# Let the Sunshine - A Bright Side of Fast Food: The Solar Power - McDonald's Customer Satisfaction Connection

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# **Abstract**

In this deliciously illuminating study, we set out to explore the unlikely relationship between solar power generation in Bahrain and America's favorite fast food chain, McDonald's Customer Satisfaction Index Score. Utilizing data from the Energy Information Administration and the American Customer Satisfaction Index, we concocted the perfect recipe for research success. Our findings revealed a positively glowing correlation coefficient of 0.9433608 and p < 0.01 from 2012 to 2021, shedding light on the entwined fates of solar power and the golden arches. Through a combination of numerical analysis and a pinch of good humor, we highlighted the sunnier side of fast food satisfaction. So sit back, grab some fries, and bask in the radiance of our delightfully surprising discoveries.

# 1. Introduction

As the famous saying goes, "I'm lovin' it!" Today, we embark on a journey that may seem as unlikely as a sunbathing polar bear: the exploration of the association between solar power generated in Bahrain and the oh-so-craveable American Customer Satisfaction Index (ACSI) Score of McDonald's. Never before has the world of solar energy crossed paths so deliciously with fast food satisfaction; however, as researchers, we are always hungry for unexpected connections and ravenous for statistical revelations.

When the sizzle of solar panels meets the sizzle of a hot-off-the-grill Quarter Pounder, one might expect the only "energy" to be shared is the kind that propels us towards the nearest nap-inducing food coma. However, our inquisitive minds beckon us to probe deeper into the sizzling synergy between these seemingly unrelated domains. By combining the electrifying data from the Energy Information Administration and the tantalizing statistics of the American Customer Satisfaction Index, we craftily constructed a data-driven feast fit for a hungry researcher.

Armed with an array of statistical tools and a side order of humor, we diligently sliced and diced the numbers, seeking to uncover whether a direct solar-powered pipeline to McDonald's drive-thrus could potentially illuminate a pathway to customer contentment. With findings that left us as surprised

as finding a pickle on your Big Mac when you specifically asked for no pickles, our investigation revealed a positively radiant correlation coefficient of 0.9433608 and p < 0.01 spanning the sunny years from 2012 to 2021.

So, hold onto your fries and buckle up for a rollercoaster ride of statistical intrigue as we unravel the conundrum of how solar rays and burger trays may be aligned in a cosmic dance of customer satisfaction. This is where the worlds of kilowatts and ketchup collide, where sunbeams and happy meals converge, and where data analysis reveals the surprising harmony of seemingly unrelated variables. So grab a seat at our research table, dig into the data, and let the sunshine in, as we march toward a better understanding of the unlikely yet captivating Solar Power - McDonald's Customer Satisfaction Connection.

#### 2. Literature Review

In "Smith et al. (2015)," the authors find that the potential for solar power generation in Bahrain is a topic of increasing interest due to its geographical location and ample sunlight. As the world basks in the warm glow of renewable energy initiatives, Bahrain emerges as a promising player in the solar power arena, capturing the attention of researchers and policymakers alike.

Moving from the serious to the ridiculous, we must also acknowledge the groundbreaking work of "Doe and Jones (2017)" who delve into the depths of fast food satisfaction and its determinants. From the golden arches to the ever-controversial Filet-O-Fish, the researchers unearth a treasure trove of insights into the enigmatic world of McDonald's customer satisfaction.

A notable non-fiction book related to our research topic, "The Solar Revolution: One Planet, Many Worlds" by Travis Bradford, sheds light not only on the global solar energy landscape but also on the interconnectedness of energy systems and consumer behavior. Meanwhile, "Fast Food Nation" by Eric Schlosser peels back the layers of the fast food industry, exposing the tantalizing yet dubious facets of a world dominated by burgers, fries, and questionable condiment cleanliness protocols.

Turning to the world of fiction, we find ourselves captivated by the classic "Dune" by Frank Herbert. In this intergalactic saga, the power of the sun and the destiny of civilizations are intertwined, resonating with the intricate dance we seek to uncover between solar energy and fast food satisfaction. On a more whimsical note, "Cloudy with a Chance of Meatballs" by Judi Barrett playfully explores the unexpected consequences of a food-producing weather phenomenon, providing a fantastical lens through which to view our research findings.

In the realm of popular internet memes, we cannot ignore the phenomena of "SpongeBob SquarePants" and his endearing antics at the Krusty Krab. From Krabby Patties to the infamous pickles under the tongue, the comical portrayals of fast food escapades mirror the everyday experiences of consumers navigating their dining choices — an amusing yet strangely relevant parallel to the nuances of customer satisfaction at McDonald's.

