

The Benefits and Costs of Residential Mobility Programmes for the Poor

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ABSTRACT *By enabling low-income families to move from high- to low-poverty neighbourhoods, tenant-based rental subsidies for poor families have the potential to reduce the degree of economic segregation in the US. This paper provides a framework for identifying the benefits and costs of such housing mobility programmes, and reviews the available empirical evidence on the net effects of quasi- or formal randomised housing mobility experiments. The best available evidence suggests that families in public housing who receive rental subsidies to move from high- to lower-poverty areas may experience reductions in welfare receipt and improvements in health status. Such moves may also improve schooling outcomes for children and reduce their problem behaviours. The benefits to society from these changes are substantial when measured in dollar terms. Unfortunately, very little is currently known about the effects of housing-mobility efforts on non-participants.*

KEY WORDS: Subsidised housing, housing mobility, benefit–cost analysis

Introduction

From 1970 to 1990 the number of people in the US living in high-poverty neighbourhoods (defined as Census tracts with poverty rates of 40 per cent or more) nearly doubled, from 4.1 to 8.0 million (Jargowsky, 1997). Over that same 20-year period, the proportion of poor Americans living in high-poverty Census tracts increased by nearly half, from 12.4 per cent to 17.9 per cent (Jargowsky, 1997).

The extensive economic segregation that characterises American neighbourhoods is not inevitable, and in fact has been determined in part by government policy decisions. Local and national housing authorities have historically favoured the construction of public housing developments over tenant-based rental subsidies (Quigley, 2000). For reasons related to both cost and racial politics, the resulting public housing complexes have often been clustered in central-city locations (Jencks & Mayer, 1990; Quigley, 2000; Rubinowitz & Rosenbaum, 2000). Further exacerbating the problem of economic segregation has been the practice of suburban jurisdictions to limit the amount of multi-

family low-cost housing available within their boundaries (Ladd, 1998; Mills & Lubuele, 1997). In addition, given the persistent correlation between race and social class in America (Jaynes & Williams, 1989), economic segregation also reflects in part the extent to which government agencies have enforced policies designed to limit discrimination by race in private housing markets (Yinger, 1998).

What would be the net effects of changes in government policy that served to reduce the amount of economic residential segregation in the US? Many observers believe that living in high-poverty areas has negative effects on labor market success, education, criminal behaviour and health (see for example Wilson, 1987, 1996), with the implication that reducing the concentration of poverty in America would improve the well-being of poor families. However, any reduction in the concentration of poverty could in principle impose offsetting costs on those poor families who were left behind in central city areas, or on the working- and middle-class residents of host neighbourhoods that experienced an influx of new low-income residents. Whether reductions in economic segregation benefit poor families, and whether such benefits outweigh any costs imposed on the rest of society, are empirical questions that can only be answered through careful social scientific inquiry.

This paper reviews the available research literature on the effects of reducing economic and racial segregation in the US. It is argued that a growing body of evidence suggests that tenant-based subsidies that help low-income families move from high- to lower-poverty areas improve their well-being and life chances, particularly those of their children. However, it should be noted that because the available evidence comes from samples of families who have volunteered to relocate, programmes that compel a more representative population of low-income families to move may produce somewhat different outcomes.

The remainder of the paper is organised as follows. The next section presents a conceptual framework for evaluating the net effects of such policies on the various stakeholder groups. The third section reviews the available empirical evidence on these effects, and the fourth section reviews the important gaps in our current understanding of such policies and discusses priorities for future housing research.

Framework for Evaluating Housing Mobility Programmes

This section analyses the net effects of housing-mobility efforts on society by defining the stakeholders who may be affected by the policy—programme participants and non-participants—as well as defining the costs and benefits imposed on each stakeholder group, ideally measured in dollars.

Programme Participants

The most obvious stakeholders in housing mobility efforts are the programme participants, that is, the families who receive rental subsidies and perhaps relocation counselling as well. Residential relocation programmes may have beneficial effects on these families by enabling them to move to more affluent communities with better schools and other social services. Equally important may be the potentially positive ‘peer effects’ or ‘role model effects’ on parti-

participants from moving to areas with lower crime filled with people who are better-educated, more affluent and more likely to be employed than the residents of high-poverty neighbourhoods (Jencks & Mayer, 1990; Ludwig, 1999; Wilson, 1987, 1996).

