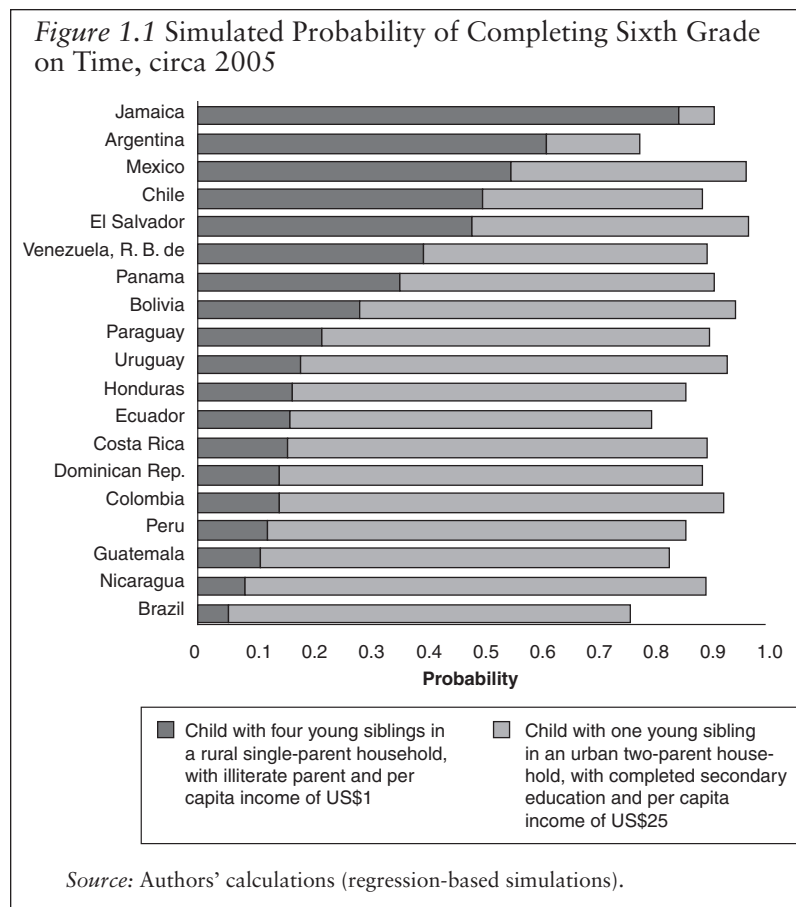


Inequality of Opportunity: What It Is, How It Can Be Measured, and Why It Matters

Even though poverty and inequality are related concepts, the goals of reducing them have received different levels of support. Reducing poverty is a universally accepted aim and a priority for development work, and is included as the first Millennium Development Goal. By contrast, while inequality has received a lot of attention—particularly in Latin America and the Caribbean, the region with the highest inequality in the world—consensus on promoting policies to reduce inequality has been much harder to achieve.

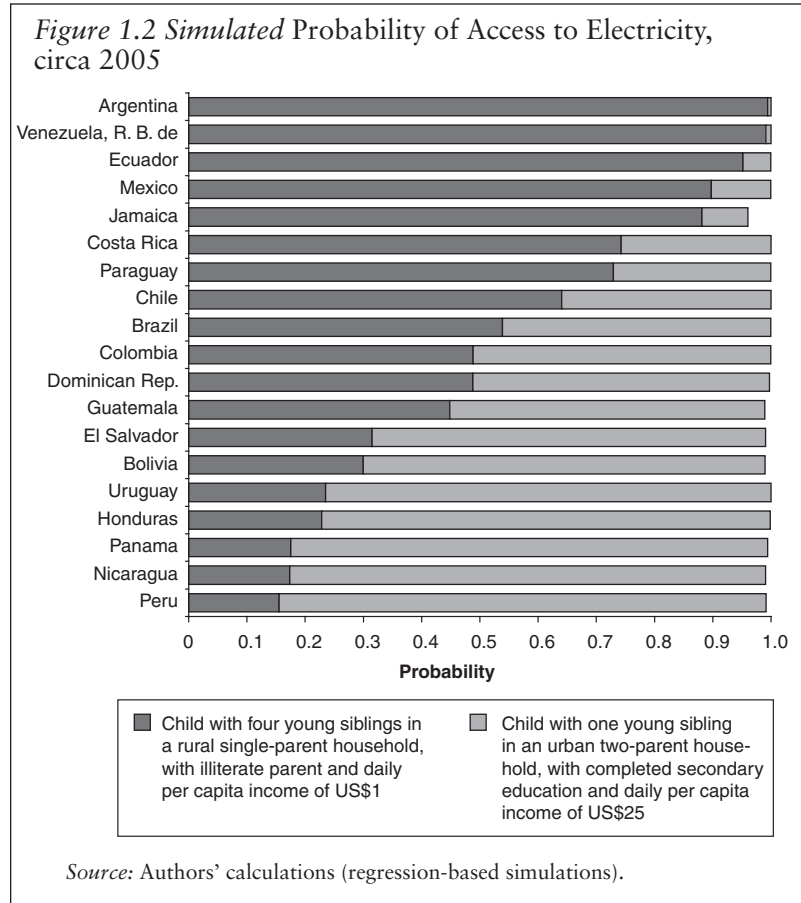
Inequality is traditionally measured using consumption, income, or wealth indicators. However, inequality is a characteristic of a host of other outcomes, production factors, and services that influence social and economic advancement. For example, access to education varies dramatically within most countries in the region. Take the probability of completing sixth grade on time for a 13-year-old living with one sibling in an urban, two-parent household with a daily per capita income of US\$25 (in purchasing power parity terms), and compare it with a 13-year-old with four young siblings in a rural, single-parent household, where the parent is illiterate and the daily per capita household income is US\$1. In a relatively rich country like Chile, the probability of a child from a richer background completing sixth grade is almost double that of a child from a poorer background. But in less rich Brazil and poorer Guatemala the probability is 15 times larger (figure 1.1).

Another example is the pronounced difference in access to basic services such as electricity. Take two children with the same characteristics



as above, but now analyze the likelihood that they live in houses where there is access to electricity from any source. Relatively rich children will all have access to electricity in almost all countries, but in countries such as Panama, Peru, and Nicaragua, less than 20 percent of poor children will have it (figure 1.2). Turning to health outcomes, the infant mortality rate among children in El Salvador with educated mothers is 25 per 1,000 live births, compared with 100 per 1,000 live births among children whose mothers have no formal education. In Haiti, the proportion of children with no access to basic immunization services is approximately 10 times larger among the poorest 20 percent than among the richest 20 percent of the population.¹

Similar disparities are found in access to a number of other public services. These examples of inequality are all the more stark because they



relate to children, who can hardly be considered responsible for making the choices that led to these inequalities.

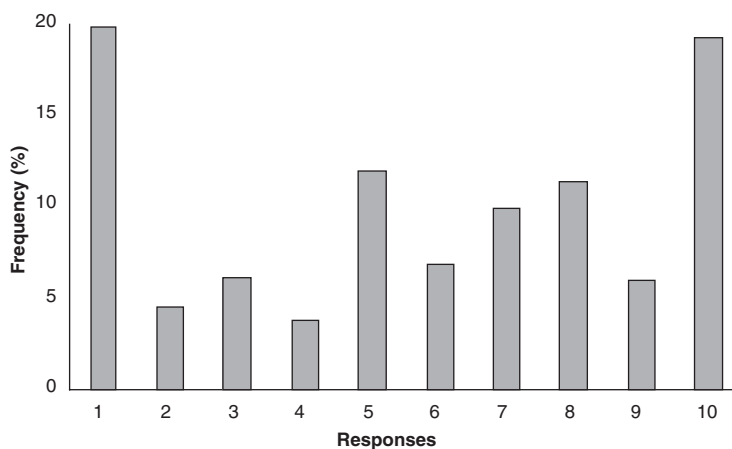
Which Kind of Inequality Matters?

