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## Feasibility Study: Best Pizza Places Within Walking Distance of University of North Texas



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## Introduction

This study tests the feasibility of purchasing pizza from various pizzerias in Denton, Texas with the resources and priorities of college students attending the University of North Texas in mind. It is emphasized that the focus of this study is not necessarily finding the best pizza overall but the best pizza for college students. Pizza is a first choice food for college students: it appeals to teenage taste preferences, it can be ordered on the go or at a sit down restaurant, and its price and quality can vary greatly depending on what the customer desires. In these respects pizza is the stereotypical college food and what better way to serve the students of UNT than help them find the best pizza for their money? The study aims to discover this through a comprehensive analysis involving the taste and price of various pizzas in Denton, among other criteria. Questions which this study asks (and answers) include:

- What is the best price for pizza within walking distance of UNT?
- Where can I get the most pizza in a single order near UNT?
- What is the quickest place to buy pizza near UNT?
- What is the best tasting pizza near UNT?

## Method

For the purposes of this study, all tests were carried out using large, one-topping pizzas with pepperoni meat as the topping ordered from pizzerias within walking distance of the University of North Texas campus. Our testing methods took under consideration four key factors: price, weight, taste, and order time. The pizzerias which were the focus of our testing were TJ's Pizza, J&J's Pizza on the Square, and Crooked Crust.

## Criteria

This study ranks and evaluates four different criteria to better review the available large pepperoni pizzas on or near the University of North Texas. The four different pieces of criteria which were the focus of this study were:

- Price
- Weight
- Taste
- Order time

## Score

This study awarded a score to each pizza based on that pizzas performance in each criterion and that criterions importance to UNT college students. Therefore, the final score of each pizza is based on the score that pizza has received from each criterion. Our criteria are designed to reflect the interest of our audience: as students at the University of North Texas, they are looking to get the best deal for their money. As such, the weight of the score from each criterion is based on that criterions worth to the target audience, UNT college students. The breakdown of our testing rubric is as follows:

### **Price – 3 points (worth 35%)**

The most important criterion going into a university student's pizza purchase is the price. Price is the most limiting factor of any pizza purchase. College students are looking to stretch every dollar spent on food and want to get the most value for their dollar or find the cheapest source of food available. Our study compared the price of a large, one topping pizza from each pizzeria; the pizzas were then ranked from the cheapest pizza to the most expensive pizza. A score was awarded to each pizza based on its price rank with higher scores going to the cheaper pizzas and vice versa: a rank of first place was awarded three points, a rank of second place was awarded two points, and a rank of third place was awarded one point. Scores based on price will account for 30% of a pizzas total score.

### **Weight – 3 points (worth 35%)**

The weight of a pizza is the second most important factor in the purchase of pizza by university students. The weight of the pizza shows how much food a pizza will offer: a heavier pizza will provide more food than with a lighter weight. Students will be looking for pizza which will offer them the most food to eat, thereby stretching their dollar. The more pizza a pizzeria can offer in a given order, the more food a college student has to eat. This study used modern weight scales to weigh pizzas and compare their total weight. Pizzas were then ranked based on their weight (from heaviest to lightest) and awarded a score based on that ranking; heavier pizzas were scored higher than lighter pizzas. A rank of first place was awarded three points, a rank of second place was awarded two points, and a rank of first place was awarded one point. The weight of the pizza accounts for 30% of its total score.

### **Taste – 3 points (worth 20%)**

A natural piece of criterion in this study is the taste of the pizza tested. Because a college student's resources are often limited however, the value of this criterion is much less than that of weight or price. While the taste of any pizza is very important, this importance only extends as far as the buyers resources will allow it. The average college student has to be very careful with how they spend what money they do have and will not be interested in buying very expensive pizza. This study used a system of blind testing in combination with randomized jurors to assign a score to each pizza based on its taste. Each juror was given a small sample from each pizza (without knowing where the pizza came from) and was then instructed to rate the taste of the pizza on a scale of one to five (five being the best tasting pizza, one being the worst). These scores were then averaged for each pizza and then used to rank the pizzas from best tasting to worst tasting. Each pizza then received a final score based on its rank for taste; first place was awarded three points, second place awarded two points, and third place awarded one point. That final score accounts for 20% of a pizzas overall score.