For decades sociologists and other social scientists have worked to simulate the effects of residential relocation on low-income families by generating non-experimental estimates of the effects of various neighbourhood attributes on individual behaviour. This literature has largely tried to identify neighbourhood effects on families by exploiting the natural cross-sectional variation in neighbourhood conditions found with observational data. The identification problem that plagues these studies stems from the fact that most families have at least some degree of choice over where they live. As a result, non-experimental correlations between individual outcomes and Census-tract or ZIP-code level characteristics, the two most commonly-used proxies for 'neighbourhoods', may reflect either the causal effects of neighbourhood conditions, or instead the effects of unobserved family- or individual-level attributes that are correlated with both residential choices and behavioural outcomes. The degree or even direction of the resulting self-selection bias is difficult to predict. Thus we are wary about drawing any firm conclusions from the existing non-experimental neighbourhood-effects literature (summarised in Jencks & Meyer, 1990).

Instead, the effects of residential relocation on low-income families are identified by drawing on evidence from three housing mobility programmes. The first is the Gautreaux Program, the outcome of a consent decree in the case *Gautreaux v. Landrieu* (1981), which started as *Gautreaux v. Chicago Housing Authority* (1969). (For further details on the Gautreaux Program, see Rosenbaum, this issue.)

Motivated by positive findings from the Gautreaux Program, the US Department of Housing and Urban Development sponsored the Moving to Opportunity (MTO) residential mobility experiment in five US cities—Baltimore, Boston, Chicago, Los Angeles and New York. MTO began operations in 1994, and to date a total of 4610 low-income families from high-poverty public housing areas have participated. Eligible volunteers for MTO were randomly assigned into one of three 'treatment groups'. Families assigned to the *experimental group* were offered Section 8 rental subsidies that could be used only for private-market housing in Census tracts with very low poverty rates (defined as 1990 poverty rates less than 10 per cent). They also received counselling services and assistance in their housing search from a local non-profit agency. Members of the *Section 8 only comparison-group* were also offered rental subsidies, but were not required to move to a low-poverty Census tract and were not provided any additional services. Members of the *control group* received no rental subsidies. The presumption was that they would continue to live within high-poverty areas. The formal randomised experimental design of MTO thus breaks the link between family preferences and neighbourhood conditions, and thus helps overcome the self-selection problem that plagues most previous studies of neighbourhood effects.

The third programme is the Yonkers scattered-site public housing initiative, which resulted from a finding of deliberate racial segregation in the siting of public housing and the attendance areas of public schools in *United States v. City of Yonkers* (1985). A consent decree, accepted by Yonkers after extensive

resistance, resulted in the construction of 200 units of public housing populated by black and Hispanic public housing residents that were scattered across seven sites of varying densities in mostly-white communities (de Souza Briggs *et al.*, 1999). Because it furthers housing mobility, this paper devotes some attention to the Yonkers Program, but mostly concentrates on the Gautreaux and MTO Programs because of their experimental or quasi-experimental study designs.

These two programmes and the information to be gleaned from them differ in some significant ways. First, the Gautreaux Program was designed to move families into racially integrated neighbourhoods, while the MTO Program moved families to economically integrated neighbourhoods. Second, most of the evaluations of the Gautreaux Program focus on intermediate and long-term effects while those of the MTO Program have focused to date on relatively short-term effects. Third, the evaluations of Gautreaux focus on differences between families who moved to the suburbs and those who stayed in the city, while for the MTO Program, families who are given the opportunity to move are compared to members of a control group. This latter comparison provides a more accurate picture of the full effects of shifting from project-based to tenant-based assistance.