Should policy makers worry about inequality? Is all inequality objectionable? Worldwide, there is less agreement on this issue than might be expected. Consider, for instance, the heterogeneous responses to a question included in the World Values Survey, which asked representative samples of people in 69 countries about their views on the importance of income redistribution versus individual effort (figure 1.3). The median response was six, roughly in the middle of the spectrum. More striking was the fact

that the two most popular replies were at the two extremes: some 20 percent of the global sample felt very strongly that incomes should be made more equal, while approximately the same number felt equally strongly that larger inequalities were needed, as an incentive to individual effort. These differences of views may arise simply from differences in social preferences about inequality. But there is an alternative explanation: that the sources of inequality matter. It can be argued, for instance, that economic inequality is neither all bad, nor all good. Whether we judge inequality to be unfair may well depend on why some people are richer than others.

People in the Latin America and the Caribbean region face highly unequal opportunities in life and different chances of economic success—and, not surprisingly, very unequal outcomes. The debate about public policy and inequality reduction must recognize that inequality is made of heterogeneous components, some much more unfair, undesirable, and unnecessary than others. Most people would probably view income gaps that arise from different choices as less objectionable than those related to ethnicity, location of birth, gender, or family background, which are all factors beyond the individual's responsibility and thus might be deemed

Figure 1.3 Should We Have More or Less Inequality?
Responses from the World Values Survey



Source: Conducted by the Inter-University Consortium for Political and Social Research, based at the University of Michigan, 1999–2000, as cited in Inglehart and others, 2004.

Note: “1” is equivalent to “incomes should be made more equal”; “10” is equivalent to “we need larger income differences as incentives for individual effort.”

unfair. Consensus could easily be reached about the need for policies devoted to reducing or eliminating the unfair influence of some of these components. However, other potential sources of inequality may be necessary to give people proper incentives to provide the effort to require education and translate it into earnings. In that regard, some inequality may be tolerated, like inequality caused by differences in effort and talent, particularly when attempts to reduce it could interfere with other ethical objectives, such as privacy and individual freedom. Equality of opportunities is desirable, equality of outcomes (earnings, income, wealth) not necessarily.

Gaviria (2006) has analyzed Latin American people's views regarding equality of opportunities. Using a large sample of people from 17 countries from the region collected by Latinobarometro, he analyzed if people believed everybody had the same opportunities to move out of poverty and if poverty could be attributed to lack of opportunities or to lack of effort or talent. Seventy-four percent believed that opportunities are not fairly distributed, and 64 percent that poverty is due to factors different to effort or talent. Overall, people were pessimistic about the importance of effort for socioeconomic advancement.

Development economists view equity—in opportunities—as an important factor not only from a moral standpoint, but also as part of the development process itself. The *World Development Report 2006: Equity and Development* suggested two main sets of reasons why equity should matter for policy makers in developing (and developed) countries: (i) unequal opportunity is widely seen as intrinsically unfair, and unfairness bothers people and can lead to social conflict; and (ii) inequality in some particular circumstances (notably but not exclusively inherited wealth) can be economically inefficient. However, people do not view, and policy makers may not want to treat, all unequal outcomes the same.

In many societies, unequal opportunities caused by circumstances at birth, such as ethnicity, gender, place of origin, and family background, which are beyond the control of the individual, condition the outcomes that individuals are able to achieve in life. The inequality caused by unequal opportunities is viewed by most people as fundamentally unfair. Thus, shifting the debate from inequality of income or earnings to inequality of opportunity, and to the policies needed to tackle that inequality, might facilitate a political and policy consensus. When the focus of the debate is on inequality of income or any other outcome, the views about how much to redistribute—if any at all—and through which mechanisms would vary from left to right across the political spectrum. However, when the focus shifts to the equalization of opportunity, political consensus about the need to reduce inequity is easier to achieve, and the direction this principle gives to policy is clearer. Deliberating equality of opportunity helps policy makers differentiate between those inequalities caused by factors considered “fair” and those considered “unfair.”

The number of different opportunities affecting later outcomes can be infinite, from access to basic education and nutrition when very young, to opportunities for tertiary education, to access to a decent job as an adult. This book treats some goods and services as *basic opportunities*, to focus attention on those opportunities most critical to future life outcomes, particularly for children. Most societies care deeply about providing a set of basic opportunities to children, such as access to safe water, minimum caloric intake, and basic education. These goods and services are not under the control of the child and are directly measurable indicators that can also be used to denote inequality of opportunity. In addition, these opportunities are affordable with existing technology and resources, making universal access a realistically achievable aim.

The remainder of this chapter is divided into four sections. The first examines in more detail the concepts behind inequality of opportunity and proposes a framework for the analysis of opportunity that may be useful for policy design. The second discusses the alternative approaches to measuring inequality of opportunity used in the remainder of the book. The third section summarizes the main reasons policy makers should be concerned about inequality of opportunity, while the last considers the implications for policy.

The Concept of Inequality of Opportunity

Understanding the exact meaning of the concept of inequality of opportunity and its implications requires some analytical, methodological, and even philosophical consideration. Before moving on to the detailed quantitative work of later chapters, this section seeks to carefully define inequality of opportunity and related concepts, and then construct a framework for measuring it.

Conceptual Underpinnings

The critical distinction between outcome differences that are attributable to individual responsibility and those that are not has played a central role in political philosophy in the last 40 or so years. Before John Rawls' *A Theory of Justice* (1971), most people sought to assess the fairness or equity of a social allocation solely on the basis of the distribution of outcomes. In the 1970s, spurred on by the work of both Rawls and Robert Nozick (1974), political scientists and philosophers began to consider the fairness of processes, and how final outcomes are determined both by the opportunities a person enjoys and by what he or she makes of those opportunities.

John Rawls (1971) emphasized liberty. His first basic principle of justice demanded "the most extensive liberty for each, consistent with similar

liberty for others.” His second principle postulated that “primary goods,” which provide basic opportunities—a concept that will be returned to later—should be available to all members of society. Under his “Difference Principle,” Rawls proposed that the optimal allocation of primary goods would maximize the share of the least privileged group.

Following Rawls, Ronald Dworkin (1981) equated fairness with *equality of resources*, rather than outcomes. Richard Arneson (1989) spoke of *equality of opportunity for welfare*, rather than of welfare itself. Although details and nuances differ across these various authors, the common thread was a redefinition of what Gerry Cohen (1989) calls the “currency of egalitarian justice”: it seemed to most writers that fairness required the equality of *something*, but given the role of individual responsibility, it was clear that it was not simply the equality of outcomes.

Economists were not far behind. In his 1979 Tanner Lectures at Cambridge University, Amartya Sen famously asked “Equality of What?” (Sen and Hawthorne 1985). He took it as a given that most recent theories of justice associated fairness with the equal distribution of something. But it was not obvious what this something ought to be. Because “final outcomes,” such as utility, or even intermediated outcomes, such as income, wealth, or education, depended in large part on choices made by individuals themselves, it seemed fair to hold individuals accountable for some of the final differences in achievement, so long as those differences followed from those choices.² Sen defined a person’s “capabilities” as the set of possible “functionings” that he or she might enjoy, and argued that attention should focus on the distribution of those capabilities.

This book, similarly to the *World Development Report 2006: Equity and Development*, adopts a notion of fairness that is based on *equality of opportunity*. This phrase has been used equally by commentators on both the political right and left. A definition of the concept useful for this discussion is that of Roemer (1998). Roemer spoke of the outcome of interest as an “advantage” and divided the determinants of advantage into two groups: “efforts,” which are subject to individual choice, and “circumstances,” which are factors that lie outside the individual’s control. Equality of opportunity would prevail in a situation in which the distribution of an outcome of interest is independent of circumstances. Equal opportunity levels the playing field, and everybody has, in principle, the potential to achieve the outcomes of their choosing.

