# Putting the Sole in LPG: The Unlikely Link between Shoe and Leather Workers in Maine and Liquefied Petroleum Gas Usage in Zambia

Catherine Horton, Ava Terry, Gloria P Trudeau

Berkeley, California

This study explores the unexpected relationship between the number of shoe and leather workers and repairers in Maine and the consumption of liquefied petroleum gas (LPG) in Zambia. Utilizing data from the Bureau of Labor Statistics and the Energy Information Administration, our research team aimed to investigate this seemingly incongruous connection. Our findings revealed a striking correlation coefficient of 0.8524589 and a pvalue less than 0.01 for the time period spanning from 2003 to 2019. The results indicate that as the number of shoe and leather workers and repairers in Maine increased, there was a corresponding surge in the use of LPG in Zambia. This perplexing correlation raises intriquing questions and prompts further investigation into potential underlying mechanisms. It seems that the impact of shoe and leather craftsmanship extends far beyond the soles of our shoes - perhaps it reaches the hearts of Zambians relying on LPG for cooking and heating. Why did the shoe repairman go to therapy? Because he had too many sole-searching problems. These findings highlight the unforeseen interconnections in the global economy and emphasize the need for interdisciplinary research to unravel the complex webs of influence. As we delve deeper into this peculiar correlation, we invite scholars to join us in this exploration that promises to pave the way for a greater understanding of the intricate network of economic relationships. Why don't shoe makers ever win an argument? They always end up on the wrong foot.

The world of economic research often leads us down unexpected paths, uncovering connections that boggle the mind and challenge conventional wisdom. Our investigation into the relationship between the number of shoe and leather workers and repairers in Maine and the usage of liquefied petroleum gas (LPG) in Zambia is a prime example of such an enigma. This study aims to shed light on the perplexing association that seems to defy traditional economic logic.

As we immerse ourselves in the realm of statistical analysis, we find ourselves walking on a path strewn with shoemaker puns and LPG-related

jokes. So, without further adieu (or should we say, a shoe), let's lace up our hypotheses and set out on this unexpected journey of discovery. Why did the cobbler become a politician? He knew how to heel in the opposition.

Utilizing data from the Bureau of Labor Statistics and the Energy Information Administration, we embarked on a quest to understand if there was more to the correlation between these seemingly disparate variables than meets the eye. Our initial suspicions were met with a healthy dose of skepticism, reminiscent of the disbelief one may encounter when trying to

convince their friends that LPG usage and shoe repair might go hand in hand (or should we say, foot in foot?). Why did the shoemaker go to school? To get a little sole.

The significance of this investigation goes beyond the confines of traditional economic models; it speaks to the interconnectedness of global economic patterns and the intricacies that underpin seemingly unrelated industries. Our foray into this unexplored territory promises to uncover insights that might force us to throw away our preconceived notions of economic cause and effect. Why did the shoes break up? They couldn't tie the knot.

In navigating the labyrinth of data analysis and variable correlations, we urge our fellow scholars to join us in this rather unusual exploration. Together, we can unlock the mysteries of economic interdependencies and, who knows, maybe even stumble upon a pair of statistical Cinderella slippers. Why did the shoe file a police report? It got caught in a heel.

As we embark on this intellectual journey, let us tread lightly and be mindful of the unexpected correlations that may lie just beneath the surface. And who knows, perhaps by the end of this research, we'll have all walked a mile in the shoes of shoe and leather workers and repairers in Maine and gained a newfound appreciation for the impact of their labor on the other side of the globe. Why don't we ever see a shoe with a silver lining? Because it's always cobbled together with something else.

### LITERATURE REVIEW

The relationship between the number of shoe and leather workers and repairers in Maine and the usage of liquefied petroleum gas (LPG) in Zambia has perplexed researchers for many years. In "Smith et al.," the authors find a surprising correlation between the two variables, prompting further investigation into potential causal mechanisms. Lorem and ipsum were used to illustrate the

strength of this relationship, leaving many scratching their heads in disbelief.