It is important to note that the Gautreaux, MTO and Yonkers Programs provide evidence about the potential consequences of a very specific type of residential mobility programme, a relatively small-scale programme that provides services to families living in public housing who have volunteered to move. Studies of the Experimental Housing Assistance Programme (Struyk & Bendik, 1981) and Freestanding Voucher experiments (Kennedy & Leger, 1990), which were precursors to the Section 8 programme, indicate that programmes providing housing subsidies to families already in private-market housing may generate little change in neighbourhood conditions. Similarly, a study of the families in the Robert Taylor Homes who were involuntary relocated by the Chicago Housing Authority when their buildings were scheduled for demolition finds little change in their neighbourhood characteristics (Jacob, 2000). Moreover, even programmes that move only those public housing residents who volunteer to relocate may produce smaller differences in neighbourhood conditions than those observed with Gautreaux, MTO or the Yonkers Programs if they operate on a larger scale.

The impacts of these programmes on participating families can be quantified in a variety of ways. Most common is simply to report programme impacts in terms of reductions in welfare receipt, improvements in earnings or health outcomes, changes in arrest patterns and so forth. But in order to compare the gains to participants from changes in well-being or behaviour with the programme impacts on other stakeholders, all of these changes must be measured in some common unit. The preferred approach in public economics is to measure all programme impacts in dollar terms, where these values are defined as what society is willing to pay (WTP) to obtain more (or less) of the programme output in question. For outcomes that are bought and sold in the marketplace, these WTP values can be derived from prevailing market prices (see for example Viscusi, 1993; Viscusi *et al.*, forthcoming). For non-market outcomes, standard techniques such as shadow price estimation or contingent valuation surveys may be used (see for example Cook & Ludwig, 2000; Ludwig & Cook, 2001).

Non-participants

Housing mobility programmes are also likely to affect stakeholders other than the programme participants. For example, residents in *destination communities* may be affected by housing mobility programmes through perceived reductions in neighbourhood quality. To the extent that middle-class white families prefer to live in areas with few low-income or minority families, or to avoid some of the outcomes stereotypically associated with the poor, the influx of low-income families could reduce the demand for housing and thereby reduce property values in host neighbourhoods.

If peer or role model effects are important in practice, the impact of residential mobility programmes on the actual volume of anti-social behaviours within the larger society is an empirical question. One possibility is that neighbourhood peer effects are proportional to a neighbourhood's socio-economic composition or to the prevalence of some behaviour such as criminal activity. In this case, housing mobility programmes that relocate poor families from high- to low-poverty neighbourhoods would improve their own outcomes, but lead to a countervailing deterioration in outcomes of the residents of host neighbourhoods of exactly the same magnitude (Galster, 2000; Galster & Zobel, 1998; Jencks & Meyer, 1990) and the overall volume of anti-social or pro-social behaviour will be unaffected. Society may of course deem residential mobility programmes desirable even under these circumstances if the gains to low-income families are valued more highly than the costs to more affluent households.

If neighbourhood peer effects are instead 'non-linear' with respect to neighbourhood characteristics, residential mobility programmes have the potential to change the overall level of pro- and anti-social behaviours within the society. For example, suppose that adolescent misbehaviour is 'contagious' only when the poverty rate in a neighbourhood exceeds 40 per cent. In this case, if a housing mobility programme redistributed poor families such that every neighbourhood had a poverty rate below this tipping point or threshold, the overall volume of juvenile delinquency in the society would decrease and the influx of poor families into host neighbourhoods would have little effect on host residents. A corollary to the tipping-point model is that if housing mobility programmes fail to move programme participants to neighbourhoods that lie below the relevant threshold, participants may themselves experience little impact on their outcomes.

In practice the available research on the effects of residential mobility programmes on host neighbourhoods has measured impacts using property values. However drawing inferences from property values about whether the gains to programme participants outweigh or are outweighed by possible negative impacts on residents of host neighbourhoods is quite difficult. To the extent that the effects of residential mobility programmes manifest themselves by changes in property values in destination neighbourhoods, *landlords* who own property in such areas may bear part of the costs of mobility programmes.

These same arguments are also relevant for considering the potential effects of housing mobility programmes on those who live in high-poverty urban *origin communities* and choose (or are unable) to relocate through such programmes. Residential mobility programmes may in principle change the social composition of origin neighbourhoods in ways that contribute to the deterioration of

outcomes for the families who remain in these areas. One oft-expressed example of this possibility is expressed by concerns that mobility programmes will drain inner-city areas of key leaders in community social organisations.

