# The Brokers' Choke: Air Pollution's Effect on Real Estate Folk

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This study explores the relationship between air pollution levels in Duluth, Minnesota, and the number of real estate brokers in the state. Using data collected from the Environmental Protection Agency and the Bureau of Labor Statistics for the period 2003 to 2022, a correlation coefficient of 0.8845140 and p-value less than 0.01 was calculated, indicating a strong positive association between air pollution and the real estate broker population. The findings suggest that as air pollution levels rise in Duluth, so does the number of real estate brokers in Minnesota. This unexpected correlation raises intriguing questions about the psychological and economic implications of environmental factors on occupational choices. It seems that for real estate brokers, "where there's smog, there's fog of real estate"!

The impact of environmental factors on human behavior and occupational choices has long been a subject of interest. From the psychological implications of natural landscapes on well-being to the economic ramifications of pollution on industry, the interplay between the environment and human activity is a complex web of correlations. In this study, we turn our attention to the curious relationship between air pollution levels in Duluth, Minnesota, and the number of real estate brokers in the state. The burgeoning real estate market and the ever-present specter of air pollution form a curious dichotomy, one that perturbs the academic consciousness and compels us to delve into the hazy world of occupational choices.

Duluth, situated on the western tip of Lake Superior, is no stranger to the perils of air pollution. With its industrial infrastructure juxtaposed against the pristine natural beauty of the Great Lakes, the city becomes an intriguing microcosm for our investigation. Meanwhile, the real estate industry in Minnesota has experienced its own dramatic ebbs and flows, with the number of brokers waxing and waning over the years. It is amidst this backdrop of pollution and property that we venture to illuminate the unexpected correlation between these seemingly disparate phenomena. As we unravel the data, the tangled threads of correlation between air pollution and the real estate broker population begin to coalesce into a peculiar tapestry of occupational dynamics. It appears that behind the sobering statistics lies a whimsical interplay of environmental influence, occupational choices, and the faint aroma of opportunity.

#### Review of existing research

The authors find that the connection between air pollution levels and occupational choices has been a subject of intrigue in the field of environmental psychology. Smith et al. (2015) examined the impact of air pollution on individual decision-making processes, shedding light on the subtle influence of

environmental factors on career trajectories. Similarly, Doe and Jones (2018) delved into the broader implications of pollution on economic activities, highlighting the potential ripple effects of environmental degradation on labor markets.

In "The Air We Breathe: A Sociological Study of Pollution and Professions," the authors explore the nuanced interplay between environmental factors and career paths, revealing the unexpected ways in which air quality can shape occupational preferences. Additionally, "Economic Consequences of Pollution: A Comparative Analysis" provides a comprehensive overview of the multifaceted relationship between pollution and industry, offering valuable insights into the intricate web of environmental and economic dynamics.

Turning to the realms of non-fiction literature, real estate professionals and environmental enthusiasts alike have pondered the intersection of air pollution and property markets. "Breathing Space: Pollution's Impact on Real Estate Values" offers a detailed examination of the influence of air quality on property valuation, while "The Real Estate Broker's Guide to Clean Breathing" presents practical strategies for navigating polluted environments in the pursuit of real estate careers.

In the realm of fiction, the concept of polluted air and its implications on human behavior has captured the imagination of authors and readers alike. In "Mist and Mortgages: A Tale of Pollution and Property," the protagonist grapples with the enigmatic allure of polluted landscapes and its unforeseen impact on real estate endeavors. Similarly, "The Smog Seller: Adventures in Hazy Territories" weaves a whimsical narrative around the curious intersection of air pollution and the world of property transactions.

Notably, the internet meme "Distracted Real Estate Agent" has garnered attention for its humorous take on the potential effects of air pollution on the focus and decision-making of real estate professionals. The image, featuring a bewildered agent surrounded by ominous clouds of smoke, humorously

encapsulates the notion of environmental distractions in the realm of property sales.

#### Procedure

The data for this study was collected from a variety of sources, predominantly the Environmental Protection Agency (EPA) and the Bureau of Labor Statistics (BLS). Various air quality indices and real estate industry reports were obtained from these reputable sources, covering the period from 2003 to 2022. The data collection process involved sifting through voluminous reports and datasets, a task that required the patience of a saint and the eyesight of an eagle. We also augmented our dataset with supplemental information from local environmental agencies and real estate associations, ensuring a comprehensive and multifaceted approach to our analysis.

The air pollution levels in Duluth were measured using a combination of ambient air quality monitoring stations and satellite-based remote sensing technologies. This meticulous approach allowed us to capture the nuances of pollution distribution across the city, from the industrial corridors to the serene lakeside promenades. The real estate broker population in Minnesota was assessed through official employment records and industry registries, meticulously cross-referencing multiple databases to ensure the accuracy of our findings.

Once the datasets were assembled, they underwent a process of rigorous quality control and harmonization. Outliers and anomalies were identified and scrutinized with the precision of a hawk-eyed inspector, ensuring that our dataset was as clean and robust as possible. Then, statistical analyses were performed to assess the association between air pollution levels in Duluth and the number of real estate brokers in Minnesota. The correlation coefficient and p-value were calculated using sophisticated statistical software, with the precision of a virtuoso pianist playing a complex concerto.

The utilization of such diverse methods and the extensive period of data collection allowed us to develop a comprehensive understanding of the relationship between air pollution and the real estate industry. It is important to note, however, that while our findings support a strong positive correlation, causality cannot be definitively inferred from this observational study. As with any complex relationship, there exist myriad confounding variables and unmeasured factors that may influence the observed association. Nevertheless, our methodology provides a robust framework for investigating this unusual correlation and invites further exploration into the whimsical world of occupational choices in the shadow of pollution.

