

The Reality of Reality Television: Does Reality TV Influence Local Crime Rates?

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Abstract

Overnight celebrity status of reality-based television cast members and filming locations may result in negative outcomes such as increased crime. Using a popular reality show filmed in Laguna Beach, we employ a difference-in-differences approach to analyze changes in the city's crime rates.

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1. Introduction

For the past decade, reality television has been on the rise with networks across the spectrum expanding their reality show programming (Levin, 2007). Reality television refers to a genre of television programs that depicts “real people in live situations”.¹ Networks such as MTV and Bravo have devoted an overwhelming share of their television lineups to reality shows. For example, in 2008, MTV launched 16 new reality-based shows. While reality shows have become more and more popular, such shows have also been subjected to intense criticism, being blamed for everything from an increase in plastic surgeries to perpetuation of stereotypes to an increase in substance abuse (Healy, 2004).

In 2006, Laguna Beach residents expressed concerns that the highly successful MTV-sponsored reality show “Laguna Beach: The Real Orange County” was responsible for tarnishing the city’s image of culture and beauty. The show followed the lives of a group of affluent teenagers in Laguna Beach, California, and depicted all aspects of their social circle, including personal conflicts, partying, and shopping. Critics argued that the high profile of the show, which increased the city’s visibility worldwide as an oasis of wealth, in combination with the portrayal of the show’s cast members as wealthy, sexy, naive, underage drinkers made Laguna Beach vulnerable to increased crime, sexual predators, and substance abuse (Kelly, 2006; Ostensen, 2006; Steinhauer, 2006). In 2006, at a forum with Laguna Beach Unified School Board candidates, parents alleged that police officers had told them that the number of sexual predators in the city had soared since the show began. Citing a 2006 Department of Education Healthy Kids Survey which showed that Laguna Beach 11th graders had the highest incidences of drug and alcohol abuse, parents expressed concerns that the show resulted in greater drug and alcohol

¹ Encarta World Dictionary

abuse and that the show would make students more susceptible to school shootings (Baker, 2006; Steinhauer, 2006).

Perceptions about the link between reality television and crime are also fueled by stories of reality stars being exposed to crime. In 2008, an estimated \$7 million in jewelry was taken from the home of boxing champion, Floyd Mayweather, Jr. almost a year after he flaunted his home and jewels on the popular MTV show “Cribs,” which features tours of celebrity homes. In 2009, reality television stars such as Audrina Patridge from the MTV show “The Hills,” Jon Gosselin from The Learning Channel’s popular show “Jon and Kate Plus 8,” and Kourtney Kardashian from the E Network’s “Keeping Up With the Kardashians” all experienced residential burglaries. Concern about the link between reality television and crime is also evident in a letter from the New Jersey Italian American Legislative Caucus to the CEO of Viacom. In the letter, the caucus stated that MTV’s popular show “Jersey Shores” was “an offensive, inaccurate portrayal of Italian Americans and contrary to New Jersey’s efforts to reduce hate and bias-related crime” (Itzkoff, 2009).

As reality-based shows continue to be more successful than sitcoms or dramas and as networks seek to make reality programming a permanent part of their television lineups, it will be important to analyze the impact that these shows have on the cast members and the communities in which they are filmed. Given the high profile of “Laguna Beach” and the show’s ability to raise the profile of a city overnight, Laguna Beach serves as a good case study to estimate changes in local crime rates after the debut of a reality television show.

“Laguna Beach: The Real Orange County” debuted on September 28, 2004. The show aired for three seasons with 43 episodes. During its second season, the show drew a record of 4 million viewers a week (Gordon, 2005). Cast members became celebrities overnight, hiring

publicists and pursuing careers in acting and fashion (Smith, 2005). Shopkeepers reported being swamped with tourists attempting to track down the cast members. In addition, the Laguna Beach Tourist Bureau offered a self-guided tour of the show's locales (Smith, 2005).

