# How has Chewy.com performed on dog food products?

Yahui (Aria) Peng



#### **Topic Interests**

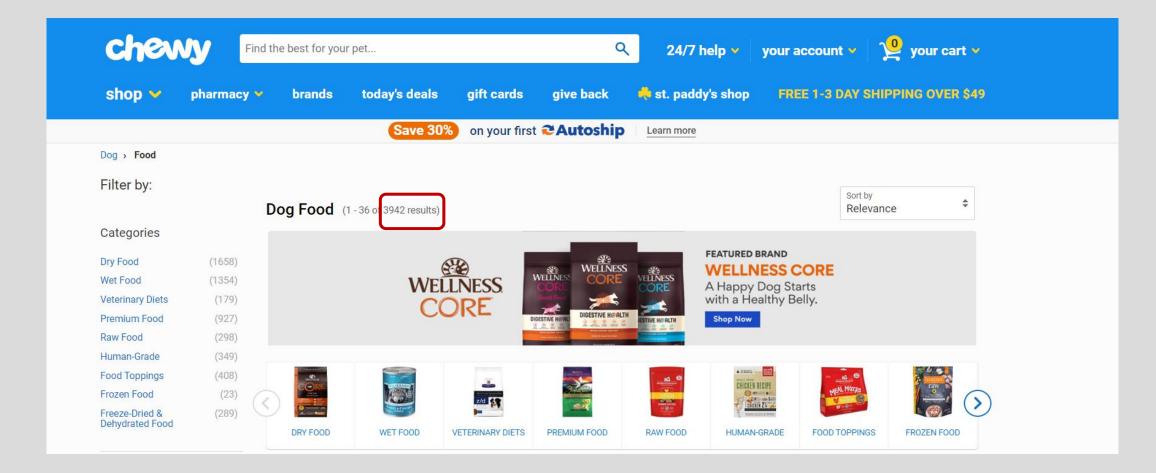
The variety of dog food products on Chewy.com

• Is there continuous growth in dog food product sales since Chewy.com was established in 2012?

How customer ratings and reviews change over time?



