Quick Response Report #211

Examination of Prices for Goods and Services in the Response and Recovery Phases Following Hurricane Ike

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Abstract
Hurricane Ike, a Category 2 storm, made landfall near Galveston, Texas on September 13, 2008. The primary research question was to empirically examine if price gouging occurred in Harris, Brazoria, and Galveston counties. Field observations, citizen interviews, and interviews with emergency management officials were conducted either in the field or by telephone. Results indicated there were individuals who experienced price gouging. The majority of these cases involved local businesses. Complaints focused mainly on gasoline prices, followed by hotel rates and taxes and food.

Keywords: Price gouging, Hurricane Ike

Introduction
There has been previous research regarding behavior after major disaster, including a multitude of studies emerging after Hurricane Katrina, the most expensive disaster in United States history (Fischer et al. 1994; Knab et al. 2006). Katrina also had the most fatalities in recent times (Knab et al. 2006). Some literature on disaster myths discuss the general belief that people are self-centered and will try to make additional profit from disaster victims through various means (Fischer et al. 1994). This practice is commonly termed price gouging.

This research, completed in December 2008, empirically examined if price gouging occurred in three Texas counties—Harris, Brazoria, and Galveston—following Hurricane Ike, which made landfall near Galveston on September 13, 2008. These locations are shown in Figure 1. This project studied whether price gouging happened following the most major hurricane disaster of the 2008 season.

Price Gouging
Price gouging is a phrase heard in nearly every type of large-scale disaster. According to Subchapter 17.46(b) of the Texas Deceptive Trade Practices-Consumer Protection Act (Texas Office of the Attorney General 2008a) as declared by the Governor under Chapter 18, Government Code (Texas Attorney General 2008b), this Texas law prohibits price gouging. In Texas, price gouging can be loosely defined as selling or leasing fuel, food, medicine, or other necessities at an exorbitant price during a declared disaster (Texas Office of the Attorney
General 2008c) (Figure 2). During disasters, the media, citizens, responders, and others assume there will be price gouging. This conjures up mental images of helpless victims being exploited for gain during their darkest time. The audacity of this selfish behavior makes the media, citizens, and officials feel the need to take quick to take action. Media reports of price gouging incidents reinforce the perception, while community leaders discuss capturing or deterring wrongdoers. While the majority of people in general believe price gouging happens frequently during disasters (Fischer et al. 1994), the research presents some contrasting arguments to that perception. Culpepper and Block view price gouging as a necessary evil rather than a callous venture (2008). Hurricanes hit oil refineries in the Gulf Coast and surges damage coastal housing. Therefore, the availability of commodities decreases following disaster. This leads to high demand and decreased product. They further posit that prices should be permitted to adjust for disaster rather than fall because of price gouging legislation. The price adjustment would serve as a warning to citizens to use less and as an incentive to companies to produce more. Resources would go to those who need them the most and who are willing to pay more. Other research challenges the prevalence of price gouging altogether from a strictly behavioral (not economic) viewpoint.

The belief in price gouging during a disaster comes mainly from peers and media reports (Drabek 1996). While price gouging is traditionally expected in the wake of a disaster, research beginning in the 1970s has focused on determining the reality of this behavior more closely. Fischer argues price gouging rarely occurs, and when it does, it tends to be conducted by outsiders who converge on the area for profit (1994). He further argues that local citizens and especially local merchants rarely exhibit such behavior during a disaster event. Fischer reported price gouging during Hurricane Gilbert and exposed false price gouging reports by the media. Despite countless reports of price gouging arrests, he found that no arrests actually took place. Tierney, Bevc, and Kuligowski’s research on Hurricane Katrina (2006) further supports Fischer’s idea of community solidarity and media exaggeration. Despite the reported prevalence of civil unrest and deviant behavior spread by news media during Hurricane Katrina, they found the media greatly exaggerated these behavioral factors to the detriment of the response system and social beliefs. Further work by Tierney on the September 11, 2001, World Trade Center evacuation reinforced the concept of altruistic behavior (2001).

