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"Poverty and Social Discrimination:

A Spatial Keynesian Approach"

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Introduction

This essay develops a spatial Keynesian approach to the problems of poverty and social discrimination. This approach shows that the spatial distribution of households and businesses is a key factor in shaping the character and extent of poverty in any society. Poverty involves not simply the circumstances of households who are poor, but structural characteristics of the bordered spaces within which most lower-income people live. These structural characteristics are deeply impacted by spatially specific social and economic dynamics. These dynamics involve economic clustering combined with social separation, and create distinct areas with very uneven cross-border patterns of goods and financial flows. These cross-border patterns tend to systematically encourage accumulation in some spaces and decumulation in others. Some areas become locations for the long-term cultivation of asset growth, while others become sites for finding prey to exploit for short-term returns. Similarly, the impact of social discrimination depends not just on the depth and pattern of personal animus, but on the degree to which those who are targets of this discrimination are segregated into distinct spatial communities, and on whether these communities are sites of production and wealth-building.

This spatial wealth/income perspective shows first that the disadvantages associated with social discrimination invariably have a spatial and community dimension. Further, when mobility between spatial communities is constrained (by social custom or by wealth variations), social discrimination and poverty cannot be attacked meaningfully at the individual level. Policies aimed at reducing poverty and social discrimination must be informed by the spatial configuration of economic and social resources. Third, any attack on social discrimination

should not focus solely on the personal level, but instead should encompass the structural inequality that personal discrimination invariably creates. In addition, this analysis shows the relevance of core elements of the Keynesian approach for understanding and intervening in situations of poverty and discrimination. Finally, this chapter makes the point that anti-poverty policies are inherently development policies, and development policies cannot avoid being anti-poverty policies. In particular, the larger the percentage of a nation's population experiences poverty and social discrimination, the more will policies for reducing poverty and social discrimination overlap with overall national economic policies. In sum, this paper argues that an attack on poverty, inequality, and social discrimination must be a component of any sustainable development strategy.

Defining poverty and discrimination: agent-based vs. structural approaches

While our interest is primarily in spatial aspects of poverty and discrimination, this section sets out aspatial definitions of poverty and discrimination. The next section brings out the often implicit spatial dimension of these concepts.

Poverty. All definitions of poverty aim at establishing objectively how many people are in need in a given place. Some definitions of poverty identify an absolute standard for the minimal levels of income and resources necessary for survival (or, in Sen's definition (1995), for achieving essential human capabilities). Other definitions use a societally relative approach – for example, the poor might be defined as those with less than 50 percent of the median

income level. For any nation, relative definitions of poverty focus attention on the relationship between the national standard of living and the national distribution of income and wealth.

Another choice in defining poverty is whether to focus on individual characteristics of the poor or on the social structures that generate and reproduce poverty. The personal characteristics approach quickly leads to distinctions between the 'deserving' and 'undeserving' poor. Those who are subject to some form of physical disability may not be responsible for their inability to earn a living, and hence are 'deserving.' Those without such disabilities or preconditions can be defined as "undeserving."[1] The notion of a "culture of poverty" (Lewis 1961) follows from using an individualistic approach to understanding why people remain in the latter category over sustained periods of time.

Alternatively, poverty can be understood as a condition that follows from systematic differences in the flows of resources and opportunities to different kinds of agents – that is, as a structural phenomenon at root, not a behavioral one. The dividing lines between people are invariably linked to histories of exploitation and exclusion – the domination of women, of aboriginal peoples, of the descendants of African slaves, and so on.

Discrimination. Generally, social discrimination occurs when agents who are members of different social categories (men/women, whites/blacks, citizens/non-citizens, etc.) have different levels of access to resources and/or goods, due in some way to the impact of this social distinction. Either market processes or governmental allocation mechanisms can bring about this differential access to resources and/or goods. The impact of social discrimination is

to widen differences in access to or control of economic resources for members of the groups subject to discrimination.

Discrimination comes to life in economic processes when those who discriminate also control a disproportionate amount of resources. Indeed, we might speculate that those who are discriminated against may very well harbor personal dislike of the class of agents containing discriminators. For example, a person of color may be suspicious of all whites as a consequence of the fact that some whites dislike people of color and deny them fair and full access to economic resources. If those suffering discrimination do not control resource flows on which those doing the discriminating depend, this dislike has no impact on economic processes or outcomes.

The distinction between agent-based and structural approaches also helps in understanding social discrimination. Three types of discriminatory market processes can be identified: (1) Personal discrimination (bigotry): differential outcomes that result from personal preferences regarding a membership distinction (whites/blacks, for example); (2) rational discrimination: differential outcomes which arise when agents use a membership distinction to make valid statistical inferences about the distinct market prospects of the members of different groups; (3) structural discrimination: differential outcomes that arise because of identifiable differences in the resources controlled by (or available to) the members of the groups in question.

Category (2) refers to outcomes based on anticipated disparities, and category (3) to those based on existing disparities. An example based on gender discrimination will clarify the difference between these two categories. Suppose men and women are members of a loan pool for a limited number of loans; and suppose credit will be allocated on the basis of their current levels of wealth and their prospective levels of earned income. Women are subject to structural discrimination if they have lower average wealth levels than men and are chosen less often for loans on this basis; if female and male wealth levels are the same, women are subject to rational discrimination if loans are based on prospective income and females' average prospective incomes are lower than males'.

The personal and structural approaches to poverty are paralleled by discrimination categories (1) and (3). Category (1), however, shifts the spotlight from the poor to victims of discrimination. To see the difference, consider a middle-class household which attempts to refinance its home in a neighborhood with many nearby residents who are in poverty. This household may be subject to discrimination because of lenders' unwillingness to finance homes in areas with large proportions of poor households. This sort of practice is termed "redlining." Redlining, a form of rational discrimination, occurs when the location of a household or business is used as the criterion for making low-cost "rational" decisions. Banks that seldom or never make loans in areas with large numbers of black or poor residents are redlining.[2]

Social discrimination cannot be traced exclusively to personal hostility (personal discrimination) by those controlling resources: the second and third categories of discrimination can arise even with neutral racial preferences. Indeed, the battleground of much

litigation and controversy over racial discrimination in the U.S. is the middle category. "Rational" discrimination can arise for several reasons, and can take the form of either discrimination against individuals or redlining. Rational discrimination against individuals may arise if a strong correlation exists between the members of a given social group and some characteristics that systematically affect group members' desirability in a given market transaction. For example, if blacks are "last hired and first fired" in the labor market, then blacks will be less creditworthy in the loan market, all else equal, due to their being more likely than whites to have reduced income flows (and hence to default). A lender would then use rational discrimination if blacks were systematically denied credit *because they were black*.