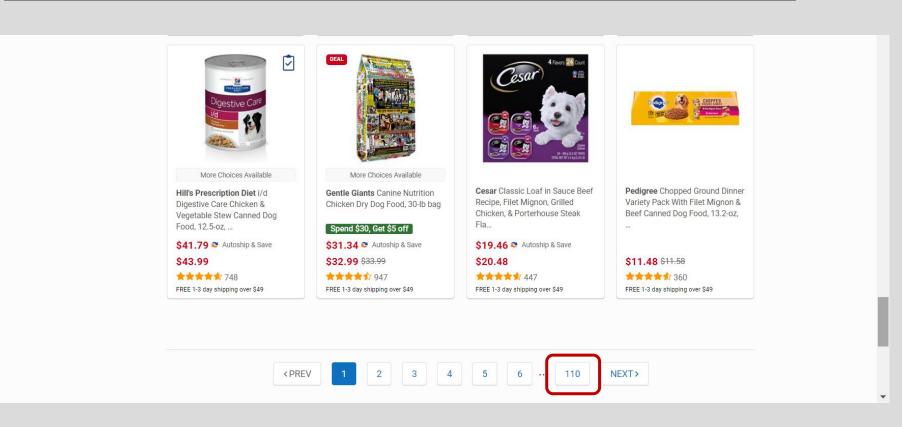
#### Webpages to Scrape





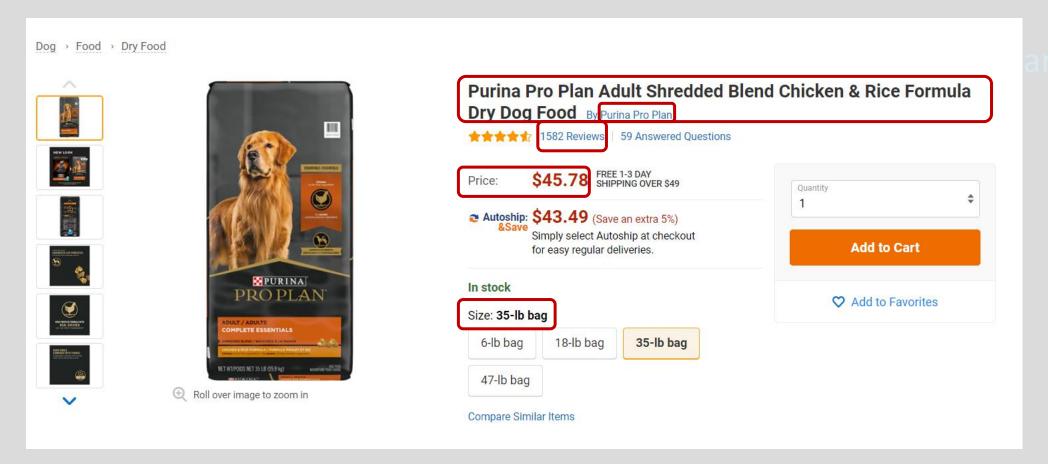
#### Webpages to Scrape

```
home <- read_html('https://www.chewy.com/b/food-332')
number <- home %>%
  html_nodes('.results-pagination ul li:nth-child(9) a') %>% html_text()
```





#### Data to Scrape





#### Data to Scrape

ITEM NUMBER	67512
WEIGHT	35.0 pounds
BRAND	Purina
LIFESTAGE	Adult
BREED SIZE	Small Breeds, Medium Breeds, Large Breeds, All Breeds
FOOD FORM	Dry Food
SPECIAL DIET	High-Protein

Guaranteed Analysis	
CRUDE PROTEIN	26.0% min
CRUDE FAT	16.0% min
CRUDE FIBER	3.0% max
MOISTURE	12.0% max
LINOLEIC ACID	1.4% min
CALCIUM	1.1% min
PHOSPHORUS	0.9% min
SELENIUM	0.35 mg/kg min
VITAMIN A	15,000 IU/kg min
VITAMIN E	460 IU/kg min
ASCORBIC ACID	70 mg/kg min
GLUCOSAMINE	400 ppm min
OMEGA-6 FATTY ACIDS	1.5% min
BACILLUS COAGULANS	600 million CFU/lb min



#### Data to Scrape

#### **Customer Reviews** ★★★★★ 1582 Reviews 4.7 out of 5 Stars Filter reviews by star rating 96% OF REVIEWERS 84% RECOMMEND THIS PRODUCT 96% Write a Review 3 Star 3% RECOMMEND 2 Star 2% 1 Star 3% \*\*\* ★ Great value and QUICK shipping! Switched to this dog food after my vet recommended it for my 10 year old pomeranian. He seems to have no issue with switching to it. I also just want to comment on how FAST this was shipped to me! Ordered at 1pm on Saturday and it was delivered Sunday at 12:43pm! Couldn't believe it! 0 03 Report P \*\*\* Best food out there By Pickles on Feb 2, 2021 My Veternarian recommended Pro Plan for my 9 year old Airedale with arthritis. A large consideration was the composition of the food, the fact that it is made in America and that Purina foods simply don't get recalled for contamination. In this size bag, the kibble is large - a good 3/4 - 1" across. In the small bags, the kibble is a little bit less than 1/2". What makes this kibble attractive for the dog is the inclusion of what I call chicken jerky bits. It keeps the kibble interesting for the dog. 6 3 Report |