**Hurricane Climatology**

Hurricane season in the North Atlantic basin begins on June 1 and runs through November, peaking around mid-September (Neumann 1993). Tropical cyclones are named after they reach tropical storm status (sustained winds of 39-73 mph). They become hurricanes when sustained winds are more than 74 mph. Storms are classified as a major hurricane if the intensity is Category 3 (111 mph) or higher on the Saffir-Simpson scale, which is used to classify hurricanes by wind velocity, storm surge, and atmospheric pressure (Simpson and Riehl 1981). A typical season has approximately 15 named storms that consist of 9.7 tropical storms, 5.4 hurricanes, and two major hurricanes (Landsea 2007a). Texas has had 60 hurricanes make landfall between 1851-2006, 19 of which were major hurricanes. Only Florida has had more hurricane landfalls, with 114 and 37 major hurricanes during the same period (Landsea 2007b).
The 2008 season had 17 storms, with 16 achieving tropical storm or hurricane status. Of these storms, eight were hurricanes and nine were tropical or subtropical storms. Four of these systems eventually impacted Texas—Hurricane Dolly, Tropical Storm Edouard, Hurricane Gustav (which first made landfall in Louisiana), and Hurricane Ike (Klotzbach and Gray 2008; National Hurricane Center 2008).

**Hurricane Ike Physical Characteristics**

On September 1, 2008, a tropical wave in the eastern Atlantic would become Tropical Storm Ike. Ike would be classified as a hurricane on September 3 and a major hurricane three hours later. The hurricane became a Category 4 (145 mph) storm on September 4, weakened to a Category 2 on September 6, and re-intensified to Category 4 the same day (Klotzbach and Gray 2008; National Hurricane Center 2008).

Hurricane Ike hit the Turks and Caicos Islands along with Haiti and the Dominican Republic before striking eastern Cuba as a Category 3 storm on September 8. The winds decreased to Category 2 before leaving western Cuba on September 9, but re-intensified to a Category 2 in the Gulf of Mexico to as it made a northwest path toward the Texas coast on September 10 (Klotzbach and Gray 2008).

On September 11, the size of the wind field associated with Ike was notable, with the hurricane-force winds extending about 100 miles in several quadrants. Although conditions were favorable for the storm to strengthen, intensification was slow because of the large size of the system. Ike reached a maximum of 95-knot sustained winds (about 110 mph) as it made landfall near Galveston Island on September 13. This is only 1 mph less than a Category 3 hurricane. There was also extensive flooding from the storm surge, which was estimated to be 17-20 feet (Federal Emergency Management Agency 2008a).

Ike was downgraded to a tropical storm on September 13 and classified as a tropical depression on September 14 (Klotzbach and Gray 2008). However, the remnants of Ike continued to impact the United States—even in Ohio and other parts of the Midwest—with flooding from heavy rainfall and extensive power outages caused by strong winds. Ike’s impacts reached as far as Canada before it finally dissipated (Federal Emergency Management Agency 2008b).

**Hurricane Ike Societal Impacts in Texas**

According to the Federal Emergency Management Agency (FEMA), there were 74 fatalities attributed to Hurricane Ike in Texas (2008a). Three weeks after landfall, 226 people were still reported as missing. Some that may have not checked, others may never be found (Forsyth 2008).

Estimated damage for insured property is listed at $8.1 billion, according to the Insurance Services Office Property Claim Services (Berg 2009). Normally, estimated damage is figured as twice the insured estimate for total estimated damage exceeding $16 billion. Based on this, Ike would be the fifth most expensive hurricane in U.S. history (Klotzbach and Gray 2008).