So there can be racial bias without racial intent – there can be, so to speak, "benign" perpetrators of discrimination, motivated not by blind hatred but by profit. This middle category of discrimination is insidious because it can affect the judgment of those who discriminate very subtly. For example, a person controlling wealth may regret that those discriminated against are less creditworthy than others, without investigating his own biases.

Poverty and discrimination. Clearly there are overlaps between the categories of discrimination and poverty. In effect, poverty is a condition, a situation, and discrimination denotes social processes that can generate or deepen this condition. Investigations of discrimination have generally been undertaken far more frequently in higher-income nations than lower-income nations. We might speculate that the problem of fair access to resources arises to a greater extent when there are more resources to be accessed. This doesn't mean that latent or even overt processes of social discrimination are not at work in nations with high

population proportions in poverty. Social discrimination, in these cases, may take an overtly political form, or may spring to life as material circumstances improve.

Policies aimed at reducing poverty and discrimination also intertwine. When those in poverty include populations that are subject to discrimination, policies aimed at encouraging initiative by individuals in poverty can work hand-in-hand with anti-discriminatory legislation. Insuring fair access to resources allocated through the market will in this case increase the numbers of those escaping poverty by their own initiative. Turning to the structural view of poverty, reducing the extent of poverty depends on decreasing some of the structural inequalities with which they contend. If most or all of those who are poor are members of a class that is subject to discrimination, then reducing the extent of discrimination will have the effect of reducing poverty. Indeed, in many societies poverty reduction can be a powerful justification for overturning discriminatory practices.

A spatial approach to development, poverty and discrimination

This section and the next consider poverty and discrimination in the context of two distinctive approaches to social and economic dynamics. This section explores the implications of spatiality, and section 4 develops some Keynesian perspectives. Section 5 then explores a spatialized Keynesian approach to poverty, discrimination, and development.

Spatial separation is a fundamental component of human existence. After childbirth, no two people can occupy the same space at the same time. This means that all transactions

between people, whether economic or otherwise, occur across space. Despite this omnipresent reality of spatiality, spatiality per se is often only implicit – even when clearly present -- in discussions of poverty, discrimination, and development.[3]

The notion of the inherently spatial character of social life is associated with the fields of economic and social geography. This is not to say that spatiality has been treated in a consistent way. In recent years, some geographers (notably Lefebvre (1991) and Soja (1996)) have insisted that the spatial dimension of social reality has an independent impact on the character of socical processes, which cannot be subsumed to any other dimensions of reality (such as social class, race, and so on). On the other hand, other geographers have argued that the spread of information technology together with the globalization of economic flows have led to the obliteration of geography. This latter view is too strong – it ignores the continuing significance of borders and of spatial separation.

Indeed, we might argue that the very fact that space-time separation has been reduced or even virtually eliminated for some – the global citizens of the new world order – only deepens the significance of spatial separation and of borders for those without the means to communicate or send resources instantaneously across borders. At the same time, it is impossible to write about space without acknowledging that it is virtualized – that the center of decisions disappears, even while action can occur at an ever-amplifying distance. A decision taken in Tokyo can affect Rio as if it were in the same neighborhood. This cannot but affect development plans. Then there is the impact of what is decided. There we cannot give away the traditional sense of space.

This section first reviews three sets of ideas that provide insights into the implications of space for understanding discrimination, poverty, and development – racial/poverty proximity models, urban agglomeration models, and city-as-small-open-economy models. The last two spatial approaches have been developed to explain phenomena other than poverty and discrimination; however, they are introduced because they constitute key links in understanding the spatial dynamics of social discrimination and poverty.

Spatial aspects of social discrimination. Some scholars interested in the problem of racial inequality in the U.S. have explored the role of space in the dynamics of social discrimination.[4] Schelling (1971) created a framework that shows how racial animus can lead to racial segregation. Specifically, every agent occupies a square within a checkerboard grid; some agents are type B, and some type W, and some squares are empty. Each agent decides in turn whether to stay still or move. The W agents move when too high a share of their neighbors are B, if a square with a lower B-neighbor share is available. B agents never move due to the proportions of B and W agents nearby. It is readily shown that racial segregation occurs. This model then depicts a kind of tragedy in that racial hostility colors outcomes even when only a significant minority of one racial group has racial animus.

Massey and Denton (1993) developed a more complex checkerboard model. These authors were not focused on white flight, but on the related hypothesis that minorities had been left behind in the inner-core areas due to cultural deficiencies of the sort that Lewis (1961) identified. Whites' shifts away from the urban inner core may thus be due to their desire to

avoid contact with the urban 'underclass,' not inherent racial bias. This proposition provided cover for the federal government's shift from policy activism to 'benign neglect' of the inner city (in Moynihan's phrase) in the 1970s and 1980s. Wilson (1987) mounted an energetic counterattack by arguing that class dynamics and not cultural dysfunctionality explain the emergence of the minority 'underclass' in American cities.

Massey and Denton link Wilson's argument to the residential mobility process. They posit that concrete social and economic characteristics of urban residents affect the social viability and stability of the various locations of the urban grid they occupy. Suppose, as does Schelling, that every agent occupies a cell in a matrix. Then if an agent lives in a cell surrounded by residents whose probability of employment is lower than elsewhere, her welfare is affected because she lives in a high-unemployment area. If this agent also lives in a neighborhood whose residents have low levels of educational attainment and high crime rates, then this agent's chances for success may be systematically affected by these environmental characteristics.

These two frameworks suggest two key implications of the spatial dimension in social relations. First, agent preferences can encompass the spatial distribution of other agents. There are spillover effects rooted in preferences that can generate agent mobility for reasons that would be invisible if space were ruled out. Second, spillovers across space can carry dense socio-economic content, and deeply affect behavior. These two frameworks have a common limitation – neither incorporates any attention to economic processes. As it turns out, two economic frameworks are available which explicitly incorporate spatial considerations. We

elucidate these economic approaches and then consider their implications for these two social models.

Increasing returns to scale and agglomeration. In recent years, due to the impulse provided by Paul Krugman, theorists and practitioners have increasingly recognized the importance in urban development of industrial (and other types of) agglomeration due to increasing returns to scale, spillover effects, and externalities.[5] Indeed, Krugman has argued that industrial agglomeration is the outstanding "stylized fact" in the field of economic geography (1991a: 7).

