



Panel Study of Income Dynamics Technical Paper Series

Tracking PSID Families in the Gulf States of Louisiana, Mississippi, and Alabama

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Abstract

The 34th wave of the Panel Study of Income Dynamics (PSID) was underway when Hurricane Katrina struck the Gulf Coast causing devastation along the coast of Louisiana, Mississippi and Alabama. By this point in the 2005 PSID field period, more than 90% of the families in these three Gulf States had completed their interviews. With a special grant from the National Science Foundation and the Department of Homeland Security, a series of tracking steps was implemented prior to the 2007 wave of data collection to find these families who may have relocated for various reasons related to Hurricane Katrina, putting them at high risk for subsequent attrition. This paper describes the effectiveness of steps taken during the fall of 2006 to locate the families residing in areas affected by Hurricane Katrina who are part of the longitudinal sample of the PSID in order to enhance the likelihood of their retention in the 2007 wave.

Background

The 34th wave of the Panel Study of Income Dynamics (PSID) was underway when Hurricane Katrina struck the Gulf Coast on August 29, 2005 causing devastation along the coast of Louisiana, Mississippi and Alabama. By this point in the 2005 PSID field period, more than 90% of the PSID families in these three Gulf States had completed their interviews. With a special grant from the National Science Foundation and the Department of Homeland Security, a series of tracking steps was implemented prior to the 2007 wave of data collection to find these families who may have relocated for various reasons related to Hurricane Katrina, putting them at high risk for attrition. This paper describes the effectiveness of steps taken during the fall of 2006 to track and locate the families residing in areas affected by Hurricane Katrina who are part of the longitudinal sample of the Panel Study of Income Dynamics (PSID) in order to enhance the likelihood of their retention in the 2007 wave of the PSID. These families were all residents of the Gulf States of Louisiana, Mississippi, or Alabama in 2005 during their participation in the PSID.

The Panel Study of Income Dynamics (PSID) is a genealogical household panel survey of a nationally representative sample of U.S. families. The same families and their descendants have been followed since 1968. Data on employment, income, wealth, health, housing, expenditures, philanthropic behavior, and marital and fertility behavior and more have been collected from the same families and their descendants annually 1968-1997, and biennially 1997-2007. The PSID followable sample is approximately 9,000 families as of 2007.

The implementation of special tracking procedures to locate the families in the PSID who may have been affected by Hurricane Katrina was important for the following reasons. First, a high wave-to-wave continuation rate is critical to the success of a long panel study such as the PSID. Panel attrition can be a serious threat to data quality to the extent that the baseline sample members become increasingly unrepresentative of the original population in successive waves of the panel study (e.g., Kazprzyk, Duncan, Kalton, Singh, 1989; Menard, 2002). As the panel progresses over time, the cumulative loss of original sample increases the risk of bias in the estimates derived from any one wave as well as in the

estimates of change (e.g., Lillard and Panis, 1998; Wright, Allen, and Devine, 1995). Throughout most of its nearly 40 year history, the PSID has achieved wave-to-wave reinterview response rates in the range of 96-98% (Hill, 1992; McGonagle and Schoeni, 2006). As the Gulf State families represented approximately 7% of the total number of PSID families, their continued participation in the PSID was of critical importance for maintaining its response rate and representation of US families as a whole.

The effects of Katrina in the states of LA, MS, and AL varied from major devastation necessitating immediate and long-term evacuation, to indirect effects such as job loss that may have caused eventual relocation, to more minimal impacts resulting in no residential changes. Nearly 7% of the total sample of families (555 of 8492) eligible for the 2005 PSID interview resided in these three Gulf States in 2005 putting them at risk for relocation and subsequent attrition. Estimates from the Current Population Survey (CPS) showed that approximately 1.5 million people evacuated from these three states due to Hurricane Katrina (Groen and Polivka, 2007). Other studies have shown that survivors of traumas such as natural disasters frequently move either temporarily (e.g., into shelters or with families members) or permanently (e.g., as a secondary result of job loss) in the year after the event (Rajotte, Fuchs, and Zatzick, 2003). Locating these families in order to secure their participation in 2007 and retain them in future waves was important to maintain the national representativeness of the sample.