We estimate changes in the city's crimes per capita after the debut of the MTV-based reality show "Laguna Beach" using a difference-in-differences approach. Given the demographic and geographic similarities between Laguna Beach and its neighboring city Dana Point, we use Dana Point as a control to account for trends in crimes over time. We observe a divergence in total crimes for the two cities in the period after the show aired. More specifically, we find that after the show aired, the number of non-residential burglaries, auto thefts, and rapes increased disproportionately in Laguna Beach. We do not find evidence of an increase in the number of residential burglaries or robberies after the show aired.

A few studies have examined the impact of the media on economic outcomes. Gentzkow and Shapiro (2008) measure the effect of television on educational outcomes, and two additional papers (Card and Dahl, 2007; Dahl and DellaVigna, 2008) examine the relationship between media and violence. Other work has analyzed the effect of media coverage on charitable donations (Brown and Minty, 2008). We contribute to the literature by examining trends in crime rates after the debut of a popular reality television show.

2. Data and Results

We obtained data on crimes from the Criminal Justice Profile through the California Department of Justice. For each month, the Criminal Justice Profile reports the number of offenses in several categories – e.g., burglary, robbery, rape, auto theft, and larceny – within each jurisdiction of a law enforcement agency. The number of offenses in any given month include

adjustments for offenses that were reported to law enforcement in prior months, but were later determined to be unfounded.²

Annual data on city populations and the number of law enforcement officers were extracted from the FBI Uniform Crime Reports. The reports include the number of officers for Laguna Beach, and we obtained data from the Orange County Sheriff's Department on the annual number of deputies allotted for the Dana Point jurisdiction. We calculate the per-capita number of police officers as the total number of officers for each 1000 people.

Laguna Beach and Dana Point exhibit geographic similarities, as the two cities are adjacent and both contain coastal areas.³ Table 1 contains summary statistics as well as demographic information for the two cities from the 2000 Census and the 2005-2007 American Community Survey. Since the show debuted in September 2004, we define our pre-period as January 2002 to August 2004 and our post-period as September 2004 to December 2006. The demographics of the two adjacent cities are similar over the two time periods, suggesting that Dana Point is a suitable control for Laguna Beach. Both communities are relatively small with a population of 25,000 to 35,000, and while the residents of Laguna Beach are slightly wealthier than Dana Point, the overall characteristics of the residents of the cities are similar - predominantly white, slightly older than the average U.S. population, and well-educated with relatively high incomes. As seen in Table 1, an increase in average crime rates occurs for categories such as non-residential burglaries and rapes in Laguna Beach after the show debuts.

² Due to these unfounded crimes, some months record negative counts for the number of crimes. For months with negative counts, we assumed the actual number of offenses in that month were zero and subtracted the unfounded offenses from the number of crimes in the prior month.

³ Other surrounding areas are either significantly more highly populated (e.g., San Clemente, Newport Beach) or have a different demographic composition of residents (e.g., Laguna Hills). Additionally a confounding effect may exist for other cities that contain the name "Laguna" (e.g., Laguna Hills, Laguna Niguel); they may be affected by association of their name with "Laguna Beach."

Figure 1 graphs the total number of reported crimes at the quarterly-level in both cities during our sample period. The figure suggests that the divergence in crime rates between the two cities was more pronounced and consistent following the debut of the show in the fall of 2004. As a specification check, we perform a falsification test to check for a pre-existing trend in crime between the two cities, and we do not find evidence of a pre-existing trend in crimes exist for Laguna Beach relative to Dana Point.⁴

To more formally investigate whether differences in crime rates are statistically significant, we run the following OLS regression for the number of crimes per capita in city i during month t :

$$y_{it} = \beta_0 + \beta_1 post_t + \beta_2 laguna_i + \beta_3 post_t * laguna_i + X_{it} \beta_4 + \varepsilon_{it} \quad (1)$$

where $post$ is a dummy variable for the time period after the show debuts (September 2004 to December 2006), $laguna$ is a dummy variable if city i is Laguna Beach, and X contains the per-capita number of officers as well as month and year dummies to capture any seasonality. The dummy variable $laguna$ captures possible differences between Laguna Beach and Dana Point prior to the show. The $post$ variable captures factors that would result in changes in per capita crime rates even in the absence of the show airing. For our dependent variable, the number of crimes per capita is calculated as the total number of crimes per 1000 people. Since no crimes occur in certain months, we do not take the log of the crimes per capita. We use nine different measures of crimes per capita in each city: burglary, residential burglary, non-residential burglary, robbery, residential robbery, non-residential residential, rape, auto theft, and larceny.