More than 3,540 people were rescued by Texas search and rescue teams. Additionally, 5,798 were evacuated from dangerous conditions after the storm (Federal Emergency Management Agency 2008a).
According to FEMA (2008a) thirty-four counties and one tribal nation were declared presidential disaster areas. This amounted to a spatial area of around 42,000 square miles—nearly the size of Tennessee. It was reported that the shelter population at a maximum reached 40,614 people, distributed among 234 sites. There were 89 points of distribution (PODs) in the disaster area that distributed food, water, ice, and other necessities (Figure 3). These PODs used resources from federal, state, and volunteer sources that were operated by a variety of people and organizations. More than 17 million meals and 16 million liters of water were delivered to the PODs. FEMA opened 124 Disaster Recovery Centers (DRCs) that worked with more than 128,000 individuals. As of mid-December, 2008, 18 DRCs were still operational (Federal Emergency Management Agency 2008a).

In the three months following landfall, FEMA reported that 99 percent of housing inspection orders were complete (2008a). This amounted to approximately 383,000 inspections. The U.S. Army Corps of Engineers was responsible for Operation Blue Roof and installed 26,244 tarps for temporary repairs (Operation Blue Roof 2008). There were more than 725,000 individuals and households registered with FEMA since Ike’s landfall at the time the research was conducted. About 498,000 registrants were referred to the housing assistance program. Approximately 1,900 households are in manufactured homes provided by FEMA (2008a).

More than $1.3 billion were approved for Texas survivors following Ike, including more than $400 billion in Small Business Administration loans, $326 million in Temporary Housing Assistance and home repairs, $310 million for Transitional Sheltering Assistance, $82.5 million in Other Needs Assistance, and $3.6 million in Disaster Unemployment Assistance (Federal Emergency Management Agency 2008a).

Public assistance funds for debris removal and other public needs were at $218.6 million at the time of research. Funding was set to reimburse 100 percent of debris removal until April 26, 2009. Debris was approximated to be 18.8 million cubic yards—the size of a football field piled two miles high (Federal Emergency Management Agency 2008a).

Gasoline prices were another major impact, not only in Texas but other areas of the country. It was very noticeable in Southeast locations, such as Atlanta, Nashville, and western North Carolina. Not only were prices high, but there were also extreme shortages. This occurred following Hurricanes Gustav and Ike, which closed down refineries along the Gulf Coast (Associated Press 2008).

Methods
Two researchers entered the field three weeks after Hurricane Ike made landfall. There were several reasons for this timing. Initially, residents were kept out of heavily damaged areas for safety reasons. Basic essentials such as running water, electricity, and safety services weren’t available. Even after three weeks, curfews were still enforced in many areas. Since the research focus was on price gouging, the researchers delayed field entry until residents returned, in hopes that damage and work estimates would soon follow. The researchers focused on three heavily damaged Gulf Coast areas of Texas—Harris County, Brazoria County, and Galveston County. While some quantitative information was analyzed using the Office of the Texas Attorney General’s (OAG’s) price gouging data, qualitative methods were primarily used for this study. Descriptive statistics were calculated from the surveys utilizing SPSS.
Qualitative researchers study predetermined phenomena—a process that is of interest to the researcher. The researcher strives to understand the meaning of the phenomena assigned by the participant as communicated through their observations, opinions, and experiences. For this purpose, the phenomenon of interest is price gouging during a major disaster, Hurricane Ike. Qualitative research can be classified as either basic, which is applied to solve a problem, or pure, which seeks to advance knowledge (Strauss and Corbin 1990). The history of qualitative research spans more than 60 years of social anthropology, social phenomenology, social and behavioral sciences, and linguistics (Strauss and Corbin 1990; Huberman and Miles 2002). Qualitative methods have been scrutinized and enriched over time (Huberman and Miles 2002). Generally, a qualitative approach relies on the emphasis of open-ended data collection methods such as interviews, observations, and documentation.

This study, in particular, used observations, open-ended field surveys, semi-structured interviews with area residents, interviews with emergency management officials, and database price gouging documents obtained from the Texas OAG. A total of 22 interviews were conducted in the three study areas. These respondents were all citizens and not emergency management officials. Citizens were found in damaged neighborhoods, PODs, and the workplace which made for a random convenience sample. The participants were asked if they would consent to be interviewed for the research project. Resident interviews were conducted in Shore Acres (Harris County), Surfside Beach (Brazoria County), and the City of Galveston (Galveston County). The researchers took notes from the respondents on the survey forms.

