A Binational Perspective of Puerto Rican-Origin Children's Living Arrangements:

A Decade of Change and Migration in Puerto Rico and the United States, 2006 and 2015

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Abstract

Drastic changes in population size have spillover effects into children's lives. During the past decade, Puerto Rico has experienced high emigration levels and declining fertility rates resulting in a 29.5 percent decline in the child population on the Island (Montalvo and Laughlin 2017). In contrast, there are now more Puerto Ricans in the United States than on the Island. The implications of these radical population shifts for Puerto Rican children are unknown, but in all likelihood are changing the resources families have to offer children as they grow up. This paper applies a binational lens to examine family, social and demographic characteristics of Puerto Rican children in Puerto Rico and the United States. The authors use American Community Survey and Puerto Rico Community Survey data from 2006 and 2015. Additional analyses will consider householder and children's place of birth and residence one year ago. The findings are evaluated regarding prior research on family migration.

PAA 2018 Short paper

Introduction and Justification

Drastic changes in population size have spillover effects into children's lives. Puerto Rico (P.R.) has been experiencing high emigration levels with a net loss of over 446 thousand people during the past decade (Manuel Krogstad 2016). Coupled with declining fertility rates, the island experienced a 2.2 percent decrease in population between 2000 and 2010 and a 6.8 percent decline between 2010 and 2015. As a result, Puerto Rico's child population decreased 29.5 percent between 2005 and 2015 (Montalvo and Laughlin 2017). In contrast, the Puerto Rican-origin population in the United States (U.S.) is booming to the point that there are more Puerto Ricans in the U.S. mainland than in Puerto Rico (Hugo Lopez and Velasco 2011). These changes may also be a result of the Economic Recession, which started in Puerto Rico in 2006, a bit earlier than in the United States, and from which the island still has not fully recovered (Linsley 2006). The implications of these radical population shifts for Puerto Rican children and their families are unknown.

Extensive family literature underscores the importance of living arrangements as indicators of potential resources children may have access to while growing up. Numerous studies show that family arrangements in which a parent is absent, such as through divorce or single parenting, are linked to negative child outcomes (Amato 2005). Many of these family arrangements co-occur with other sources of disadvantage. For example, single parents are more likely than married parents to have low education, low income, to be younger and to be part of an ethnic/racial minority. Puerto Rican children are more likely to have single and cohabiting mothers when compared to other Hispanic children and children of other racial groups, which may also be associated with limited family resources (Landale and

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Hauan 1996; Vazquez Calzada 1993). Migration can make living arrangements more complex and limit resources for families in both the destination and origin communities (Glick 2010; Dreby 2010).

Although Puerto Rican migration has been considered akin to that of internal U.S. migration because of the ability to move to the U.S. mainland without legal restrictions, in fact the experiences of Puerto Rican migrants are more similar to those of international migrants (Duany 2002). Upon arrival, immigrants must learn to speak English and navigate a foreign culture pervaded by racial, ethnic and class divisions. Immigrant children in particular face having to straddle two worlds, that of their parents and that of the destination country. This may lead to conflict within families regarding appropriate roles for household members and relationships with the receiving community (Portes and Rumbaut 2001). Puerto Rican families face these same issues on the U.S. mainland. Migration, experienced by children directly or through the departure of relatives, leaves children with little control over their lives and in a highly vulnerable position. Furthermore, Puerto Ricans struggle more to succeed than other racial and ethnic groups on various socioeconomic indicators. For example, in 2008, 24 percent of people of Puerto Rican-origin in the United States lived in poverty compared with 23 percent of those of Mexican origin, 14 percent of Cubans, 17 percent of other Latinos, and 9 percent of non-Hispanic Whites (Collazo, Ryan and Bauman 2010).

This paper uses a binational lens to examine the social and demographic characteristics of Puerto Ricanorigin children living in Puerto Rico and the United States. It specifically focuses on how migration, the re-organization of family life, and the changes to sending and receiving communities affected by large migrant outflows shape the early-life outcomes of Puerto Ricans. The lack of studies on the linkages between families, migration and child outcomes among the Puerto Rican population guide the following research questions:

- 1. How have Puerto Rican-origin children's living arrangements changed in the past decade?
- 2. How are current migration trends potentially impacting Puerto Rican children's living arrangements in Puerto Rico and the United States?