⁴ We run a similar regression to equation (1) where we define the pre- period as January 1999 to August 2001 and the post- period as September 2001 to December 2003. Both time periods occur before the show debuts, so we should expect no difference in per-capita crimes between the two cities. As expected, none of the coefficients on the interaction of the $post*laguna$ variable are statistically significant.

Our coefficient of interest is β_3 , which represents the difference in crimes per capita between Laguna Beach and Dana Point after the show aired. Equation (1) assumes that the characteristics of Laguna Beach and Dana Point are similar over the two time periods. However, if the characteristics of one city changed relative to the other over the two time periods, then our coefficient of interest may not fully capture the effect of the show.

Table 2 reports coefficients from our OLS regressions for the nine crime categories. The results suggest that after the reality show debuted, an additional 0.09 non-residential burglaries and an additional 0.08 auto thefts per 1,000 people occurred each month. Given that the population of Laguna Beach is approximately 24,000, this corresponds to an additional 2 non-residential burglaries and 2 auto thefts each month. Some evidence exists that after the airing of the reality show there was an increase in the monthly number of rapes by 0.013 per 1,000 residents; this result is statistically significant at the 10-percent level. There does not appear to be a statistically significant impact on the other crime categories. While the reality show is one possible explanation for the differences in crime rates, it may also be possible that the characteristics in one city changed relative to the other and that this may have contributed to the differential crime rates.

3. Conclusion

The reality-based show “Laguna Beach: The Real Orange County,” bestowed overnight celebrity status to the city of Laguna Beach and the show’s cast members. Critics argued that the high profile of the show and the wealthy lifestyle portrayed by its residents would result in negative consequences, particularly an increase in crime. Using Laguna Beach as a case study, we analyze changes in the crime rates after the debut of the reality television show.

We find suggestive evidence that non-residential burglaries, auto thefts, and rapes increased during the period following the show's debut. Given that the show also raised the profile of the local merchants that were highlighted in various episodes, it may not be surprising that we observe an increase in non-residential burglaries.⁵ We find no evidence that residential burglaries or robberies increased in the period after the show's debut. One explanation for why we do not observe higher rates of residential crimes may be the result of the numerous gated communities in Laguna Beach that create highly guarded residential areas. It should also be noted, that our results are based on the assumption that Dana Point is a suitable control group and that the demographics of the two cities remained the same over the two time periods.

The increased profile of a city can bring many positive benefits to a community, such as a rise in tourism and local business. However, depending upon the lifestyle portrayed by the residents, the community may draw negative consequences, such as an increase in crime. As more reality-based shows are created, the community needs to carefully weigh the costs and benefits of their increased profile.

Acknowledgements

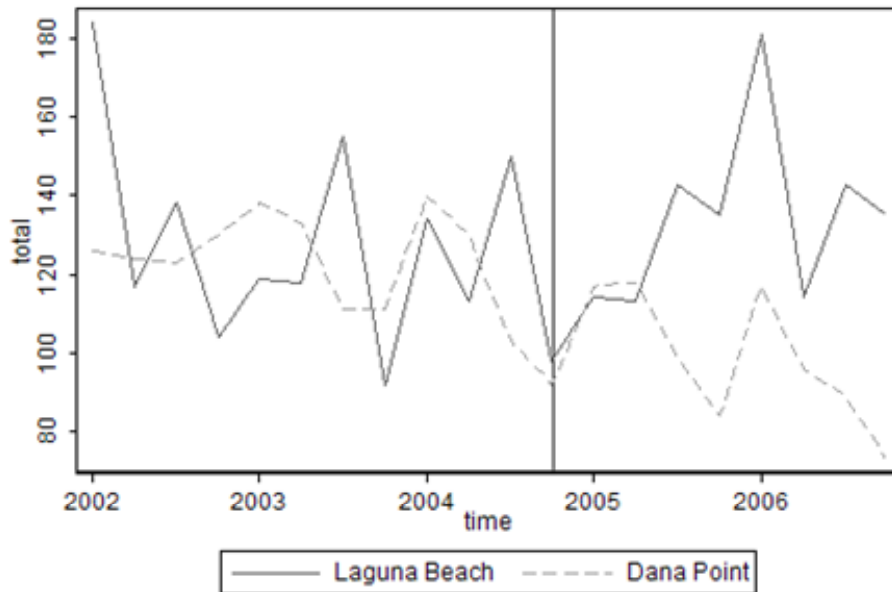
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⁵ Due to prohibition of filming at the campus of Laguna Beach High School, TV producers focused on local "hot spots" and businesses in the area, such as Ruby's Diner, Surf and Sport, and Fashion Island (Paulsen, 2004). In fact, Laguna Surf And Sport has reported an increase in calls and traffic from tourists and the general public after the show aired, inquiring about one of its former employees who was a prominent cast member of the show (Riley, 2005).

