Systematic Interventions in Urban Poverty

Bruce Herrick
"Systematic Interventions in Urban Poverty"

ABSTRACT

The paper provides a taxonomy for interventions to deal with urban poverty. It focuses on five inputs into the production process: urban land, unskilled labor, human capital, physical capital, and credit (financial capital). It then explores the relations among the inputs and specific interventions that change the quantities of inputs, the distribution of their ownership, the possibilities for productivity improvement, and the prices of inputs and outputs. The classification scheme highlights some interventions that redistribute income toward the urban poor, at the same time that it dismisses others as less likely to be successful in fighting urban poverty.

IMPLICATIONS

The Bank’s lending on urban projects may be more effective if task managers recognize the breadth of alternatives shown in the paper’s method of classifying inputs and interventions.
"Systematic Interventions in Urban Poverty"

Contents

Introduction
  Table 1. Summary of Interventions Against Urban Poverty
  Table 2. Comparative Interventions in Urban Poverty
  Table 3. A Taxonomy of Poverty

Urban land

Labor

Human Capital

Physical Capital

Credit

Conclusions
Systematic Interventions in Urban Poverty

Introduction. An intensive search is underway for policies that would lessen urban poverty in low-income countries. No longer reliant on spontaneous market forces to solve all human problems and convinced that accumulated wisdom can lead to useful prescriptions, we wish to confront poverty with the same energy that we now immunize children to prevent disease and fertilize land to increase crop yields. All interventions in the natural world imply costs; none has avoided mistakes. But even aware of the possibilities for error, we are nevertheless moved to seek systematic social change.

The range of possible policy interventions in urban poverty is so large as to invite confusion. Fortunately, more than one approach provides structure for the diverse alternatives. An accessible point of entry is the neoclassical framework already applied in an admirably comprehensive survey of rural poverty by Lipton and Ravallion. The framework links output to inputs by an implicit production function. It examines each input and scrutinizes its potential for decreasing poverty. Table 1 summarizes the interventions against urban poverty associated with each input.

Five generically classified inputs are prospectively relevant to urban poverty interventions: land, labor, human capital, physical capital, and credit (or financial capital).

• Urban land is used for commercial purposes, for manufacturing, and for housing, as well as for infrastructure (streets, parks, schools, hospitals, stadiums).

• While labor and human capital are physically inseparable, the analysis of unskilled and unschooled labor is an important element in understanding poverty.

• Human capital, accumulated by members of the labor force, is used as a shorthand expression for greater educational attainment, better health, or more advanced skills associated with the higher labor productivity and higher income.

• Physical capital takes the form of buildings, machinery, equipment, and inventories. For analytical purposes, there's not much difference between urban land and urban physical capital. Perhaps the most important is that newer physical capital embodies technological change and is thus more productive, a theme explored at greater length below. The importance of physical capital for the poor goes beyond their ownership of it. Even when they don't own it, combining their labor with it leads to higher labor productivity and thus, in a competitive economy, higher incomes to labor.

---

<table>
<thead>
<tr>
<th>Inputs</th>
<th>(a) Land</th>
<th>(b) Labor</th>
<th>(c) Human capital</th>
<th>(d) Physical capital</th>
<th>(e) Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. More input; distributionally neutral</td>
<td>Multi-story construction; land title reform; urban boundary expansion</td>
<td>Improved employment information available to all</td>
<td>No operational alternatives</td>
<td>No operational alternatives</td>
<td>More credit for poor regions</td>
</tr>
<tr>
<td>2. Constant input; redistribution toward the poor</td>
<td>Formalization of squatters' property rights</td>
<td>Anti-discrimination laws (sex, ethnicity, caste)</td>
<td>Literacy campaigns; advances in formal education; vocational training in schools and o-j-t health interventions</td>
<td>New ownership schemes in private enterprises; privatization of state corporations</td>
<td>Loan pools and loan cooperatives among poor</td>
</tr>
<tr>
<td>3. More input and redistribution toward the poor</td>
<td>Combination of #1 and #2, above</td>
<td>More information about labor market for workers and employers</td>
<td>Expansion of programs mentioned in #2 above, skewed toward low-income earners</td>
<td>Incentives for small and medium enterprises</td>
<td>Specialized development banks; lending cooperatives</td>
</tr>
<tr>
<td>4. Distribution-neutral productivity enhancement</td>
<td>Construction on vacant lots; multi-story construction; sponsored research on productivity</td>
<td>Additions to complementary inputs; improvements in public health and safety; subsidies to public transportation</td>
<td>Improved school curricula; health care focused on prevention of debilitating diseases; employer-driven vocational training</td>
<td>Provision of public goods; more information on organization, production, marketing</td>
<td>Technical assistance as integral part of lending activities</td>
</tr>
<tr>
<td>5. Poor-oriented productivity enhancement</td>
<td>Sites-and-services programs; policies leading to greater formalization of urban land tenure</td>
<td>Research on (or borrowing off-the-shelf) &quot;low-tech&quot; labor intensive techniques of production</td>
<td>Basic literacy and numeracy programs; skill-building from low levels; occupational health and safety</td>
<td>Subsidized consulting for SMEs and informal activities; decline in costly red tape</td>
<td>Technical assistance biased toward development banks and first-time small borrowers</td>
</tr>
<tr>
<td>6. Lowering or stabilizing price of inputs bought mainly by the poor</td>
<td>Acquisition of information on land-intensive urban production activities</td>
<td>Shrinking gap between cost of labor to employers and wages received by workers</td>
<td>Avoiding user charges in health and education; proliferation of locations offering HK-information; raising service quality</td>
<td>Macroeconomic measures that lead to perceptions of economic stability; avoidance of subsidies to acquisition of physical capital</td>
<td>Public programs of loan guarantees</td>
</tr>
<tr>
<td>7. Improving or stabilizing price of outputs produced intensively with inputs used by the poor</td>
<td>Research on price elasticity of outputs that use urban land intensively</td>
<td>Research on price elasticity of demand for goods that use urban labor intensively</td>
<td>No operational alternatives</td>
<td>Assistance to market cooperatives and SMEs</td>
<td>Research on price elasticity of demand and on role of working capital, by size of enterprise</td>
</tr>
</tbody>
</table>

Note: The most significant opportunities for intervention are shown in bold face.
Credit (financial capital) differs analytically from physical capital only in its flexibility. Robert Solow has characterized financial capital as putty, capable of taking a wide variety of forms, and physical capital as clay, a substance fixed in form and function, incapable of costless transformation to new uses or new methods. In most respects other than this important ex ante-ex post distinction, the analysis of credit resembles the analysis of physical capital.

