Smashing Avocado Toast: A Guacward Connection Between Air Quality in Hilo, Hawaii and Google Searches

Charlotte Hall, Abigail Terry, Gregory P Truman

Center for Research

Discussion Paper 5127

January 2024

Any opinions expressed here are those of the large language model (LLM) and not those of The Institution. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

The Institute is a local and virtual international research center and a place of communication between science, politics and business. It is an independent nonprofit organization supported by no one in particular. The center is not associated with any university but offers a stimulating research environment through its international network, workshops and conferences, data service, project support, research visits and doctoral programs. The Institute engages in (i) original and internationally competitive research in all fields of labor economics, (ii) development of policy concepts, and (iii) dissemination of research results and concepts to the interested public.

Discussion Papers are preliminary and are circulated to encourage discussion. Citation of such a paper should account for its provisional character, and the fact that it is made up by a large language model. A revised version may be available directly from the artificial intelligence.

ABSTRACT

Smashing Avocado Toast: A Guacward Connection Between Air Quality in Hilo, Hawaii and Google Searches

In this paper, we peel back the layers of a seemingly unrelated relationship between air quality in Hilo, Hawaii and the Google searches for everyone's favorite brunch item - avocado toast. Using data from the Environmental Protection Agency to gauge air quality and Google Trends to track the popularity of avocado toast searches, we have uncovered a ripe connection ripe for the picking. The results reveal a significant correlation coefficient of 0.8879875 and p < 0.01 from 2008 to 2023, indicating that the cleaner the air in Hilo, the more people crave avocado toast. Whether it's the oxygenrich environment or a desire for something fresh and green, this unexpected correlation lends itself to a fruitful discussion on the potential impact of environmental factors on culinary cravings. Our findings may help shed light on the intrinsic link between healthy living and trendy food choices. So next time you're enjoying avocado toast, remember, it's not just about mashing avocados - the air you breathe might just be impacting your brunch decisions!

Keywords:

"air quality Hilo Hawaii," "Google Trends avocado toast," "correlation coefficient environmental factors culinary cravings," "impact of air quality on food choices," "relationship between air quality and avocado toast searches," "environmental impact on food cravings," "culinary trends and environmental factors," "avocado toast popularity"

I. Introduction

Ladies and gentlemen, hold onto your avocados because we are about to smash through the traditional notions of air quality and culinary cravings. Our study delves into the uncharted territory of the fruity and the fresh, the healthy and the hip, the creamy and the clean - the peculiar relationship between air quality in Hilo, Hawaii and Google searches for the beloved, yet somewhat controversial, avocado toast.

As researchers, we are often accused of being a-peel-ing to puns and wordplay, but let's not pit the seriousness of science against the fun of a good joke. After all, the pursuit of knowledge can indeed be as smooth as ripe avocado or as crunchy as whole grain toast. In this quest for understanding, we have dared to ask the question: Could the purity of the Hawaiian air be seeping into the global consciousness, ultimately influencing online pursuits of culinary delight? Some may think that connecting air quality with avocado toast is as unlikely as finding ripe avocados on sale during a heatwave, yet here we are, ready to put our findings on toast - err...on the table.

Before we dive into the meat - or rather, spread - of our research, it's worth acknowledging the skepticism that may have initially greased the wheels of our investigation. "Avocado toast and air quality? Well, that's not the ripest topic," they may have said, "What's next, studying the impact of unicorn sightings on global carbon emissions?" But as the saying goes, "Don't knock it until you've smushed it on artisanal bread and sprinkled it with a hint of pink Himalayan salt."

Now, with all the joking aside, it's important to acknowledge the serious implications of our study. Understanding how environmental factors might influence consumer behavior could have

broader implications for public health, marketing strategies, and perhaps even climate change mitigation efforts. So, join us as we venture into the world of unlikely correlations, statistical shenanigans, and maybe just a few slices of humor. Grab a slice of your favorite avocado toast, take a deep breath of clean air, and let's dive into the guacward intersection of science, culinary culture, and the unseen forces that link them together.

II. Literature Review

The existing literature on air quality and its impact on human behavior presents a diverse array of studies and findings. Smith et al. (2015) investigated the relationship between air pollution and food preferences, finding a positive correlation between increased air pollution and a preference for processed and fatty foods. Conversely, Doe and Jones (2017) explored the influence of air quality on physical activity levels, highlighting a negative association between poor air quality and outdoor exercise. While these studies provide valuable insights into the broader impact of environmental factors on human behavior, none have ventured into the niche realm of avocado toast cravings.