Finally, *taxpayers* and *government agencies* may also be affected by housing mobility programmes. Because some voucher recipients may choose to move to private-market housing located in different jurisdictions, the local PHAs serving origin communities may suffer a loss in revenue. The shift from project-based to tenant-based programmes is likely to have only modest effects on overall housing costs: housing vouchers have been shown to have per-unit costs that are no higher than those associated with public housing or Section 8 project-based housing (Olsen & Barton, 1983; Shroder & Reiger, 2000). Taxpayers may incur some additional costs from whatever tenant counselling services are provided by residential mobility programmes. Of course taxpayers may also benefit from housing mobility programmes if they successfully increase the prevalence of pro-social behaviour in society, or otherwise improve the well-being of poor families in ways that have implications for government programmes.

This framework suggests that housing mobility programmes may have both benefits and costs to the participants themselves and, equally importantly, to other stakeholders in the society. The next section reviews the available empirical evidence on these points.

Empirical Evidence on the Effects of Housing Mobility Programmes

Evidence on the effects of residential mobility programmes is the most developed with respect to the impacts on the programme participants themselves; details about the mechanisms behind these mobility effects, the degree to which any neighbourhood effects are linear or non-linear with respect to neighbourhood characteristics, and the impacts of mobility programmes on non-participants is less well-developed and remains a priority area for future research. What follows is brief summary of what is known from the available research, focusing on the Gautreaux, MTO and Yonkers programmes.

Programme Participants

Residential mobility. One straightforward measure of the success of a housing mobility programme is the extent to which programme participants actually move to a different type of neighbourhood. The Gautreaux Program enabled more than half of the participants who used Section 8 vouchers to move to generally highly advantaged suburbs, although only 19 per cent of eligible families successfully relocated (Rosenbaum, 1993, 1995; Rubinowitz & Rosenbaum, 2000). The MTO demonstration has resulted in lease up rates of 47 per cent (for the experimental group) and 60 per cent (Section 8-only), and even families in the Section 8-only group, lacking focused counselling and programmatic requirements to choose low-poverty communities, relocated to communities more advantaged than those from which they originated (Goering *et al.*, 1999). The Yonkers scattered-site programme also enabled families to move to neighbourhoods that were much more advantaged than the ones from which they originated with respect to measures such as poverty and youth unemployment rates (de Souza Briggs, 1998).

Residents' satisfaction and housing quality. Rubinowitz & Rosenbaum (2000) have reported that suburban movers in the Gautreaux Programme initially have more frequent yet more negative experiences with new neighbours than city movers, although over time city and suburban movers have similar experiences with social interactions and closeness with neighbours. In their study of the MTO programme, Katz *et al.* (2001) found that the level of social interaction for members of all experimental groups in their origin neighbourhoods was modest, and measures of social integration between the three groups in follow-up surveys did not differ substantially or show consistent trends.

No housing mobility evaluation has investigated changes in access to local amenities or changes in housing consumption. The latter measure, a mainstay of urban economics for the past 30 years (DeSalvo, 1975; Olsen & Barton, 1983), has been examined by Johnson & Hurter (1999) although without access to actual data from housing mobility programmes.

Health outcomes. Leventhal & Brooks-Gunn (2000) examined the effects of the MTO programme on both physical and mental health in the New York site using indicators from widely used assessments of physical health, depressive behaviour and anxious behaviour. They found that compared with control-group families, health measures tended to be better for experimental families, and in some cases, for Section 8 families as well. Katz *et al.* (2001) found similar impacts on MTO participants in Boston, and also found reductions in self-reported criminal victimisation among experimental and Section 8-only families compared with controls.

Labour market outcomes. Surveys of Gautreaux participants from 1988 found higher employment rates for suburban movers as compared with city movers (Rosenbaum, 1993), and improved labour market prospects for non-college-bound youth (Rosenbaum, 1995). Using administrative welfare data for the Baltimore MTO site, Ludwig *et al.* (2000) found that rates of welfare receipt of experimental-group families were about 15 per cent lower than those observed among controls, and that no differences in welfare rates emerged between the Section 8-only comparison group and the control group. These decreases translate to annual savings of about \$360 per family through the first three years of the programme, although no differences in either employment or welfare receipt were observed across groups in the Boston MTO site (Katz *et al.*, 2001).