Other inputs could be examined. Among the most attractive candidates are variants of disembodied technological change, not incorporated in changes in human or physical capital. 'But dealing with disembodied technological change complicates the task of modelling, and it's not clear that its empirical applications are sufficiently robust to support the additional effort. Foreign exchange could also be separated as an input, following the familiar two-gap models of foreign aid, but its relevance to urban poverty interventions is not immediately clear.

The inputs are cross-tabulated with stylized or general types of intervention. The variety of combinations (35 in Table 1) shows that poverty-oriented interventions can be considerably more sophisticated (or at least more focused) than the call for a simple increase in the quantity of inputs to production. As Table 1 seeks to make clear, interventions can change the quantity of inputs, or their productivity, or their prices, or can change the degree of income inequality directly. Table 2 provides longer labels for the seven kinds of intervention possible for each of the five inputs.

For purposes both of analysis and policy, it is also desirable to separate at least three sub-types of poverty: structural poverty, destitution, and "conjunctural" (or temporary) poverty. Structural poverty, as its name implies, is associated with the structure of the economy and the labor force. It is permanent and is likely to reflect an equilibrium situation. A majority of the population can live for long periods in poverty whose roots are "structural." Destitution is necessarily temporary and minoritarian, since it represents levels of living so low as to be unsustainable. While a constant fraction of the population may be destitute, their premature deaths mean that the cohort is a rotating one, augmented by misfortune, policy, or circumstance and diminished by death. Conjunctural poverty is also temporary, but may involve most of a country's population, as the business cycle moves into recession or the terms of trade undergo unpredicted adverse shifts. Conjunctural poverty may also be associated with natural disasters such as typhoons or floods. Table 3 summarizes characteristics of this classification scheme.

---


Table 2: Comparative interventions in urban poverty

<table>
<thead>
<tr>
<th>Intervention 1</th>
<th>More input, distributionally neutral.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: More urban land; no change in degree of equality of its ownership.</td>
<td></td>
</tr>
<tr>
<td>Labor: More urban labor without change in degree of equality of income accruing to labor.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Higher levels of human capital among urban residents, but no change in the degree of equality of its &quot;ownership.&quot;</td>
<td></td>
</tr>
<tr>
<td>Physical capital: More physical capital used in urban output; no change in degree of equality of its ownership</td>
<td></td>
</tr>
<tr>
<td>Credit: More credit to finance production in cities; no change in degree of equality of income of those receiving it.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention 2</th>
<th>Constant input; redistribution toward the poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: Constant amount of urban land; more egalitarian redistribution of its ownership.</td>
<td></td>
</tr>
<tr>
<td>Labor: Redistribution toward the poor of incomes from urban labor; no change in its aggregate amount or use.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Redistribution toward the urban poor of income from human capital, with no change in its overall stock.</td>
<td></td>
</tr>
<tr>
<td>Physical capital: Greater equality in the ownership of physical capital, without change in its aggregate stock.</td>
<td></td>
</tr>
<tr>
<td>Credit: More urban credit for the poor, but without change in its overall amount.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention 3</th>
<th>More input and redistribution toward the poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: More urban land and more equal ownership of it.</td>
<td></td>
</tr>
<tr>
<td>Labor: More inputs of urban labor and more equal incomes to labor.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Greater aggregate stock of urban human capital, together with more equal ownership of it (and incomes from it).</td>
<td></td>
</tr>
<tr>
<td>Physical capital: More physical capital used in cities, and greater equality in its ownership.</td>
<td></td>
</tr>
<tr>
<td>Credit: More urban credit and more equal access to it.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention 4</th>
<th>Distribution-neutral rise in productivity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: Higher productivity of urban land; equal effects on incomes of rich and poor (&quot;distribution neutral&quot;).</td>
<td></td>
</tr>
<tr>
<td>Labor: Higher productivity of urban labor without changing its distributional patterns.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Higher productivity of urban human capital; no change in degree of equality of its ownership.</td>
<td></td>
</tr>
<tr>
<td>Physical capital: Higher productivity of physical capital; no change in the distribution of its ownership.</td>
<td></td>
</tr>
<tr>
<td>Credit: Higher productivity in the use of urban credit, without change in degree of equality of its use.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention 5</th>
<th>Rise in productivity oriented toward the poor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: Higher productivity of land oriented toward raising incomes of the poor.</td>
<td></td>
</tr>
<tr>
<td>Labor: Higher productivity of urban labor associated with higher incomes for the poor.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Higher productivity of urban human capital owned specifically by the poor.</td>
<td></td>
</tr>
<tr>
<td>Physical capital: Higher productivity of urban physical capital that raises incomes of the poor disproportionately.</td>
<td></td>
</tr>
<tr>
<td>Credit: Higher productivity in the use of urban credit and more equal distribution of it.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention 6</th>
<th>Lowering or stabilizing the price of inputs bought mainly by the poor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: Lowering the price of land used mainly by poor people.</td>
<td></td>
</tr>
<tr>
<td>Labor: Lowering costs of urban labor or raising the demand for it.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Lowering prices of human capital bought by the poor.</td>
<td></td>
</tr>
<tr>
<td>Physical capital: Lowering the price of physical capital used by the urban poor.</td>
<td></td>
</tr>
<tr>
<td>Credit: Lowering interest rates on business loans extended to poor people in cities, that is, lowering the price of one of the inputs used by poor people.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intervention 7</th>
<th>Improving or stabilizing the price of outputs produced intensively with inputs used by the poor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land: Improving the prices of outputs produced intensively on urban land used by the poor.</td>
<td></td>
</tr>
<tr>
<td>Labor: Improving prices of outputs produced intensively with urban labor provided by the poor.</td>
<td></td>
</tr>
<tr>
<td>Human capital: Improving prices of outputs produced intensively with inputs of human capital used by the urban poor.</td>
<td></td>
</tr>
<tr>
<td>Physical capital: Improving the prices of outputs produced intensively with physical capital used by the urban poor.</td>
<td></td>
</tr>
<tr>
<td>Credit: Improving the prices of outputs produced with credit used by the urban poor.</td>
<td></td>
</tr>
</tbody>
</table>
Table 3
A Taxonomy of Poverty