Krugman's work on spatial questions was initiated by his May 1989 paper, "History vs. expectations" (published as 1991b). Krugman observes that "positive external economies in production" can be seen as "a way to formulate rigorously a number of heterodox challenges to standard economic doctrine" – among them, the idea of the uneven pace of development of rich and poor nations.[6]

Krugman then developed an increasing-returns spatial model which he refined over a period of years (see, in particular, Krugman 1991c). In this model, households are spread evenly across the spatial landscape; they engage in agriculture, which provides their subsistence and also income they use to buy products manufactured by the industrial sector. Meanwhile, every producer makes and sets the price of a unique good. Industrial monopolies arise naturally because every firm's average costs fall as its output expands.[7] But firms do not

earn excessive profits; for if they did, new firms would enter, produce close substitutes for existing goods, and drive profits to zero.[8]

This framework shows how competitive, high-productivity industrial clusters can emerge. The question is why. Marshall, 80 years earlier, understood that spillovers – externalities -- of some kind must be involved. Marshall suggested two kinds of spillovers: the benefits from pooling the supply of labor and the demand for specialized non-tradable inputs; and the spillovers from concentrated technology and training expenditures. The second set of factors have been emphasized in models of "endogenous growth" (Romer 1990). Krugman suggests another sort of externality: if the industrial sector itself constitutes a principal source of demand for industrial products, and if transportation costs increase with distance, then firms will cluster because they produce under increasing returns. In formulating this model, Krugman inverts two assumptions of standard trade theory: in the received wisdom, tradable goods can be costlessly transported, but factors of production are immobile; in his model, factors of production are costlessly mobile but the transportation of tradable goods is costly. Thus, whereas comparative advantage results from "natural" advantages, in this agglomeration model it may be socially constructed, and trade flows may be what they are due to historical accident, not necessity. Increasing returns of the technological and market-spillover type, together with transportation costs, can generate both core-periphery patterns within a country and the surprising localization of some economic activities (Krugman uses the example of musical instruments in Elkhart, Indiana (1991a)).

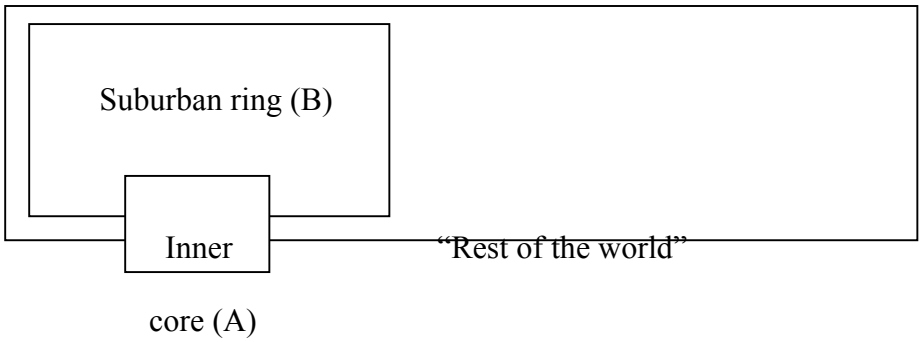
Other theorists have supplemented Krugman's work on industrial agglomeration by examining other path-dependent processes driven by increasing returns and spillovers. Benabou (1993, 1994) has shown how education and skill spillovers can affect neighborhood growth.

The spatial microeconomy as an open macroeconomy. The previous spatial concepts all pertain to market and social dynamics that can be observed within a given spatial unit at any scale – a region, a city, a neighborhood. But one key aspect of space is, as noted, separation. Any region contains cities as subunits, any city contains neighborhoods; any neighborhood, blocks. And between any separated subareas at any level are borders.

Borders are considered explicitly in macroeconomic models – trade flows and financial flows across them are commonly measured. Actually, the relationship of flows across the borders of any two distinct and enclosed spatial areas can be examined. Consider Case 1 below; there are two distinct spatial areas, the "inner core" and the "suburban ring." The suburban ring has a goods-and-services "surplus" or "deficit" with the inner core over any period of time (such as a quarter). The situation is exactly analogous to the case of trade across national borders. The consequences of unbalanced trade flows are well known. The trade balance of a given nation equals its exports (X) minus its imports (M). Countries with a trade surplus (such that the trade balance, X – M, is positive) can export capital to the rest of the world, and vice versa. In general, the dollars that nation A uses to buy imports must be generated either by other nations' (financial or direct) dollar investments in nation A, or by nation A's previously accumulated stock of dollars. The financial balance for nation A can be written as follows:

(Change in A's dollar reserves) + (Foreigners' savings in A)

= (Nation A trade balance) + (Net income transfers to A) (1)



Case 1: A metropolitan area: "Inner core" vs. "suburban ring"

Equation (1) is sometimes understood as "trade-driven", such that trade deficits (surpluses) net of transfer flows are understood to dictate movements in foreign savings. But it is important to see that equation (1) can just as readily be "finance-driven," with capital inflows dictating the resources available for disposal within an area, in the form of either trade deficits or through the buildup of wealth stocks. In any event, (1) *must* balance.

Stock-flow imbalances normally occur across borders; hence disequilibria occur frequently, and adjustment processes are continually at work. In the case of the United States, for example, a negative trade balance is offset by positive foreigners' savings. Recent experience in Latin America and Asia illustrates that severe macroeconomic disruptions can occur when large-scale inflows to borrower nations slow or reverse, especially when these

nations' reserves are exhausted. Indeed, the financing of investment positions across national borders creates an additional source of Minskyian financial instability (Dymski, 1999). To repeat, then, here will be equilibrium in the value of goods, services, and financial flows across spatial borders only by an unplanned coincidence. The *general case* is one of disequilibria across borders. This means that *adjustment* is an ongoing process.

For the intra-metropolitan border between inner core and suburb in Case 1, equation (1) becomes:

(Change in inner-core financial wealth) + (Inner-core investment outside the inner core) – (External investment in inner-core) = (Inner-core trade balance) + (Income transfers) (2)

Equation (2) shows that the inner core must finance its expenditures on imported goods and services either by selling goods or labor "abroad" (in the suburbs or outside the city), by accepting income transfers, by attracting "foreign" savings, or by spending down accumulated wealth. This equation emphasizes that the "inner core" area of an urban area can be viewed as a developing country. This dichotomization can be used at multiple levels – for example, within Brazil, the capital and current account of the favelas in Rio with the formalized portions of that city could (in principle) be computed. Within the formalized areas of Rio, in turn, a current account-capital account balance could in principle be computed on every square block, and in turn on every apartment house in any given block.

As in the case of national development, the location of production and consumption, the volume of cross-border trade – both with foreign buyers and with buyers in other domestic locations – and cross-border capital and credit flows provide the architecture of cash-flows

against which successful or abortive local development plays out. And as in the case of developing nations, urban cross-border balances can be finance-driven, not trade-driven. Consider the case of the creation of new suburban developments (such as those currently being constructed in Corona in Southern California, or in Barra de Tijuca, in Rio). This construction takes the form of initial investment flows into an undeveloped region (the construction site) with a trade deficit (imported bricks and wood, "guest workers," and so on). This perspective makes clear that all physical development in urban areas involves financial speculation in the sense of an inflow of moneys in advance of any promise of a return flow of revenues.