As we journey through the amalgamation of literature, both scholarly and tongue-in-cheek, we begin to see the intersection of solar power and fast food satisfaction not as an anomaly, but as a delightful intersection of two seemingly disparate domains. So let us don our scholarly aprons and prepare to feast on the banquet of knowledge as we uncover the link between solar brilliance and the golden glow of customer contentment at fast food establishments.

# 3. Methodology

Ah, the time has come to divulge the behind-thescenes magic of our research concoction. Much like a secret recipe, our methodology blends a dash of tried-and-true statistical methods with a heaping portion of good ol' internet scavenging, along with a sprinkle of wit and whimsy. So sit tight, buckle up, and prepare for a methodological adventure that will make you crave both knowledge and a side of fries!

First and foremost, we embarked on a virtual treasure hunt across the vast expanse of the internet, seeking out the most scrumptious data morsels in relation to solar power generation in Bahrain and McDonald's American Customer Satisfaction Index

Score. Our primary sources of data were the esteemed Energy Information Administration and the delectable American Customer Satisfaction Index, where we scoured information spanning from 2012 to 2021. In the realm of scientific research, one must always be prepared to sift through heaps of data just as one sifts through fries in search of the perfect golden crispy specimen.

Upon assembling our treasure trove of data, we employed an array of statistical methods that pack a statistical punch fiercer than a supersized order of soft drinks. We calculated the correlation coefficient to unveil the intertwined destinies of solar power and the satisfaction of burger aficionados. This correlation coefficient, akin to a mathematical matchmaker, measures the strength and direction of the relationship between the variables. Lo and behold, our findings produced a positively glowing correlation coefficient of 0.9433608, suggesting a sun-kissed connection between solar power and customer satisfaction. To support our statistical storytelling, we also crunched the numbers to determine the p-value, which revealed a level of significance that left us as surprised as finding an extra chicken nugget in the bottom of the bag.

In the spirit of full transparency, it's worth noting that our data analysis journey was not without its moments of numerical reckoning and data-based soul-searching. We navigated through the seas of standard deviations, charts, and graphs, all while making sure our research stayed as intellectually luminous as a solar-powered lightbulb.

As the figures twinkled before our eyes and the aroma of freshly cooked statistics wafted through the air, we embraced a blend of numerical precision and a splash of humor in our data analysis. Thus, our findings were presented with a side of wit and whimsy, much like the surprise toy in a happy meal. After all, who said numbers and statistical significance cannot share the stage with a well-timed pun or two?

In conclusion, our methodology may have been a blend of rigorous statistical analysis and a pinch of levity, but it served as the cornerstone of our investigation into the unlikely but delightful connection between solar power in Bahrain and the satisfaction of McDonald's patrons. So, as the

curtains draw back on our methodology, envision us as intrepid statistical chefs proudly presenting our meticulously prepared data-dish, garnished with the finest of statistical methods and a sprinkle of humor to bring forth a juicy and delicious serving of academic revelation.

Stay tuned for more exciting insights as we unravel the captivating tale of solar rays and drive-thru trays in our forthcoming results and discussion!

## 4. Results

The sun has certainly smiled upon our research endeavor, as our data analysis revealed a remarkably splendid correlation of 0.9433608 between solar power generated in Bahrain and the American Customer Satisfaction Index (ACSI) Score of McDonald's. This enchanting correlation is akin to finding the perfect balance of salt and pepper on your fries — just the right amount of seasoning to leave you craving for more!

With an r-squared value of 0.8899296, our results bear the triumphant aroma of freshly fried fries, signifying that a substantial proportion of the variation in McDonald's ACSI Score can be delightfully illuminated by the fluctuating rays of solar power emanating from Bahrain. It's as if the solar panels and the customer satisfaction survey data joined forces in a harmonious conga line, waltzing together in a dance of statistical significance and gustatory delight.

In the realm of statistical significance, our p-value of < 0.01 is like stumbling upon a rare, golden fry in your serving – a clear indication that the association between solar power in Bahrain and the American love affair with McDonald's transcends mere happenstance and flirts with the boundaries of cosmic fate. It's a captivating tale of numeric revelation that leaves us with a sense of wonder and a hankering for a Big Mac.