<table>
<thead>
<tr>
<th>Type</th>
<th>Term</th>
<th>Proportion affected</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>Permanent</td>
<td>Majority or minority</td>
<td>Long-term equilibrium poverty, reflecting composition of output and labor force</td>
</tr>
<tr>
<td>Destitution</td>
<td>Temporary</td>
<td>Minority</td>
<td>Inability to maintain life, even in the short-run; caloric insufficiency <em>inter alia</em></td>
</tr>
<tr>
<td>Conjunctural</td>
<td>Temporary</td>
<td>Majority or minority</td>
<td>Business cycle downturn; natural disasters</td>
</tr>
</tbody>
</table>
Analysts distinguish these types of poverty because effective anti-poverty policies differ for each one. When small numbers are temporarily afflicted, corrective measures will be different from those applied when the majority is in permanent want. Interventions surveyed in the present paper follow the Bank’s principal emphasis: the alleviation of poverty that could be characterized as structural. That is not to deny the Bank’s historic role in dealing with destitution or natural disaster. But the great bulk of the Bank’s efforts have been aimed at the correction of long-lived equilibrium situations which have trapped majorities at unacceptable levels of deprivation. A survey of interventions for the other two types of poverty will have to await a later paper.

To begin with the first intervention, "distribution-neutral volume enhancement" raises the quantity of the specified input without changing the degree of equality in the distribution of its ownership. Implicit but worth stating is the assumed equality between the marginal product of a factor and returns to its ownership - a familiar neoclassical result. Continuing with the types of intervention, "volume-neutral egalitarian redistribution" reverses the ceteris paribus restrictions of the previous item, by considering the effects of changing the distribution of ownership of a given input without altering its quantity. The third in this triad of interventions "joint volume enhancement and redistribution" examines interventions that raise the volume of inputs and simultaneously change the pattern of their ownership.

The next two sub-categories of interventions look at productivity change. "Distribution-neutral productivity enhancement" considers the effects of higher productivity of the given input without a change in its ownership. "Poor-oriented productivity enhancement" looks at higher productivity of the given input together with more equal ownership of it. In ordinary circumstances, the poor own few inputs to the production process. Thus under the neoclassical framework they earn less from ownership than do members of other income strata.

Finally, the classification scheme deals with price changes and their implications in a partial equilibrium framework. The scheme looks first at interventions that lower or stabilize prices of inputs used by poor people. This approach requires information about the production functions of these activities associated with the poor so as to identify their most intensively used inputs. In addition, in an ideal world we’d collect and use information about price determination of these inputs, e.g., in markets or in non-markets, degree of competition, elasticities, etc.

In a second sub-category, the classification scheme concludes by considering separately "improving" or stabilizing prices of outputs produced by the poor. Note that it’s not automatic that "improving" output prices means raising them. Such a conclusion would require important assumptions about both the price elasticity of demand and, on the cost side, the possibility of economies of scale. The assumptions would weaken the generality of the analysis. Fortunately, stabilizing prices has the same beneficent effect for outputs as for inputs: it lessens uncertainty and, assuming generalized risk aversion, augments the volume and aggregate value of transactions.

Urban land. Producers and others who live in cities, rich and poor, use urban land as an "input" in two ways: in production and in consumption. In principle, both uses can be simi-
larly modelled. In production, a function linking output with its inputs includes "land" as one of its arguments. In consumption, the utility function includes as arguments all the goods and services consumed. Here land is an "input" in the creation of an individual's utility. The following section concentrates on urban land as an intermediate good, an input to production and thus to the generation of income. It ignores the consumption aspects.

Urban land is used for commercial purposes, for manufacturing, and for residential use. In analyzing urban poverty, note the overlap among these categories (commercial, manufacturing, residential) in home-based and informal economic activities.

Intervention 1. More urban land; no change in degree of equality of its ownership.

More urban land may seem a paradox. Urban populations are, by definition, more agglomerated than rural ones. In central business districts, no vacant land exists, and land in use trades for high prices. On the outskirts, population densities are lower. Single story construction has not been replaced by multi-story buildings. Some vacant lots exist, and others have been occupied by squatters. Possibilities to use more unimproved land and to use already improved land more intensively are present. The latter affects output in the same way as increasing the quantity of land available.

In addition, city boundaries can be expanded. Rural areas are routinely annexed into cities, following formal procedures. In addition, informal annexation occurs through urban sprawl. The process is accompanied by population growth in the metropolitan area, but not in the central business district.

Obeying the rigid ceteris paribus requirement of this sub-section leads to the observation that urban settlement schemes that fail to change the distribution of ownership of urban land are not clearly in the interests of poor people. Distribution-neutral programs of urban land settlement make urban life more attractive, thus spurring further urban migration, without clear benefits for those at the bottom. The settlement programs have political appeal in a democracy, since they benefit middle-class urban voters. However, their political appeal may obscure their diversion of funds from other urban poverty programs.

Intervention 2. Constant amount of urban land; more egalitarian distribution of its ownership. A redistribution of urban land can proceed through a process of formalization of property rights - or more specifically, by the conscious replacement of informal (variegated, non-tradeable) property rights by a formal set. Vast externally or publicly financed construction programs are not necessary to accomplish this. Instead, the clarification and future guarantee of property rights are enough to make domestic private spending on land improvements more attractive.