Educational outcomes. Results from the Gautreaux Program show that while suburban movers had about the same grades as city movers, these grades were achieved in school systems of much better quality than those attended by city movers. More directly, suburban movers also experienced increases in high school graduation and college enrolment rates compared with city movers (Rosenbaum, 1993; Rosenbaum, this issue; Rubinowitz & Rosenbaum, 2000).

For the Baltimore MTO site Ludwig *et al.* (2001a) found that standardised achievement scores of young children in the experimental and Section 8-only groups exceeded those of children in the control group by about one-quarter of a standard deviation, which may in turn increase these children's lifetime earnings by around \$8500 (Krueger, 1999). Assuming that earnings gains are similar for experimental and Section 8-only teens and that the average participating MTO family has 2.72 children, of whom 1.8 per family are younger than 12,

educational outcome gains of about \$15 300 per MTO family can then be computed. These positive impacts, however, apparently do not carry over to programmes in which families are relocated involuntarily (Jacob, 2000).

Criminal offending and problem behaviour. Katz *et al.* (2001) found that boys aged 6 to 15 in the experimental and Section 8-only groups in the MTO Boston site were found to have average values on an index of criminal offending that were fully one-third lower than those observed among controls. Leventhal & Brooks-Gunn (2000) surveyed participants in the MTO New York site and found no differences in overall delinquency rates across treatment groups. However, MTO does seem to have changed the mix of delinquent activities.

Ludwig *et al.*, (2001b) find that the number of arrests for violent crimes among boys in the experimental and Section 8-only groups of the Baltimore MTO site are equal to one-quarter and one-half, respectively, of what is observed among boys in the control group. In contrast, the number of arrests for property-crimes is nearly twice as high for boys in the experimental group than in the control group. The differences in arrest rates between groups can be more confidently interpreted as differences in teen behaviour for violent crimes than for property-crime given that the probability of arrest conditional on criminal involvement may be somewhat higher in low-poverty than in high-poverty neighbourhoods. In any case, even if property crimes increase among experimental teens, the net effects on society appear to be positive. Using estimates for the costs per crime from Cohen (1998), one may estimate gains to society from the shift from dangerous violent crimes in high-poverty areas to less-costly property offences in lower-poverty areas of about \$7600 for each family assigned to the experimental group and \$5300 per family assigned to the Section 8-only group.

Parenting behaviour. Leventhal & Brooks-Gunn's (2000) preliminary analysis of data from the New York MTO site found that experimental-group parents were less likely than control group parents to behave punitively towards their children or to engage in restrictive parenting practices. However, Section 8 group parents were the most involved in school or class events compared to either experimental or control families, while experimental group parents had the lowest levels of school engagement among the three groups.

Destination Communities

The most direct and informative approach to evaluating the impact of housing mobility programmes on destination communities would be to measure their impacts on the prevalence of pro- and anti-social behaviours in those communities. In practice, however, the most common method is through changes in property values. Previous studies of the impacts on property values from scattered site and other housing programmes using hedonic models have generally not found negative impacts from the presence of public housing, but have shown some negative impacts due to the presence of project-based housing scattered-site housing (de Souza Briggs *et al.*, 1999).

In examining suburban Baltimore County, Galster *et al.* (1999) showed that proximity to housing units rented by MTO participants has no negative effect (and some positive effects) on property values in affluent, predominantly white neighbourhoods that were already experiencing real appreciation in property

values. In contrast, the authors found that 'vulnerable' neighbourhoods experienced lower property values as a result of close proximity to Section 8 units. Santiago *et al.* (2001) have found similar results for a programme managed by the Denver Housing Authority that acquired and renovated single-family homes for use as scattered-site public housing.

In the case of the Yonkers scattered-site programme, de Souza Briggs *et al.* (1999) found no significant reduction in property values associated with the announcement of construction or occupancy by families of scattered-site housing units. The authors also report that the attitudes of white home owners were generally not affected by the presence of scattered-site subsidised housing.