Developing a Conceptual Framework

The debate about the role of public policy in reducing inequality requires a better understanding of the sources of inequality. Figure 1.4 diagrams the basic ideas behind the concept of inequality of opportunity, which will help orient the discussion. Overall outcome inequality, in the uppermost box, represents the inequality observed in outcomes such as labor earn-

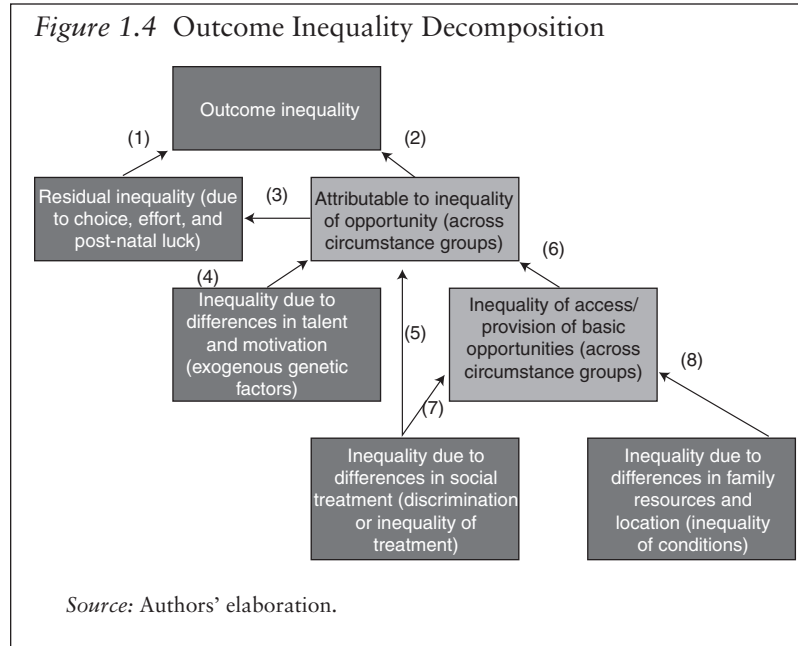
ings, household consumption per capita, educational achievement, health prevalence, or any other social outcome of interest. Outcome inequality arises from two basic sources. The first is inequality associated with differences in circumstances that the individual cannot be held accountable for and that lead people to face different opportunity sets: race, gender, the family and socioeconomic group into which they were born, the place where they were born, as well as any mental or physical characteristics they inherit at birth. As long as these predetermined circumstances affect the outcome of interest—and there is a social agreement that they should not—through any mechanism, the differences generated will be attributable to inequality of opportunity, represented in the right-hand box.

Although many would argue that this source of inequality is intrinsically unjust, not everyone would unconditionally agree that public policy must be used to reduce it. Inequality of opportunity, as well as overall inequality, is made up of heterogeneous components that must be disentangled before a consensus can be reached on the extent to which public policy should be used to reduce it.

The remainder of outcome inequality reflects differences in variables that are, to some extent, under the control of the individual. These include where individuals choose to work and live, with whom they choose to marry or cohabit, how many children they decide to have, and so forth.³ These factors could have been different if the person had chosen a different path; individuals with identical choice sets reach different outcomes as a result of their own choices, and it is sensible to hold them accountable for those choices. That component of inequality is in the left-hand box. It is sometimes described as inequality resulting from effort and choice, but because it also includes differences resulting from postnatal random shocks (luck), it is preferably called “residual inequality.”⁴

Two views of inequality of opportunity can be encompassed within this framework. The first, called “meritocratic,” requires that people with identical levels of effort and choice enjoy identical outcomes. Any inequality in outcomes would map perfectly to differences in effort and choice. In this situation, circumstances might still condition the final outcome as they affect the choice set available to the individual (arrows 1 and 3, shutting down arrow 2 in figure 1.4). A second view, called “egalitarian,” is from Roemer (1998). This definition requires that the distribution of outcomes be stochastically independent of any circumstances.⁵ It therefore shuts down not only the direct effect of circumstances on outcomes through arrow 2, but also the indirect effect of circumstances on the set of choices facing the individual that operates through efforts and choice (arrow 3).

An example clarifies the distinction. Imagine a country in which there is no discrimination against indigenous people in the labor market, but where language barriers, cultural differences, differences in the types of schools attended, or differentiated treatment within schools result in indigenous students consistently attaining lower educational achievements. Given



that the quality of the education they receive leads to lower expected returns in the labor market, they rationally choose to invest less time in education. The labor market rewards education, and indigenous workers earn less than nonindigenous workers; for the sake of argument assume that the lower earnings are entirely due to educational differences resulting from a choice made by the individual. According to the meritocratic definition, this society would not have inequality of opportunity in its labor market, because education is part of the choice set of the individual, and people would be rewarded precisely in accordance with their educational achievements.

The egalitarian view, however, would view this society as opportunity-unequal, because outcomes are not independent of ethnicity. Circumstances (being indigenous) may not affect outcomes through the labor market, but they affect them through the educational choices (“efforts” in Roemer’s terminology) of the individual, which implies that the distribution of choices finally made is different across the two groups. In this case, even if arrow 2 is shut down, circumstances are affecting outcomes through arrows 1 and 3.

As Roemer (1998) noted, the egalitarian view would mandate some form of intervention to increase the incomes of the disadvantaged group, until each percentile of the effort distribution among the advantaged group earned the same as the corresponding percentile among the disadvantaged. To compensate, indigenous workers must, theoretically, be paid more than

nonindigenous workers for each unit of education (year of schooling, for example), because the level of education itself was unfairly influenced by circumstances. In the discussion of meritocracy, the egalitarian view questions where the merit comes from. If it is attributable to circumstances, it is not “true” merit (box 1.1).

Box 1.1 Meritocracy and Equality of Opportunity

Meritocracy is a notion often associated with equality of opportunity. Meritocracy awards positions of responsibility according to skill and effort. To some extent, this notion parallels Roemer’s distinction made between effort and circumstances in defining equality of opportunity. But Roemer proposes an important distinction between meritocracy and equality of opportunity. His proposition is that equality of opportunity implies leveling the playing field before any competition takes place. Meritocracy is equivalent to a nondiscriminatory approach at the competition stage, where selection is based only on traits and skills that are relevant to the position in question. A “leveled playing field” conception of inequality of opportunity is equivalent to equalizing opportunities at the period of formation so that all have the chance to acquire the needed skills.

Take the example of admission to a university. The meritocracy principle will admit those most likely to do well. The equality of opportunity principle will admit the high-effort individuals across groups of individuals defined by circumstances, even if those from disadvantaged groups may not do as well in university as those from advantaged groups. According to equality of opportunity, this policy is not a waste of university resources; according to meritocracy, it is.

Equal opportunity focuses on *fairness* in regard to competition for social resources. Meritocracy focuses on *produced social outcomes*. But society must balance fairness toward those competing for resources with general social welfare. Equality of opportunity cannot imply devoting an infinite amount of resources so that any individual can acquire the skills needed for any position he or she chooses. To properly adjudicate this problem requires having a general social welfare function for society. Lacking that, there is a rule of thumb that most people would adhere to: when training people for careers and occupations, use the equality of opportunity principle. When choosing candidates for jobs, use meritocracy.

No one would recommend equality of opportunity for choosing surgeons for their children. In that case, people want meritocracy. Also, take the example of selection to professional basketball teams. Height is an important circumstance, exogenous to the individual. Yet no one would recommend equality of opportunity here. In none of these cases is it advisable to select people only according to their effort—because the welfare of patients and basketball spectators dominates.

The meritocratic and the egalitarian definitions coincide only when effort is stochastically independent of circumstances. When there is no arrow 3 when circumstances do not affect the choice set, shutting down the direct effect through arrow 2 suffices to ensure that circumstances have no effect on outcomes. In general, however, this is not the case. Assume the final outcome is earnings. Earnings inequality will depend on the educational effort a young individual chooses to make. Is the educational effort independent of circumstances? Unlikely. The best (and most empirically well-established) example is the dependence of a person's own schooling (which reflects effort) on parental education (a circumstance from the viewpoint of the child).⁶ In fact, intergenerational mobility and inequality of opportunity are related concepts, although they measure different effects. One can say that as long as parental income is a good predictor of individual income, intergenerational income mobility is low. Hence, inequality of opportunity is high and family background might have a large influence on economic achievement and welfare. However, that is true only under the restrictive assumption that parental income is statistically sufficient for all observed relevant circumstances. Still, the literature of intergenerational mobility is pertinent for this discussion because parental and family background is a key determinant of opportunity. As shown above, children from different family backgrounds do face very different access to basic services, and, through different channels, family background affects a host of outcomes throughout the lifetime. Box 1.2 delves into the different points of contact between the literatures of intergenerational mobility and inequality of opportunity.