Second, in the PSID, which follows the same families and their genealogical descendants over time, the sample is naturally refreshed as children grow up and form their own economically independent family units. “New” families can also arise through the “splitting off” of other family members who form their own independent family units for various reasons, including marital changes, moving for job changes, etc. One source of uncertainty about the families in the Gulf states was whether the split off rate would be higher as external factors resulted in compositional changes of family members within family units, even if temporarily. It was also possible that some families moved in together to share resources, which would yield a smaller number of families than in 2005. In both of these situations, having information about the location of these families was important in order to increase the odds of securing participation in 2007, and for the planning of interviewer and other field resources.

Finally, with its repeated measures on individuals from the same families and their descendants across time, a central scientific aim of the PSID is to provide data to support the study of economic status, health, and well-being over the life course. To this end, the goal of a supplemental project supported by the National Institute on Drug Abuse (Sandro Galea, PI) is to collect information about the exposures of these families to Katrina and its aftermath and emotional functioning after approximately 18 months. Disaster exposures and emotional functioning measures were administered through a 20-minute module after the main PSID interview in 2007 (Cerdeira et al., 2007). Advance tracking of these families would also facilitate high cooperation on this important module.

Three sets of results are presented. First, various tracking efforts routinely used in the PSID for all families are described and results are presented comparing the effectiveness of these efforts for Gulf State and Non-Gulf State families. Second, the additional tracking efforts undertaken specifically to locate Gulf State families are described and results presented on the effectiveness of each step. Finally, data on the ultimate indicator of the success of tracking efforts in 2006 – the outcome of efforts to retain and gain cooperation of the Gulf State families during the 2007 PSID interviewing phase – is presented.

Methods

The Survey Research Operations division of the Survey Research Center at the Institute for Social Research has collected data for the PSID since its inception in 1968 and conducts all tracking efforts for PSID families. The PSID main study interviewing phase occurs biennially between March and December in odd-numbered years. The focus of this report is families responding in 2005 to the 34th wave of the Panel Study of Income Dynamics from their residences in Louisiana, Mississippi, or Alabama. There were 555 such families in the PSID who were eligible for the PSID 2005 interview prior to Hurricane Katrina in the three states of interest. Of the 555 families, our estimate based on 2005 geocode data is that 9% were in areas affected by severe flooding (metro New Orleans), 3% were in areas affected by storm surge (coastal Mississippi), 5% were in near-inland counties of Alabama and Louisiana affected by hurricane-force winds and rain, 12% were in areas affected by tropical-storm force winds and rain, and

71% were in areas further away from the storm but which received heavy rain and considerable numbers of evacuees from the areas harder hit by the storm.

In order to locate these families, both routine PSID tracking methods and a series of special steps were undertaken. As part of its routine tracking efforts, PSID sends all families a study notification letter to alert them to expect an upcoming telephone call from an interviewer from the Survey Research Center at the University of Michigan. The interviewer then attempts to make contact with all families using their last known telephone number. PSID routinely collects the names and addresses of up to two contact persons who would be most likely to know of the whereabouts of families at the conclusion of each interview. Interviewers attempt to locate families through this contact information provided in the prior wave if they are not found at their last known telephone number.

The 2005 geocoded address of the families indicated that the majority were not likely to have been affected by Katrina to an extent involving immediate relocation. Thus, the last known contact information from the prior wave of data collection was expected to be valid for most of these families. Location information provided to the interviewer by contact persons named by the respondent in the prior wave was expected to be the primary source of information for locating the Gulf State families that resided in the areas most heavily affected by Hurricane Katrina.

Two additional routine tracking steps were carried out in preparation for the PSID 2007 main study interviewing phase that were also used to locate Gulf State families. First, in January of the year preceding data collection (i.e., most recently in 2006), a newsletter is routinely sent to all families providing them with general study news, alerting them to the upcoming study, and thanking them and emphasizing the importance of their participation. Address changes or “bad addresses” that get returned to the PSID by the USPS as a consequence of this mailing are archived and used to make the next contact with families. Second, midway between the end of one field period and the start of the next (i.e., most recently in July 2006), a “contact information update” mailing is routinely sent to all families. The mailing includes a postage-prepaid postcard listing the families’ last known address and telephone number and a letter asking families to verify, or update their contact information if they have moved.

Families who return the postcard receive \$10 as a token of appreciation for their time and effort providing this information. Before this mailing is sent, all addresses on record are updated through the USPS National Change of Address to ensure that the mailing is sent to the best possible address. Each wave, between 50-60% of families return the postcard and provide updated or verified contact information.

