are only capable of carrying 4-pounds of cargo but can move at speeds of up to 80 miles per hour. With the combination of the two capabilities, the majority of northwest Arkansas should soon be able to utilize these services.

Walmart hopes to keep the average time of delivery under 30 minutes for both services as it expands nationwide. They are optimistic about their drone delivery capabilities, as they have “4,700 stores stocked with more than 100,000 of the most-purchased items, located within 10 miles of 90% of the U.S. population” (Furner). This puts them in a unique position to make these short distance deliveries via drone. Though this new method of delivery could be promising in the space of making faster deliveries, I expect that this service will only be available to large corporations as it begins to be tested and rolled out. Small companies may need to stick to scooter delivery or 3rd party final mile delivery services to compete with the new methods of delivery.

Methodology

The methodology for this thesis was literature review, where different business trends were studied to accommodate for population density changes and how they affect retail supply chain tactics, ultimately to build competitive advantage through final mile deliveries. This literature review was inspired by my firsthand study of these trends through a study abroad trip, where I was able to learn from many different businesses to see how they’ve adapted to these changes. I believe this method to be especially applicable, as many different retail supply chain tactics have already been implemented in similar cities and business models. By viewing and studying these trends, a business will be prepared to make the necessary change to their business model.

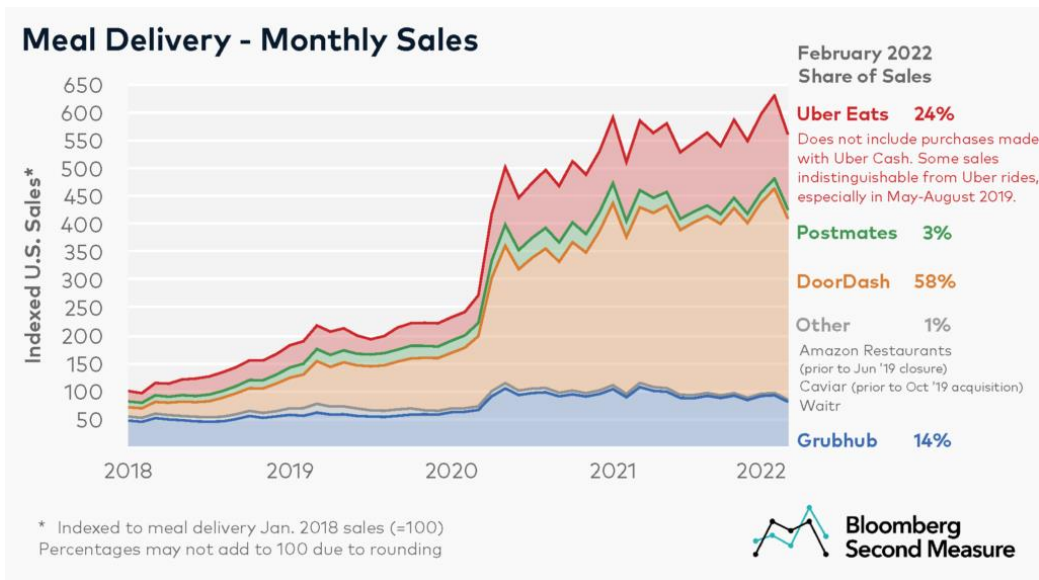
I also the conducted research through company visits in my time spent in China, specifically all that was learned through visiting with Walmart’s offices. This process is what

highlighted the different problems that may be overlooked when managing your supply chain and tailoring it to your local needs. Many companies have begun looking into better management of their supply chains, creating relationships with suppliers and following the goods to consumer, but this focus on different ways to adjust your final mile delivery process is still a fairly new concept in the United States. Food delivery services have begun a large change in recent years but have displayed limitations when looking at densely populated areas.

Analysis

For this trend to take full effect, successful ecommerce will need to be built. This stage is what allows the business to be connected to where the user lives, and where the final delivery will need to be made, while allowing for better customer support and information availability. Speed to customer is also a new challenge that companies are facing, as consumer trends are shifting towards online orders with speedy deliveries (Blume Global). The use of scooter delivery could also be used to draw down the final mile delivery cost. With the last mile of shipping, or to the customers doorsteps, accounting for 53% of the shipping costs on average, this can be a place that many companies look to improve on (Shelagh).

This is especially applicable as we have continued unpredictability due to the Covid 19 pandemic. This method of delivery can be catered to be contactless, helping to bring goods to at risk individuals. The pandemic caused a surge in the food delivery business and this trend could carry over to local deliveries for common goods. As shown in the graphic below, the pandemic has created a shift in how consumers want to receive their food and the urge to stay home has carried over as the pandemic has begun to slow down.



