



Appendix A

**The Poverty Universe
and Unit of Analysis**

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A measure of poverty must establish a threshold – a line that demarcates the poor from the rest of society. It must also define what resources a family can draw upon to meet its needs. Once these parameters are in place, a method for measuring poverty must assess which groups in the population it can be meaningfully applied to. The “poverty universe” is the population whose poverty status can be determined.

Another important task is to create a “poverty unit of analysis.” People live together for a variety of reasons. The reasons relevant to poverty measurement are that they pool economic resources and satisfy their material needs as a unit. As described below, NYC Opportunity expands the definition of the poverty unit of analysis beyond the family-based unit employed by the U.S. official poverty measure.

Who Is Counted When Measuring Poverty?

Not everyone can be counted when measuring poverty. For example, the poverty universe used by the U.S. Bureau of the Census in its official poverty measure excludes most people living in “group quarters,” such as college dormitories, nursing homes, military bases, and prisons.¹

It is easy to see why. Much of this population is in no position to earn income. At the same time, group quarters residents typically receive housing, meals, and the other services provided by the institutions in which they reside. The former condition could be used to judge that every individual in an institutionalized setting is poor. The latter condition could be used to judge that basic material needs of these individuals are being met and that they are not poor. Either choice reveals that a concept of poverty as material deprivation is an awkward fit for this group.

An additional challenge arises when determining the poverty status of group quarters residents: the lack of information the American Community Survey (ACS) provides about them, particularly their relationship with others. A college student living in a dormitory, for example, may have little or no personal income but might be comfortably supported by parents. That information is not available in the survey. Each of these reasons makes it very difficult to determine the poverty status of group quarters residents. NYC Opportunity, therefore, excludes the entire group quarters population from the measure we call the “NYCgov poverty rate.”

¹ For a definition of group quarters, see: <https://www.census.gov/topics/income-poverty/poverty/guidance/group-quarters.html>

Another group excluded from the U.S. official poverty measure is unrelated individuals under 15 years of age who are living in households. Members in this type of group are not assigned a poverty status because, as unrelated individuals, whether they would be considered poor or not poor depends on their personal income. The ACS, however, does not collect data on the incomes of people under 15 years of age. NYC Opportunity, by contrast, includes this group in our poverty universe. As explained below, unrelated individuals under 15 are placed in a poverty unit with other members of the household in which they reside. Their poverty status is determined by the income of the unit as a whole.

In sum, the NYCgov poverty universe excludes the entire group quarters population but includes the entire household population in the ACS sample for New York City. As Table A.1 illustrates, the poverty universe for this study includes 8.140 million (rounded) of the city's 8.336 million residents in 2019. All of those excluded – just over 196,000 people or 2.4 percent of the population – are living in group quarters.

The Poverty Unit of Analysis: Who Is Sharing Income and Expenses?

From the perspective of the current U.S. official methodology, individuals are considered poor if the total income of the family in which they live fails to reach the appropriate poverty threshold for their family size and type. The rationale for this is straightforward: Family members who reside in the same household share resources and living expenses. Spouses typically pool their income and jointly decide major expenditures. Parents provide financial support to their children. Treating family members as lone individuals whose poverty status is determined by their own income would place nearly every nonworking spouse and child in poverty.

Families in the U.S. official poverty measure are composed of people who are related to the household head by blood, marriage, or adoption.² NYC Opportunity modifies this definition of the family unit in three ways:

1. People who are unmarried partners of the household head are considered to be part of that head's family rather than separate unrelated individuals.³ Following a recommendation by the National Academy of Sciences (NAS) panel, such people are treated as the householder's spouse.⁴ If the household also includes children of the partner who have not already been identified as children of the reference person, they are included as children in the householder-unmarried partner family.

² The ACS does not identify unrelated subfamilies.

³ The ACS Subject Definitions defines an unmarried partner as "a person age 15 years and over, who is not related to the householder, who shares living quarters, and who has a close personal relationship with the householder." Beginning in 2013, the ACS allows same-sex married couples to identify themselves as such. NYC Opportunity makes no gender distinction in our analysis of married couples or unmarried couples.

⁴ Constance F. Citro and Robert T. Michael (eds). *Measuring Poverty: A New Approach*. Washington, D.C.: National Academy Press. 1995, p. 306.