Once main study interviewing starts, additional tracking attempts are undertaken if families are not found at their last known telephone number, or through contact persons. During 2005 production interviewing, approximately 23% of all PSID families required tracking after unsuccessful attempts using the last telephone number and contact person information. Trackers used directory assistance and internet search databases to eventually locate 92% of these families and about 83% provided interviews compared to an overall interview rate of 95% among the 77% of families who did not need tracking.

Between October 2006 and December 2006 a team of eight trackers employed by the Survey Research Operations unit of the Survey Research Center at the Institute for Social Research implemented three sets of additional steps to locate the Gulf State families (Table 1). The first set of steps is referred to as “first 24-hour” steps, comprised of attempts to locate the family at their last known telephone number or through their contact persons, or by obtaining a new telephone number through directory assistance. These are the same steps that PSID routinely undertakes during main data collection to make contact with the families for their interviews, but were conducted several months in advance for the Gulf State families. Families who were not located in these first steps were sent a letter to their last known address describing PSID’s concern about their well-being in light of Hurricane Katrina, and requesting that they contact us through a dedicated 1-800 number. The second set of searches was comprised of Internet searches, including websites set up by the Red Cross and other organizations to identify relocated disaster victims. Finally, face-to-face tracking was conducted to locate families who remained “lost” after undertaking these steps.

The trackers were additionally supplied with an “e-profile” for each Gulf State family taken from the 2005 wave. The e-profile is an informational description of the family developed for interviewers each wave consisting of information about “what happened” to the case as reported by the interviewer in

the preceding two waves, including call record information, best times to make contact, resistance information, names of family members, etc. The study used the sample management program, developed by the Survey Research Center, to carry out all field activities, including the updating of records for families that were located.

Results

Routine Tracking Efforts. Table 2 displays the outcome of three routine tracking efforts undertaken for Gulf State and Non-Gulf State families in 2006, following the hurricane and prior to the 2007 data collection effort. First, by January 2006, approximately five months after the hurricane, the study newsletter mailing revealed that there were more than three times as many address changes for Gulf State families compared to non-Gulf State families, as indicated by USPS returns (16% compared to 5%). Second, fewer Gulf State families returned the July 2006 contact information update postcard by October 2006 than non-Gulf State families, with 46% of the former returning the postcard compared to 55% of the latter. Among those returning the postcard by October 2006, 25% of Gulf State families provided information on an address change, as opposed to an address verification, compared to 14% of non-Gulf State families returning the postcard that had an address change.

Supplemental Tracking Efforts for Gulf State families. Table 3 presents the results of the effectiveness of the October – December 2006 supplemental tracking efforts for Gulf State families. Once addresses were updated from the Family Newsletter and contact information update mailing, more than 75% of Gulf State families (n=414) were located based on their last known telephone number, leaving 141 families for whom additional tracking procedures were necessary. Of these 141 families, a total of 126, or 89%, were eventually located through one of the three tracking steps, as will be described. Thus, overall, 97% of Gulf State families were located in advance of the 2007 production phase.

Of the 141 families that needed additional tracking, the overwhelming majority (72%) were found by calling the telephone numbers of the contact persons that the respondents had provided during the 2005 interview. Internet searches were conducted for families who remained lost. Only one family was

found as a direct result of finding a telephone number via the Internet. However, internet searches gave trackers leads about the likely whereabouts of approximately 30 families who were then tracked using the face-to-face methods described in Table 1. Seventeen percent of these families were located via face-to-face tracking with the most successful source of information acquired on visits to the families' last known address, often through neighbors and landlords.

2007 Production Interviewing Outcome. Table 4 displays the outcome of the 2007 PSID production effort for Gulf State and Non-Gulf State families. The results show that both the routine and supplemental efforts taken in 2006 to retain and gain the cooperation of the Gulf State families were a worthwhile investment. By the conclusion of the 2007 main study data collection period in December 2007, 96% of these families had completed the 2007 PSID interview and 85% completed the supplemental 20-minute module on disaster experiences. This overall response rate of 96% was significantly higher than the overall response rate in the main PSID of 94% but nonetheless very similar between the two samples.

An examination of the total number of calls made by the interviewer needed to complete the case provides information on cost and effort of interviewing this sample. There was no statistically significant difference between the two samples in the average total number of calls needed to finalize the disposition of the case. However, among cases providing an interview, families in the Gulf states required significantly more calls to finalize the interview compared to families in non-Gulf states (10.4 average calls compared to 9.3, $p < .05$). This may have been due to the longer questionnaire length for the Gulf State families, which included a 20-minute module on their experiences with Hurricane Katrina.