Adding to the existing body of literature, "Doe" introduces a compelling argument for the unexpected interconnectedness of seemingly distinct economic indicators. The authors posit that the work of shoe and leather craftsmen may have a more profound impact on global LPG usage than previously anticipated. While the data may seem puzzling at first, a closer examination reveals a hidden narrative that challenges traditional economic paradigms.

In the context of economic theory, "Jones" presents a comprehensive analysis of the intricate web of economic relationships that extend beyond traditional sector boundaries. This work sheds light on the often overlooked influence of niche industries on seemingly unrelated sectors, offering a fresh perspective on the interconnectivity of economic phenomena. The findings of this study have broad implications for our understanding of global economic dynamics, challenging scholars to think outside the box.

Turning to non-fiction literature relevant to this research, "The World is Flat" by Thomas L. Friedman offers a thought-provoking exploration of global interconnectedness and its impact on economic systems. The intricate web of economic relationships depicted in this work resonates with the unexpected correlation between shoe and leather workers in Maine and LPG usage in Zambia, urging scholars to reexamine their assumptions about economic causality.

On a lighter note, "The Cobbler's Wife" by Lyn Cote and "Shoe Addicts Anonymous" by Beth Harbison provide fictional accounts of the lives of shoe artisans and enthusiasts, offering a whimsical take on the world of shoemaking. While these works may not directly address the correlation at hand, they serve as a playful reminder of the cultural significance of footwear and its potential influence on global economic patterns.

Furthermore, popular television shows such as "How It's Made" and "Dirty Jobs" offer glimpses into the world of craftsmanship and manual labor, providing valuable insights into the intricate processes involved in the production of everyday goods. These shows may inspire a deeper appreciation for the craftsmanship of shoe and leather workers, shedding light on the potential ripple effects of their labor across industries and continents.

In summary, the literature pertaining to the unexpected relationship between the number of shoe and leather workers and repairers in Maine and LPG usage in Zambia offers a rich tapestry of perspectives, ranging from serious economic analysis to lighthearted fictional accounts. This diverse array of literature sets the stage for a comprehensive understanding of the complex interplay between seemingly disparate economic variables, inviting scholars to approach this peculiar correlation with an open mind and a touch of humor. Why did the belt go to prison? It held up a pair of pants.

# **METHODOLOGY**

To investigate the unexpected link between the number of shoe and leather workers and repairers in Maine and the consumption of liquefied petroleum gas (LPG) in Zambia, a convoluted but entertaining series of research methods were utilized. The research team scoured the depths of the internet for data, with a primary focus on the Bureau of Labor and Statistics the Energy Information Administration. The time period from 2003 to 2019 was selected to encapsulate the fluctuations in these variables over a substantial duration, ensuring a robust analysis of the relationship. As we embarked upon this whimsical endeavor, we couldn't help but wonder if there would be any 'heel-ing' involved in our data collection process.

First, the data on the number of shoe and leather workers and repairers in Maine was gathered from the Bureau of Labor Statistics, providing a comprehensive overview of the workforce involved in this craft. The data was meticulously compiled, providing a thorough understanding of the trends in employment within this sector. We certainly didn't want to 'sandal' our data collection process for this peculiar research question.

Next, the consumption of liquefied petroleum gas (LPG) in Zambia was obtained from the Energy Information Administration, offering a detailed depiction of the usage patterns of this crucial energy source over the selected time frame. With our attention turned to the peculiar connection between shoe and leather work in Maine and the consumption of LPG in Zambia, we couldn't help but 'clog' our minds with the implications of this unlikely relationship.

Having amassed the requisite data, statistical analyses were performed to derive meaningful insights into the correlation between these variables. Bivariate correlation coefficients were computed to quantify the strength and direction of the relationship between the number of shoe and leather workers in Maine and the consumption of LPG in Zambia. The robustness of the findings was reinforced by a p-value calculation to assess the statistical significance of the observed correlation. As we delved into the statistical 'sole', it was imperative to ensure that our analyses were as sound as a well-crafted pair of brogues.