In-depth interviews were conducted with one Harris County official and three Brazoria County emergency management officials. Emergency management officials from Galveston County, as well as the City of Galveston, declined repeated requests for an interview. While Emergency Management officials were interviewed, their information was not part of this report regarding primary data.

The data from the OAG was aggregated into a database consisting of 1,491 complaints. This does not mean all are legitimate, only that all were reported to the OAG. Complaints were categorized into seven classifications. These categories were gas issues; hotels; generators; food, water, ice, and charcoal; repairs and materials; insurance; and miscellaneous. It should also be noted complaints are from the entire state, not just impacted counties.

**Study Area**

Data were collected at three areas chosen for their extensive damage. Harris County and Galveston Counties were given substantial media attention. Contact with the Emergency Management Office in Brazoria County indicated significant damage.

Harris County is home to the Houston, which is the county seat. According to the 2005-2007 American Community Survey (United States Census Bureau 2008) the population of Harris County is just under 4 million people. Twenty-four percent of the population is foreign born, and 41 percent speaks a language other than English at home, predominantly Spanish. Just more than half of the foreign-born population report they do not speak English well. Twenty-four percent of the population did not graduate from high school. The median household income is $48,604 and 17 percent of the population is in poverty. The dominant population demographic is 60 percent White, 38 percent Hispanic or Latino, and 18 percent Black or
African American. Harris County has a total area of 1,778 square miles.

Brazoria County is located south of Harris County, along the southeastern coast of Texas. The 2005-2007 American Community Survey (United States Census 2008) stated that Brazoria County has a total population of 284,000. Eleven percent of the population is foreign born, 23 percent speak a language other than English at home, predominantly Spanish. Thirty-eight percent of the foreign speaking population report they did not speak English well. Seventeen percent of the population did not graduate from high school. The median household income is $58,583 and 11 percent of the population is in poverty. The dominant population demographic is 77 percent White, 25 percent Hispanic or Latino, and 10 percent Black or African American. The county seat is Angleton. Brazoria County has a total area of 1,597 square miles.

Galveston County is located farther to the southeast along the Gulf Coast. According to the 2005-2007 American Community Survey (United States Census 2008), Galveston County has a total population of 280,000. Ten percent of the population is foreign born and 20 percent speak a language other than English at home, predominantly Spanish. Of that population, 36 percent report they did not speak English well. Fifteen percent of the population did not graduate from high school. The median household income is $51,885 and 13 percent of the population is in poverty. The dominant population demographic is White (75 percent), followed by Hispanic or Latino (21 percent), and Black or African American (15 percent). Galveston County has a total area of 873 square miles.

Primary Data Findings
There were 22 respondents interviewed following landfall of Hurricane Ike. Five respondents were in Harris County, seven in Brazoria County, and ten in Galveston County. These interviews did not include the emergency management officials whose interviews included other issues besides price gouging such as preparedness, evacuation, and response. The majority of interviews were face to face, but a few were completed by telephone after the site visit.

Four basic open-ended questions were used in the study. The following questions were asked in regard to price gouging issues for the citizens:

1. Did prices for goods or services (food, water, ice, gasoline, other) change after Hurricane Ike?
   2a. Did you have damage to your home?
   2b. If so, did you hire someone to assist you in repairs or cleanup?
   2c. What type of work?
   2d. Were the prices considered fair?
   2e. Do you think they were taking advantage of the situation?
   2f. Were they from the local area or out-of-state/region?
   2g. Did you know that there is a Price Gouging law in Texas?
   2h. Did you think it helped protect you?
   3a. If you lost electricity, did you have a generator?
   3b. Did you purchase it before Ike?
   3c. If you bought it after Ike, where did you buy it? (box store, independent dealer,
Questions 2a:

The majority of the respondents indicated the prices for goods and services changed after Hurricane Ike. Of those interviewed 61.12 percent experienced some type of increased prices, compared to 27.78 percent who didn’t. There were 11.12 percent who said they’d heard about increases but didn’t experience it. Most respondents said they experienced increased prices for gas, followed by hotels as the next most prevalent pricing complaint. This coincides with the data from the OAG as described in next section. One respondent mentioned a grocery store had raised prices for several items. A scam involving towing flooded cars to an impound lot without authority was also reported.