Data and Approach

Data and Universe

The authors will use the American Community Survey (ACS) and Puerto Rico Community Survey (PRCS) one-year estimates for 2006 and 2015, which provide nationally representative demographic, social and economic information about the U.S. and P.R. resident populations. These data also include information on place of birth, current place of residence and residence one year ago. Children ages 0-17 will be the main focus of this paper. These youth are categorized as being of Puerto Rican origin based on responses to the detailed survey question asking whether respondents are Hispanic or Latino, they can be of any race. All further mentions to children in this paper are Puerto Rican-origin children under the age of 18.

Approach

² For more information on the ACS and PRCS, visit https://www.census.gov/programs-surveys/acs/. Surveys are subject to sampling error. For more information on sampling and non-sampling error, confidentiality protection and definitions, visit https://www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html.

We will first develop a demographic profile of Puerto Rican-origin children in the United States and Puerto Rico in 2006 and 2015. This will include estimates by family, social and demographic characteristics. Second, the analysis will shift toward the migration experiences of children and their living arrangements. Combining information provided by questions on place of birth, current place of residence and residence one year ago (ROYA) will yield significant insight into the role that migration has in shaping the living arrangements of Puerto Rican-origin children.³

Variables

Several measures of living arrangements will be considered for the analysis. Children's **living** arrangements will be classified as children living with two married parents, children living with a cohabiting parent, children living with their mother only, children living with their father only and children living with no parents in the household. Only children of the householder can be identified as living with a cohabiting parent. The parent's partner may or may not be the child's second parent; for simplification purposes we label this group of children as living with cohabiting parents. Some children living with their mother only or father only may be living with a parent married to an absent spouse who is stationed overseas with the armed forces, or is incarcerated, for example. Parental information is gathered by combining information on the relationship to the householder question and the U.S. Census Bureau recodes for subfamilies. This allows us to identify children who are not the child of the householder with a parent present; their parent may be married, which we show as children living with two married parents, or their parent may be cohabiting or living without a partner. These last two groups are combined and shown as children living with their mother only or father only due to data limitations.

Additional living arrangement measures included in this section of the analysis are presence and responsibilities of grandparents and presence of coresidential siblings (among children of the householder only). As a clarification, we have coded responses to questions about grandparents at the household level, since they are asked to adults regardless of their relationship to the householder. Because of this we cannot determine whether the child being analyzed is the grandchild of the adult who reported they had grandchildren in the household, only that there is a grandparent present. Living arrangements measures considering grandparents and siblings overlap with the living arrangements measures of parents described above; so, for example, a child living with a person who says they are a grandparent may be living with two married parents, two cohabiting parents, mother only, father only or with no parents.

Regarding the migration portion of this poster, we combined information on place of birth and residence one year ago of the householder and children of the householder to develop a **family migration** variable with four categories. We restrict this analysis to children of the householder because we can capture migration information of at least one parent and their child. Zero-year-old children are excluded because they do not have values for ROYA.

In Puerto Rico we identify four groups of children:

³ Another source of migration information in the ACS/PRCS is year of entry; however, this question was not applicable to people moving from Puerto Rico to the United States or vice versa due to Puerto Rico's status as a U.S. territory.

- 1. Nonmigrants: Families where the child and the householder were born and lived one year ago in P.R.
- 2. Long-term immigrants: Families where the child or the householder were born in the U.S. and lived one year ago in P.R.
- 3. Recent immigrants: Families where the child or the householder lived one year ago in U.S. and they were born in P.R. or the U.S.
- 4. Abroad: Families where the child or the householder were born abroad (other than P.R. or the U.S.) or lived abroad one year ago.

In the United States we also identify four groups of children:

- 1. Nonmigrants: Families where the child and the householder were born and lived one year ago in the United States.
- 2. Long-term immigrants: Families where the child or the householder were born in the P.R. and lived one year ago in the United States.
- 3. Recent immigrants: Families where the child or the householder lived one year ago in P.R. and they were born in P.R. or the U.S.
- 4. Abroad: Families where the child or the householder were born abroad (other than P.R. or the U.S.) or lived abroad one year ago.