Implications for discrimination and poverty. What are the implications of these two spatial economic approaches for discrimination and poverty – especially given that discrimination and poverty already have spatial social dimensions? These frameworks show that the spatial distribution of businesses will affect (and be affected by) the revenues and profits of individual firms; and consequently, firms tend to cluster to capture spillovers of various kinds. Consequently, the location of firms and businesses across urban space will tend to be "lumpy," not smooth. Further, agents and firms invariably exist within spaces that are bordered, the flows across which alter the wealth/goods balances in individual neighborhoods, regions, and nations. Wealth thus either builds up or is subtracted over time, in spaces in which households and businesses capture positive and/or negative spillovers.

To link these economic processes to the social spatial dynamics that Schelling and Massey and Denton explored, note first that occupying any formal-sector spatial location in a capitalist economy (especially urban locations) requires substantial wealth, income, or both. This holds a fortiori for moves from one formal-sector location to another. So these social

models are both unrealistic in that households cannot locate where they wish – they cannot hop like checkers among open "squares." Instead, economic units must have resources, usually substantial resources, if they are to move. And if income flows are too low, as in the case of dire poverty, it may be impossible even to maintain occupancy of a given space.

Thus, implementing a strategy of moving from one "square" to another in an urban setting, in search of "squares" surrounded by fewer non-white units, requires resources. Conversely, a unit may be located in a neighborhood with negative spillover affects, which adversely affects its socio-economic opportunity set; but this doesn't mean that it can do anything about it. The poverty "trap" involves, in part, a spatial fix.

These ideas about spatialized social and economic processes – discrimination as a mobility dynamic, poverty as a spillover effect, agglomeration effects in industrial location, and cross-border balances -- together they suggest a coherent story of the relationship between spatialization, discrimination, and poverty. The work of Massey and Denton suggests that (a) proximity to neighbors that are lower-income has a palpable social cost, which carries a market value; (b) so those who have the ability to move away from cost-generating neighbors, do so when they can; (c) leading to concentrations of lower-income residents in some places, and of upper- and middle-income residents in other places. Schelling's work on racial preferences indicates that widespread racial preferences could have the same effect. So either "real, if barely-measurable" spillovers or "irrational racial preferences" or both could generate a separating dynamic in the population of residents.

Because of this separating dynamic, social discrimination motives and sensitivity to socio-economic spillovers will reinforce one another. Layered on top of this are economic process of business and regional development. Businesses, especially successful ones, tend to group together to capture spillovers of various kinds. So business firms will be overrepresented in some spatial areas, but underrepresented in others. Consequently, some areas will have strong cross-border balances, permitting the build-up of wealth and/or the purchase of many goods and services from external areas. Other areas will have current-account deficits and low levels of good/service exchange. The poor will be disproportionately in areas of the latter type. These lower-income/wealth areas will also tend to have over-representations of households that are subject to social discrimination. In sum, poverty and discrimination have implications for community development because of the spatial specificity of social processes of exclusion; further, there are community or social dimensions of the economic, or social exclusion experienced by households whose members are poor and/or subject to social discrimination.

Some Keynesian ideas about economic development and poverty

Writing on Keynesian approaches to economics fills entire libraries.[9] Here, we bring in some ideas from Keynes and the Keynesian tradition which are pertinent to our discussion of poverty and discrimination: uncertainty; aggregate demand; financial fragility; and financial structure. This section presents these ideas largely without emphasizing the implications of spatialization per se; that is done in section 5.

Uncertainty, development, and poverty. Our selective intervention begins with the recognition that in any Keynesian approach, the notion that processes with stochastic outcomes can be uniformly treated as if they confront situations of probabilistically defined risk is set aside as an impossibility. One of Keynes' deepest methodological commitments is to the idea that the future is fundamentally unknowable. At the same time, all economic units are engaged in "real time" processes: processes wherein irreversible decisions are made at one point of time, and realizations are had only later. The degree of unease that this causes economic units depends on how uncertain is any project they might consider, how much time will pass between initial commitment and final outcome, and the size of commitment required. Everyday tasks normally can be regarded as governed by probabilistic risk without much harm; non-repetitive tasks with large consequences entail uncertainty. For many urban investment projects, uncertainty arises at least in part because irreversible investments must be sunk into spatial areas whose longer-term prospects are not clear. Faced with uncertainty about outcomes, those undertaking time-using projects can mitigate their fear and improve their odds of success by pre-coordinating their activities, looking for new ways to get involved, etc.

Uncertainty and economic development are linked in that the gradual construction of infrastructure and capacity in a given location creates more predictability, more confidence for those who might risk long-term commitments. Poverty is linked with uncertainty in that economic units who are poor have much more uncertainty about their life circumstances than upper-income units. They control less of their environment, have a more constrained choice set, and have less protection against downside loss.

Aggregate demand, macroeconomic balance, and development. A second key aspect of Keynesian theory is its recognition of the importance of aggregate cash flows in determining levels of economic activity. In macroeconomic theory, these aggregate cash-flows generally involve the level of aggregate demand. The aggregate demand consists of expenditures on currently-produced goods and services. The focus on goods produced in the current period means that this concept implicitly measures employment and capacity utilization. In Keynesian theory, this demand for goods and services determines the level of output the economy can absorb. This notion is embodied in the Keynesian multiplier – the notion that expenditures on goods in a given economy that are independent of that economy's level of economic activity will lead to further rounds of expenditure. Demand leads supply in the sense that demand independently validates supply commitments.[10]

In urban economics, the Keynesian multiplier concept is transformed into the base-multiplier model. In this model, the level of expenditure in a given area (a metropolitan area, usually) depends on two factors: first, the goods or services that this area's firms sell to other areas; second, the multiplier effects of the production of these goods and services. This latter depends in the case of an urban area on the extent of supply-side interlinkages internal to this area. Because many interlinkages are incomplete, and in effect many intermediate goods are imported into any given urban area, urban multipliers are normally considerably smaller than those for national economies.