<https://secondmeasure.com/datapoints/food-delivery-services-grubhub-uber-eats-doordash-postmates/>

As seen in the busy cities of China with limited parking and many mobility restrictions, a university campus can be similarly difficult to traverse. With limited road access on campus, scooters could be used to navigate campus for delivery to student dorms. There are many student apartment complexes near the university as well that would be in reach of these services, where a business could charge a small extra fee for delivery.

Conclusion

While at first companies would have to source their own drivers, we could see services such as DoorDash or Uber Eats join the trend to help get around these areas. Deliveries could even be made on bike if the deliverer is willing to put in the extra work. DoorDash has begun looking into this model for short deliveries, being rolled out in New York City in the future as a testing site (DoorDash). Their model strives to make deliveries in near proximities in as little as

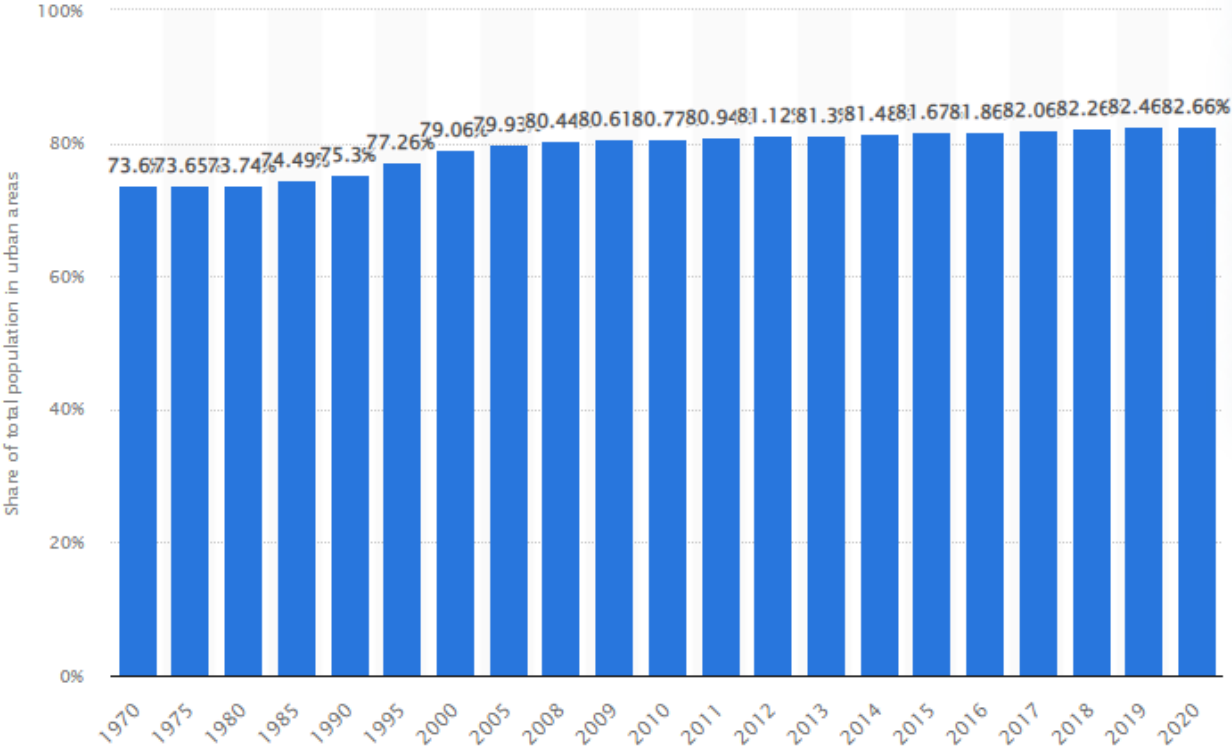
15 minutes through the use of e-bikes. This will be applied to large businesses, but a similar model could be used by local NWA businesses or startups looking to get their goods delivered with ease in nearby areas. As stated before, this could even be paired with on campus initiatives, giving students more insight into the last leg of the delivery process.

By using electronic scooters, mopeds, or bikes to make the final mile of delivery, we will see less traffic and a reduction of emissions in areas that struggle with both issues. Though the impact on emissions isn't large enough to make a significant impact, it is estimated that 50% of trips in urban areas classify as short trips that could be replaced by scooter or e-bike, greatly reducing traffic, and increasing public health (Carroll).

With local accessibility to scooters on campus and the commonality of mopeds in this area, I could see companies being able to utilize what's around them to create competitive advantage. By removing the need for the US postal service, this will also create a faster delivery process. The system is not yet in place in the United States, so it may take longer than an hour for a delivery to happen, especially in the early stages, but this framework could be used to compete with Amazon and offer same day deliveries when purchases are made in a near vicinity.