2. NYC Opportunity creates additional family units referred to as “unrelated subfamilies.” These are family units within households that do not include someone who is related to the householder. An example of such a unit would be two people who are married to each other and are boarders in someone else’s home. Because of data limitations, unrelated subfamilies can only be observed when they are composed of married couple families, with or without their own children, or single people with children.
3. We place other unrelated individuals who we identify as being claimed as dependents for tax filing purposes into the poverty unit of those claiming them. An individual claimed as a dependent is being supported by others in the household. Given that relationship, we judge that they should be members of the poverty unit of the person(s) upon whom they are dependent. Non-relative indigent adults and nearly all the unrelated children in private households are assigned to a poverty unit. In the few instances where the tax program cannot connect an unrelated child to a tax unit or a health insurance unit, the child joins the poverty unit of the household’s reference person.⁵

Together, these three modifications bring over 251,000 individuals who would have been treated as single-person poverty units or excluded from the poverty universe in the U.S. official measure in 2019 into multi-person poverty units in the NYCgov measure. Thus, the poverty unit of analysis for this study is composed of:

1. Expanded families: all people residing in the same household who are related to the household’s reference person by blood, marriage, or adoption; are the reference person’s unmarried partner (and any children and dependents of that partner not already identified as related to the reference person); or others who are claimed by the household head as dependents for tax filing purposes. As Table A.2 reports, this group accounts for 80.9 percent of the total poverty universe. People living in families that include an unmarried partner, a subgroup within the expanded family category, comprise 5.8 percent of the poverty universe.
2. Unrelated subfamilies. This subgroup only accounts for 0.5 percent of the poverty universe.
3. The remainder of the poverty universe is composed of “unrelated individuals.” These are people who are either living alone (13 percent of the poverty universe) or living in a household with others with whom they have no familial or obvious economic relationship (6.1 percent of the poverty universe). Both groups of unrelated individuals are treated as “single-person families” and their poverty status is determined using their individual NYCgov incomes.

A poverty threshold is assigned to each unit based on its size and composition (see Appendix B). The sum of the resources of all the people in the unit is computed and compared to the appropriate threshold to determine whether the members of the unit are poor.

⁵ For a detailed description of how these units are created and an evaluation of the accuracy of NYCgov methods, see Vicky Virgin, “Creating the CEO Poverty Unit: An Evaluation Using the CPS ASEC.” June 2011. Available at: https://www1.nyc.gov/assets/opportunity/pdf/poverty_unit_analysis_ceo_2011.pdf

A Note on Comparisons to the U.S. Official Poverty Measure

In September 2020, the U.S. Census Bureau released a 2019 poverty rate for New York City of 16 percent, a significant drop from the 2018 rate of 17.3 percent.⁶ This rate is not the same as the NYCgov estimate of the U.S. official poverty rate used in this report (14.5 percent in 2019, compared to 16.1 percent in 2018, also a significant decline). The NYCgov assumptions about poverty units listed above generate differences from the official poverty measure in two important ways:

1. Population Size. The inclusion of unrelated children under 15 gives us a slightly larger population.
2. Unit of Analysis and Unit Size. Poverty is determined at the level of the family unit; the threshold is a function of family size while income is the sum of all family members' income. The inclusion of unmarried partners, their children, and unrelated children under 15 in the expanded poverty unit results in a different alignment of people within poverty units than found in the official unit of analysis.

The result is the reassignment of over 251,000 individuals who are either counted as single-person poverty units or not counted at all in the Census estimate. In the NYCgov estimate they are assigned to poverty units with other individuals. The NYCgov data file contains fewer units of analysis, but, on average, those units contain more members. Because of the linking of unmarried partners, in particular, NYCgov units contain more children who are supported by adult resources.

⁶ U.S. Bureau of the Census, data.census.gov. "Poverty Status in the Past 12 Months." 2019 American Community Survey 1-Year (2019) Estimates for New York City.

Table A.1
The NYCgov Poverty Universe, 2019

New York City	Number	Percent
Household Population	8,139,943	97.6%
Group Quarters Population	196,101	2.4%
Total New York City Population	8,336,044	100.0%

Source: American Community Survey Public Use Micro Sample 2019.

Table A.2
The Unit of Analysis for Poverty Measurement, 2019

	Number of Persons	Share of Poverty Universe
People in NYCgov Expanded Families	6,585,033	80.9%
People in Unmarried Partner Families	473,560	5.8%
People in Unrelated Subfamilies	41,241	0.5%
Unrelated Individuals Living with Others	494,162	6.1%
Unrelated Individuals Living Alone	1,060,748	13.0%
Total Poverty Universe	8,139,943	100.0%

Source: American Community Survey Public Use Micro Sample 2019.