Results

Population Size and Change

The following section provides preliminary results on the distribution of the Puerto Rican child population in Puerto Rico and the United States in 2006 and 2015. All comparative statements have been tested and are significant at the 0.1 level. Specifically, comparisons were made and tested between 2006 and 2015 for each place of residence separately, and between P.R. 2015 and U.S. 2015 estimates.⁴

Table 1 shows the number of Puerto Rican-origin children (rounded in thousands) in 2006 and 2015 in both Puerto Rico and the United States, including the population living in group quarters. Between 2006 and 2015, not only did the child population decline in absolute numbers in Puerto Rico, but they also made up a smaller proportion of the Puerto Rico resident population. In 2006, children comprised a total of 994 thousand people, accounting for 26.5 percent of the total resident population in Puerto Rico. By 2015 there were only 723 thousand children living on the Island, a decrease of 270 thousand children or 27.2 percent of this age group. Kids under the age of 18 made up 21.7 percent of the Puerto Rico resident population in 2015. In contrast, the population of children of Puerto Rican origin in the United States increased within the same time frame from 1.3 million to 1.7 million children (see Figure 1). This numerical difference translates into a 27.7 percent change for this age group. In both years, children made up a higher proportion (between 31 and 33 percent) of the Puerto Rican-origin U.S. resident population than children of the Puerto Rico resident population (between 22 and 27 percent). Table 2 shows the standard errors for the estimates provided in Table 1.

⁴ Statistically significant differences between 2006 and 2015 at the 0.1 level are identified in figures with '*'. Statistically significant differences between PR 2015 and US 2015 at the 0.1 level are identified in figures with '◆'.

Figure 2 shows the percent change between 2006 and 2015 for the number of Puerto Rican-origin children by state. Most states saw an increase in the number of Puerto Rican children between 2006 and 2015. Nine out of the 10 states with the largest Puerto Rican child population had a positive percent change: Florida, Pennsylvania, New Jersey, Massachusetts, Connecticut, Texas, California, Illinois and Ohio. New York is the only state among the top 10 to have a negative percent change. Although Puerto Rico, New Mexico, Wyoming, Rhode Island and New York are shown as having a decline in this population, Wyoming was not statistically different from the U.S. average. Eighteen states did not differ statistically across years in the number of Puerto Rican-origin children, and their percent change between years was also not different or was lower than the U.S. average: Illinois, New Mexico, Rhode Island, Alabama, Arizona, Delaware, Georgia, Maine, Maryland, Nebraska, Nevada, North Dakota, Oregon, Utah, Vermont, Washington, Wisconsin and Wyoming.

Children's Living Arrangements and Families

Figure 3 shows the breakdown of the living arrangements of Puerto Rican-origin children in Puerto Rico and the United States who do not live in group quarters in 2006 and 2015. Five out of 10 children lived with two married parents in P.R. in 2006; by 2015, 4 out of 10 did so. By 2015, living with a mother only became as common as living with two married parents for children in P.R. A higher proportion of children in P.R. lived with cohabiting parents in 2015 (14 percent) compared to 2006 (6 percent). Only four percent of children in Puerto Rico lived with no parents in 2015 compared to nine percent in 2006. Children's living arrangements in the U.S. only changed for two groups between 2006 and 2015, those living with cohabiting parents and those with none. A higher proportion of children in the U.S. lived with cohabiting parents in 2015 (11 percent) than in 2006 (8 percent). In 2015 only five percent of children in the United States lived with no parents present compared to seven percent in 2006.

Comparing children in Puerto Rico and the United States in 2015, the majority of Puerto Rican-origin children lived with two married parents (39 percent in P.R. and 43 percent in the U.S.) or with their mother only (40 percent in P.R. and 37 percent in the U.S.) in both places. A higher proportion of children in P.R. lived with mother only compared to children in the U.S. in 2015. Also, in 2015, a higher proportion of children in P.R. live with cohabiting parents compared to children in the U.S. (14 percent vs. 11 percent respectively).