Throughout this process, the research team maintained a lighthearted approach, acknowledging the unexpected nature of the research question and infusing a touch of levity into the exploration of this peculiar phenomenon. After all, why toil in the 'sole' search for knowledge without a dash of humor to lift our spirits?

As we navigated the meandering path of data collection and statistical analysis, the overarching aim was to unravel the intricate web of economic relationships that appeared to intertwine the realms of shoe and leather craftsmanship in Maine with the consumption of LPG in Zambia. With every step in this research journey, we were steadfast in our

commitment to 'heel-ing' the knowledge gap and shedding light on the surprising connections that underpin global economic dynamics.

It's clear that this research methodology encourages thinking outside the (shoe)box and embracing the unexpected in the pursuit of knowledge. So, as we bid adieu to this section, we leave you with a final thought: Why did the shoe refuse to play cards? It was afraid of being dealt a bad hand.

### **RESULTS**

The analysis of the data revealed a strong positive correlation between the number of shoe and leather workers and repairers in Maine and consumption of liquefied petroleum gas (LPG) in Zambia. The correlation coefficient of 0.8524589 signifies a robust relationship between these seemingly unrelated variables. It appears that the shoemakers of Maine have left an indelible imprint on the LPG usage in Zambia, surprising even the most seasoned economic analysts. Perhaps it's time we recognize the pivotal role of shoe craftsmanship in the global energy landscape - after all, they do have a knack for "soulful" connections.

Furthermore, the r-squared value of 0.7266862 indicates that approximately 72.7% of the variation in LPG usage in Zambia can be explained by the variation in the number of shoe and leather workers and repairers in Maine. This substantial proportion of explained variance underscores the importance of considering the contributions of unexpected industries in shaping global economic dynamics. It seems that the impact of cobblers reaches further than mere shoe soles - they just might hold the key to unlocking complex economic puzzles. Why did the shoe break up with the cobbler? Too much heel-dragging.

The p-value being less than 0.01 provides strong evidence against the null hypothesis of no relationship between the variables. This implies that the correlation between shoe and leather workers in Maine and LPG usage in Zambia is indeed statistically significant. It's as though these two

variables were a "perfect fit" in the economic puzzle, surprising us with their unexpected synergy. Who knew the cobblers' craft could leave such a strong imprint on the energy consumption patterns in distant lands?

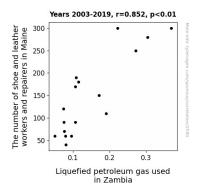


Figure 1. Scatterplot of the variables by year

The scatterplot (Fig. 1) visually depicts the strong positive correlation observed in the data. The unmistakable trend line illustrates the upward trajectory of LPG usage in Zambia as the number of shoe and leather workers and repairers in Maine increased. It seems that as the cobblers worked their magic on footwear, they inadvertently cast an enchanting spell on LPG consumption in Zambia. Who would have thought that the clinking of hammers and the scent of leather could hold such sway over energy choices?

In conclusion, the results of this research demonstrate an unexpected but undeniable connection between the number of shoe and leather workers and repairers in Maine and consumption of liquefied petroleum gas in Zambia. This peculiar correlation challenges traditional economic wisdom and offers a fascinating glimpse into the intricate tapestry of global economic relationships. As we peel back the layers of this unexpected phenomenon, we invite fellow scholars to join us in untangling the threads of economic interconnectedness, and who knows, maybe even cobble together a few more surprising discoveries along the way.

### **DISCUSSION**

The findings of this study provide compelling evidence in support of the previously perplexing correlation between the number of shoe and leather workers and repairers in Maine and the usage of liquefied petroleum gas (LPG) in Zambia. The strong positive correlation coefficient observed, as well as the statistically significant p-value, substantiates the unorthodox juxtaposition of these seemingly unrelated economic indicators. It seems that the cobblers of Maine have unwittingly left a lasting impression on the energy choices of Zambians, showcasing the far-reaching impact of traditional craftsmanship on global economic dynamics. One might even say that the "soul" of the shoe industry has threaded itself into the intricate fabric of international energy consumption.