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Figure 1. Total number of crimes in Laguna Beach and Dana Point 2002-2006



Notes: This figure graphs the total number of crimes reported in the Criminal Justice Profile from the California Department of Justice for the major categories of burglary, robbery, rape, auto theft, and larceny. The counts are aggregated at the quarterly-level for the two cities of Laguna Beach and Dana Point over the years 2002-2006. The reality show debuted in fall 2004 as indicated in the figure.

Table 1. Summary Statistics

	Laguna Beach		Dana Point	
	Pre	Post	Pre	Post
Demographic Characteristics				
Population	23,727	23,578	35,110	32,018
Median Age	43.4	47.7	39.8	44.9
Percentage White	92	90.7	87.2	85.8
Population 25 and over with Bachelor's degree or higher	56.1	59.6	41	45.1
Median household income (2007 dollars)	\$94,347	\$90,007	\$78,460	\$81,665
Families below the poverty line	2.8	3.6	3.4	4.9
Crime and Police				
Residential burglaries	0.314	0.239	0.168	0.149
Non-residential burglaries	0.195	0.246	0.109	0.074
Residential robberies	0.001	0.003	0.002	0.003
Non-residential robberies	0.015	0.022	0.028	0.021
Rapes	0.010	0.022	0.009	0.009
Auto thefts	0.148	0.163	0.156	0.10
Larcenies	1.08	1.09	0.69	0.54
Officers	1.99	1.97	0.74	0.72

Notes: The pre-period refers to data from the 2000 Census, and the post-period refers to data from the 2005-2007 American Community Survey 3-year Estimates. Crime categories are reported as the average monthly number of crimes per 1000 people. Police employment is reported as the average annual employment per 1000 people.

Table 2. Crime rates in Laguna Beach (relative to Dana Point) after the debut of the TV show

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Burglary: residential	Burglary: non- residential	Robbery: residential	Robbery: non- residential	Rape	Auto theft	Larceny
officers per capita (000s)	-0.226 (0.337)	-0.062 (0.353)	-0.062+ (0.032)	-0.055 (0.101)	-0.057 (0.069)	-0.158 (0.288)	0.058 (0.983)
Laguna Beach	0.428 (0.420)	0.164 (0.443)	0.077+ (0.041)	0.057 (0.126)	0.071 (0.086)	0.190 (0.357)	0.318 (1.212)
post	0.033 (0.039)	-0.090+ (0.050)	0.003 (0.005)	-0.019+ (0.011)	0.005 (0.009)	-0.027 (0.037)	-0.265* (0.106)
Laguna Beach*post	-0.054 (0.034)	0.086** (0.032)	0.001 (0.003)	0.014 (0.010)	0.013+ (0.007)	0.075* (0.030)	0.156 (0.100)
Observations	120	120	120	120	120	120	120
R-squared	0.461	0.509	0.092	0.153	0.197	0.260	0.571

Notes: Robust standard errors in parentheses

+ significant at 10%; * significant at 5%; ** significant at 1%

The pre- period is from January 2002 to August 2004 before the show aired, and the post- period is from September 2004 to December 2006 after the show aired. The dependent variable is the number of crimes divided by the total city population (measured in thousands.) The regression also includes month and year dummies.