Figures 4a and 4b provide a breakdown of different groups of children and the presence of grandparents in the household. In Figure 4a, each person shown represents a tenth of all Puerto Rican-origin children in a given location. The colored boxes show the number of kids living with a grandparent or with a grandparent who is responsible for a grandchild in 2015. Almost 2 out of 10 children live in a house with a grandparent in both P.R. and the U.S. Less than 10% of children live in a house with a grandparent who is responsible for a grandchild in both P.R. and the U.S. (see Figure 4a). The percentage of children in the U.S. with a grandparent present was higher in 2015 than in 2006 (16 percent vs. 14 percent). Yet, in P.R. there were no statistically significant differences between 2006 and 2015 in the percentage of children living in a household with a grandparent present nor statistically significant differences between 2006 and 2015 of children living with a grandparent who is responsible for grandchildren.

Although not shown in any figure, few children of the householder lived with a grandparent in either year in P.R. or the U.S. in 2015, only about three and six percent respectively. These amounts did not change substantively across years in either location. But, for children with no parents present the story is completely different (see Figure 4b). Figure 4b depicts, among kids who do not live with parents, the

percent of children who lived with a grandparent or with a grandparent who is responsible for a grandchild in 2006 and 2015 in P.R. and the U.S. Two out of three (67 percent) children with no parents present lived with grandparents in P.R. in 2015. This is higher than in the U.S. in 2015 (45 percent). Also, in P.R. in 2015 there were more children with no parents present living with a grandparent responsible for grandchildren (53 percent), than in the U.S. (31 percent). Children who live with no parents may do so for many different reasons, but the reality is that many of them rely on grandparents for support.

In Figure 5, we show family characteristics for the children of the householder. Over 70 percent of children in both places lived with at least one sibling. The proportion of children living with a female householder was over 60 percent in 2015 in both P.R. and the U.S. In 2015, more children lived with a householder who was in the labor force in P.R. and the U.S. (71 percent and 80 percent respectively) than in 2006 (69 percent and 77 percent respectively). This was also true for children living with a householder who had more than a high school diploma (HS), in other words, a householder who had completed some years of college, a bachelor's degree or graduate studies (52 percent in 2006 vs. 60 percent in 2015 in P.R. and 46 percent in 2006 vs. 59 percent in 2015 in the U.S.). In P.R., more children lived with an unemployed householder in 2015 than in 2006 (13 percent vs. 9 percent). In 2015, 58 percent of children in P.R. lived in poverty compared to 32 percent of Puerto Rican-origin children in the U.S.

Family Migration

Family migration is a part of the story. In 2015 in the United States, about 3 in 10 Puerto Rican children of the householder are part of families with migration experiences, where either the child or their householder parent have migrated (see Figure 6). In Puerto Rico, family migration was less common. About 1 in 10 children of the householder in P.R. in 2015 were part of families with migration experiences. Additional analyses, not shown, provide more information on the characteristics of children's families in 2015 by their family migration experiences. In P.R. in 2015 fewer children in recent immigrant families (25 percent) lived with 2 married parents than children in nonmigrant P.R. families (45 percent). This group, children in P.R. in recent immigrant families, also lived with an unemployed householder in lower proportions (5 percent) than nonmigrants (13 percent). In the U.S. more children in long-term immigrant families (39 percent) lived with a mother only than children in nonmigrant U.S. families (35 percent). In the U.S. more children in long-term immigrant and recent immigrant families lived in poverty than children in nonmigrant U.S. families (41 percent and 53 percent respectively vs. 29 percent). These are preliminary results shown here to generate interest, discussion and research on this topic.

Conclusions

This project is a first step toward assessing the impact current migration trends are having on the living arrangements of Puerto Rican children on the U.S. mainland and in Puerto Rico. Methodologically, this research benefits from the ability to study the sending and receiving populations in tandem with nationally representative data on the populations in the United States and Puerto Rico.

Along with the astonishing increase in Puerto Rican-origin children living in the United Sates, there has been a similar decline of this group in Puerto Rico. Migration is a part of this story. The economic recession in Puerto Rico motivated a mass exodus to the United States. Consequently, children's families in both Puerto Rico and the United States have changed considerably in the past decade, not only in

their living arrangements but also in terms of household characteristics. Particularly, children in PR are most likely to live with a single mother in 2015 than with two married parents. Living with cohabiting parents also increased between 2006 and 2015. Children with no parents present are also much more likely in 2015 to live with grandparents than before, in both places of residence.