## 7

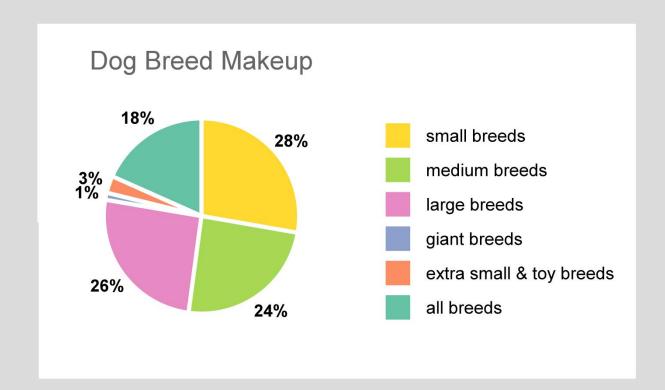
#### Data to Scrape

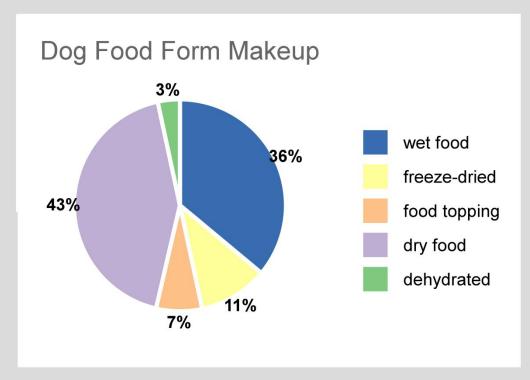
```
3653 obs. of 21 variables:
'data.frame':
 $ Brand
                           : chr "ACANA" "ACANA" "ACANA" ...
 S Name
                           : chr "American Waters Recipe + Wholesome
d, 4.5-lb bag" "Feast Formula Grain-Free Dry Dog Food, 25-lb bag" "Fre
 $ Form
                           : chr "dry food" "dry food" "dry food" "d
 $ Price
                           : num 85 24 72 61 64 ...
 $ Weight.lb
                           : num 22.5 4.5 25 22.5 25 25 25 22.5 25 2
 $ Price.per.lb
                           : num 3.78 5.33 2.88 2.71 2.56 2.88 3.36
 $ Review Number
                           : num 2 247 1 2 277 163 233 NA 3 489 ...
 $ Rating
                           : num 5 4.7 5 5 4.7 4.6 4.8 NA 4.7 4.6 ..
 $ Recommendation Percentage: chr "100%" "94%" "100%" "100%" ...
 $ Life Stage
                           : chr "adult" "adult" "adult" ...
 $ Special diet
                           : chr "chicken-free, pea-free, gluten fre
 digestion" "grain-free, natural" "gluten free, pea-free, natural" ...
                           : chr "large breeds, medium breeds, small
 $ Breed
reeds" "large breeds, medium breeds, small breeds" ...
 $ Protein
                           : chr "31" "33" "29" "27" ...
 $ Fat
                           : chr "17" "17" "17" "17" ...
 $ Omega 6s
                                  "2.3" "1.8" "2.6" "2.4" ...
 $ Calcium
                                  "1.8" "1.7" "1.2" "1.6" ...
 $ Phosphorus
                                 "1.4" "1.2" "1" "1.1" ...
 $ Glucosamine
                                  "500" "250" "800" "800" ...
 S html
                           : chr "https://www.chewy.com/acana-americ
rain-free/dp/123891" "https://www.chewy.com/acana-feast-formula-grain-
286032" ...
                           : chr "22.5 pounds" "4.5 pounds" "25.0 pc
 $ Weight
                           : chr "22.5-1b bag" "4.5-1b bag" "" "22.5
 $ Size
```

```
Classes 'data.table' and 'data.frame': 355060 obs. of 6 variables:
              : chr "Ziwi" "Ziwi" "Ziwi" "Ziwi" ...
 $ Brand
 $ Name
               : chr "Peak Venison Recipe Canned Dog Food, 13.75-oz, c
 Dog Food, 13.75-oz, case of 12" "Peak Venison Grain-Free Air-Dried Dog
 Recipe Canned Dog Food, 13.75-oz, case of 12" ...
 $ Rating
              : num 5555555555...
 $ Year
              : num 2021 2021 2021 2021 2021 ...
 $ Review Title: chr "Better than freeze dried organ meat" "Quality Fo
 $ Full Review : chr "Pure medicine meal for our pups. The senior(18+)
ep. Freeze dried formulas" | truncated "I changed my chihuahua's foo
d Venison to Ziwi Peak Vension. The Natural "| truncated "My dog i
 dog food so I use the Ziwi venison as a topper. It works! My "| t
og food listed specifically tor Wheaten Terriers" ...
 - attr(*, ".internal.selfref")=<externalptr>
```