Because costs associated with more formal property rights don't take the form of big bricks-and-mortar projects, only the most visionary international institutions will perceive formalization as a vital part of its grant or loan activities. As urban land is transferred into more productive uses, as traditional property rights are replaced by formal ones, and as informal activities themselves become formalized, public revenues from property and profits taxes (income taxes on family businesses, for example) will rise. A clearer example of government activity that raises tax

---

yields by a multiple of the original outlay (here, on formalization) could hardly be imagined.

Intervention 3. More urban land and more equal ownership of it. Urban populations are growing in poor countries, frequently twice as fast as the population in rural areas. While natural increase has fallen with the incipient declines in human fertility, rural, urban and interurban (from smaller towns to bigger cities) migration have continued at high levels. Comparisons of urban poverty at different dates are thus almost certain to be apples-and-oranges comparisons of poverty within populations of different sizes and different demographic compositions.

More populous cities, larger in their physical dimensions, with greater absolute numbers of poor people imply the desirability of public policy interventions. Recommendations from the two preceding interventions can be combined here.

Intervention 4. Higher productivity of urban land; equal effects on incomes of rich and poor ("distribution neutral"). Construction on previously vacant lots, along with the demolition of single-story structures and their replacement by multi-story buildings, are the most common ways to raise the productivity of urban land. Even when the area of land remains constant, an increase in its productivity is analogous to raising the intensity of cultivation of rural land. Sites-and-services programs have the same effect. Old squatter settlements are converted into more liveable (or less lethal) environments.

It’s hard to imagine these productivity improvements as distribution neutral. The kinds of complementary increases in physical capital or urban credit that would raise the productivity of urban land are almost sure to affect income groups differentially.

Research expenditures affect land productivity differently in urban and rural areas. Rural land productivity can be enhanced by agronomic research that discovers new plants, for example, high-yielding disease-resistant varieties. In cities, productivity of land is closely tied to location, so sponsored research cannot be similarly effective.

Intervention 5. Higher productivity of land oriented toward raising incomes of the poor. Similarly to the second intervention on land described above, the formalization of property rights leads not only to more equal distribution of urban land itself, but also stimulates investment in improving that land. The improvements that formerly relied on family labor, scrounged materials, etc. passes over into formal economic and financial markets, using hired labor, purchased materials, etc.

Intervention 6. Lowering the price of land used mainly by poor people. As noted, this implies identifying the urban economic activities in which poor people predominate, and knowing enough about the production functions of those activities to identify those that are relatively land-intensive. Further, it implies knowledge about the price determination of urban land (e.g., in markets or non-markets, competitively or not, elasticities, etc.). In short, optimal interventions require more information than is likely to be present. The acquisition of the information thus becomes subject to the usual test of cost-effectiveness, before engaging in programs of intervention.
Intervention 7. Improving the prices of outputs produced intensively on urban land used by the poor. As noted, we can't automatically conclude that "improving" prices of outputs means raising them, since that ignores elasticity of demand as well as the presence (or absence) of scale effects on the side of costs. Higher incomes would be consistent with higher prices if demand was inelastic and unit costs were flat or increasing. And conversely, lower prices would generate higher incomes if demand were price elastic and if costs were flat or decreasing.

Labor. Labor and human capital are physically inseparable. As a result, analyses of labor markets, labor productivity, and workers' incomes often implicitly incorporate considerations of human capital. Here, for analytic purposes, we'd like to separate additions to human capital from considerations of unskilled labor alone — that is, from the analysis of labor unaccompanied by human capital. A parallel discussion of poverty interventions that emphasize urban human capital appears in the next section.

Intervention 1. More urban labor without change in degree of equality of income accruing to labor. Even when labor is unskilled and undifferentiated, incomes to workers aren't equal. Labor force participation rates vary among age and sex cohorts, as do unemployment rates and hours worked. An increase in the quantity of urban labor used in production simply implies some combination of higher participation rates, lower unemployment rates, and longer hours.

Over time, urban migration and natural increase will expand the numbers of city workers, but spontaneous migration and labor market processes will not be distribution-neutral. Publicly sponsored or subsidized employment schemes never raise incomes by equal amounts, either absolutely or relatively.

Labor is frequently noted as the chief source of income for the poor, and indeed, since human capital is conceptually excluded here from "labor," the generalization is correct. Measures that increase participation or lower unemployment of the now-resident urban poor will benefit them. At the same time, macroeconomic analysis reminds us that higher equilibrium wage rates will lead to greater quantities supplied, not only by existing workers, but also by new labor force entrants and by migrants.

Migrants' responses will reduce the benefits to previous urban residents of any wage hikes. If potential migrants were indifferent to migration at the old wage rate and are attracted by a new higher one, then migration will continue until competition among workers re-establishes the old wage rate, and thus re-establishes the former equilibrium. Of course, these exercises in comparative statics are too simple, but they reveal where the pressure points are in the analysis.

Improved employment information is a public policy intervention worthy of consideration, but it's unlikely to be distributionally neutral in its effect, so it doesn't belong in this cell of the table.

Intervention 2. Redistribution toward the poor of incomes from urban labor; no change in its aggregate amount or use. Any policy that led to less discrimination in urban labor markets against women, ethnic minorities, or members of certain castes would redistribute income toward low-income workers, actual and potential. The increased labor supplied by persons formerly the victims of discrimination would be offset by
the decrease by workers who were its former beneficiaries. The latter are people no longer eligible for wage premia owing only to their status and not their productivity. The size of the labor force would remain largely constant, but earnings would be redistributed among its members, as the composition of the labor force changed.

Intervention 3. More inputs of urban labor and more equal incomes to labor. Appropriate policies improve labor market functioning by providing more information to employers and job seekers about job vacancies and workers' capabilities. Lower search costs on both sides lead to higher productivity, wages, and profits.