Furthermore, this work expands on the role that families have in the distribution of economic disparities. On one hand, in 2015 children seem to live with householders who have higher human capital, in the form of labor force participation and higher educational levels, in higher proportions in both Puerto Rico and the United States, than in 2006. However, Puerto Rican-origin children in Puerto Rico experience poverty at much higher levels than children in the United States. This rate increased between 2006 and 2015. Furthermore, immigrants, particularly recent immigrants, to either country are particularly vulnerable; they experience higher poverty rates than nonmigrants in their respective place of residence. This is of concern given that in the aftermath of Hurricane Maria, emigration from the Island has increased greatly.

The disastrous hurricane season of 2017 will change Puerto Rican-origin children's families in even starker ways. By helping us understand the changes that occurred before the hurricanes, this research serves as a baseline to which we can compare the consequences of the aftermath of the storms for Puerto Rican families in both the U.S. and P.R. This will allow for the development of more effective actions to better serve these communities.

References

- Amato, P. 2005. "The Impact of Family Formation Change on the Cognitive, Social, and Emotional Well-Being of the Next Generation." *The Future of Children*, 15(2):75-96.
- Dreby, J. 2010. Divided by Borders: Mexican Migrants and their Children. Berkeley: University of California Press.
- Duany, J. 2002. *The Puerto Rican Nation on the Move: Identities on the Island and in the United States*. The University of North Carolina Press, Chapel Hill, United States.
- Collazo, S.G., C.L. Ryan and K.J. Bauman. 2010. "Profile of the Puerto Rican Population in United States and Puerto Rico: 2008." SEHSD Working Paper presented at PAA 2010, Dallas TX. Accessed on August 25, 2017. https://www.census.gov/content/dam/Census/library/working-papers/2010/demo/collazo-ryan-bauman-paa2010-paper.pdf
- Glick, J. E. 2010. Connecting complex processes: A decade of research on immigrant families. *Journal of Marriage* and Family, 72(3), 498-515.
- Hugo Lopez, M. and G. Velasco. 2011. "A Demographic Portrait of Puerto Ricans: 2009." *Pew Research Center*, Statistical Profile. Accessed on July 18, 2017. http://www.pewhispanic.org/2011/06/13/a-demographic-portrait-of-puerto-ricans/
- Landale, N. and S.M. Hauan. 1996. "Migration and Premarital Childbearing Among Puerto Rican Women." Demography, 33(4), 429-442.
- Manuel Krogstad, J. 2016. "Historic population losses continue across Puerto Rico." *Pew Research Center*, Fact Tank. Accessed on July 18, 2017. http://www.pewresearch.org/fact-tank/2016/03/24/historic-population-losses-continue-across-puerto-rico/
- Montalvo, A. and L. Laughlin. 2017. "An Island in Crisis? A Statistical Portrait of Recent Puerto Rican Migration and Socioeconomic Outcomes between 2005 and 2015." SEHSD Working Paper presented at PAA 2018, Poster Presentation. Accessed on July 25, 2017. https://www.census.gov/library/working-papers/2017/demo/SEHSD-WP2017-21.html
- Portes, A. and R. G. Rumbaut. 2001. *Legacies: the story of the immigrant second generation.* University of California Press, Berkeley, United States.
- Vázquez Calzada, José. 1993. "Las Madres que Procrean fuera de un Matrimonio Legal en Puerto Rico." CIDE.

Table 1. Children as a percentage of the total population in 2006 and 2015, P.R. and the U.S.

Population	Number in 2006 (thousands)	Percent in 2006	Number in 2015 (thousands)	Percent in 2015	Change in number 2015-2006 (thousands)	Percentage point difference 2015-2006	Percent change /1
Puerto Rican-origin people in Puerto Rico	3,745	100.0	3,329	100.0	-416	0.0	-11.1
Puerto Rican-origin children in Puerto Rico	994	26.5	723	21.7	-270	-4.8	-27.2
Puerto Rican-origin people in the U.S.	3,988	100.0	5,373	100.0	1,385	0.0	34.7
Puerto Rican-origin children in the U.S.	1,304	32.7	1,666	31.0	361	-1.7	27.7

Source: American Community Survey and Puerto Rico Community Survey 2006 and 2015 1-year estimates.

Puerto Rican-origin based on responses to Hispanic origin question.

Includes the group quarter population.