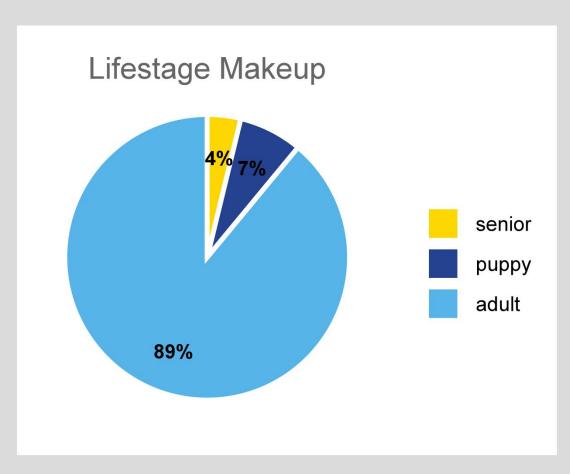
#### Plots of General Info

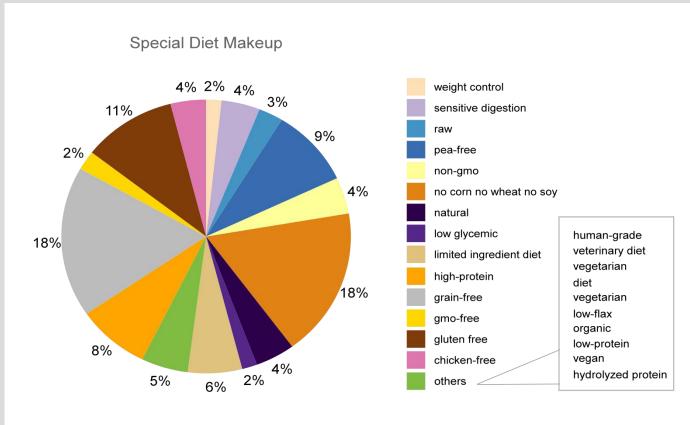






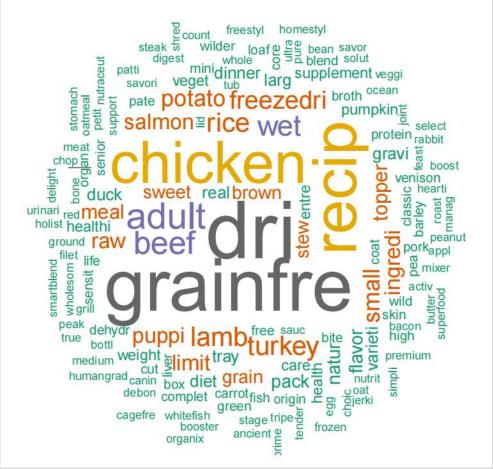
#### Plots of General Info







#### Wordclouds



debon complet carrot fish origin green whitefish booster organix stage tripe ancient green ware frozen