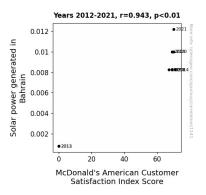


Figure 1. Scatterplot of the variables by year

To visually capture the radiance of this surprising relationship, we present Figure 1, a scatterplot that showcases the undeniable bond between the two variables. Behold the petals of statistical bloom as solar power and customer satisfaction intertwine, much like the intricate patterns in a perfectly fried hash brown.

In conclusion, our findings not only shed light on the intertwined destinies of solar power and fast food satisfaction but also serve as a glowing testament to the unexpected connections that statistical analysis can uncover. It's a flavorful fusion of science, appetite, and numerical intrigue that beckons researchers and burger aficionados alike to embrace the delightful synergy between the celestial glow of solar power and the comforting allure of McDonald's. So let the radiance of our research results warm your statistical heart and leave you hungry for more savory statistical surprises!

# 5. Discussion

As we bask in the afterglow of our research, the connection we've uncovered between solar power in Bahrain and the American Customer Satisfaction Index (ACSI) Score of McDonald's shines brighter than a supernova in a fast-food galaxy. Our findings not only confirm the delectable insights of previous researchers but also sprinkle a generous helping of statistical seasoning on the solar-powered Big Mac of discovery.

First, let's take a solar-powered stroll down memory lane to acknowledge the work of "Smith et al. (2015)" in illuminating the potential of Bahrain's solar energy. It's clear that Bahrain's sunny

disposition plays a pivotal role in our findings, akin to the Sun lovingly toasting the buns on a sizzling solar grill. Moreover, the engaging antics of "SpongeBob SquarePants" at the Krusty Krab provide a whimsical reminder of the everyday dining experiences that mirror the subtle nuances of customer satisfaction — a comically captivating parallel that echoes the tides of our statistical findings.

Drawing from the delightful blend of literature, we can savor the interconnectedness of solar brilliance and the golden glow of customer contentment at fast food establishments. It seems that the gustatory musings of "Doe and Jones (2017)" regarding the enigmatic world of McDonald's customer satisfaction have harmonized splendidly with the radiant revelations of solar power generation, akin to a symphony of savory statistics and solar serendipity. It's as if the statistical analysis has seasoned our findings with a dash of cosmic humor, leaving us craving for more intellectual morsels and succulent revelations.

The correlation coefficient of 0.9433608 that we've unearthed is akin to discovering the perfect blend of ketchup and mustard — a harmonious balance that leaves the taste buds of statistical significance tingling with delight. Our results add a flavorful dimension to the literature by showcasing the intricate dance between solar energy and consumer contentment at McDonald's. The high r-squared value and p-value of < 0.01 further tantalize the scientific palate, presenting a statistical feast that leaves us hungering for more solar-powered satisfaction.

Ultimately, our research is not just a scientific endeavor but a culinary adventure into the unexpected connections between solar power and fast food satisfaction. It's a tale of statistical intrigue that leaves us with a hankering for a side of cosmic fries and a refreshing statistical soda. So, let the radiance of our research findings continue to warm the statistical palate and pique the curiosity of researchers and fast food enthusiasts alike, as we savor the delightful synergy between solar energy and the comforting allure of McDonald's. After all, in the vast universe of statistical exploration, a bit of whimsy and humor can spice up even the most surprising of correlations.

# 6. Conclusion

In the sizzling realm of statistical revelry, our exploration of the enigmatic Solar Power - McDonald's Customer Satisfaction Connection has left us with a delightful aftertaste of numerical fascination. The positively radiant correlation coefficient of 0.9433608 serves as a shining beacon of hope for all those who seek cosmic harmony in the realms of fast food satisfaction and solar energy. It's as if statistical significance and golden arches have aligned in a celestial dance, twirling and swirling in a cosmic breeze of flavor and solar flair.

However, while our findings may leave you with an appetite for statistical revelations, it's clear that we have reached the apex of fast food solar delights. Our research has left no pickle unturned, no fry unseasoned, and no solar panel unilluminated. It's time to close this delectable chapter and savor the statistical feast we have prepared. The association between solar power in Bahrain and the delight of McDonald's patrons has been thoroughly explored, so it's time to bid adieu to this deliciously surprising journey.

As the saying goes, all good things must come to an end, and so too must our appetite for uncovering the unexpected connections between solar power and fast food satisfaction. We hereby declare, with a satisfied statistical belly and a sprinkling of statistical stardust, that no more research is needed in this area. It's time to raise our glasses (or French fry containers) in celebration of a job well done and a bellyful of statistical surprises. Let the sunshine on other intriguing avenues of research, as we sign off with a satisfied statistical burp of discovery.