Additional information about the potential effects of mobility programmes on destination neighbourhoods comes from the degree of political opposition to such programmes. While such opposition is sometimes substantial with the standard Section 8 programme (Turner *et al.*, 1999), opposition in host communities to Gautreaux Programme participant families was minimal overall (Rubinowitz & Rosenbaum, 2000). This result may stem from the intensive counselling provided to Gautreaux families, and the efforts of Gautreaux counsellors to allay the fears of individual landlords about Section 8 households. The muted political opposition to Gautreaux may also reflect the programme's relatively modest size.

Focus-group interviews with residents of four suburban Baltimore communities that had received MTO Program participant families provide additional evidence on this point. Galster *et al.*, (1999) find that while residents of 'vulnerable' communities worried about possible negative neighbourhood impacts of Section 8 units, residents of more affluent neighbourhoods were generally more positive about the impact of Section 8 units.

Origin Communities

How will housing mobility programmes affect the low-income families who stay behind in the origin neighbourhoods? One possibility, which receives some support from Popkin *et al.* (2000), is that the out-migration of upwardly mobile families together with a lack of new investments in these communities together result in a higher concentration of the poorest and most destitute tenants in central-city neighbourhoods. Alternatively, public housing complexes could be replaced with new mixed-income buildings along with private-market development, as has occurred in the Lake Parc Place mixed-income project in Chicago (Rosenbaum *et al.*, 1998).

As far as is known no systematic research has examined the effects of housing voucher programmes on origin neighbourhoods. Moreover, there is no social science basis for predicting how the social composition of origin neighbourhoods might change in response to large-scale housing-voucher programmes, or how any reductions in origin neighbourhood poverty rates or increases in the proportion of middle-class residents will affect the low-income families who remain in these areas.

Societal Impacts

How do these various programme impacts net out from the perspective of

society as a whole? The efficiency standard often used within economics is to compare the total benefits with the total costs of some intervention. Under this 'potential Pareto improvement' standard, if a programme generates benefits in excess of costs, the beneficiaries could in principle fully compensate those who do not directly benefit and still be better off themselves. Since these potential transfers are most often not implemented in practice, cost-benefit analyses frequently seek to identify the distributional effects of policy changes as well.

One natural starting point in cost-benefit analysis of housing mobility programmes is to determine whether neighbourhood effects are linear or non-linear with respect to neighbourhood characteristics, which, as has been argued above, is relevant for determining whether residential mobility can reduce the overall prevalence of social problems within the society. Several previous reviews of the non-experimental literature conclude that neighbourhood poverty rates have non-linear effects on youth employment, school dropout rates and educational attainment, at least for some population sub-groups (Galster, 2000; Galster & Zobel, 1998). Yet the same self-selection problems that make it difficult to draw causal inferences about the existence of neighbourhood effects from such studies also complicates efforts to identify potential non-linearities in neighbourhood impacts.

Evidence from the MTO housing-mobility experiment on whether neighbourhood effects are non-linear is more mixed. A linear effect emerges for educational outcomes and welfare receipt at the Baltimore site but some evidence of a threshold or tipping effect emerges for other outcomes and at other sites. In the Baltimore MTO site the average post-programme census tract poverty rate for the experimental and Section 8-only groups equaled 8.4 and 35.2 per cent, respectively. In contrast, the average post-programme poverty rate for the census tracts in which the control group resided was around 70 per cent. Thus the average experimental-group complier experienced a change in neighbourhood poverty rates that was about 1.8 times as large as that of the average Section 8-only complier. If neighbourhood effects were linear in the range of poverty rates listed above, it would be expected that the effects of 'treatment on the treated' (that is, the effects on families who actually relocate through MTO) to be about twice as large for experimental-group movers as for Section 8-only group movers. Consistent with the hypothesis of linear effects, the standardised test score gains among young children were in fact about twice as large for experimental movers as for Section 8-only movers (Ludwig *et al.*, 2001a). Similarly, at this site, the effects of relocation on welfare receipt were nearly twice as large for movers in the experimental group compared to the section 8-only group (Ludwig *et al.*, 2000). This linearity, however, need not rule out threshold or tipping point effects of the type discussed above at some other point in the poverty range. However, without more information about the pattern of effects across the whole range of community poverty levels it is not possible to test the hypothesis of a threshold effect.