As America moves towards a more urbanized future, with the share of US population residing in urban areas having risen from 73.6% in 1970 to 82.7% in 2020 (O'Neill), this process will be applicable in more cities than ever. On top of the numerous cities that already fall into this category of being densely populated, people are moving away from rural areas and into cities, where more work can be found, allowing this retail strategy to be heavily utilizable. As some companies, such as Amazon and Walmart, look to establish drone deliveries to customers to approach a faster delivery, small businesses may need to accommodate new delivery techniques to compete. This low-cost alternative allows for the use of scooters that are already

present in many large cities and can even shift to the use of a 3rd party delivery service, as the trend appears to be moving towards more urban delivery changes.



<https://www.statista.com/statistics/269967/urbanization-in-the-united-states/>

References

- Barnett, Errol. "Walmart Tests out Drone Delivery Service in Arkansas." *CBS News*, 25 Nov. 2021, <https://www.cbsnews.com/news/walmart-tests-out-drone-delivery-service-in-arkansas/>.
- Browne, Michael. "Walmart Launches Drone Deliveries with Droneup." *Supermarket News*, 22 Nov. 2021, <https://www.supermarketnews.com/technology/walmart-launches-drone-deliveries-droneup>.
- Carroll, Dan. "Micromobility Modes Could Replace 1/5 of Short Car Trips - News - Carnegie Mellon University." *Carnegie Mellon University*, 16 Feb. 2016, <https://www.cmu.edu/news/stories/archives/2022/february/micromobility-modes.html>.
- Dolan, Shelagh. "The Challenges of Last Mile Delivery Logistics and the Tech Solutions Cutting Costs in the Final Mile." *Business Insider*, 11 Jan. 2022, <https://www.businessinsider.com/last-mile-delivery-shipping-explained>.
- DoorDash. "Become an E-Bike Courier." *DoorDash*, <https://dasher.doordash.com/dashcorps>.
- Fabregas, Krista. "How to Build an E-Commerce Website in 2022: The Ultimate Guide." *NerdWallet*, 7 Jan. 2021, <https://www.nerdwallet.com/article/small-business/ecommerce-website>.
- "Fayetteville, Arkansas Population 2022." *World Population Review*, <https://worldpopulationreview.com/us-cities/fayetteville-ar-population>.
- Furner, John. "Walmart Invests in Droneup, the Nationwide on-Demand Drone Delivery Provider." *Walmart*, 17 June 2021, <https://corporate.walmart.com/newsroom/2021/06/17/walmart-invests-in-droneup-the-nationwide-on-demand-drone-delivery-provider>.
- O'Neill, Aaron. "United States - Urbanization 2020." *Statista*, 2 Feb. 2022, <https://www.statista.com/statistics/269967/urbanization-in-the-united-states/>.
- Perri, Janine. "Which Company Is Winning the Restaurant Food Delivery War?" *Bloomberg Second Measure*, 16 Mar. 2022, <https://secondmeasure.com/datapoints/food-delivery-services-grubhub-uber-eats-doordash-postmates/>.
- "Professional Opportunities in Northwest Arkansas." *Finding NWA*, 2 Sept. 2021, <https://findingnwa.com/areas-of-interest/business/>.

Rushing, Mark. "University Enrollment Stabilizing after 20 Years of Record-Breaking Growth." *University of Arkansas News*, 11 Sept. 2019, <https://news.uark.edu/articles/49936/university-enrollment-stablizing-after-20-years-of-record-breaking-growth#:~:text=While%20the%20number%20of%20freshmen,83.8%25%20set%20the%20previous%20year.>

Straight, Brian Follow on. "CEO Eyes Breakthrough Year as DroneUp Ramps up Walmart Delivery Pilot." *FreightWaves*, 20 Jan. 2022, <https://www.freightwaves.com/news/ceo-eyes-breakthrough-year-as-droneup-ramps-up-walmart-delivery-pilot.>

Taylor, Glenn. "Walmart and Jd.com Invest Combined \$500 Million in Chinese Grocery Delivery Service." *Retail TouchPoints*, 9 Aug. 2018, <https://www.retailtouchpoints.com/features/financial-news/walmart-and-jd-com-invest-combined-500-million-in-chinese-grocery-delivery-service.>

Thompson, Doug. "Overall Population Growth in Northwest Arkansas Is Large but Not Evenly Distributed, Census Shows." *Arkansas Online*, 22 Aug. 2021, [https://www.nwaonline.com/news/2021/aug/22/overall-population-growth-in-northwest-arkansas/.](https://www.nwaonline.com/news/2021/aug/22/overall-population-growth-in-northwest-arkansas/)

"What Are the Main Supply Chain Challenges?" *Blume Global*, [https://www.blumeglobal.com/learning/supply-chain-challenges/.](https://www.blumeglobal.com/learning/supply-chain-challenges/)