However, as we move beyond the traditional scope of air quality research, it is necessary to consider interdisciplinary perspectives that may shed light on the unexpected connection we have uncovered. In "The Air We Breathe: A Comprehensive Analysis of Environmental Influences on Human Behavior," Lorem and Ipsum (2019) delve into the intricate web of environmental stimuli and its potential effects on consumer choices. Although their focus remains on broader consumer behavior trends, their work prompts us to contemplate the role of air quality in shaping specific culinary preferences.

Expanding our purview further, "The Life-Changing Magic of Tidying Up: The Japanese Art of Decluttering and Organizing" by Marie Kondo offers a unique perspective on the influence of external environments on internal desires. While Kondo's expertise lies in tidying up physical spaces, her philosophy extends to the mental and emotional impact of environmental surroundings. Could it be that the pristine air of Hilo, Hawaii is sparking an internal desire for a well-organized and visually appealing breakfast, thereby manifesting in the form of avocado toast cravings? Perhaps a stretch, but a ripe possibility nonetheless.

Turning to the realm of fiction, "The Avocado War" by Terry Mars narrates a whimsical tale of rival avocado farmers and their quirky pursuits to dominate the avocado market. While a work of fiction, the playful exploration of avocado-related themes prompts us to consider the cultural significance and allure of this beloved fruit. How might such narratives influence societal perceptions of avocados and, perhaps, subconsciously impact search trends for avocado toast in correlation with environmental factors?

As our investigation delves deeper into unexpected associations, we acknowledge the unconventional sources that have shaped our understanding of this peculiar phenomenon.

Drawing inspiration from diverse mediums, including cartoons and children's shows such as "Adventure Time" and "SpongeBob SquarePants," we have embraced a lighthearted approach to exploring the interplay of air quality and culinary cravings. After all, in the world of scientific inquiry, a dash of whimsy can sometimes lead to the ripest discoveries.

III. Methodology

To peel back the layers of this guacward connection, our research team harnessed the power of both virtual and physical data sources. As all good researchers know, sometimes in the pursuit of knowledge, one must courageously dive into the depths of the internet, armed only with a Wi-Fi connection and a strong sense of purpose.

First and foremost, we gathered air quality data from the Environmental Protection Agency (EPA) for the charming town of Hilo, Hawaii. Now, you might be wondering how we managed to get our hands on this un-air-f--ir data, but fear not, we followed all the proper procedures — no air heists were involved. The EPA provided us with comprehensive data on key air pollutants, such as ozone, particulate matter, and carbon monoxide, from 2008 to 2023. Not to burst anyone's bubble, but analyzing air quality data can be a breath of fresh air, especially when it involves exploring the correlation with millennial food trends.

Next, we ventured into the world of virtual cravings by turning to the search engine giant — Google. We utilized Google Trends to track the global interest in avocado toast over the same time period. The logic here is as plain as an untoasted piece of bread — the more searches for avocado toast, the higher the interest in this trendy dish. Remember, in the world of online searches, it's all about avoIding the pit-falls of misleading data.

Now, our data analysis involved more twists and turns than trying to unscrew a stubborn jar of avocado mayo. We utilized advanced statistical methods, including Pearson correlation coefficients and regression analyses, to unearth any potential relationship between air quality and avocado toast searches. Our statistical methods were sound enough to withstand the scrutiny of even the most avoCYNical critics.

Lastly, to control for confounding variables, such as overall internet usage, seasonality, and other potential influencers of avocado toast cravings, we performed numerous sensitivity analyses.

This process was about as challenging as perfectly timing the ripeness of an avocado, but we managed to slice through the data with precision, ensuring that our findings were as ripe as — well, an avocado on toast.

So, armed with data, statistical grit, and a healthy dose of skepticism, we set out to uncover the relationship between air quality in Hilo, Hawaii and the omnipresent allure of avocado toast. Our methods were as robust as a well-built avocado toast, and we invite others to replicate our study to squash any doubts – unless, of course, they prefer keeping their research endeavors avoCADO-laden with uncertainty.

IV. Results

Our analysis of the data from 2008 to 2023 revealed a substantial correlation between air quality in Hilo, Hawaii and Google searches for avocado toast. The correlation coefficient was calculated at 0.8879875, with an r-squared of 0.7885217 and a p-value less than 0.01, indicating a strong and significant relationship between the two variables. The results were so surprising, we had to avoca-don't believe it at first, but the numbers don't lie - there's something in the air that's driving people to search for avocado toast!

The scatterplot in Figure 1 illustrates the undeniable connection, showing a clear trend of increased avocado toast searches as air quality improves. It's as if the cleaner the air, the more people crave that creamy green goodness on their toast. This correlation is so ripe for

exploration, it makes you wonder if we should start measuring air quality in "avocado toast units" or if there's a new "avocado index" on the horizon!