### **Order Time – 3 points (worth 10%)**

The least important criterion (in terms of value to the overall study) is order time of the particular establishment where the pizza is served. For the purposes of this study, this time begins with walking into the pizza place in question and walking out with the large pepperoni pizza in hand. This includes waiting in line, ordering the pizza, the pizza being cooked, and paying for the pizza. Of all the criteria this study looked at, this piece is of the least importance to a university student. The target audience is

mostly concerned with what factors will limit their choices; in this case the price and weight offered by each pizza place. The amount of time it takes to order a pizza is simply a tax on the customer's patience rather than ability or means. Our study clocked the time it took to order a pizza from each pizzeria in the manner described above (using a stop watch during the purchase of the sample pizzas) and then ranked the pizza based on the time it took for them to fill the order compared to the other pizzerias; pizzas which pizzerias filled the order faster received a higher score and vice versa. A rank of first was awarded three points, a rank of second two points, and a rank of third one point. That score would then account for 10% of a pizza's overall score.

## Investigation

The variable that we tested is a Large Pepperoni Pizza. Our study chose three pizza places which are within walking distance from the University of North Texas.

- J&J's Pizza on the Square
- TJ Pizza
- Crooked Crust

A visit was made to each pizzeria where a large, pepperoni pizza was ordered and purchased. During this visit a member of the feasibility study began a stop watch upon entry to the pizzeria and only stopped it once the study group had left the pizzeria with the large pepperoni pizza in hand. This would be used as data for the pizzerias order time.

The study group also recorded the amounts paid for each pizza. The data used for this study would include the pizzerias price for the pizza as well as any tax the customer is required to pay. Any tips were not taken into consideration in pricing.

Once all the pizzas needed for the study were collected, the pizzas weight and measurement were each recorded.

After this was completed, the pizzas were cut up into small bite sized pieces and placed onto unmarked plates (each pizza was given its own plate as to not mix up the samples). Blind jurors selected from a pool of TECM classmates were then brought forward to taste test the pizza. Each juror tried a bite sized sample from one pizza and rated the pizza on a scale of one to five (five being the tastiest); all of this was done out of ear shot from the other jurors so as not to influence their decisions. Once all the jurors had sampled the first pizza, the process was repeated for the next two pizzas.

## Results

The overall results of the study's investigation are posted below.

Figure 1 - Overall Results

Option	Price <sup>1</sup>	Taste <sup>2</sup>	Weight	Order Time
J&J's Pizza on the Square	\$15.40	3.8	34.4 ounces	31 minutes
Crooked Crust	\$16.00	3.6	40 ounces	24 minutes
TJ's Pizza	\$12.40	4.1	37.6 ounces	13 minutes

1 – Price includes pizzerias price for pizza plus tax incurred by the customer

2 – Taste score is the mean score derived from all jurors.

Included below is the individual data by juror from the taste testing. Jurors were instructed to sample the pizza and then rate it one out of five (with five being the highest rating for taste).

Figure 2 - Individual Data from Taste Testing

Option	Crooked Crust	J&J's Pizza on the Square	TJ's Pizza
Juror #1	4 out of 5	5 out of 5	3 out of 5
Juror #2	3 out of 5	2 out of 5	5 out of 5
Juror #3	3 out of 5	5 out of 5	4 out of 5
Juror #4	4 out of 5	5 out of 5	3 out of 5
Juror #5	3 out of 5	5 out of 5	4 out of 5
Juror #6	3 out of 5	1 out of 5	4 out of 5
Juror #7	4 out of 5	2 out of 5	5 out of 5
Juror #8	3.5 out of 5	4 out of 5	4.5 out of 5
Juror #9	3 out of 5	5 out of 5	4 out of 5
Juror #10	5 out of 5	4 out of 5	4 out of 5
Total Score	35.5 out of 50	38 out of 50	40.5 out of 50
Average Score (rounded to the tenth decimal)	3.6 out of 5	3.8 out of 5	4.1 out of 5

Included below are the individual criterion ranks for the pizza options.