See Table 2 for standard errors for the estimates shown in this table.

/1 Percent change = ((Number in 2015 - Number in 2006) / Number in 2006) * 100.

Table 2. Standard errors (SE) for children as a percentage of the total population in 2006 and 2015, P.R. and the U.S.

Population	SE Number in 2006	SE Percent in 2006	SE Number in 2015	SE Percent in 2015	SE Change in number 2015-2006	SE Percentage point difference 2015-2006	SE Percent change
Puerto Rican-origin people in Puerto Rico	5,464	-	4,659	-	7,181	-	0.2
Puerto Rican-origin children in Puerto Rico	1,990	Z	1,515	Z	2,501	0.1	0.3
Puerto Rican-origin people in the U.S.	29,263	-	34,992	-	45,615	-	1.2
Puerto Rican-origin children in the U.S.	13,974	0.2	18,690	0.2	23,336	0.3	1.8

Source: American Community Survey and Puerto Rico Community Survey 2006 and 2015 1-year estimates.

Puerto Rican-origin based on responses to Hispanic origin question.

Includes the group quarter population.

/Z A standard error number of less than 1,000 people or a standard percent error rounding to zero.

/- Not applicable.

For more information on the estimates methodology see: https://www2.census.gov/programs-surveys/popest/technical-documentation/methodology/2010-2016/2016-natstcopr-meth.pdf
For more information on sampling and non-sampling error, confidentiality protection and definitions, visit https://www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html.

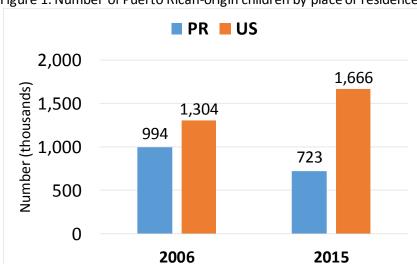


Figure 1. Number of Puerto Rican-origin children by place of residence in 2006 and 2015

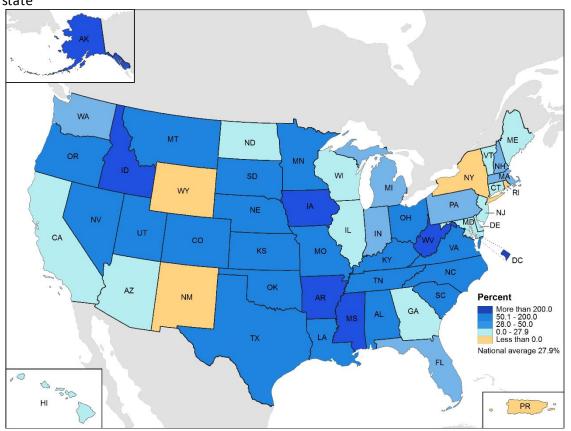


Figure 2. Percent change between 2006 and 2015 of in the number of Puerto Rican-origin children by state

Notes: All comparative statements have been tested and are significant at the 0.1 level. Percent change=((Number in 2015-Number in 2006)/Number in 2006)*100

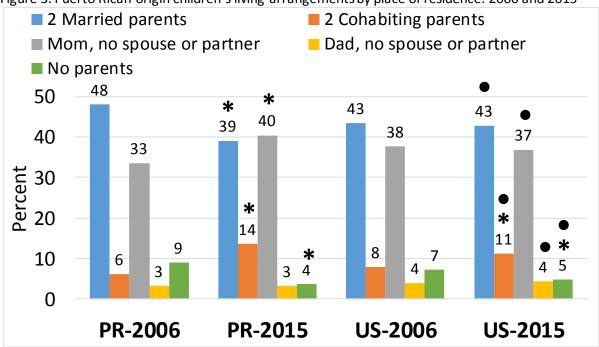
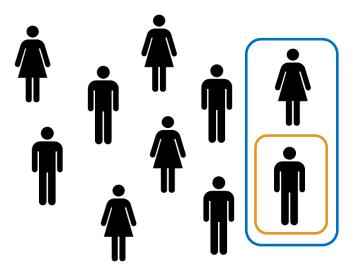


Figure 3. Puerto Rican-origin children's living arrangements by place of residence: 2006 and 2015

- * Difference is statistically significant between 2006 and 2015 at the 0.1 level.
- Difference is statistically significant between P.R. 2015 and the U.S. 2015 at the 0.1 level.