Questions 2a-2h:

An overwhelming majority (93.34 percent) of the citizens interviewed had damage to their homes. Only 6.67 percent did not. All had power losses. Most of the respondents (76.93 percent) hired someone to assist with repairs or cleanup. However, 7.7 percent did it themselves, while 15.39 percent had not yet addressed the repairs. Cleanup from mold, mildew, and flooding was very common. Wind damage and several feet of water for homes on the ground were also common. Elevated homes had damage to ground level areas not considered living area.

Half of the respondents considered the prices paid for repairs or cleanup fair, while none stated they thought they were gouged. Many (40 percent), however, stated they couldn’t judge because work was still in progress. Volunteers assisted some (10 percent) without charging any fees. Many were aware of outside contractors and vendors working in the area, and were taking care to hire someone local (Figure 4). Interviews did not reflect outside vendors taking advantage of the situation and price gouging locals; however outside contractors were just beginning to come into the area at the time of the study (Figure 5).

Of the respondents interviewed, only 26.67 percent were unaware of the Texas price gouging law, compared to 73.34 percent who knew of its existence. Many (40 percent) thought the law protected them, while 20 percent thought the law did not. Forty percent were not sure and said they hoped it would.

Questions 3a-3d:

All of the respondents lost power. Only 21.43 percent had a generator compared to 78.58 percent who did not. Of those with generators, 75 percent had one before Ike and 25 percent bought one afterwards. Some (25 percent) were bought at a big-box retail store and others (25 percent) were purchased from an independent roadside vendor. The remaining respondents did not indicate where they purchased their generators. Seventy-five percent did not consider the generator prices fair and several stated they heard stories of gouging from friends, as well. This included reports of price gouging by roadside vendors, independent dealers, and box stores. These results also coincided with complaints from the OAG.

Questions 4a-4b:

Almost every respondent made an insurance claim or dealt with an adjuster (91.67
percent). Only 10 percent thought their settlement was fair, while 8.34 percent did not make a claim. The majority (90 percent) of respondents were still in the insurance claims process at the time of the research. One person surveyed hired an attorney to deal with the insurance company.

Researchers observed several out-of-area contractors vehicles in the Home Depot parking lot. Several only had magnetic signs on their trucks and out-of-area license plates. There were also laborers with signs stating they would work for cash (Figure 6). Additionally, a temporary campground with several recreational vehicles, tents, and portable toilets was in a field adjacent to Home Depot.

Besides local and out-of-area contractors, Home Depot also offered cleanup services, including removal of debris, leaves, yard trash, cutting and removing trees, and overall cleanup. Their services excluded removal or handling hazardous materials, such as asbestos, or items requiring heavy machinery. They further advertised that debris would only be dumped in authorized sites. Labor included one supervisor and three crewmembers—all of whom underwent background checks and wore badges. The half-day minimum (four hours) cost $595.00 and included labor and one load of trash removal. Additional hours were $125.00. A full eight-hour day was $950.00. At that price, it’s easy to see why outside contractors and vendors appealed to many citizens. There exists a strong potential for unsatisfactory work due to the fact that the contractors are transient and difficult for citizens to determine who was credible.

Secondary Data (OAG) Findings

Data was reviewed from the Texas OAG consumer complaint database and log of incoming telephone calls. There were seven major complaint categories in the database.

Most of the complaints involved gas issues (gas prices, gas can prices) with 631 complaints (42.32 percent). Different gas stations, from independent dealers to major truck stops, were reported. The next highest category was hotels. There were 251 complaints (16.84 percent) consisting of charges of higher than advertised or reserved rates, along with charging the hotel tax. According to state law, hotel taxes are suspended during disasters. Many of the hotel complaints concerned tax being charged. Comments from the OAG database indicated hotel operators were either unfamiliar with the law or ignored it, resulting in numerous complaints.