In sum, aggregate demand is viewed in Keynesian theory as providing the financial scaffolding for supply-demand relations in any set of micro-markets. It will be useful here to

set out a simple formal representation of aggregate demand and supply. Aggregate demand (AD) can be written as follows:

$$\text{Output demanded:} \quad AD = C + I + G + X \qquad (3)$$

where C = consumption, I = investment, G = government spending, X = exports. Consumption is defined here as the act of buying and consuming domestically-produced goods and services for everyday use. Investment refers to the purchase of goods and/or services so as to expand the level of a unit's assets.[11] G and X represent the government sector's and foreigners' purchases of locally-produced goods and services. These are the dollars chasing currently-produced goods and services, and thus determining how much of what is produced is taken. Now consider a depiction of aggregate supply, AS:

$$\text{Output earned:} \quad AS = C + S + T + M \qquad (4)$$

where S = domestic savings, T = taxes, M = imports. Equation (4) represents the idea that the production of goods and services in any time period gives rise to income claims of several types, and these incomes can be used in one of the four ways shown here: to buy locally-made goods and services (C), or foreign-made goods and services (M), to pay taxes (T), and to save (S). Saving, the act of not-spending income, can involve either building up idle monetary stocks or purchasing financial assets (bank deposits, bonds, securities, etc.).

To determine an equilibrium find the level of output at which aggregate demand equals aggregate supply (AD = AS, using (3) = (4)):

$$I + (G-T) = S - (X - M) \qquad (5)$$

This macroeconomic balance specifies that investment spending plus net government spending must be supported by domestic savings net of export earnings. This is a key equation in understanding the determinants of any area's economic growth. A useful way to think of this balance is as follows. Macroeconomic policy stimulus in the Americas and Western Europe in the "Golden Age" period from World War II to the early 1970s focused on the manipulation of investment spending (via monetary policy) and of government spending as means of maintaining stable growth. When applied to developing nations, investment is especially privileged, because investment expenditures build up assets and hence socially and economically productive capacity. More investment now means not only means enhanced demand for goods and services this period, but an expanded capacity to generate goods and services in future periods. Investment is financed by savings – by some units' withholding of income from consumption. This pool of savings may also be required to support government deficit spending (which occurs when G > T). From a Keynesian perspective, the key to development is then private and public investment expenditure, prominently featured on the left-hand side of equation (5).

An important alternative view is the neoclassical approach, a more market-oriented perspective held by many economists at the International Monetary Fund. The neoclassical

approach asserts that export earnings (the other term on the right-hand side of equation (5)) and fiscal discipline are crucial for successful sustained development. One component of this view is the "financial deepening" hypothesis, originated by MacKinnon and Shaw in the early 1970s, prioritizes the right-hand side of equation (5). In this hypothesis, the key to development is the creation of a market-driven structure of financial intermediaries that can encourage saving behavior and channel available saving to the highest-return activities available.[12] One implication of the neoclassical approach is the Kuznets hypothesis: that is, at the 'take-off' stage, the development process entails increasing income and wealth inequality; as a developing society achieves economic maturity, its inequality levels will be reduced. The Kuznets hypothesis is premised on the financial deepening model: the increasing inequality it anticipates is required to permit the creation of the savings pools required to support rapid accumulation. Insofar as the development process often entails the creation of new urban spaces, this means that economic development will go hand-in-hand with the creation of more urban impoverishment.

The relative merits of development strategies built, respectively, on the left-hand and right-hand sides of equation (5) have been the subject of sharp disagreement and controversy among policy-makers and economists. The rapid growth of many East Asian nations in the 1970s and 1980s provided evidence that financial liberalization and higher interest rates was not required to generate high saving levels. These nations also followed a path led by government guidance and planning, not a market-led path; they were able to largely avoid the creation of impoverished urban areas, and in fact enjoyed a more egalitarian distribution of income and wealth than the U.S. and most European nations. The late-1990s crisis of East Asia,

more than a decade after the government-led economies of Latin America were plunged into the 1980s Latin American debt crisis, provided fuel for skeptics of market-led growth, even while illustrating the dangerous volatility of a post-financial-liberalization world.

Financial fragility and poverty. As a micro perspective, a key theme in Keynesian theory is the financial fragility of economic units and the financial instability of the economy. Hyman Minsky developed the notion of financial fragility to describe the impact of uncertainty on economic units who must take illiquid asset positions in real time to build up their wealth and resources. An economic unit is financially fragile to the extent that the interest obligations it has to meet to support its asset position may exceed its net operating revenue. Minsky (1975) argues that financial fragility rises over the economic cycle, because economic units tend to take on more debt and become more leveraged in 'good' times; eventually, however, some overextended economic units cannot meet their obligations, triggering a period of financial instability characterized by asset-price devaluations, bankruptcies, and debt deflation. Subsequent work on Minsky's framework have shown that in an open-economy setting, rapid and unanticipated downward revisions in currency value are sufficient to generate financial instability (Dymski 1999).

The details of Minsky's theory need not be pursued here. Instead, the links between Minsky's financial-fragility framework and poverty might be highlighted. The key point is that those who are poor and who are subject to discrimination are especially vulnerable to financial fragility and instability. Living in poverty means surviving with an inadequate and unstable cash-flow. Being a target of social discrimination means being subject to unfair treatment in

market transactions, and sometimes being denied access to financial and non-financial assets for arbitrary reasons. These circumstances result in precarious cash-flows, enhance the extent of financial fragility and instability, and thus make financial crisis more likely. Just as small businesses are far more likely to enter bankruptcy than are larger ones, poor households are far more likely to experience financial turmoil than are middle-income and rich households. And breakdowns in cash-flow and overwhelming debt obligations bring locational and vocational shifts, as new sources of income are sought in new places, and as new household members enter the labor force or migrate elsewhere. If successive generations of a family are poor, they are unlikely to be poor in the same way and in the same place.

Financial structure and local investment and savings. The three elements of Keynesian theory identified thus far are well-established. A fourth, only tangentially related to Keynes' work, should also be mentioned because of its relevance for the theme of this essay. That is, the financial structure of any neighborhood or city is an important determinant of economic outcomes therein.[13] Financial structure here means the population of formal- and informal-sector firms and offices that are engaged in the payments mechanism, the collecting and disposition of financial savings, the assessment of creditworthiness and financial investment options, and the provision of credit and capital. Commercial banks are uniquely important because they engage in all three activities of credit-provision, deposit-collection, and payments services. However, many institutions in a given community may provide one or more of these services. Further, there may be some specialization in financial services, depending on the income and wealth levels of households and businesses.

There are several impacts of a robust financial structure on economic outcomes in any local community. First, financial-service providers have some of the characteristics of public goods – a community with conveniently-located and plentiful financial firms will have low transactions costs for merchants and households, plentiful financial savings options, and numerous professionals specializing in localized credit provision. Second, a robust structure of credit-granting institutions that competes among themselves and with lenders in other areas will generate a substantial volume of information about individual borrowers and about the area as a whole. This will overcome informational barriers to lending that may arise due to asymmetric and incomplete information regarding potential borrowers. Third, a substantial volume of credit commitments in a given area will signal other prospective lenders regarding the viability of this area as a credit risk. Given the path dependence of credit-market outcomes, this will lead to a fourth impact: the community will be on a trajectory to receive more credit and capital, creating opportunities for more wealth accumulation – especially on fixed geographic assets such as homes and local businesses – than in areas that are less well-served. In effect, the financial structure in any locality provides the physical embodiment of the investment-savings mechanism that is at the heart of the entire macroeconomic process (see equation (5)).