One source of uncertainty about these families in advance of the 2007 interviewing phase that could have affected production efficiency was whether they would experience particularly high rates of "splitting-off;" that is, would the family compositions change at a high rate compared to non-Gulf State families necessitating a greater amount of field resources? Reducing this uncertainty for the purposes of field management was a motivating force behind implementing early tracking. It turned out that the rate by which new families were generated from sample families (i.e., the "split-off" rate) for the two samples

was highly similar, with 8.3% of families in the Gulf states having a new related family participating in the PSID in 2007 compared to 7.7% in the main PSID ($p>.01$). As noted above, split-off families typically occur in the PSID when adult children grow up and move out forming their own independent household but can also occur if related family members move out and form their own economically independent households for other reasons. There was no evidence that this occurred more frequently among families in the Gulf States compared to those from non-Gulf states.

Gaining participation of Gulf State families during the PSID 2007 interviewing phase was more efficient than for non-Gulf State families as indicated by their lower rates of tracking and need for refusal conversion efforts. Compared to non-Gulf State families, families from the Gulf states were significantly less likely to require tracking during 2007 production (19.7% vs. 23.4%, $p<.01$), were significantly less likely to have been sent a letter for refusal conversion or for some other reason to address reluctance (7.4% vs. 11.1%, $p<.01$), and were nearly half as likely to have ever been in refusal conversion status (4.8% vs. 8.0%, $p<.01$).

The proportion using a cell phone to complete the PSID interview is of interest due to the dramatic increase across the entire sample in the past two waves. Little is currently known about the impact of cell phone use on data quality and participation but efforts are underway to examine this recent phenomenon (Gouskova, McGonagle, Beaulé, Stafford, 2007). In 2005, 12% of the PSID sample completed the interview via cell phone. This rate nearly doubled in 2007, with 23% of the overall sample completing the interview on the cell phone. Gulf State families used cell phones at a significantly higher rate than non-Gulf state families (27.1% vs. 21.8%, $p<.01$) which may be indicative of their greater mobility post-2005.

Discussion

A main advantage of the panel survey design is the detection of change from one wave of measurement to the next through the assessment of the same sample members over time. Locating and retaining families affected by the natural disaster of Hurricane Katrina who were at high risk for attrition

was a central aim of this project. A related aim of this project was reducing the uncertainty of the numbers of family composition changes to expect due to Hurricane Katrina. It was unclear at the start of production how many of the Gulf State families had moved, multiplied into additional family units for various reasons, or joined together in fewer family units to share resources. Having this information was important for the successful planning and implementation of PSID field activities.

The supplemental efforts to locate the Gulf State families were a worthwhile investment, with contact information found for 97% of these families in advance of 2007 production interviewing. As a genealogical panel ongoing for the past four decades, the study was able to capitalize on its sample design whereby participating families are related to one another and have good rapport with the project. Thus, related family members are likely to be aware of each other's whereabouts and willingly provide this information to the interviewer. In fact, the PSID reinforces this willingness by providing family members with small incentives ranging from \$5 to \$20 for the provision of contact information about the location of other sample families.

The importance of the pre-production early tracing efforts is underscored by higher rates of mobility in these Gulf State families as indicated by their lower rates of response to the routine study mailing in July 2006 requesting updated contact information, and among those who responded, higher rates of address change. Post office returns of the study newsletter mailing in January 2006 also showed a much higher rate of address change for these families compared to other PSID families. These families were also more likely to complete the interview on a cell phone, versus a landline, and need significantly greater numbers of calls by the interviewer to do so. These indications of residential changes are certainly consistent with reports of high rates of mobility and population losses in LA, MS, and AL between July and December 2006 as documented by a special project of the American Community Survey (Koerber, 2006).

The vast majority of PSID Gulf State families were located based on their last known contact information which was updated from the routine study newsletter mailing and the contact information update mailing. Other longitudinal studies have demonstrated the effectiveness of such mailings in

keeping track of panel respondents (see Couper and Ofstedal, 2006; Laurie, Smith, and Scott, 1999). The utility of these “off-year” mailings in the PSID is highlighted by the fact that more than half of all families respond to them and provide updated or verified contact information. These mailings are much more cost effective than full-scale tracking during main data collection, even including a modest incentive (\$10) for each responding family as a token of appreciation for this information.