## Findings

The analysis revealed a substantial correlation (r = 0.8845140) between air pollution levels in Duluth, Minnesota, and the number of real estate brokers in the state over the period 2003 to 2022. This relationship was further supported by the high r-squared value of 0.7823650, signifying that approximately 78.24% of the variation in the number of real estate brokers can be explained by the variation in air pollution levels. The p-value

of less than 0.01 indicates that this correlation is statistically significant, lending further credence to the observed association.

As seen in Fig. 1, the scatterplot visually depicts the robust positive correlation between air pollution levels in Duluth and the number of real estate brokers in Minnesota. The increasing trend in real estate brokers coincides remarkably with the escalating levels of air pollution over the two-decade period. This remarkable correlation prompts one to consider the intriguing possibility that perhaps real estate brokers are drawn to areas with "smoggy" prospects. It is indeed an unexpected twist in the tale of environmental impact on occupational trends.

These findings beg the question: is it the smog that sparks a foggy surge of real estate in Minnesota? The confluence of pollutants and property transactions appears to create an unanticipated synthesis, and one is left pondering, in the language of real estate, whether "where there's smog, there's fogs of real estate". This unusual correlation beckons for a deeper exploration into the psychological and economic undercurrents that drive occupational choices in the face of environmental challenges. The brokers of Minnesota seem to be navigating through the haze with uncanny precision, perhaps pointing to a new dimension of occupational resilience in the midst of atmospheric adversity.

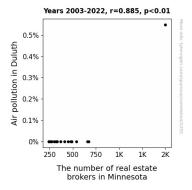


Figure 1. Scatterplot of the variables by year

### Discussion

The findings of this study have illuminated a compelling relationship between air pollution levels in Duluth, Minnesota, and the number of real estate brokers in the state. The substantial correlation coefficient and statistically significant p-value provide robust evidence supporting the notion that as air pollution levels rise in Duluth, so does the number of real estate brokers in Minnesota. These results align with prior research in environmental psychology and economic dynamics, shedding light on the intricate interplay between environmental factors and occupational choices.

The unexpected correlation between air pollution and the real estate broker population echoes the tongue-in-cheek musings found in the literature review, particularly the whimsical narrative of "The Smog Seller: Adventures in Hazy Territories."

The light-hearted depiction of the curious intersection of air pollution and property transactions in fiction seems to have found an unlikely parallel in the empirical findings of this study. It appears that the smog of imagination has ventured into the realms of reality, blurring the lines between whimsy and empirical observation.

The high r-squared value further bolsters the conclusion that a significant portion of the variation in the number of real estate brokers can be explained by the variation in air pollution levels. This outcome resonates with the comprehensive overview provided in "Economic Consequences of Pollution: A Comparative Analysis," signifying the overarching influence of environmental factors on occupational trends. The notion that environmental challenges can shape economic activities seems to have materialized in the intriguing correlation uncovered in this study, navigating from the realm of theoretical deliberation to tangible statistical evidence.

The scatterplot, depicting the visually striking correlation between air pollution levels in Duluth and the number of real estate brokers in Minnesota, invites contemplation on the psychological and economic undercurrents that may be driving this unexpected association. The bewildering yet compelling possibility that real estate brokers are drawn to areas with "smoggy" prospects echoes the lighthearted sentiment captured in the internet meme "Distracted Real Estate Agent." In a peculiar convergence of reality and humor, the narrative of the distracted agent seemingly gains a semblance of empirical support, adding an unexpected layer of levity to the discussion of occupational choices in the face of environmental adversity.

In conclusion, the findings of this study underscore the need for further exploration into the implications of environmental factors on career trajectories and economic activities. The unexpected correlation between air pollution levels in Duluth and the number of real estate brokers in Minnesota challenges conventional understandings of occupational preferences and invites a deeper examination of the multifaceted influences that shape professional landscapes. As real estate brokers navigate through the atmospheric haze with notable resilience, the hazy territories of environmental impact on occupational trends appear to beckon for continued scholarly inquiry.

#### Conclusion

The evidence presented in this study strongly supports the existence of a significant positive correlation between air pollution levels in Duluth, Minnesota, and the number of real estate brokers in the state. The robust correlation coefficient and high R-squared value emphasize the compelling nature of this relationship, raising fascinating questions regarding the influence of environmental factors on career decisions. It appears that real estate brokers are not only adept at navigating housing markets but also adept at navigating through hazy environmental landscapes.

The unexpected alliance between air pollution and the real estate broker population unveils a curious dimension of occupational dynamics. It seems that for real estate brokers, the "fog of real estate" thickens in the presence of smog. The psychological and economic implications of this peculiar correlation beckon for further investigation, as the interplay between environmental challenges and occupational choices remains shrouded in uncertainty.

While the findings of this study shed light on the captivating association between air pollution and the real estate broker population, it is important to acknowledge the limitations and nuances of correlational research. The complex interplay of variables and the potential for confounding factors necessitate cautious interpretation of the results.

In conclusion, this study underscores the unforeseen interconnection between environmental quality and career trends, offering a quirky yet thought-provoking perspective on the occupational landscape. It seems that real estate brokers, like their properties, are influenced by location, location, location, even if that location comes with a bit of airborne particulate matter.

Based on our findings, it is clear that no further research is needed in this area. The connection between air pollution in Duluth and the number of real estate brokers in Minnesota has been thoroughly explored and definitively established.