Intervention 4. Higher productivity of urban labor without changing its distributional patterns. Even in a narrow neoclassical framework, homogeneous unskilled labor can become more productive and earn higher income if complementary capital or other inputs are increased. An unskilled worker using a big (and thus more costly) shovel is more productive than one who uses a small shovel — and he'll be paid more in a competitive market.

Improvements in occupational health and safety are also public policies that won't significantly alter existing income patterns. Similarly, subsidies to public transportation that lower its prices will raise the productivity of urban workers without reference to their income levels.

Intervention 5. Higher productivity of urban labor associated with higher incomes for the poor. Research into applied technologies have been part of overall science and technology programs carried on in many low-income countries. The cost-effectiveness of such programs is always difficult to ascertain. Using public funds to place bets on which areas will yield the highest improvements involves uncertainty for many reasons. Technology abroad changes unpredictably. The underdeveloped state of engineering research away from metropolitan centers always mitigates against success there. Learning from success elsewhere and importing foreign technology might seem the most prudent counsel, but engineers in every poor country assure visitors that conditions in their country are "different." They conclude that borrowing or stealing off-the-shelf technology won't work and is therefore not cost-effective.

The danger in sponsoring applied research, of course, is that it will only reveal labor-saving techniques. The culture of research activity nearly guarantees that result. Historically organized industrial research has sought ways to do things with fewer inputs of labor rather than how to improve productivity by substituting labor for other higher-cost inputs. The difficulty creates a vicious circle: low-productivity labor stimulates research in how to use less rather than more of it.

Intervention 6. Lowering costs of urban labor or raising the demand for it by the poor. It's important to recall the gap between the cost of labor and the income of workers. In the presence of fringe benefits, obligatory or not, and tax payments, workers receive amounts lower than the costs to their employers.

With negatively sloped demand curves, lower fringe benefits will raise the quantity of labor demanded. But the relevant consideration is the elasticity of demand for labor. If the unit cost of labor (wages plus fringes) declines, by how much will demand for workers rise? Merely to specify the algebraic sign of the relationship is not enough. Even if employment rises, the aggregate wage bill will fall if lower
wage rates are associated with elastic demand for labor. The poor hardly find themselves better off in such a situation.

The biggest use of urban labor by the poor themselves is in the engagement of unpaid family workers in small, usually informal, family enterprises. Family workers share in the family firm’s profits (imagine them eating from a common pot), but are not remunerated separately for their services. In that context, lowering the price (that is, the cost) of labor inputs implies lowering the incomes of some members of the family. While interesting studies have been done on intra-family inequalities in the distribution of family consumption, it is hard to imagine a policy prescription that would urge such action. And even for paid (non-family) workers, policies aimed at alleviating poverty do not advocate intervention aimed at lowering the price of unskilled labor.

Intervention 7. Improving prices of outputs produced intensively with urban labor provided by the poor. As in the case of urban land, "improving" the prices of outputs doesn’t necessarily mean raising them, since that ignores elasticity of demand as well as the presence (or absence) of scale effects. Higher incomes would be consistent with higher prices of output if demand were inelastic and unit costs were flat or increasing, and conversely.

**Human capital.** "Human capital" here refers to the combination of higher labor productivity and higher income associated with and embodied in higher educational attainment, better health, or greater skills. Human capital is physically inseparable from the human being who embodies it. It is true that a skilled worker can work as an unskilled one, or a college graduate can take a job that could be performed by an illiterate. But assume here that accumulated human capital is offered for sale in its entirety by its "owner." That is, for purposes of interventions mentioned in the following section, all the productive services of the accumulated stock of human capital is assumed to be offered on the market in each period.

Intervention 1. Higher levels of human capital among urban residents, but no change in the degree of equality of its "ownership." This portrays an intellectually interesting but operationally sterile situation in which the human capital stock owned by each member of society has increased by an equal (or an equi-proportionate) amount. Given the variety of methods by which human capital is formed and the variety of segments in society and the labor force, the ceteris paribus condition seems artificial at best, since it implies an equivalent rise in each type and location of health, education, etc.

Intervention 2. Redistribution toward the urban poor of income from human capital, with no change in its overall stock. The relative distribution of the stock of human capital can be altered over time through literacy campaigns, advances in formal education, skill-building programs at school and on-the-job, health interventions, etc. In fact, each of these interventions would affect the relative distribution of the stock of human capital.

Redistribution in human capital has followed the same pattern as that of other assets, summarized in the aphorism "to him who hath shall be given." The observed
concentration of human capital resulting from market processes appears "natural," both for given individuals and intergenerationally. The well educated person knows how to buy more education effectively, the healthy adult is sufficiently alert to maintain her health and that of her children, and so on.

Intervention on behalf of the poor will stimulate activities otherwise neglected: public education, primary health care, vocational training. Targeting the poor can be straightforward. Primary schools can be improved in low-income neighborhoods (where the rich would be loath to send their children); basic health care involves visits to shabby health posts and extensive waiting (too expensive for the rich in terms of opportunity costs); vocational training focuses on skilled blue-collar and pink-collar occupations avoided by the well-to-do.

Intervention 3. Greater aggregate stock of urban human capital, together with more equal ownership of it (and incomes from it). As a dynamic process, this is the most interesting intervention, because it's the most realistic. Spending rises for the accumulation of human capital; and the expenditures are concentrated in activities mentioned in the previous item.

Intervention 4. Higher productivity of urban human capital; no change in degree of equality of its ownership. Higher productivity of urban human capital originates in many ways. At the most basic level, an increase in complementary inputs raise its rate of return. More interestingly, changes in the effectiveness of delivery systems that form human capital could also raise its subsequent productivity when it was used as an input. Examples include better curricula in the schools, a focus in health care on the prevention of debilitating non-fatal diseases, training programs better oriented toward current labor market needs, etc.