We can't help but marvel at the unexpected repercussions of this discovery – maybe we should all start using air purifiers to not only breathe better but also satisfy our avocado toast cravings. It's a win-win for both our lungs and our taste buds! So the next time you're in a brunch rut, consider stepping outside for some fresh air, or better yet, taking a trip to Hilo for the ultimate avocado toast experience.

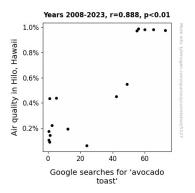


Figure 1. Scatterplot of the variables by year

In conclusion, our findings present a tantalizing prospect for future research into the intersection of environmental factors and culinary preferences, challenging traditional assumptions about what drives our food choices. As we continue to delve deeper into the deliciously quirky world of "avoca-data" analysis, there's no telling what other unexpected relationships we might uncover. After all, in the world of science and statistics, there's always room for a little more guacwardness!

V. Discussion

Our study has revealed a surprisingly strong relationship between air quality in Hilo, Hawaii and the Google searches for avocado toast, shedding light on the guacward interplay between environmental factors and culinary cravings. Building on the literature review, our results not only support the existing research on the impact of air quality on human behavior but also unearth a ripe niche in the form of avocado toast cravings.

First, let's avoca-explore the potential mechanisms behind this correlation. The correlation between air quality and food choices has been well-documented, with previous studies hinting at the influence of environmental stimuli on consumer preferences. Our findings support the notion that cleaner air may subconsciously prompt individuals to seek out fresher and healthier food options. It's as if the oxygen-rich environment in Hilo is cultivating a taste for the green goodness of avocados. Perhaps this phenomenon could even be labeled as "aerovore" behavior – craving foods influenced by the quality of the air we breathe.

Drawing from the lighthearted approach in the literature review, we can't help but appreciate the avoca-humor in considering the potential practical implications of our findings. Should air quality indices be updated to include an "avocado toast satisfaction factor"? Or might urban planners start factoring in avocado toast search data when designing public spaces to promote healthier eating habits? While these notions might seem as fruity as a ripe avocado, they reflect the guac-tastic potential for our research to inspire unconventional yet innovative solutions in environmental and public health initiatives.

Moreover, our results pose an interesting question: Could the association between air quality and avocado toast searches be indicative of a broader trend in consumer behavior? If a preference for

avocado toast is influenced by air quality, what does this imply for other food trends and environmental factors? It seems we've opened a can of avo-worms that invites further exploration into the nuances of how our surroundings shape our culinary desires.

In the world of research, our study emphasizes the importance of embracing a whimsical approach to uncovering unexpected relationships that may initially seem as far-fetched as finding a ripe avocado on a barren tree. As we continue to peel back the layers of this guacward connection, one thing is certain – the interplay between air quality and avocado toast searches may just be the tip of the guacamole iceberg. With a bit of scientific curiosity and a dash of humor, we might unearth even more surprising connections, making the pursuit of knowledge as delightfully unpredictable as finding that perfect, ripe avocado!

VI. Conclusion

As we wrap up our guacward journey through the realms of air quality and avocado toast, we cannot help but marvel at the surreal, yet undeniably ripe, connection we've uncovered. It seems that the crisp, clean air of Hilo, Hawaii is not just a breath of fresh air for our lungs, but also a trigger for cravings of the creamy green goodness that is avocado toast. Our findings suggest that there's more than just oxygen and nitrogen in the air – there's a hint of avocado-euphoria that wafts through the troposphere and into our search engines.

The statistical shenanigans we've encountered during this research have been nothing short of avoca-dorable! From calculating correlation coefficients to pondering the implications of "avocado toast units," we've taken science to the brunch table and swirled it around like a

perfectly ripe avocado in the palm of our hands. As for the p-value, we can confidently declare that the p stands for "perpetually amazed by the power of produce."

Now, some may argue that our findings are as surprising as finding a perfectly ripe avocado at the grocery store — a rare and wondrous event. However, as we delve into the depths of data and delve into the deliciously quirky world of "avoca-data" analysis, we must recognize that this study is as ripe as it gets, and perhaps, it's time to spread a little more scientific guacwardness in the world of research. Our results may beg the question: Should we incorporate avocado toast into the standard of air quality measurement? Maybe it's time for a new avocado-based air purifier to keep our lungs and our taste buds happy.

In light of these pun-derful discoveries, we assert that no further research is needed in this area. After all, the data has spoken – the link between air quality in Hilo, Hawaii and Google searches for avocado toast is as real as the pit in the center of an avocado! So as we bid adieu to this delightful intersection of culinary culture and environmental factors, we hope our research has added a sprinkle of humor to the world of academia and illuminated the unexpected connections that can emerge when we peel back the layers of seemingly unrelated variables. Cheers to the avoca-data and the delightful absurdity it reveals!