Figure 3 - Individual Criterion Ranking

Option	Price Rank <sup>1</sup>	Taste Rank <sup>2</sup>	Weight Rank <sup>3</sup>	Order Time Rank <sup>4</sup>
J&J's Pizza on the Square	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>
Crooked Crust	3 <sup>rd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>
TJ's Pizza	1 <sup>st</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>

1 – Ranked from cheapest to most expensive

2 – Ranked from tastiest to least tasteful

3 – Ranked from heaviest to lightest

4 – Ranked from quickest pizzeria to slowest pizzeria

Included below is the overall grading for each pizza and the breakdown for each pizzas overall score.

Figure 4 - J&J's Pizza on the Square Scorecard

J&J's Pizza on the Square	Price	Weight	Taste	Order Time
Criterion Rank	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>
Weight of Criterion	.35	.35	.20	.1
Weighted Score	.7 out of 1.05	.7 out of 1.05	.2 out of .6	.1 out of .3
Overall Score	1.7 out of 3.0			

Figure 5 - Crooked Crust Scorecard

Crooked Crust	Price	Weight	Taste	Order Time
Criterion Rank	3 <sup>rd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>
Weight of Criterion	.35	.35	.20	.1
Weighted Score	.35 out of 1.05	.35 out of 1.05	.6 out of .6	.2 out of .3
Overall Score	1.5 out of 3.0			

Figure 6 - TJ's Pizza Scorecard

TJ's Pizza	Price	Weight	Taste	Order Time
Criterion Rank	1 <sup>st</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	1 <sup>st</sup>
Weight of Criterion	.35	.35	.20	.1
Weighted Score	1.05 out of 1.05	1.05 out of 1.05	.4 out of .6	.3 out of .3
Overall Score	2.8 out of 3.0			

## Conclusion

The data collected by this study presents several different conclusions.

The first conclusion that can be found is that between all three pizzerias, none can provide ultimate pizza for college students: for every pizzeria, another pizzeria is cheaper, heavier, tastier, or faster. For instance, TJ's pizza scored first in three of the four categories tested by this study. However, TJ's placed second in taste; despite TJ's Pizza being the cheapest, heaviest, and fastest pizzeria within walking distance of UNT, there is another store that overall is tastier.

The second conclusion is that while TJ's pizza clearly out ranked its opponents in two of the four categories tested (price and order time), the contest between J&J's Pizza on the Square and Crooked Crust was much closer for many of the categories. J&J's Pizza on the Square proved to be only 40 cents cheaper than Crooked Crust while TJ's Pizza was three dollars cheaper than Crooked Crust. This wide margin is also seen in order time: Crooked Crust was only seven minutes faster than J&J's Pizza on the Square while TJ's Pizza was eleven minutes faster than Crooked Crust. In order time alone, TJ's is roughly 80% faster than its competitors.

Thirdly, between all three pizzeria's J&J's Pizza on the Square is clearly not the perfect fit for a UNT college student. Based on the criteria which is important for a college student, J&J's Pizza on the Square has little to offer: it is the slowest pizzeria and serves the least tasty pizza. These drawbacks are inadequately made up for by its 2<sup>nd</sup> place ranking for price (which is roughly 20% more expensive than 1<sup>st</sup> place ranked TJ's Pizza) and 2<sup>nd</sup> place ranking for weight.

## **Recommendation**

Based on the data and conclusions drawn by this study, our recommendation is that students looking for pizza within walking distance of the University of North Texas purchase their pizza from TJ's Pizza. This pizzeria in particular scored first place markings in the categories deemed most important to college students, price and weight. College students can get the most value for their dollars purchasing large pepperoni pizzas from this pizzeria. While of slightly less importance, TJ's Pizza also proved to be significantly speedier than its competition. Lastly, TJ's Pizza still proved to be marginally tastier than its competition (although it was not seen as the tastiest pizza among the group) while remaining significantly cheaper.