But there are many other ways in which background affects effort and choices people make. In a recent experimental study in rural India, Hoff and Pandey (2006) found that children perform differently in simple tasks when their caste identity is made salient. Steele (1997) and Steele and Aronson (1995) found similar effects on performance from emphasizing stereotypes among African Americans and whites in the United States (see World Bank 2006 for a summary).

This book, in keeping with the *World Development Report 2006*, uses an approach consistent with Roemer's egalitarian definition of equality of opportunity: a society has equal opportunities when circumstances are not statistically associated with differences in important life outcomes, nor directly, nor through affecting the choice set people face.

For policy purposes, it is critical to further disentangle the elements behind inequality of opportunity to judge whether those elements are justifiable or whether policy can and should attempt to redress them. Inequality of opportunity arises from at least three sources: intrinsic and personal characteristics, discriminatory treatment, and access to social services.

First, inequality of opportunity can arise from traits that are exogenous but intrinsic to the person: the genetic endowment of talent and motivation (arrow 4, figure 1.4). To the extent that these circumstances lead to

Box 1.2 Intergenerational Mobility and Equality of Opportunity

Intergenerational mobility is the extent to which parents' incomes or occupational choices correlate with those of their offspring.^a There are a number of points of coincidence between the mobility and equality of opportunity literatures. One relates to the role of inherited ability and, more broadly, of genes in determining both individual outcomes and the intergenerational transmission of such outcomes. Some of the specialized literature suggests that intelligence and personality are, in part, hereditary. Moreover, the role of genes is likely to be enhanced by assortative mating and other channels of cultural transmission, such as choices, preferences, and the environment in which children are raised (Feldman, Otto, and Christiansen 2000). A second has to do with the importance of social connections, networks, and influences as determinants of individual outcomes and their intergenerational transmission.

Reliable estimates of intergenerational mobility are scarce. A common measure is the elasticity of son's to father's income; the smaller the elasticity, the higher mobility will be, and the less dependent an individual's earnings on that individual's background. Recent evidence shows that mobility in the United States is much lower than in Canada, Finland, Sweden, or the United Kingdom (World Bank 2006). Mazumdar (2005) calculates a fairly high intergenerational elasticity in earnings (0.6) between fathers and sons in the United States. Moreover, he finds substantial immobility among the poorest. Children born to parents in the lowest decile are likely to remain in the poorest 50 percent, and half of them will stay among the poorest 30 percent. There are many potential reasons behind this. One developed by Mazumdar is that parents from poorer backgrounds face financial constraints early in the lifetime of the child such that they cannot "buy into" neighborhoods with higher-quality schools. Empirically, he finds that families with low net worth have a significantly higher intertemporal elasticity than families with high net worth. That is, low wealth generates an intergenerational poverty trap. This justifies paying attention to family background as a key source of inequality of opportunity.

Recent evidence for Brazil, Peru, and Chile suggests that low mobility might be more marked in Latin America than in industrial countries (IDB 2008). Ferreira and Veloso (2004) show that in Brazil, sons of fathers in the lowest quintile of the wage distribution have a 35 percent probability of remaining in that quintile. For fathers in the richest quintile, the probability of their sons staying in the same quintile is 43 percent. Of interest is that income persistence is much higher among Afro-descendants. For this group, the figures are 47 percent and 29 percent, respectively; that is, half of Afro-descendants' sons in the poorest quintiles will stay there. The corresponding figures for whites are 25 percent and 50 percent, showing low mobility for those in the richest quintile.

Box 1.2 Intergenerational Mobility and Equality of Opportunity *(continued)*

An important point is that equal opportunity might not lead directly to greater economic mobility. Equality of opportunity does not necessarily imply the elimination of all sources of economic likeness between parents and children. Specifically, equality of opportunity may not negate the effect of inherited ability or certain values, which seem to explain a large portion of outcomes and economic mobility (Jencks and Tach 2006).

But at the same time, there is room for policy interventions to equalize opportunities and promote mobility. Ashenfelter and Rouse (2000) suggest that in the presence of positive returns to schooling unrelated to ability, schools can offer an adequate environment to increase skills (and therefore incomes), enhancing both equality of opportunity and economic mobility. Furthermore, in addition to the skills that are taught in schools, these environments can have an effect on norms and preferences in ways that make individuals more attractive to employers, translating into further effects on earnings (Bowles and Gintis 2000).

a. Both sociologists and economists have contributed substantially to the theoretical and empirical understanding of economic mobility. A complete review of the two literatures can be found in Morgan, Grusky, and Fields (2006).

differences in productivity or achievement, or results in a meritocratic environment, the inequality of opportunity might be considered, if not just, at least acceptable.⁷ From a policy perspective, some genetic disadvantages can be fixed (for example, eyesight problems), and that can have important implications for equalizing opportunities (Jencks and Tach 2006). Roemer (1998) proposes that traits that are to some extent genetic (such as inherited IQ) are circumstance variables in an education production function. In principle, a society may want to invest resources to level the playing field for low-IQ individuals. How much and how far it wants to go in this compensation is a social choice.

Second, equally talented and productive individuals are treated differently in different markets, which might generate different outcomes for individuals with otherwise similar characteristics (arrow 5). People with different circumstances (family background, race, or place of origin) might be discriminated against in the labor market and have access to different kinds of jobs and consequently to different incomes. Likewise, males and females may not be treated equally when under consideration for a job, and may be paid differently for performing the same task. Quite often, equally talented and productive individuals are treated differently, receiving different access to the best jobs or receiving different wages even when performing the same tasks. In this case, inequality is generated by the unequal treatment of

equally deserving individuals. This unequal treatment of equals is usually referred to as discrimination. Although there is consensus that discrimination is unfair, the resources societies are willing to allocate to eliminating this source of inequality vary considerably and remain open to debate.

A third component is the unfair allocation of what we call “basic opportunities” (arrow 6). The number of dimensions in which inequality of basic opportunities may arise is large and may operate at different stages of the life cycle. Differences in access may be generated early in life, such as access to education, health, nutrition, and basic services, or later in life in access to tertiary education, to a good quality job, or to political voice. As defined in more detail below, basic opportunities are those that are critical for development at early stages in life, that will have a key impact on outcomes, and that countries may aspire to provide universally. Policies can and should be implemented to increase access to basic opportunities and to ensure that their provision is not systematically biased against any specific group or type of individual. Even if universal access is not achievable in the short run, equality of opportunity implies ensuring that progress in the provision of basic opportunities is not biased against anybody because of circumstances.

The sources of unequal access to basic opportunities related to circumstances can be grouped into differences in social treatment and differences in conditions. *Differences in social treatment* are mostly related to discrimination across circumstance groups (arrow 7). If access to an opportunity is biased against certain groups of the population, inequality in acquired characteristics (such as formal education) might be generated even among equally talented persons. This, in turn, will lead to unequal outcomes even in meritocratic societies. Discrimination can also operate during the process of acquisition of a characteristic. For example, different ethnic groups may be treated equally for admission to a school, but be discriminated against while studying. In all cases of discrimination, equality of opportunity is violated because equally talented and motivated individuals are being treated differently, leading to differential outcomes. Nondiscriminatory policies would be the appropriate and necessary measure in these situations.

Differences in conditions relate to family background and resources that might differ across circumstance groups (arrow 8). In this case, children of poor parents are not being discriminated against; rather, they do not have equal access to services to develop and fully utilize their talents, just because their families lack the necessary resources. Among children, unequal access to basic opportunities hampers the accumulation of human and physical capital, which eventually has an impact on outcomes such as income and earnings. Lack of resources may impair not just access to basic opportunities but also the ability to benefit from them. For example, children of poor parents may have both less access to schools and learning disadvantages (such as no books at home or illiterate parents). In this case, equally talented children from different social backgrounds are not

going to have the same opportunities for reasons outside their control. Unequal access to basic opportunities may also occur because of differences in location—for example, in a society with urban-biased policies, key services may not be available in rural areas, or the quality of those services may be much lower.