Intensive tracking efforts were necessary for only 25% of Gulf State families, which is only slightly higher than the percentage of all PSID families who routinely need tracking during production (i.e., 23% in 2007). The majority of the Gulf State families undergoing special tracking procedures were located within the first 24 hours once contact was made with persons whom families reported in the prior wave were most likely to know of their whereabouts. The effectiveness of collecting names and addresses of contact persons who are most likely to know where to find respondents has been demonstrated in other studies (Ribisl, Walton, and Mowbray, 1996). The information provided by the mailings and contact information made it necessary to use expensive face-to-face tracking for only a very small number of families during pre-production. However, during production, nearly 20% of the Gulf State families still required tracking – just slightly less than the percent in the entire study. It is likely that this number would have been much higher without the early tracking.

In summary, the tracking efforts undertaken in 2006 for the Gulf State families were successful. The majority was located and provided an interview during the 2007 PSID, and, compared to the rest of the sample, required fewer tracking and refusal conversion steps during main 2007 production. Locating these families in order to secure their participation in 2007 was of critical importance to maintaining the national representativeness of the sample and response rate. Moreover, valuable information about the functioning of these families post-Hurricane Katrina was successfully collected for the majority of them. Given the greater mobility of these families in the Gulf States, it is likely that these 2006 efforts were preemptive strikes against steps that would have otherwise taken place at greater cost and with less efficiency during the interviewing phase for PSID 2007.

Table 1. Tracking steps to locate 555 PSID families in 3 Gulf states

Routine tracking steps for all PSID families

Address changes as a result of Jan. 2006 Family Newsletter mailing

July 2006 PSID mailing requesting updated contact information

Tracking steps specific to Gulf state families

Initial tracking steps

Letter sent to families

Family e-profile developed for trackers from 2005 wave

First 24-hour steps

Call last known telephone number of family

Call last known telephone number of contact persons

Use Directory Assistance to find telephone number of family and/or contact persons

Internet searches, including:

Hurricanekatrinainformation.com
Familylinks.icrc.org/Katrina
Katrinasurvivor.net
Craigslist.org
Personfind.org
Americanredcross.org
Networkforgood.org
Cnn.com/specials/2005/hurricanes/list/
Neworleans.craigslist.org
Google.com
Anywho.com

Face-to-face tracking, including:

Family's last known address
Neighbors/other informants
Landlord, building manager, rental agent, realtor
Local stores, churches, schools
Local shelters
Local, state, government agencies
FEMA Trailer parks

Table 2. Results of Routine Tracking for Gulf State and non-Gulf State Families

Source of information	Gulf State Families (n=547)	Non-Gulf State Families (n=7,820)
USPS Address Change from Newsletter Mailing January 2006	16%	5%*
Returned July 2006 Contact Information Update Postcard	47%	55%*
Gave New Contact Information from Postcard (of those returning)	25%	14%*

* Difference between two groups is statistically significant at $p < .01$; $+p < .05$

Table 3. Results of Tracking Specific to Gulf State Families

	Total Sample	Found	% Found of Total
<u>Summary of Tracking Method</u>			
Found at last known address	555	414	75
Found with additional tracking	141	<u>126</u>	89
Total found		n=504	97
<u>Special tracking of n=141</u>			
Found using contact persons		101	72
Internet searches		1	<1
Face-to-face tracking		<u>24</u>	<u>17</u>
Total found		n=126	89

Table 4. Outcome of PSID 2007 Interview for Gulf State and non-Gulf State Families

Source of Information	Gulf State Families (n=561)	Non-Gulf State Families (n=7771)
Completed PSID 2007 Interview	96%	94%*
Completed Hurricane Module	85%	--
Conducted Interview on Cell Phone	27.1%	21.8%*
Average Number of Calls to Interview	10.4	9.3+
Average Number of Calls to Final Disposition	11.5	10.8
Split-off Rate**	8.7%	7.7%
Ever in Tracking During 2007	19.7%	23.4%*
Ever Sent a Refusal Conversion Letter	7.4%	11.1%*
Ever in Refusal Conversion Status	4.8%	8.0%*

* Difference between two groups is statistically significant at $p < .01$; + $p < .05$

**Rate at which new families is formed from existing families. Results do not include split-off cases.

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