In communities without adequate financial infrastructures – that is, to say, in lower-income communities, and in communities of residents who are subject to social discrimination -- a very different scenario unfolds. Transactions are insecure and costly; merchants must operate with low levels of cash, and take special provisions to protect their premises. It will be difficult for residents to find outlets for financial savings – indeed, there may be none. At the same time, residents and local business-owners may regard the economic circumstances of this

area as too uncertain to merit investments in local fixed geographic assets (except those that enhance personal security). The area will be regarded as a poor credit risk based on second-hand information; indeed, the theory of rational discrimination suggests that if prospective lenders anticipate very few loans in this area, it is not be cost-effective to replace this second-hand data with the first-hand information that might overturn this impression. So informational barriers to lending will be high. Few or no other lenders will be attracted to this area, except for bottom-feeder lenders interested in earning some fast money by exploiting the absence of mainstream credit and savings mechanisms. Rather than building up financial wealth and fixed real assets, local residents and businesses will gradually spend down their balances and liquidate their assets; the local financial structure facilitates decumulation, not accumulation.

A spatial Keynesian approach to development, poverty and discrimination

Section 3 emphasized that spatial social and economic dynamics are always present, even if not given explicit theoretical recognition. For our purpose, explicit attention to spatial boundaries is crucial because of the physical divides and different structural circumstances that separate communities on the basis of poverty and social discrimination. This section, then, explores spatial aspects of the Keynesian ideas introduced above, concerning macroeconomic balance, uncertainty reduction, financial fragility and instability, and financial structure. We begin with the Keynesian aggregate demand/supply framework. This can be spatialized in two different ways: first, by emphasizing cross-border goods flows; second, by emphasizing cross-border financial flows and the investment/savings nexus.

A spatialized Keynesian multiplier approach. When applied to a region or city, as noted in section 3, the Keynesian multiplier is transformed into the base-multiplier model, a framework which regards all economic activity within this spatial area as activated by external demand for tradeable goods and services.[14]

One version of this model is of special interest – the two-region case, which involves a region or city with two spatially distinct zones, that in turn trades with the rest of the world. Let us suppose, as in section 3, that the poor and those who are subject to social discrimination are segregated spatially from the remainder of the population – in the area we denoted region A above. For simplicity, the area in question produces just two goods that are exported to the outside world: inner-city region A produces X_1, and suburban region B produces X_2. These two goods are both "basics" – that is, X_1 is required for the production of X_2 and vice versa. Suppose also that the workers and capitalists making X_1 live in A, and those making X_2 live in B. A sustainable equilibrium for this two-region economy entails balance in production levels, in monetary value, and in intra-regional "trade." Equilibrium in production requires that:

(X_1 produced) = (X_1 used in making X_1 and X_2) + (External demand for X_1)

(X_2 produced) = (X_2 used in making X_1 and X_2) + (External demand for X_2) (6)

It is easy to solve this equation to find the overall amounts of X_1 and X_2 that should be produced given the level of external demand. "One-region" urban multiplier models stop there. But two-region models have extra conditions, which makes sustainable equilibria between regions A and B unlikely. For one thing, long-run equilibrium requires two monetary intersectoral balances between A and B (which is to say, between industries 1 and 2).[15] These are unlikely to prevail, since the variables involved are determined nationally, not locally.

Further, for a self-sustaining equilibrium: flows of value between regions A and B must equate.[16] If workers live and work in their "home" regions, this balance is:

(Value of X_1 used in producing X_2)+(Value of X_1 consumed and invested in region B) = (Value of X_2 used in producing X_1)+(Value of X_2 consumed and invested in region A) (7)

Equation (7) entails an intra-regional restriction on the relative prices of X_1 and X_2 which does not arise in aspatial input-output models. Urban or other contiguous areas are likely to systematically violate this equation, as no direct mechanism for bringing about a spatial equilibrium exists. Equation (7) is a zero probability event. If so, then, it implies arbitrary transfers of value from A to B or vice versa. These transfers are aligned with the distribution of the production of goods and services in these areas. In the U.S., the spatial distribution of production has evolved considerably over time. Initially, production facilities were located in inner-core areas such as A, while workers and managers increasingly moved to suburban areas such as B. Then came a period in which some production facilities moved to suburban areas, generating intensive if uneven exchanges between A and B areas as described above. The next phase was one of the isolated urban core, wherein no production facilities remain active in the inner-core. In this situation, the inner core runs a trade deficit with the suburbs (and with the rest of the world); it can subsist only through wealth reductions or payments transfers (as when inner-core residents work in the suburbs).

In other nations, production and residential spaces have very different relationships. In most cities outside the U.S., marginalized areas have historically been suburban; the inner core has been, and often remained, a locus of elite commercial activity and residences. In Brazil,

favelas are the equivalent of the U.S.'s segregated inner-core "slum" communities. But most favelas have never been focal points for the production of tradeable goods and services: they have always relied, in effect, on earnings brought back by residents working in formalized communities beyond the favela borders. This is not to say that no economic activity takes place in favelas or other marginal communities in Latin America, Africa, Asia, and Europe; to the contrary. However, most of these marginal communities' economic activity involves the redistribution of cash earned outside and brought back – not production integrated into the broader matrix of tradeables and basic goods.

A spatialized investment-saving nexus. To explore the implications of shifting industrial locations further, we now turn to a spatialization of the investment/savings approach. This involves re-imagining section 4's aggregate-demand/supply framework as a subnational construct and considering explicitly the interlinkages between cross-border conditions and aggregate demand/supply equilibria.

Equation (2) showed how equation (1) for national cross-border constraints could be re-interpreted for sub-national closed economic spaces. We can similarly reinterpret equation (5) by again recontextualizing equation (1). To see this, note first that equation (1) and equation (5) both share a term – the trade balance, X-M. We can substitute for (X – M) in equation (5) using the "Nation A trade balance" term in equation (1), giving us this expression for aggregate demand and supply in a given nation (or in a given sub-national area):

$$I + (G-T) + \Delta W = S + S^F + Y^F, \text{ or in words,} \qquad (8)$$

(Investment expenditures) + (Government expenditures net of taxes collected)

+ (Changes in financial wealth held internally) = (Domestic saving)

+ (Foreigners' savings) + (Net income transfers to this area) (8′)

That is, investment and net-government expenditures can be financed by domestic savings, foreigners' savings, and earnings and transfer payments to residents (including residents who work outside the community). If these transfers and savings flows are significant, then financial wealth levels will build up; but when income transfers and savings flows fall, domestic wealth stocks may erode. For example, when new suburban areas such as B are developed, investment expenditures there rise, supported by "foreign savings" committed by developers, prospective residents, and financial institutions. An inner-core area subject to "disinvestment" – the closure of production facilities being relocated elsewhere – has negative investment, paralleled by negative foreign savings.