Whenever a child's access to or ability to benefit from basic opportunities depends on family resources, the ideal of equal opportunity is violated and social immobility is generated. Equally talented children from different social backgrounds are not going to have the same opportunities and outcomes for reasons outside their control. The role of public policy in this case is unanimously recognized—equal access to and conditions to benefit from these specific sets of social services should be provided to all. The policy implications are critical. Countries can and have implemented policies to subsidize access to social services, at least for the poor and, in some cases, have even guaranteed minimum income to ensure that all have the necessary conditions for benefiting from available services.

There are many correlations and causal interactions between these elements of inequality of opportunity. Greater innate ability may be partly the result of early childhood stimulation (such as storytelling or playing with small children). Richer families may have access to neighborhoods with better public schools, so that access to “better” public services is correlated with family socioeconomic background, and so on. From the point of view of policy design, the correlation between the pattern of access to, use of, and benefit from public services and the other subcomponents of inequality of opportunity is absolutely critical.

From Concepts to Operationalizing Equality of Opportunity

The overall goal of this book is to make the concept *equality of opportunity* operational by developing measurement tools that can assess and track inequality of opportunity. The book starts by defining equality of opportunity as the situation in which all individuals, independent of exogenous circumstances, have the same opportunities in life. “Circumstances” as used here are socially determined exogenous factors, such as gender, race, or socioeconomic background, beyond an individual's control, and about which there is broad agreement that they should not have a role in outcomes. In a situation of full equality of opportunity, these circumstances neither hinder nor contribute to the individual's achievement.

If the measurement of inequality of opportunity is to have any policy relevance, outcome levels and their relation to circumstances must at least conceptually be influenced by social policy choices. Circumstances are factors beyond an individual's control (such as race) that should not but

that actually do affect outcomes of interest (such as wages). Outcomes of interest are advantages (such as wages) that can be modified by social choice (such as subsidized education or minimum wages). Moreover, the relationship between outcomes and circumstances (wages and race) can, at least conceptually, be modified by social choice (for example, ensuring equal provision of quality education for everybody, or affirmative action programs). For this exercise to be relevant for policy, that social choice must conceptually be able to modify both the level of the outcome and, more important for present purposes, its dependence on circumstances.

Despite the attention given to inequality of opportunity by sociologists and philosophers, empirically it neither has a universal definition nor an established measurement indicator similar to those for inequality of income or earnings. In the sociology literature, inequality of opportunity has been measured as the association between family background and children's outcomes. (See, for instance, the classic work of Boudon 1974.) Economists have recently begun paying attention to the measurement of inequality of opportunity for continuous outcomes such as income, consumption, and educational achievement.⁸

This study proposes two types of measures of inequality of opportunity. The first is a Human Opportunity Index, which introduces a new way to measure inequality in discrete indicators of basic opportunities for children. The second measure builds upon existing research to estimate the share of economic and educational inequality resulting from inequality of opportunity among youth and adults. The conceptual frameworks for these two techniques for estimating inequality of opportunity are outlined below and described in more detail in chapters 2 and 4.

The Human Opportunity Index

Understanding all the factors that influence individual outcomes, such as welfare or utility, is complex, if not impossible. We recognize that those outcomes are partially determined by factors that are the individual's responsibility, but an important part is determined by circumstances that lie beyond the individual's control and that create differences in the opportunities available to each individual. An equitable development process should pursue the equalization of opportunity at all stages of an individual's life, seeking to level the playing field for all citizens.

As mentioned in the previous section, one component of inequality of opportunity is unequal access to basic opportunities. As long as some children in a country do not have access to education, health, nutrition, and basic services, and as long as access is determined by circumstances for which the child is not accountable, such as gender, ethnicity, or family background, inequality of opportunity will prevail in that country. The Human Opportunity Index is an indicator that can be used to track a country's progress toward the goal of providing all children equal access

to basic services defined as critical opportunities for future advancement in life.

Given the complexity of the issue, and for methodological considerations, it is useful to focus on a limited number of specific opportunities that could be measured and tracked. Undertaking such a task first requires operationalizing the concept of “opportunity.” For the purposes of this study, opportunities are defined as those variables that

- exert influence on outcomes (such as income, labor earnings, educational achievement, and the like);
- are critical for the development of an individual;
- are exogenous and not under the control of the individual but are endogenous to society and can be modified by social choice and public policy; and
- might be unfairly influenced by circumstances.

For adults, endogeneity makes classifying opportunities as the result of either effort or circumstance more difficult. What role do individual effort and choice have in, for example, the opportunity to attend tertiary education? Attendance is influenced by the choices of an individual, but also by whether adequate tertiary education institutions exist or whether family resources might preclude attendance.⁹ The same could be said of an adult’s access to clean water—it might depend, at least partially, on an individual’s choices, but it might also depend on the supply where the individual lives. Some may argue that the location of residence for an adult is under his or her control, so the condition of an adult with or without access to water is an interplay between an opportunity and a choice the adult made.

But for a six-year-old girl, access to safe drinking water or to a primary school is clearly an exogenous opportunity. Access is controlled not by her, but by her family or society. Hence, the set of goods and services that are critical for children is defined as *basic opportunities*. Examples include access to education, basic infrastructure, immunizations, minimum nutritional levels, and a birth certificate or other identity document. Two other elements are critical to consider a service or good a basic opportunity. First, basic opportunities are critical for human development. Second, they are affordable, given the available technology; and if not affordable today for a specific country, they might be in the near future with effective policies, such that universal provision is a valid and realistic social goal. Even if different societies have different standards regarding the set of basic opportunities, there is some consensus at the global level, as exemplified by the Millennium Development Goals. In the particular case of children, most societies agree on a set of basic opportunities, at least at the level of intentions.

A development process in which society attempts to equitably supply basic opportunities requires undertaking two complementary objectives:

- Ensuring that as many people as possible have access to basic opportunities.
- If the supply of basic opportunities is limited because of resource constraints, allocating newly created opportunities first to those who, given their circumstances, are at a disadvantage, to promote equality of opportunity.

The Human Opportunity Index presented in subsequent chapters gauges progress in these two complementary objectives using a measure of inequality of opportunity that can be applied to discrete outcomes. Indicators used to approximate opportunities among children are empirically more tractable: all observed inequality related to circumstance can safely be assumed to be inequality of opportunity because children cannot be held responsible for their own access to them. The empirical analysis does not have to disentangle inequality derived from circumstance from that related to individuals' choices. Hence, because opportunities are easier to directly observe among children, and because opportunities early in life are a precondition for equality of opportunity throughout the lifetime, this study focuses on basic opportunities for children to construct a Human Opportunity Index.

This approach gauges how circumstances related to differentiated social treatment (for example, based on gender or race), family resources, or location impact inequality in basic opportunities for children. Again following figure 1.4, this is represented by arrows 7 and 8. This method proceeds in two steps. First, it measures whether *existing* opportunities are allocated equitably, by using a dissimilarity index, or “*D*-index,” that compares different circumstance groups' probabilities for accessing a given opportunity. The *D*-index has an appealingly concrete interpretation: it is the share of opportunities that would have to be “reallocated” across children from different circumstance groups in a country to restore equal opportunities for all children. Second, the *D*-index is combined with the absolute level of basic opportunities in a society into a synthetic measure, a Human Opportunity Index. This index assesses the importance of both improving overall access to basic opportunities and ensuring that existing opportunities are allocated equitably.

Through the Human Opportunity Index, this book investigates the extent to which circumstances affect access to a set of basic opportunities related to education (attending sixth grade on time and attending school at ages 10–14) and housing (water and sanitation, and electricity). Given that data on access to these types of public services are collected in household surveys, the Human Opportunity Index can be applied to a large number of countries. Other key basic opportunities have not been included owing to data limitations. More detail on the construction of the index is provided in chapter 2.

