Hurricane   Households Disposable Income
and Real Estate Values in the Southeast Texas Region

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ABSTRACT

This paper examines the impact of Hurricane Harvey on households disposable income and values of flooded houses in South East Texas region. The disposable income analysis is based upon data obtained from the reports of 10 local credit unions and from the National Credit Union Administration. The data of the flooded 48 houses are used for the analysis of the values of flooded homes pulled from the Multiple Listing Service and the Jefferson County Tax Assessor's Office. Based on data analysis of this small sample of financial institutions, the findings suggest that the residents of Southeast Texas obligated to use more of their disposable income to maintain the pre-Harvey levels. The results of real estate analysis show a significant drop in value for the flooded houses with few having flood insurance looking at both the sales prices and new appraise values by the tax assessor.

Keywords: Hurricane Harvey's impact, Real estate values, Households Disposable Income

INTRODUCTION AND BACKGROUND

More than 51 inches rain dropped in Hardin, Jefferson, and Orange counties of Southeast Texas, which broke the record of 48 inches set in 1978. (Holmes, 2017) Harvey was one of the most expensive hurricanes in United States history after Hurricane Katrina, 2005. The property damage and impact on households of South East Texas region were substantial. The objective of this research was to analyze the impact of Hurricane Harvey on households disposable income and values of flooded houses. The disposable income analysis is based upon data obtained from the reports of local credit unions and from the National Credit Union Administration. The small sample of flooded houses used for the analysis of the real estate values.

According to The Wall Street Journal hurricane Harvey had a temporary impact on employment. "Payroll employment growth slowed in the weeks after Harvey, rising just 14,000 in September, and then bounced back with growth of 271,000 the following month." (Torry & Chaney, 2018) Texas Comptroller of Public Accounts considered a reduction in the productivity of labor. Salaried employees remained unaffected, while non-salaried employees experienced a deep decrease in their income. However, Comptroller assumed that the negative impact on employment would be counterbalanced by recovery efforts. (Hegar, 2018)

Storms had a significant effect on households checking account deposits and expenditures. "Checking account deposits for consumers were more than 20 percent ($400) lower and expenditures were more than 30 percent ($500) lower than the baseline in the week of Harvey." (Greig et al., 2018) Hurricane also had a big impact on debt return. "Debt payments dropped by more than 15 percent in the week of landfall and cumulatively remained lower than baseline 12 weeks after Hurricane Harvey." (Greig et al., 2018)

Harvey's direct impact on households' can be summarized as follows:
- 88 fatalities,
- 44,000 people forced to shelters,
- 450,000 people needed assistance to recover,
- employment grew only by 14,000 in September,
- 370,000 customer lost electricity,
- 120,000 customers left without water in Beaumont. (Aon Benfield, 2018)

The intensive construction and current infrastructure were not prepared to handle more than 51 inches of rain. The clay soil type provided an additional risk for flooding. (Ramchand & Krishnamoorti, 2017) This factors led that Harvey destroyed $125 billion worth of property including damaged:
- 148,000 single-family homes,
- 163,000 apartments,
- 500,000 cars. (Ramchand & Krishnamoorti, 2017)

According to Goldman Sachs, rebuilding efforts has the capacity to offset slowdowns. Long rebuilding, construction, and purchases lead the economic boost. (Torry & Chaney, 2018)

car payment rose from $329.98 to $349.24.[3] This is an increase of $19.26 per month per loan. The CU group held 31,856 used car loans for a book value of $491,744,307.

Chart 1. Car title applications
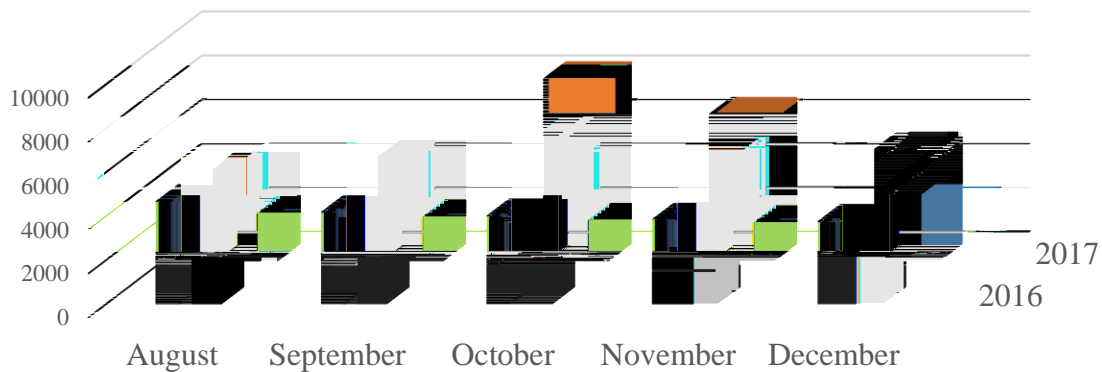
As indicated in Table 2 (Appendix) the number of approved registrations for individual assistance in the Hardin, Jefferson, and Orange counties of Southeast Texas for FEMA was 54,578. The total amount in survivor's pocket in three counties of Southeast Texas was $1.77 billion as estimated by FEMA. FEMA issued 11,290 applications for business loans in the three counties of Southeast Texas. The number of applications received was 1,461. The total of applications approved was 470. Theses approvals were 4.2% of applications issued and 32.2% of applications received. The average business loan approved was $131,072. A business would on average have to pay an extra $1036.52.[4]

Post-Harvey Real Estate Analysis in Flooded Area of South East Texas

National Flood Insurance Program (NFIP) paid $752.5 million in the Hardin, Jefferson, and Orange counties of Southeast Texas for the 11,968 flood claims. It was estimated that in Beaumont alone there were over 20,000 flooded homes. Housing and other disaster-related expenses for the three research counties of Southeast Texas were $331 million.

As indicated in Table 3 (Appendix) FEMA also issued 57,826 applications for home loans. The number of applications received was 15,927. Applications approved were 7257 for $625 million. These approvals were 12.5% of applications issued and 27.5% of received applications. The average home loan approved by FEMA was $86,138. The extra payment on their home to service this new mortgage on their home would be $364.56 a month in addition to

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[3] Based on 48 months at 4.1% APR
[4] Based on 180 months at 5% APR

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CONCLUSION

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REFERENCES

Aon Benfield. (2018).

APPENDIX

Table 1. Loan data obtained from reports of 10 local Credit Unions of Southeast Texas

	Dec-17	Dec-16	Difference

Table 3. NFIP claims and FEMA home loan data analysis

Table 4. Real estate appraisal value and sales price analysis of the small sample of flooded houses

Table 5. Regression on a sample of flooded houses

Regression statistics	
Multiple R	0.7530