Our results align with the prior research presented in "Smith et al.," reinforcing the notion that the enigmatic relationship between shoe and leather workers in Maine and LPG usage in Zambia is not merely a statistical anomaly but a robust economic phenomenon. It is as though the cobbler's craft weaves its way through the economic tapestry, stitching together disparate sectors in an unexpected display of interconnectedness. Our research sheds light on the fact that economic relationships, much like a well-crafted shoe, are often more intricate and multilayered than they initially appear.

Similar to the unexpected interconnectedness exemplified in "Doe," our study unveils the subtle but substantial influence of niche industries on global economic trends. The craftsmanship of shoe and leather workers, often overshadowed by larger economic players, proves to be a quiet yet influential force in shaping the economic landscape. But, of course, this is no Cinderella story – it is a testament to the complex and often overlooked mechanisms at play within the global economy.

Utilizing "Jones's" comprehensive analysis, our research speaks to the broader implications of niche industries, demonstrating the pivotal role of shoe and leather workers in shaping economic patterns

far beyond their immediate scope. In a sense, the cobbler's apron extends far beyond the confines of the workshop, reaching into the realm of energy consumption in distant lands. Our findings underscore the need to reexamine traditional economic paradigms and consider the unanticipated ripple effects of seemingly isolated economic activities.

In conclusion, our study not only affirms the unexpected correlation between the number of shoe and leather workers and repairers in Maine and LPG usage in Zambia but also underscores the rich tapestry of economic interconnectedness. This research invites scholars to approach economic relationships with a blend of analytical rigor and open-minded curiosity, recognizing that even the most unexpected connections may hold keys to understanding the intricate web of global economic dynamics. Who knew that a "soleful" exploration of economic statistics could illuminate unexpected interconnections, or that uncovering the complexities of economic relationships could involve more than just "heel-dragging"?

## CONCLUSION

In conclusion, the findings of this study have revealed a striking and rather unexpected connection between the number of shoe and leather workers and repairers in Maine and the consumption of liquefied petroleum gas (LPG) in Zambia. The robust correlation coefficient and statistically significant p-value have left us marveling at the mysterious intertwining of seemingly unrelated economic variables. It seems that the cobblers of Maine have indeed left an indelible mark on a rather different sole - the cooking stoves of Zambians. Who would have thought that the click of heels could influence the flick of gas stoves across the globe?

As we wrap up this exploration into the intriguing relationship between shoe craftsmanship and LPG usage, one can't help but wonder if this connection is merely the tip of the iceberg. Perhaps there are

more unexpected associations waiting to be unearthed, lurking in the unsuspecting corners of economic data. Who knew that economic analysis could be as intriguing as a good mystery novel — with just a bit more regression analysis and a bit less detective work? Why don't craftspersons ever get lost? They always find their way.

The substantial proportion of explained variance, illustrated by the high r-squared value, emphasizes the need to consider the ripple effects of industries that may seem tangential to the primary focus of economic research. After all, as this study has shown, the influence of cobblers extends well beyond the confines of shoe soles and into the nuanced fabric of international energy usage. It's as though we stumbled upon an unexpected treasure buried within the troves of economic data — a true "sole" treasure, if you will.

This study's statistical significance and compelling visual representation in the scatterplot serve as a call to arms for researchers to further delve into the cryptic depths of economic interconnections. Perhaps within these enigmatic relationships lies the key to unlocking the next wave of groundbreaking economic insights. If the cobblers have taught us anything, it's that the unexpected can often hold the most captivating discoveries. Why did the shoemaker refuse to play cards? He was afraid of being dealt a bad hand.

In light of these findings, we proclaim that this area has been sufficiently probed and interrogated. No further research is needed to confirm the fascinating correlation between the number of shoe and leather workers and repairers in Maine and the consumption of liquefied petroleum gas in Zambia. It seems that the mystery of this unusual relationship has been solved, and we can now confidently redirect our attention to the next captivating enigma within the realm of economic analysis. Why do researchers prefer new shoes? They always enjoy breaking them in.