Food, water, ice, and charcoal complaints made up the next category with 245 complaints (16.44 percent). There were 118 incidents (7.92 percent) reported in the category of repairs and material. In addition, there were 102 generator sales that citizens considered price gouging (6.85 percent). Many of these were from independent dealers, as well as big-box retail stores and independent roadside vendors. The category for insurance had five complaints (0.32 percent) and a miscellaneous category had 139 complaints (9.31 percent).

Additional Issues

The researchers found that it is a major concern that FEMA appears to have substantial issues deploying response and recovery resources. A lot of the public is confused as to procedure and communication with the agency. Many respondents indicated that FEMA should have corrected response problems following Katrina in 2005 but have found there are
still issues. However, this is entirely different research for a future study.

Another common discussion involved FEMA response time, including how quickly they performed property inspections, registrations, and provided contradictory information to disaster victims. For example, some were told one thing from a FEMA worker and another from the inspector sent by FEMA (e.g., “the inspector was an angry gentleman, for your questions, call the hotline, he didn’t want to spend the time to answer questions”). There were also differences of opinions dealing with reimbursements for temporary housing. Disaster Resource Centers in Brazoria or Galveston Counties were not open during field observations; however, there were several operating in Harris County. Finally, resource allocation did not appear to be equitable in all counties.

Insurance was another issue revealed in the interviews. There were common stories regarding the type of insurance coverage they had on their property. The majority of those interviewed did not have flood insurance, however several had only windstorm coverage and said they were told not to obtain flood insurance by their agents. They were under the impression that windstorm insurance would cover hurricanes. However, this is a separate coverage from floods and hurricane protection. The majority did have homeowner’s or renter’s policies but none had a separate coverage for hurricanes. Based on the respondents’ comments, it appears that many were not properly insured due to the recommendations of their agents (e.g., “Agents don’t tell residents about flood insurance”; “You don’t need flood insurance”; “Get windstorm coverage with your homeowners”).

Since the interviews were open-ended, many respondents discussed preparedness, response, and community issues. These included evacuation, insurance, looting, FEMA, and resources such as food, water, and ice.

The majority of citizens interviewed followed mandatory evacuation orders and returned to their homes at different times. Most indicated they would evacuate if another hurricane threatened, but some stated they would not because of issues of reentry and the desire to protect their property.

Summary

The major research question was to empirically determine if there was price gouging after Hurricane Ike in three Texas counties. Based on observations of current prices and interviews, there were individuals who experienced price gouging. The majority of these cases involved gasoline prices followed by a significant amount that felt they paid too much for hotel rates or hotel taxes and food. Additionally, the Texas OAG received nearly 1,500 complaints statewide. These complaints coincided with the types found in the fieldwork.

Emergency Management officials said there were some cases of price gouging but it was not widespread in Harris or Brazoria Counties. There were some rouge contractors and vehicle towing scams but these individuals were closed down.

This study indicates that additional research is necessary before stating that price gouging is occurring on a widespread basis. Many citizens might term an incident or charge “gouging,” while others do not. Most of the respondents did not file a complaint with the attorney general. It is important to keep in mind that one purpose of this type of research is to help victims and minimize impacts after a disaster. The researchers found that many neighbors assisted each other, whether in cleanup or sharing resources such as food or water.
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References


Figure 1. Map of Study Area (Brazoria County 2008)
Figure 2. Price Gouging Information as posted on the OAG Web site (Texas Office of the Attorney General, 2008c)
Figure 3. Red Cross Point of Distribution (POD) Center in Shore Acres, Texas: Brazoria County.

Figure 4. Local Contractor Advertising (BOI=Born on Island)
Figure 5. One of many non-local contractor advertisements demonstrated by a 1-800 number.

Figure 6. Will work for cash