Spatial aspects of uncertainty, financial instability, and financial structure. One of the foremost Keynesians, Paul Davidson (1994), has emphasized the uncertainty-reduction role of government stabilization and regulation policies: establishing fixed or predictable exchange rates and cash-flows, with low and stable interest rates, permits economic agents to develop longer-range plans than they otherwise would. We might add that when agents make the illiquid investments that implement their longer-run plans, these commitments build up real asset structures in the spatial communities that house their facilities. As noted, these sorts of investments are unevenly distributed across space – hence, some areas become more secure

sites for investment, while others lag. Similarly, prospective homeowners look for homes in areas with secure values and active resale markets; prices and resale prospects elsewhere are far more uncertain.[17] In effect, just as overall uncertainty about investment prospects can be increased or dampened by macro-level policies, this same sort of uncertainty varies across space within cities and regions. Insofar as market dynamics involve path dependence and spillover effects (that is, increasing returns), then if left alone market forces will tend to widen the uncertainty gap between neighborhoods.

Financial fragility and instability can also vary systematically across spatial communities. At least two of the key elements affecting the degree of financial fragility – asset values and cash-flows from economic activities – are more unstable for those living in lower-income communities and/or in communities whose residents are subject to social discrimination. So whatever the degree of financial fragility in an economy as a whole, the degree of fragility will be exaggerated in some areas. Any given economic unit will thus be affected not only by its own balance-sheet stress, but by that of the residential and business units surrounding it. We have already noted that the character of financial structure in a given spatial community can encourage or discourage savings, long-term investment, and the acquisition of geographically fixed assets.

Aggregate Keynesian dynamics, poverty, and discrimination. These structural Keynesian dynamics, as they play out over the spatial terrains of urban areas the world over all, have remarkable implications for the problems of poverty and discrimination. For one thing,

they create an encompassing macro situation that no small business can avoid. Micro market equilibria are overwhelmed by these macro dynamics.

To the extent that the poor are spatially isolated from the broader society, and that those subject to social discrimination are segregated as well, distinct spatial communities of the poor and of discriminatees will arise and persist. Poverty and social discrimination then take on a spatial and community dimension just as real as individuals' material and capability deprivation. Communities of the poor, insofar as they are isolated from the broader economy's production nexus, are sustained by repatriated earnings, income transfers, and the decumulation of wealth.[18] The earnings and transfers received in these communities are just sufficient to meet subsistence needs, ruling out saving or wealth-building on a systematic basis.

This perspective makes it clear that anti-poverty or anti-discrimination initiatives that address one dimension of the community's structural deficit, especially on an individual basis, may be insufficient to reverse the community's fix. For example, a homeownership initiative aimed at encouraging neighborhood revitalization will not succeed if cash-flows from residents' jobs are not systematically strengthened as well. This is not to say that such an initiative is useless: to the contrary, the formula for successful upper-income suburbs is precisely a combination of repatriated earnings and transfer payments combined with community-specific investment. A favela or inner-core area in which a significant share of residents have good jobs for a sustained period can be an investment locus. The transformation required is profound, however: the common wisdom that only a fool would keep her money anything but liquid must be replaced by a belief that investment in neighborhood-specific assets

will pay off. It is not only macroeconomic circumstances that are crucial in imagining this kind of shift; the presence and behavior of mainstream financial institutions is also crucial.

Conclusion

Everywhere in the world, policy-makers, activists, and government officials find areas whose residents have substantial levels of poverty, however that is defined -- inner-city neighborhood in the US, favelas in Brazil, townships in South Africa, and so on. How can we explain the poverty we see? There are many different views, most focusing on whether the people in such communities are responsible for their conditions, or whether they have lacked access to the resources required for self-improvement. This paper has asserted that the very spatial separation of these communities itself has important economic consequences, which are very well illuminated by ideas associated with Keynesian economics, suitably adapted to subnational areas. The bottom Keynesian line regarding successful management of national economies is that this requires attention to the sufficiency of aggregate demand, to the level of uncertainty, to the consequences of financial fragility, and to the character of financial structure. Maintaining growth and avoiding the social damage associated with unemployed labor, idle factories, and shuttered shops requires attention to the structural integrity of the economy, at both macro and micro levels. This chapter has developed a framework showing that these same points hold for spatial subareas within national economies.

This chapter has explored the overlooked spatial dynamics of economic development, poverty and discrimination. Poverty involves, in part, systematic differences in the resources

available to people in different spatial communities. Social discrimination also often involves resource differentials linked to residential segregation and other forms of social exclusion. These spatial dimensions of poverty and discrimination arise because economic clustering driven by increasing returns and uncertainty-reduction motivations goes hand-in-hand with social separation. The structural aspects of poverty and discrimination thus have spatial and community-level dimension as well as household dimensions. This emphasis on the structural is not meant to deny the relevance of cultural and behavioral elements for understanding poverty and discrimination: the point of this discussion is instead that any cultural and behavioral elements are always shaped by macro-structural forces, forces that operate unevenly at regional, urban, and neighborhood levels.

This chapter has introduced three impacts of spatiality on economic and social relations: first, the spatial distribution of households will affect the socio-economic opportunity sets of individual units via spillovers, since each agent is spatially-embedded (and it is costly to change locations); second, the spatial distribution of businesses will affect (and be affected by) the revenues and profits of individual firms; third, agents and firms invariably exist within spaces that are bordered, the flows across which alter the wealth/goods balances in individual neighborhoods, regions, and nations. Wealth thus either builds up or is subtracted over time, in spaces in which households and businesses capture positive and/or negative spillovers.

An impoverished area then is likely to have the following characteristics: (1) low-level and unstable income flows, especially in terms of earnings from the rest of the world; (2) the absence or shortage of institutional mechanisms for securely saving, leading most area

residents to be unable to accumulate financial savings; (3) problems in achieving capital accumulation either through the construction of new real assets or the appreciation of the prices of existing ones; (4) dependence for capital on capital inflows from the rest of the world; (5) the presence of a disproportionate number of residents who are subject to social discrimination.

It follows that efforts to attack poverty should involve a developmental strategy for impoverished areas. Residents' opportunities for income-earning in the broader economy must be strengthened, business capacity enhanced, and financial structure built up. If the economy as a whole enjoys a period of sustained prosperity, and if the geographic extent of the impoverished area is relatively small, it is conceivable that the impoverished area will gradually be transformed into a place in which real wealth can be accumulated and the path-dependent downward trajectories leading toward ever-more economic exclusion and isolation reversed. Conceivably – because this sort of experiment has perhaps never had a chance to play out over time: either the broader macroeconomy turns sour or long-term residents are elbowed aside by new residents engaging in gentrification.