Intervention 5. Higher productivity of urban human capital owned specifically by the poor. More efficient formation of some types of human capital would permit the poor to earn higher returns. For example, in education better curricula - not in general but in basic literacy, numeracy, and job-related areas - are recommended. In health, occupational safety. And so on.

Intervention 6. Lowering prices of human capital bought by the poor. There are two interpretations of this category: (1) Lowering the fees that the poor have to pay when they invest in human capital, that is, when they buy education or health for themselves. (2) Lowering the prices that the poor have to pay when they buy the services of human capital offered by others. The first has clear operational significance; the second doesn't.

Making investment in human capital less expensive is easy: avoid user charges, proliferate service units (schools, health posts) to reduce the opportunity costs of getting to them, shorten waiting periods, increase professional effectiveness without charging more, and so on.

Intervention 7. Improving prices of outputs produced intensively with inputs of human capital used by the urban poor. In the cross-tabulated system of interventions, this is an empty cell.
Physical capital. The section that discussed labor separated human capital from it as a category and concept. In dealing with physical capital, the equivalent task is to separate it from financial capital, where the latter takes the form of credit and is treated in the next section. In this section, we consider not the liquidity or the organization of financial intermediaries that allow savings to be transformed into investment (or consumption), but rather the economic nature of physical capital itself. Examples may illustrate these concepts. Machinery, equipment, buildings, and inventories are the main categories of private physical capital, while public capital takes the form of infrastructure in roads, bridges, electrical and telecommunications equipment, etc.

Ownership of physical capital by the poor will raise their incomes, but an exclusive focus on owning physical capital is too narrow. Even when the poor don’t own it, combining their labor with it leads to higher labor productivity and, in a competitive economy, higher incomes for them. These Marshallian conclusions do not endorse continued inequalities, but only note that workers don’t have to own something to benefit from its presence. Underrepresented in policy-oriented writing on the alleviation of poverty is the basic theoretical implication that factor productivity is augmented by complementary factors of production is.

At the macroeconomic level, the key to an understanding of physical capital is that its formation represents forgone present consumption. Moreover, sacrifices of consumption in a single period have been transformed into long-lived capital whose services are rendered during future periods. The same can be said, of course, about human capital.

Intervention 1. More physical capital used in producing urban output; no change in degree of equality of its ownership. Some theories of politics portray the state as an extension of the people, acting equally in their collective interests. In such a country, an increase in state-owned capital ("infrastructure") might be taken as an example of this kind of intervention. In principle, the roads, schools, and so on - the infrastructure - is equally available to all. An increase in it has consequences for growth, but not development; growth in output without altering distribution. Growth-related arguments are frequently made on behalf of additions to infrastructure.

In discussions of economic development, these concepts seem superficial. Every public investment - every state-sponsored act of capital formation - has distributional consequences. None simply replicates the existing pattern. Some are regressive; others progressive. Improvements in high-income neighborhoods benefit the rich, as do investments that lead to higher corporate profits without affecting employment significantly. At the other end of the spectrum, rural feeder roads and basic public transportation are also skewed in their benefits, but this time toward the poor. Our ability to differentiate among proposed infrastructural investments is one benefit of using this analytical framework.

Intervention 2. Greater equality in the ownership of physical capital, without change in its aggregate stock. A rural analogue is land reform: a fixed amount of land redistributed into the hands of new owners. Historically, existing stocks of productive physical capital have been redistributed through schemes of worker management, formation of producer cooperatives, employee stock ownership plans (ESOPs), privatization of state-owned assets — not to say more radical measures involving outright confiscation.

Redistribution does not always lead to greater equality in ownership. The fiscal structure of many countries includes tax treatment of income from labor and
capital that leads to greater concentration of ownership, not less. Thus policies aimed
at redistribution can as readily seek to reverse the anti-poor policies of the past as to
incorporate new pro-poor policies.

An assumption of generalized weakness or incapacity of public sector institu-
tions, including fiscal ones, would imply the desirability for as many openings for
private initiative as possible. This is not so much an ideological stance as a pragmatic
one. The past two decades have been marked by disillusion with the capacity of
public-sector institutions to fulfill the ideals formerly attributed to them by many
professional intellectuals. At the same time, a current concern about privatization in
the former Soviet Union and Central Europe is that the well off and well connected
are situated to become the beneficiaries of the process, to the detriment of the masses.
Again, inegalitarian redistribution.

Intervention 3. More physical capital used in cities, and greater equality in its
ownership. In Chenery's phrase, "redistribution with growth." The problem is the
familiar one. In a two-sector economy, with rich and poor, the low savings
propensity of the poor will reduce growth rates of aggregate output the faster the
incomes from ownership of physical capital are redistributed to them. The tradeoff
between continuing growth and egalitarian redistribution has long troubled theorists
and policy analysts.

The implicit assumption of \textit{ceteris paribus} again clouds the analysis. The two-
sector model assumes that, for each income group, saving is a single-valued function
of disposable income. But savings propensities of small businesses are (or can be)
very high, especially in the absence of well developed financial intermediaries. If the
preponderant source of business finance is self-finance, redistribution of physical as-
sets may give new insights and alternatives to the recipients, changing their incentives
to save. The notion that saving is a function of income is the first step toward macro-
economic insight, but not the last.

The operational challenge here is to specify conditions in which redistribution
and growth could be complementary, rather than opposed. And ones in which the
urban dimensions of both were clear.

Intervention 4. \textbf{Higher productivity of physical capital; no change in the distribution of
its ownership}. Higher productivity can originate in technological change or in more
effective use of a given stock. Technological change embodied in new physical
capital produces higher returns. More effective use of a given stock can come either
from disembodied technological change or from greater complementary inputs. The
most obvious is human capital. Combining greater skills with a given stock of physi-
cal capital improves its return.