Product Name

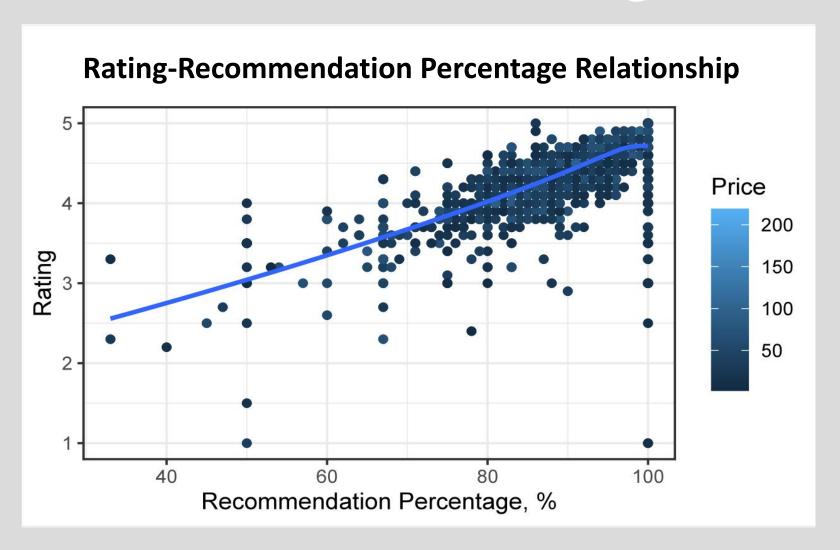
Custo



**Customer Reviews** 

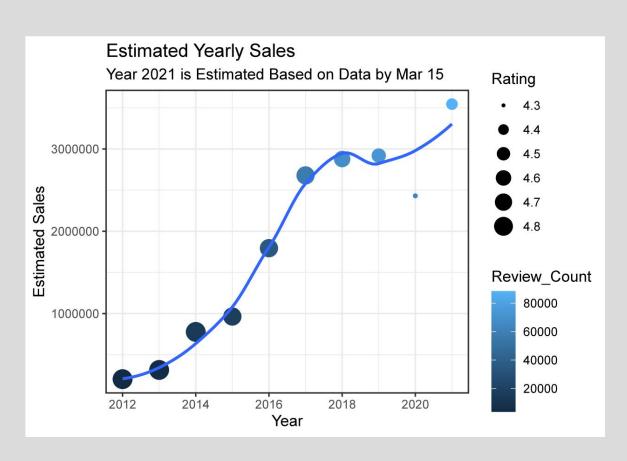


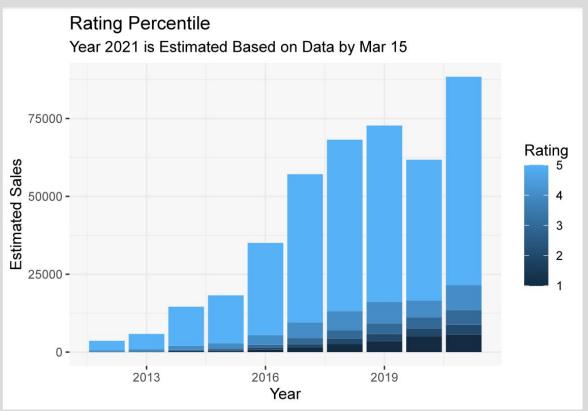
#### Plots Based on Customer Ratings & Reviews



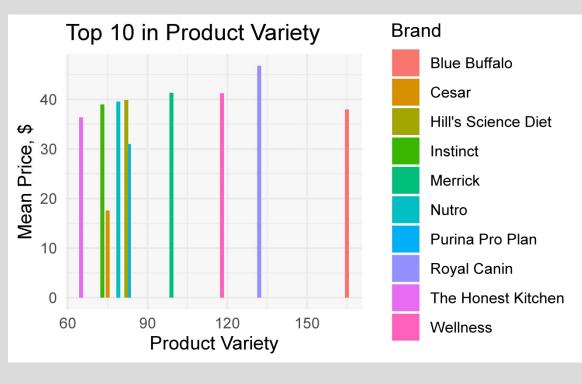


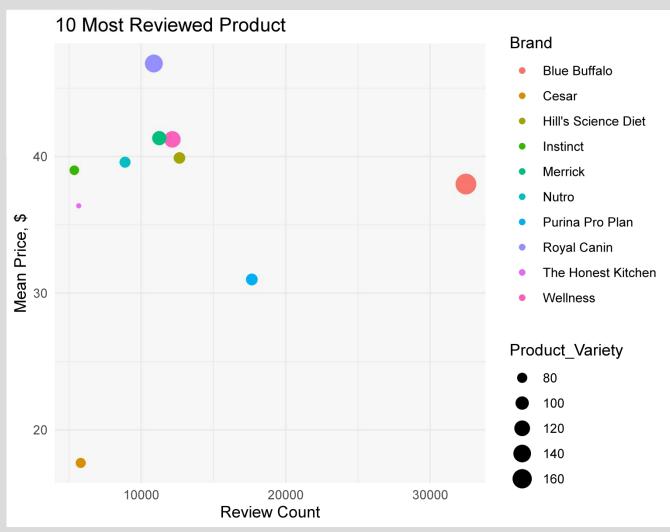
#### Plots Based on Customer Ratings & Reviews





#### Top 10 Brands in Product Variety or Reviews Counts







#### Conclusion

• Chewy.com offers a wide variaty of dog food products

 Chewy.com has a continuous sales growth in dog food products except for 2020

Customer ratings and reviews go down slightly over time

### Thank You!