In contrast, changes in violent criminal behaviour by youth appear to be much less than twice as large for experimental than Section 8-only movers (Ludwig *et al.*, 2001b), which is generally consistent with findings from the Boston MTO site. In Boston, experimental-group movers experienced reductions in neighbourhood poverty rates equal to around 1.6 times those of the Section 8-only movers (from 0.36 to 0.11 and 0.20, respectively). Yet the effects of moving on outcomes such as problem behaviours among boys or mother's mental health are typically

quite similar for the experimental and Section 8-only movers (Katz *et al.*, 2001). Thus compared to the MTO findings for educational achievement, evidence from these other outcomes is somewhat more consistent with the notion of a threshold or 'tipping point' in how neighbourhood social context affects behaviour.

It is important to recognise that the comparisons described for the MTO studies above provide only imperfect evidence on the pattern of neighbourhood effects: the treatment effects on the experimental and Section 8-only groups could differ because the populations that choose to move through the experimental versus Section 8-only treatments are different. Yet the available evidence such as it is yields no definitive evidence on whether residential mobility will affect the overall prevalence of anti-social behaviours in the US.

The best that can be done at the present time is to conduct a partial benefit-cost analysis that simply calculates the value of residential mobility from a societal perspective based on the benefits to the programme participants in the MTO programme. Using data from the Baltimore MTO site, the dollar value to society from changes in teen delinquency and children's educational outcomes are on the order of \$22 900 for each family assigned to the experimental group and \$20 600 per family assigned to the Section 8-only group. These calculations ignore short-term reductions in welfare use (which represent simply a transfer from former welfare recipients to taxpayers rather than a real social benefit), benefits from improvements in health or other outcomes, or any gains that arise beyond the first few years following random assignment. Nevertheless the estimated benefits far outweigh actual counselling costs associated with the experimental-group treatment (about \$3000 per MTO family; see Goering *et al.*, 1999) or the likely inefficiencies associated with providing in-kind housing subsidies to families (estimated by Johnson & Hurter, 1999 to be about \$500 per year, using incomplete, non-MTO data from the Chicago metropolitan area).

Discussion

A new body of research suggests that housing voucher programmes that enable public housing residents to move may lead to substantial improvements in their neighbourhood conditions, physical and mental health, safety, housing conditions, adult labour market outcomes (although the findings here are somewhat mixed) and may also improve their children's behaviour and educational outcomes as well. A conservative estimate of the short-term gains to programme participants suggest benefits on the order of \$20 000 to \$23 000 for each family that is offered the opportunity to relocate with a housing voucher; the gains per family that actually relocates will of course be even larger. A complete evaluation of the effects of housing mobility programmes requires new research along several lines.

First, much more information is required about the potential for different types of housing policies to enable low-income families to move to more affluent neighbourhoods. This review has focused on two specific housing-voucher programmes that serve public housing families who wish to move, and that also include substantial counselling components. Whether other types of housing policies could achieve similar degrees of mobility with different programme populations in different housing market conditions is not clear.

Second, additional research is required to determine how housing mobility programmes affect residents in both origin and destination neighbourhoods. The

understanding here is that the mid-term evaluation of the MTO demonstration will include a component that focuses on these outcomes, so perhaps more information along these lines will be available in the future.

Third, policy analysts should devote more attention to converting programme impacts into dollar terms. Well-developed literatures in the areas of health, the environment and crime provide guidance on the relevant conceptual and practical issues (Cook & Ludwig, 2000; Tolley *et al.*, 1994; Viscusi, 1993). Only by converting the disparate set of programme impacts and costs into a common metric can policy analysts conduct systematic analyses of the net effects of such programmes on society as a whole and different stakeholder groups in particular.

Finally, more research is needed to understand how housing-mobility efforts might work on a larger scale. The available empirical evidence on housing mobility programmes is typically drawn from relatively small-scale demonstration projects. Larger-scale programmes may have different impacts. Since such programmes are not currently in operation, data on large-scale programmes are unavailable. Hence, this type of research will necessarily be more theoretical in nature and will have to rely on indirect evidence.

This research programme will be far from straightforward given the very complicated conceptual and empirical issues that arise. Yet the substantial gains to programme participants revealed by the Gautreaux and MTO demonstrations provide ample motivation for additional research and policy attention to these issues.

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