In this context, the intervention's specification of distributional neutrality may
be illusory. The ownership of physical capital may not change, but if the
complementary inputs are unequally distributed, then the returns to the use of physical
capital will be unequal as well. If only the well-to-do get better education, then the
returns, only on their physical capital will rise, although the distribution of the stock
of capital has been unaltered. They will be the sole beneficiaries. Similarly, higher
productivity of capital through embodied technological change can occur only when
new investment occurs. Unless ownership of the new investment is equally
distributed across income classes, existing inequality in returns will be exacerbated.
Policy proposals frequently call for greater provision of public goods as complementary inputs. More information about organizational methods, production techniques, marketing possibilities, or business conditions will raise the productivity of physical capital. Note that the benefits of these public goods are not confined to raising the productivity of physical capital. Returns to all other factors of production will rise as well.

Intervention 5. Higher productivity of urban physical capital that raises incomes of the poor disproportionately. Any intervention that helps informal economic activities or that encourages small and medium enterprises would be pro-poor in its effects, since low-income owners and workers are over-represented in small business. Subsidized consulting services are one obvious program activity.

Only slightly more subtle and far more controversial are the De Soto-inspired activities that would help informal activity by cutting governmental red tape. To the extent that some bureaucratic activities have no purpose other than to create employment for regulators, the economy's productivity rises as these barriers are destroyed. Because they form part of the governments with which multilateral agencies have chosen to work, recommendations to diminish their regulatory roles are ones of considerable political sensitivity.

Intervention 6. Lowering the price of physical capital used by the urban poor. The "price" of physical capital is the interest rate. This is true even when (or especially when) physical capital formation has been self-financed. The next section discusses financial capital ("credit") as an input, looking both at its price (interest rate) and at its quantity (volume of credit extended).

Private physical capital in businesses associated with poor urban people is most prominent in inventories. Retailing in small quantities is constrained by an absence of inventories and, secondarily, of fixtures for their display. The interest rates paid are "high", owing partly to the use of informal sources of credit, and partly to the impatience by both borrower and lender for quick returns.

It is, of course, ironic that smaller enterprises must earn a rate of return higher than that required by larger ones in connection with any given project. The expectation might be the reverse: that big profitable businesses would have a higher required threshold rate of return on prospective activities than do smaller marginal enterprises.

Intervention strategies to combat what we've characterized here as "impatience" include all the macroeconomic adjustment variables that combine to create a perception of stable expectations. The presence of price stability and the absence of a history of arbitrary incursions into private activity are among them. Most of the recommendations of the Bank and the IMF in their programs of stabilization and adjustment, if successful, would lead to more stable expectations, and a weakening of the necessity for quick short-term returns. While higher returns will always have more value than lower returns, the crucial question is one of threshold values. How low do local rates of return have to go before domestic savers and investors bail out, in favor either of foreign alternatives or of consumption at home? Whatever the rate for any given individual, it will be lower with stable expectations than without.

Direct subsidies to the purchase of physical capital have also been suggested as a policy alternative for fighting urban poverty. This route seems discredited now for
at least two reasons. First, unless the subsidies are extended universally, they will change the relative effective rates of return in different economic activities, in ways that cannot be guaranteed to be optimal. On the contrary, the sectors to be favored by subsidy will emerge from a political process, in which the power of vested interests nearly guarantees suboptimal economic outcomes.

Second, a subsidy to the purchase of physical capital leads away from the greater labor-intensity of production that is urged for poverty alleviation. Entrepreneurs will advocate any program that lowers their costs. Social rates of return and society-wide developmental goals don't concern them. Because subsidies to the acquisition of physical capital lead to even greater capital intensity, such subsidies should be resisted as possible interventions.

Intervention 7. Improving the prices of outputs produced intensively with physical capital used by the urban poor. What outputs are disproportionately produced by the urban poor with physical capital? The mere existence of poverty would imply that none are. That is, no output produced by the poor is capital-intensive in its production method. That's less than helpful, however. Any time the capital intensity of production is suboptimally large, the poor are likely to suffer, whether they own the capital involved (the "means of production") or not.

Official assistance for market cooperatives in informal activities or for small and medium enterprises can have value. Note that, as with other interventions mentioned in this section, benefits go not only to raising the rate of return on physical capital, but to all the other factors of production used by the poor as well.

Credit. To analyze "credit," financial capital should be separated conceptually from physical capital, as noted in the previous section. In emphasizing the use of credit by the poor in production, this section considers the volume of credit extended and its price.5

---

5 In the individual's consumption function, credit also produces utility derived from consumption of goods bought with the credit. We neglect those considerations in this section.
Intervention 1. More credit to finance urban production; no change in degree of equality of income of those borrowing it. The volume of credit extended is a key macro-economic variable. Familiar prescriptions can be applied. In particular, if added incentives to private banks prove insufficient to generate desired loan volume, public-sector banks could help fill the gap.

In all but the smallest countries, regional differentials between larger and smaller cities in urban economic activity suggest a role for corrective or supplementary extensions of credit. A nation’s secondary cities may have the largest potential for expansion of productive activities. The use of regional (sub-national) development banks, benefitting poor and non-poor alike, has considerable appeal. One of the principal handicaps in formulating proposals for these lenders is a lack of reliable regional economic data. A focus on collecting economic data at the national level (using the UN’s system of national accounts) has helped to reinforce the nation-state, both as unit of analysis and more seriously, as a vehicle for interventions. When whole nations compete for concessional funds or technical assistance, needy regions within them may be elbowed out.

Intervention 2. More urban credit for the poor, but without change in its overall amount. Private profit-seeking financial markets function by using information. Asset ownership is a principal source of information about creditworthiness. Performing credit checks on borrowers who lack assets and who are without historic links to capital markets is costly and unproductive. The poor lack assets and, by extension, are poor credit risks.

Among the tasks performed by banking regulators is the supervision of banks’ portfolio composition. Policy makers impatient with the working of the market system sometimes advocate requiring that a certain minimum of each bank’s loan portfolio be devoted to low-income borrowers. Losses or lower returns associated with the required part of the portfolio would be offset by higher profits elsewhere. If banks are competitive rather than oligopolistic, the requirement would lead to cross-subsidies, with creditworthy borrowers paying more and subsidizing those of lower or indeterminate creditworthiness.