Measuring Inequality of Opportunity

Outcomes such as income, earnings, occupational advancement, health status, and educational achievement show inequalities that stem at least partially from circumstances. When a share of unequal outcomes can be attributed to circumstance, it reflects inequality of opportunity in a society. In an ideal world, inequality in outcomes should reflect only differences in effort and choices individuals make, as well as luck and talent. Based on this idea, one way to measure inequality of opportunity is to decompose unequal outcomes into a portion resulting from circumstances that lie beyond the individual's control, and a residual component that contains reward to effort and choices (as well as luck and talent). The individual cannot be held accountable for the component resulting from circumstances, because he or she is not responsible for them. That component reflects inequality of opportunity. This approach is used in chapters 4 and 5 to assess inequality of economic opportunity and educational achievement. Referring to figure 1.4, the first component includes both the direct effect of circumstances on outcomes (arrow 2) and any indirect effect of circumstances through effort or choice (arrow 3). Thus, it captures the multiple channels through which circumstances have an impact on outcomes. The residual component includes the effects of effort, choices, luck, and talent that are not associated with differences in circumstances, if all relevant circumstances are adequately measured. Because this approach breaks down the overall observed inequality in outcomes, it is called in this book the "top-down" approach.

A method frequently used for testing the equality of opportunity in a given society consists of investigating whether the outcome distributions conditional on circumstances are different.¹⁰ If the wage distributions among indigenous and nonindigenous people in a country were identical, one would claim that there was no inequality of opportunity in that society related to the circumstance of being indigenous. If, instead, they differed in systematic ways (for instance, such that one circumstance was always preferable to another), the hypothesis of equal opportunity would be rejected, and some of the unobserved inequality would be due to opportunity disparities between indigenous and nonindigenous people. (See Lefranc, Pistoiesi, and Trannoy 2006.)

To move beyond *testing* for inequality of opportunity and toward *measuring the extent* of that inequality, the literature has relied primarily on decompositions of overall outcome inequality into the two components described above. This top-down approach is closest to the spirit of the existing literature on measuring inequality of opportunity. (See, for example, Checchi and Peragine 2005, and Bourguignon, Ferreira, and Menéndez 2007.) It uses the formalization provided by John Roemer (1998), who describes equality of opportunity as the situation where outcomes (or "advantages") are distributed independently of circumstances. Essentially, individuals in a sample are allocated to groups defined by the vector of

circumstance variables that are judged to be important potential determinants of outcomes of interest—such as race, gender, ethnicity, birthplace, and family background. This procedure partitions the population into many cells, such that all persons in any given cell have identical circumstances. Once this is achieved, all the inequality *between* the cells is due to differences in circumstances, while the inequality *within* a cell is due to the residual component.¹¹ The share of between-group inequality is then used as a measure of inequality of opportunity.

There are two ways of applying the top-down approach: either directly estimate between-group inequality or estimate within-group inequality and subtract that from the total. These two alternative paths do not generally yield the same responses. The technical reason for this path-dependence is that when the differences within groups are eliminated first, the weights used to aggregate within-group inequality across all groups are not changed. For most inequality measures, however, when the differences between groups are eliminated first (by rescaling group means, or “standardizing the distribution”), the weights change.

Fortunately, there is one standard decomposable measure of inequality—a member of the generalized entropy class of indexes—that is path-independent in this sense. It gives the same share for inequality of opportunity whether differences between groups are estimated directly, or whether the within-group differences are estimated first and then subtracted from the total. This measure is the mean logarithmic deviation, also known as the Theil-1 index. In this book, this index is relied on mostly when using the top-down approach.¹² The decomposition described in this section can be implemented in practice both parametrically and nonparametrically.

Finally, the partition of the population into groups, which was implemented for the decompositions mentioned above, can also be used to individually identify the groups that are the most disadvantaged in the distribution of opportunity in each society. Instead of ranking individuals or households by their income levels, ranks are produced only to identify which are the broad groups, defined by circumstances, that are, on average, not sharing in social prosperity. The methodology allows identification of the characteristics of the most-disadvantaged groups, from the perspective of equality of opportunity. For example, circumstances such as ethnicity and low parental education characterize the groups that account for the bottom 10 percent of the population.

Chapters 4 and 5 present results and describe in more detail the methods touched on in this section, while the formal treatment is reserved for papers by Ferreira and Gignoux (2008a, 2008b).

The Complementarity of the Empirical Approaches

The two approaches described above are complementary. Looking from a life-cycle perspective, the more bottom-up approach of the Human Oppor-

tunity Index seeks to understand the nature of inequality in access to basic opportunities related to education and housing among children. In this sense, it looks “inside the production function” of inequality of opportunity by focusing on arrows 7 and 8 of figure 1.4. Inequality in access to basic opportunities related to circumstances will, later in life, be reflected as part of the overall effect of circumstance on outcomes.

In turn, the top-down approach focuses on outcomes among youth and adults, and estimates to what extent a specific set of circumstances affects those outcomes. The measure reflects the operation of a multiplicity of opportunities, including basic opportunities during life that have been affected by circumstances. This allows the full extent of inequality of opportunity, at least that part linked to observed circumstances, to be measured. This relates to arrows 1 through 3 in figure 1.4.

This book does not dwell directly on all situations in which opportunities are needed to improve life chances. For example, the empirical sections of the book do not directly address unequal opportunity stemming from discrimination in the labor market. The analysis of the role of circumstances on outcomes such as income or labor earnings is captured through the final net impact of circumstances on outcomes, which are mediated through specific inequalities in opportunity, including discrimination, without trying to isolate each specific effect. Other studies approaching the theme of inequality of opportunity in the Latin America and the Caribbean region from different perspectives have become available (see box 1.3).

Box 1.3 Latin American Contributions to the Opportunities Literature

The work presented in this book builds upon a vast literature driven by dedicated researchers in the region who have directly and indirectly investigated issues related to basic opportunities. Researchers investigating individual country experiences in the region have contributed significantly to the growing literature using opportunities as an analytical framework. The fact that a variety of stakeholders in Latin America and the Caribbean are showing active interest in using an opportunities framework to analyze issues related to poverty reaffirms the value of efforts that aim to widen the methodological debate and bring opportunities to the top of the policy agenda.

Scott (2007) investigated inequality in income and basic education and health indicators in Mexico since the revolution (1910–20), reviewing the historical persistence and multidimensional nature of inequality. Scott concentrated on analyzing a wide range of instruments employed by the government over time, such as land reform, Progresa (Oportunidades), and social spending on universal programs in education, health,

(Box continues on the following page.)

Box 1.3 Latin American Contributions to the Opportunities Literature (continued)

and social security, in view of assessing the redistributive impacts of these initiatives. Núñez, Ramirez, and Taboada (2006) investigated income inequality in Colombia from the perspective of opportunities and effort, focusing on social mobility. A key finding was that if people at birth had the same opportunities, income distribution in Colombia could improve between 12 and 28 percent, depending on the inequality index used (Gini or Theil) and the unit of analysis (individuals or households).

The Economic Commission for Latin America and the Caribbean and Fundación Empresarial para el Desarrollo Educativo in 2000 collaborated to investigate equity in the coverage, quality, and intergenerational transmission of educational opportunities in El Salvador (Carrasco Guzmán 2000). Similarly, the Pan American Health Organization has played a key role in investigating issues related to access to health. In 2004, it published a study using data from six countries—the Dominican Republic, Ecuador, Guatemala, Honduras, Paraguay, and Peru—with the objective of characterizing and measuring exclusion in health (PAHO 2004).

Another strand of the literature studies intergenerational mobility through educational transmission. Schooling inequality may be partially explained by parental characteristics, which can be attributed to inequality of opportunity. This approach was used by Barros and Lam (1993) for Brazil. Behrman, Gaviria, and Szekely (2001), in a study for Brazil, Colombia, Mexico, and Peru, examined the impact of parental background in schooling and occupational status, and found that intergenerational mobility is much larger in the United States than in Latin American countries. Gaviria (2006) studied the relation between parents' and sons' years of schooling and found a stronger and larger statistical relationship in Latin America than in the United States and Europe. He found large differences in education for offspring of less-educated parents and very small differences for those with educated parents.