Figure 4a. Puerto Rican-origin children and grandparents in P.R. and in the U.S.: 2015



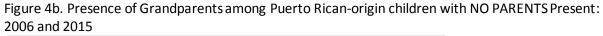
2 out of 10 kids live in a house with a grandparent in P.R. and the U.S.

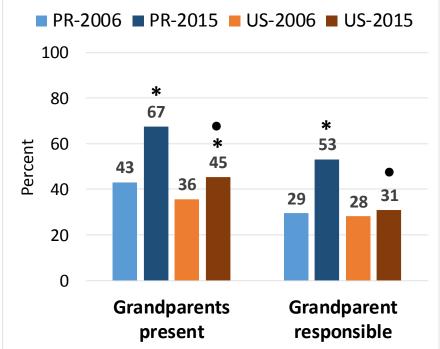
Less than 10% of kids live in a house with a grandparent who is responsible for a grandchild in P.R. and the U.S.

Source: American Community Survey 1-year estimates 2006 and 2015 and Puerto Rico Community Survey 1-year estimates 2006 and 2015

Notes: In Figure 4a each person represents a tenth of children in P.R. or the U.S. The colored circles show the number of kids living with a grandparent or with a grandparent who is responsible for a grandchild in 2015.

- * Difference is statistically significant between 2006 and 2015 at the 0.1 level.
- Difference is statistically significant between P.R. 2015 and the U.S. 2015 at the 0.1 level.





Notes: Only includes Puerto Rican-origin children who live with no parents in the household.

- * Difference is statistically significant between 2006 and 2015 at the 0.1 level.
- Difference is statistically significant between P.R. 2015 and the U.S. 2015 at the 0.1 level.

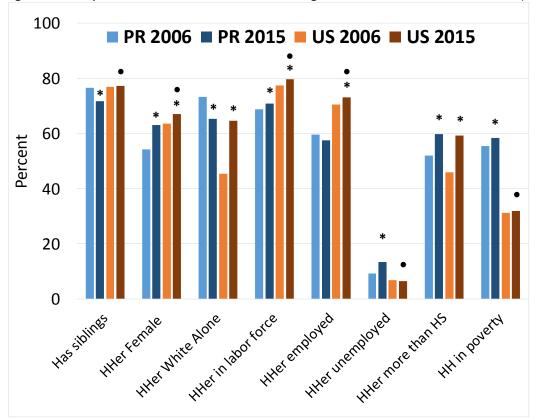


Figure 5. Family Characteristics for Puerto Rican-origin Children of the HOUSEHOLDER (HHer)

Notes: Only includes Puerto Rican-origin children who live with at least one parent who is the householder.

HHer=Householder, HS=high school diploma.

- * Difference is statistically significant between 2006 and 2015 at the 0.1 level.
- Difference is statistically significant between P.R. 2015 and the U.S. 2015 at the 0.1 level.

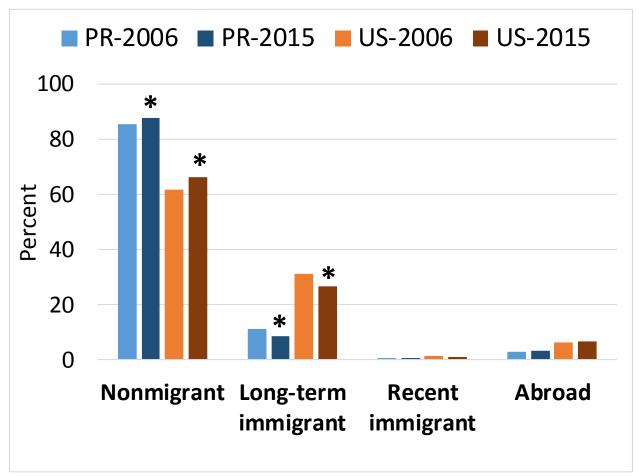


Figure 6. Puerto Rican-origin children and family migration

Notes: Only includes Puerto Rican-origin children who live with at least one parent who is the householder.

- * Difference is statistically significant between 2006 and 2015 at the 0.1 level.
- Difference is statistically significant between P.R. 2015 and the U.S. 2015 at the 0.1 level.