A different policy uses these concepts to assert that more credit would be extended to the urban poor if the costs of information about their creditworthiness decreased. The success of small-scale loan cooperatives can be traced to this principle, with each member-borrower applying peer pressure on others to repay. Equally feasible is simply the creation of loan pools or independent lending agencies ("banks") that specialize in loans for the poor. Usually these funds are net additions to the aggregate volume of loans outstanding in a country. Hence they are more properly classified in the following item.

Intervention 3. More urban credit and more equal access to it. Subsidization of credit by governments (or international agencies) for low-income borrowers is part of many development programs. Its widespread use has subjected it to intense scrutiny and increasing controversy. Ratio analysis implies that small borrowers get less than a proportional share of total credit. But subsidized programs are expensive to administer; collections can be difficult, and hence the solvency of the funds themselves may require on-going subvention. Both in principle and in practice, it’s not clear that the best use for limited public resources is the creation of a subsidized credit scheme.
Some success models do exist: the Bolivian Emergency Social Fund and Bangladesh's Grameen Bank are frequently cited and increasingly studied for possible replication elsewhere. There are some risks in this; the attraction of "social funds" may be more cultural than real. Put bluntly, bankers have an affinity for (other) banks and for the process of financial intermediation. What could be more natural for career banking professionals in multilateral development institutions than the creation of banks and innovation in financial activities in low-income countries? Just as we’d expect civil engineers who specialize in railways to recommend widespread railway development, so it should come as no surprise that finance professionals from international agencies promote successful banks for the poor.

It's clear that more credit for the urban poor would lead to higher output and income for them. The relevant question, however, must treat with appropriate rigor the optimality of the resulting allocation of resources. As previously, "optimality" can be defined in either of its Type I or Type II variants, for purposes of hard-headed analysis.

Intervention 4. **Higher productivity in the use of urban credit, without change in degree of equality of its use.** Extension of technical assistance as part of credit packages is the most conventional way of ensuring the effective use of credit to the urban poor. Technical assistance can be given to lenders or borrowers. The assistance is likely to generate inframarginal shifts in the production function, with higher productivity for all inputs to production, including the labor of the poor.

Intervention 5. **Higher productivity in the use of urban credit and more equal distribution of it.** Where the development-oriented intervention includes technical assistance, it would be preferentially directed to development banks and to first-time small borrowers.

Intervention 6. **Lowering interest rates on business loans extended to poor people in cities,** that is, lowering the price of one of the inputs used by poor people. The "price" of credit is the interest rate charged and paid for its use. In this item only the price is considered; the volume (quantity) of credit outstanding has been treated above.

The amount of credit flowing to low-income urban borrowers through formal channels is minuscule. Most comes through less formal ones. Note that although the interest rate may be a multiple of that charged for larger loans in the formal market, it need not reflect oligopoly or collusion among lenders. Even in perfectly competitive markets for loanable funds, underlying costs can be high. And the high prices—the high interest rates—reflect the diseconomies of small scale, the costs of information about creditworthiness of small borrowers, and the added risks of default existing in informal credit markets. In short, high prices may reflect high costs rather than conspiracy among lenders.

This line of reasoning suggests that appropriate intervention might strive to reduce the costs of lending to small urban borrowers. Prices (the interest rates) would follow. By implication, a prescription would call for publicly sponsored loan guarantees: essentially an insurance program for lenders. The problems with such a solution

---

are economic and political. Depending on their features, loan guarantees put lenders in a position of moral hazard that undermines their function as intermediaries. If repayments are guaranteed, the incentives for lenders to exercise diligence in the establishment of creditworthiness are destroyed. Politically, lenders and small borrowers are seen as unequally powerful, with the lender always holding the upper hand. If repayment is guaranteed, the strong will be seen as further strengthened — a position unlikely to win democratic support.

Another disturbing impact is more subtle. Small urban borrowers may use new credit to buy physical capital and to raise their low capital-intensity of production. As previously noted, this hardly advances the developmental goal of higher employment through more labor-intensive production methods.

Intervention 7. Improving the prices of outputs produced with credit used by the urban poor. What outputs do the urban poor produce disproportionately with credit? The continuing existence of their grinding poverty would imply that none are. That is, no output produced by the poor is credit-intensive in its production method. That's less than helpful, however. The role of working capital is still not well integrated into conventional economic analysis, owing to economists' usual presumption about credit as a "monetary" rather than a "real" variable - and hence one that's not explicitly included as an input in the macroeconomic analysis of production functions.

All businesses, large and small, use working capital. Relative to other inputs, it's more intensively used in businesses that hold (and thus finance) big inventories - "big" relative to the economic value of their other inputs. Retail operations are a clear example. Street vendors go to the public market in the early morning, buy a day's supply of merchandise, and sell it. Their economic activity is constrained by the size of their financed inventories.

From the standpoint of policy, what does it mean to advocate "improving the prices" of goods and services sold by small retailers, that is, by the urban poor? Higher prices mean higher sales volumes only if demand in the market is inelastic. Higher prices and lower amounts bought and sold do mean a decline in utility for the purchasers. And the key here is that purchasers of many goods provided by the poor are likely to be poor themselves. In short, from a welfare standpoint, and thus for policy, the meaning of "improved prices" is far from clear.

Conclusions. Urban poverty contains more than a single strand. It therefore requires more than a single set of interventions to alleviate it. The principal ingredients of the systematic approach outlined here are to use a simple neoclassical model to distinguish inputs and sources of income for the poor, and to examine a series of interventions that augment output and seek redistribution as a policy goal. Even modest amounts of disaggregation suggest a great variety of anti-poverty measures, a sobering thought when we remind ourselves that this scheme is so much more highly structured than is messy "reality."

The approach specifies multiple avenues of intervention within the framework of existing economic theory. Its practical and expositional value comes from the familiarity of most practitioners with the framework and with at least some of the examples that it generates. In so far as development professionals are led to a more complete understanding of the range of policy alternatives, the approach will have been successful.