An important contribution to the Latin American literature is the IDB's 2008 Report on Economic and Social Progress, which focused on social exclusion. The report, *Outsiders? Changing Patterns of Exclusion in Latin America and the Caribbean*, delves into questions about the multidimensional and interrelated nature of social exclusion. The report views social exclusion as an inefficient and dysfunctional dynamic social, political, and economic process whereby individuals and groups are denied access to the opportunities and quality services necessary to live productive lives and move out of poverty.

Research into opportunities has not been confined to the academic world. In 2005, the Ministry of Finance of Chile included an analysis of inequality of opportunity in Chile, and highlighted it as a challenge for

the future in its annual public report on the state of the treasury. Though relatively short, the analysis is impressive. Topics included philosophical considerations, historical foundations of inequality of opportunity from colonialism, and up-to-date data on a diverse set of important variables, such as access to education and intergenerational mobility. The ministry also produced a number of short notes on its Web site tailored toward a wider readership in an effort to gain public attention for the issue.

Why Should We Be Concerned with Inequality of Opportunity?

Inequality of opportunity, as well as its importance to the more common inequality of outcome concept, is—and if not, should be—a matter of academic and policy interest for several reasons. It is at the heart of the concern about the ability of society to increase opportunity for the most disadvantaged and provide a level playing field to all individuals. It is critical to an understanding of attitudes toward inequality and, hence, attitudes toward redistribution, which will influence the political economy framework under which public policy is defined. And it is critical to a better understanding of the relationship between inequality and growth (Ferreira 2008).

The World Bank's *World Development Report 2006: Equity and Development* (WDR) defined equity as the combination of equality of opportunity with avoidance of extreme deprivation in outcomes. This definition is consistent with a view of the development process in which the ultimate social objective is maximum sustainable expansion of opportunities for the least advantaged group, subject to a no-poverty constraint.¹³ The shift of focus from inequality of outcomes to inequality of opportunity puts the need to eliminate unfair differences stemming from circumstances for which the individual is not responsible at the center of the debate.

The focus on inequality of opportunity touches on disparities that recent evidence shows are perceived as unfair. As noted in the introduction to this chapter, the WDR suggested that one of the reasons equity should matter for policy makers in developing (and developed) countries is that unequal opportunities are widely seen as intrinsically unfair, and unfairness bothers people. Intrinsic unfairness simply reflects the fact that people object to inequality of opportunity, and prefer to live in a “more just” society (see box 1.4). The 2006 WDR listed a number of manifestations of this concern, from religious teaching to the importance of equity in legal institutions, as well as a growing psychology and economics literature on the foundations of social preferences for fairness. Incontrovertible experimental evidence now exists, for instance, that individuals across a

Box 1.4 Social Preference and the “Ultimatum Game”

A classic example of the preference for fairness is the international results from the ultimatum game, which are inconsistent with the predictions from game theory under the maintained assumption of self-regarding preferences (also known as the rational self-interest hypothesis). In a simple ultimatum game, players A and B are matched anonymously (across computer screens that do not reveal one’s identity to another), and told that they will never interact again. Player A is given some amount of money (say, \$100) and is told that he must offer some share of the \$100 to player B. Player B must then accept or reject the offer. If the offer is accepted, it is implemented in fact, and both players keep their allotted shares. If B rejects the offer, both players get zero. B also knows the rules.

Under the rational self-interest hypothesis, the Nash equilibrium from this game is that A should offer \$1 to B, and keep \$99. Since $\$1 > \0 , B should accept this offer. In reality, relatively few offers come in at less than \$30, and a nontrivial share of those offers is actually rejected. The modal offer ranges between 31 and 60 percent of the \$100, depending on the context. Note that the behavior of the first player is possibly consistent with rational self-interest. If the person has any reason to believe that player B will reject the offer, it may well be perfectly selfish and rational to offer, say, \$40. But the behavior of those who reject the offer is simply not consistent with rational self-interest. The dominant interpretation in the literature is that it reveals a remarkably widespread “taste for fairness.” (See Falk, Fehr, and Fischbacher 2003 and Hoffman, McCabe, and Smith 1996.)

wide range of cultures and geographic settings are prepared to forgo real income gains in exchange for the opportunity to directly reward others who have behaved fairly and punish those seen as behaving unfairly.

Whether such social preference is learned or socially acquired (as a norm), or whether it is in fact innate, remains a matter of debate. Whatever the reason, there is now widespread agreement that fairness matters to people; and if it matters to people, it should also matter to policy makers.

These social preferences, intertwined with the perceptions about the sources of the observed inequality, have an effect on the attitudes of people toward redistributive policies. Alesina and La Ferrara (2005) showed that those who believe that the mobility process is “fair” and that society offers equal opportunity to its members so that effort and ability determine socioeconomic success, do not look favorably on government redistribution. But those who believe that social advancement is not a fair game, either because social connections are critical or because not everyone has

the same opportunity to get an education, are more supportive of redistributive policies. The sources of income differences that affect individual opinions regarding redistribution are estimated by Fong (2001) using Gallup Poll data for the United States in 1998. Gaviria (2006), using Latino-barometro data, showed that in Latin America, redistributive policies are supported by those who believe that connections are critical for economic advancement, that opportunities are not the same for everybody, and that working hard is not enough to be economically successful.

Turning to another reason for unequal opportunity to be of concern, the WDR mentioned that inequality in some particular circumstances (notably but not exclusively inherited wealth) may lead to an inadequate ex post allocation of resources. As an example, it is unlikely that the ablest children are matched to the best educational opportunities. Instead, relative wealth is likely to constrain their schooling possibilities, with children from wealthier backgrounds gaining disproportionate access to the best schools. This is not only unfair, but is also likely to lead to a lower aggregate level of human capital than alternative allocations. In a similar vein, if poorer entrepreneurs have no access to credit, or access only at higher interest rates regardless of expected returns, financial capital will be allocated to some projects with lower (risk-adjusted) rates of return, while potentially better projects remain unfunded.

Finally, notions of inequality and opportunity are open to many different interpretations, and discussion of their precise meaning and policy and legal implications can become heated and controversial. For some, the basic opportunities expounded here will be considered fundamental rights. Indeed, countries such as Mexico have embedded in their constitution the right to education and other services. Several other countries incorporate access to specific services as individual constitutional rights, although specific policies on how those rights are to be translated into effective provision are generally vague. A further discussion on the perspective of right can be found in box 1.5.

What Does Measuring Inequality of Opportunity Mean for Policy?

The quantitative tools described in this book are intended to help measure inequality of opportunity in different countries and across time. Adequate measurement is the first step to being able to use the concept for public policy, allowing policy makers to track an individual country's progress over time in providing equity of certain opportunities related to certain circumstances, and also to compare policy experiences across countries, to gain perspective and seek lessons that can be applied elsewhere. We do not explore here the specific policies that countries should undertake to

Box 1.5 Beyond Measurement: The Perspective of Rights

Rights themselves are a challenging concept—scholars have debated the nature of rights for centuries. Many choose to introduce a dichotomy into rights: “I have a right to X means that either someone else has an obligation to provide me with X or that no one should stop me from having X.” The former is a positive right and the latter is a negative right. This simple dichotomy underlies much of the ongoing political and social debate about what should be considered a right and in what sense. A negative view would contend that a child cannot be denied access to education by anyone, while a positive view would argue that someone (usually the state) carries the responsibility to provide that child with access to education.

A further consideration is what good is a right if there are no available forms of redress. In the context of widespread corruption among judges, prohibitive costs of legal counsel for the poor, and a lack of basic knowledge of rights, some have questioned what rights mean to people in the world. Legal rights, which are included in national legislative frameworks and backed by governmental power, are but one category of rights in public discourse. The concept of human rights, for example, as articulated in the Universal Declaration of Human Rights and adopted by the United Nations General Assembly in 1948, has been used primarily to promote a set of social conditions seen as fundamental to human well-being and dignity. However, they are not always enforceable; their “power” lies in persuasion and shaming, not in the courts or through police. So if a child has a right to education, the question that follows is, what kind of right? And what does conferring rights status on this basic opportunity really mean on a daily basis in any particular country?

Recent efforts to develop innovative approaches to integrating a rights-based perspective into social policy through “social guarantees” in Chile reaffirm the ongoing dedication of societies to defining a socially acceptable framework for reducing poverty and improving well-being. Chile’s Regime of Explicit Health Guarantees (RGES), introduced between 2003 and 2005, guarantees the universal provision of health services for a selection of prioritized health problems, while also defining maximum waiting periods and total yearly amounts a family can spend on those services. The RGES uses a range of tools to ensure social guarantees: a solid legal framework, mechanisms of redress and enforcement (maximum waiting periods for resolution of claims also exist), extensive publicity campaigns, and monitoring systems that ensure the continual improvement of services. Public debate played a pivotal role in establishing societal consensus around the initiative. Following from this, another concept strongly linked with both opportunities and rights is justice. A country’s legal system and the rights that it protects originate in society’s sense of what is socially just. Notions of justice range from the relatively abstract to clear principles communicated through religious institutions.

improve opportunity for all citizens, but rather focus on contributing to better measurement of inequality of opportunity.

To the extent that unequal access to social services and unequal opportunity to benefit from them are systematically related to exogenous factors (such as gender, ethnicity, place of origin, or family background), they are clearly a constituent part of the inequality of opportunity. This is particularly true for children because family resources, family characteristics, where they were born, and their own traits are certainly exogenous. Few would question the unfairness of children's unequal access to and opportunity to fully benefit from social services resulting from any of these factors. The Human Opportunity Index can track a country's progress toward providing basic opportunities to all children, and whether existing opportunities are being allocated according to a principle of equality of opportunity. As such, the index sheds light on which specific basic opportunities require more attention, either because of inequitable distribution or low absolute levels. It also helps to identify the more disadvantaged segments of the population and to determine where policies should place more emphasis, given financial, managerial, and technological constraints.

To both widen the coverage and promote the equality of basic opportunities for children, public policy should be oriented toward directing marginal investments so as to increase basic opportunities for the most disadvantaged groups, helping equalize access to education, sanitation, water, and electricity. This, in turn, implies shifting the pattern of resources spent by society such that disadvantaged groups receive proportionately more. Considering existing technologies and resources, most countries in Latin America are currently realistically able to make universal access to basic opportunities, at least the ones considered here, a policy goal for the near future. In Latin America, social expenditures have increased sharply; according to data from the Economic Commission for Latin America and the Caribbean, between 1990 and 2003, social expenditures rose from 9.6 percent to 12.8 percent of GDP, consistent with an increase of 45 percent in expenditures per capita. Overall expenditures, however, are not large compared with international standards, nor are overall tax revenues. But changing the pattern of distribution of public expenditures is a pending challenge. The policy challenges countries face are complex when the goal of increasing opportunity for those that are more disadvantaged has to face up against the higher marginal costs of providing opportunities to those subgroups of the population.¹⁴ For example, education expenditure patterns in Latin America usually reveal that public resources per student are higher in richer areas, reinforcing the unequal pattern that comes from family out-of-pocket expenditures. Breaking the cycle of intergenerational persistence of inequality requires modifying expenditure patterns, and modifying institutional barriers to doing so.

A development process that equalizes opportunity implies devoting more resources to providing opportunities to disadvantaged groups. There is a leap, however, from the theoretical construct to the practical policy application. Shifting expenditure and investment patterns is an economic and political process and also presents implementation challenges. For example, it might be less costly to increase equality of opportunity when a population is geographically concentrated rather than dispersed. In that case, community-level targeting might have a different impact on equalizing opportunities than targeting at the individual level, but costs might also be different. The only fair process would be one in which new opportunities are randomly distributed to individuals from disadvantaged populations, but that process might not be technologically feasible. The principles and the measurement tools presented here can still guide policy choices among the different technologically, economically, and administratively feasible expansion paths to allow a country to provide the most opportunities in the fairest manner.

The second part of the book, which uses a top-down approach to decompose observed adult income into a component resulting from circumstances exogenous to the individual and a residual component resulting from effort, choice, and luck, generates two different kinds of output that may be useful to policy makers. The first, of course, is simply a lower-bound measure of the degree of inequality of economic opportunity in a society. It is not a perfect measure because it provides an assessment of the inequality associated with only six observed circumstances. But it is informative and can be presented either as an indicator of the *level of inequality of opportunity* or as a measure of the *opportunity share of overall inequality*. Both numbers are discussed for the seven countries for which the appropriate data were available. If estimated repeatedly over time, these indicators can provide governments and other social actors with a useful diagnostic of how the distribution of opportunities is evolving in their countries.

The shift of focus from inequality of incomes or earnings to inequality of opportunity is critical for policy makers and development practitioners in Latin America. A better understanding of the importance of inequality of opportunity in the determination inequality of outcomes may change attitudes toward redistribution. People dislike and consider unfair inequality associated with differences in circumstances, which many argue should be compensated for by society. By highlighting that component of inequality attributable to circumstances, this type of analysis can help build a social and political consensus on both the necessity of and the best means for addressing inequality of opportunity. As such, the focus on inequality of opportunity may have a greater impact on improving economic performance than might a focus on inequality of income.

Measuring the inequality of opportunity allows policy instruments to focus more exactly on the component of unequal outcomes caused by

factors outside individual control, while not affecting differences resulting from individual choice and the application of effort, which are usually viewed as fair. The tools presented in the following chapters can help promote a consensus on the need to focus the policy debate urgently on how to increase equity, identify the specific populations most in need, and provide guidance on the kinds of policies needed to effectively provide the same chances to all.

Notes

1. See chapter 2 in World Bank (2006).
2. Sen was also particularly concerned with interpersonal comparability of utility, and with the fact that different people may have different maps from the commodity to the utility space. Though important in their own right, those issues are tangential to the discussion at hand.
3. Note that many of the choices an individual makes will then be predetermined circumstances for the next generation.
4. The role of luck (or pure randomness) in the analysis of inequality of opportunity is neither a simple matter nor completely settled. It is generally agreed that one's "initial position" (the luck of birth) should be seen as a circumstance. But luck during one's lifetime may be treated differently depending on whether participation in the lottery is voluntary (as in actual gambling, but also in choosing to fight a war) or not. See Lefranc, Pistoiesi, and Trannoy (2006) for a good summary. This book groups postnatal luck with effort and choice, and refers to it as a residual component.
5. Formally, $F(y|c) = F(y)$, where y denotes the (univariate) outcome of interest, and c denotes the full vector of circumstances.
6. Among many good surveys, see Solon (1999) and Bowles and Gintis (2002).
7. Even in a meritocratic environment, some might dislike a society where only one type of talent has a large economic value and only a small fraction of the population has that talent.
8. See, for instance, Betts and Roemer (1999), Bourguignon, Ferreira, and Menéndez (2007), Checchi and Peragine (2005), Waltenberg and Vandenberghe (2007), Schuetz, Ursprung, and Woessmann (2005), and Lefranc, Pistoiesi, and Trannoy (2006).
9. Providing educational subsidies for talented individuals will equalize opportunity and reduce the influence of parental income on access to tertiary education.
10. Because if $F(y|c) \neq F(y), \exists c$, the egalitarian definition of equal opportunities is violated.
11. The "identifying assumption" that underpins the claim that between-group inequality is "due" to circumstances is essentially that all material circumstance variables are observed and used in the partition of the population. The robustness of this assumption can be assessed by means of a Monte Carlo simulation exercise. See Bourguignon, Ferreira, and Menéndez (2007).
12. This goes back to a result attributed to Foster and Shneyerov (2000), and the implications for the measurement of inequality of opportunity are discussed in Ferreira and Gignoux (2008a).
13. See Bourguignon, Ferreira, and Walton (2007) and Roemer (2006) for a discussion.

14. It is likely that the actual dynamics of the interrelation between coverage and equality of opportunity is determined by the relative price of providing access to different population groups.

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