Anti-poverty policy vs. development policy vs. anti-discrimination policy? The policy implications of this analysis might be summarized as follows. First, market dynamics interacting with processes of social discrimination will tend to produce spatial separations between the poor and non-poor, and between those who are subject to social discrimation and those who are not. Second, development strategy, anti-poverty policies, and efforts to reduce the impact of social discrimination are invariably interrelated. Third, poverty and discrimination never operate solely at the level of individual units – they almost invariably

involve structural differences reflected in and amplified by spatial separation on the basis of poverty and social discrimination.

The idea that anti-poverty and anti-discrimination policies cannot be separated from development policies creates different challenges for nations with higher per-capita incomes and with lower per-capita incomes. In nations with high per-capita incomes, anti-poverty policy is controversial because people hold different preconceptions regarding the root causes of poverty. At one extreme is a view of poverty as a timeless condition reflecting the cultural deficits and social isolation of the poor (for example, Murray (1981)). This view attributes poverty primarily, if not solely, to individual characteristics, and asserts that policy interventions must aim to alter the behavior of the poor – either by carrots (low-income tax credits) or by sticks (sunset provisions for family welfare benefits). At root, "heal thyself" is the diagnosis. At the other extreme is the notion of poverty as a structural problem, remediable through intelligent social intervention underwritten by political will. Well-crafted governmental programs can cover poor peoples' asset and income deficits and reduce poverty.

Views on social discrimination also range between two extremes. One view is that government need take no action regarding discrimination against, say, women or blacks, because market forces will punish perpetrators.[19] At the other extreme is the view that all instances of discrimination should be aggressively litigated so that discriminators will modify their behavior; furthermore, compensation for disadvantages due to the historical legacy of discrimination should be considered. As with poverty, there is nothing or everything to be done.

As might be expected, there is a high correlation among the proponents on the two sides of these divides regarding poverty and social discrimination. The idea of poverty as a characteristic of individuals, albeit rooted in cultural characteristics, is readily combined with the idea that discrimination will disappear because it is economically costly. Government policy thus should simply let market processes work, as these will reward the deserving and leave the undeserving behind. The structural views of poverty and of discrimination both lead to advocacy for a redistribution of income flows and a leveling of economic opportunity. Controversy then ensues in that those holding the former view(s) regard as unnecessary and even socially wasteful what those holding the latter view regard as essential.

In nations with lower per-capita incomes, as noted above, the problem of discrimination receives little attention. The proper approach to poverty, however, remains controversial. One view is that the very presence of widespread poverty makes its eradication a priority of the first order. A contrary view (associated with the Kuznets curve) is that continuing and even deepening levels of inequality and hence poverty are a necessary accompaniment of development policy. Development policy is thus emphatically *not* anti-poverty policy: elites and the formal institutions that will be at the commanding heights of the economy must be encouraged, not democratized. Some justification for this view is found in the emergence of informal marketplaces, of startup businesses, and of lending circles in favelas and inner-core areas. Authors such as De Soto (1989) have achieved wide currency because their views resonate both with this approach to development policy and with those in high-income nations who believe that the poor can and should heal themselves.

This chapter constitutes a warning against this view. The greater-inequality portion of the Kuznets curve is not an abstract area that a population of representative agents enters on the way to a brighter future. Greater inequality and more poverty mean the differentiation of people across space; and categories of social discrimination are converted very readily into divisions in income and wealth. As growth proceeds, social discrimination can be a criterion for deciding who should be first in line for access to scarce resources. Once these divisions are made, overturning them requires redistribution, and not just more growth. And redistribution based on categories of social discrimination forces societal confrontations with historical legacies that are normally tangled and disputatious. Awareness of the potential economic consequences of social discrimination and social separation alone is not sufficient to avoid drinking repeatedly from the bitter cup of history's legacy; but it is the first step toward a different future.

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[1] As Katz (1989) points out, much anti-poverty policy in the U.S. is aimed at those selected as the "deserving" poor – a designation that requires deciding whether or not any segment of the impoverished (such as the disabled, or Vietnam veterans) are responsible for their circumstances. The 1996 welfare-reform legislation in the U.S. essentially accomplished a significant contraction in those who are presumptively eligible for public support, as most families with dependent children were shifted from the former into the latter category.

[2]Redlining on the basis of neighborhood racial composition has been an object of social struggle in the U.S. for 3 decades. Banks have altered their behavior in the wake of continued criticisms – often in ways that accommodate community protests of unfair practices. One recent credit-market phenomenon that has drawn renewed criticism is the emergence of predatory loan practices. The term predatory loan refers to credit contracts that have significantly worse terms and conditions (and hence are more onerous for borrowers) than loans for similar purposes elsewhere in the same market area.

[3] For example, Omi and Winant (1994), Katz (1989).

[4] If these authors had described discrimination in another nation, they might have used income inequality rather than racial difference as the basis of social animus. This section emphasizes racial discrimination because this form of discrimination has dominated social-scientific investigations in the U.S. Note that some forms of discrimination – such as gender discrimination – are not easily assimilable in spatial terms. For discrimination to have a spatial dimension, there must be the possibility of systematic separation between discriminators and discriminatees. This is clearly feasible in the case of racial difference and income inequality; it is less clearly feasible for other types of discrimination.

[5] Increasing returns per se have attracted a disproportionate amount of attention. However, increasing returns are sufficient for agglomeration in urban development, they are not necessary (Papageorgiou 1979). Externalities and spillovers can also introduce nonlinearities in urban spatial interactions and lead

to activity clustering, path dependence, and uneven development. To a significant extent, the concepts of increasing returns, externalities, and spillovers represent different ways of framing the same core concepts (Rosser, 1999).

[6] An externality arises when market transactions give rise to benefits or costs to agents other than those directly engaged in these transactions. Increasing returns occur when increasing the level of output reduces the per-unit cost of producing it. Increasing returns occur frequently in formal models. For example, suppose there is a fixed cost X associated with starting up a given firm; then as output Y expands, the fixed cost per unit of Y, X/Y, falls. So even if marginal production costs, dx, remain constant, the per-unit return increases as output rises. The evolution of Krugman's ideas on increasing returns are discussed in Dymski (1996); also see Martin and Sunley (1995).

[7] With increasing returns, one firm can meet market demand more efficiently than multiple firms. Prices cannot be set competitively because one firm supplies the whole market.

[8] This construct shows how firms that each have an absolute productivity advantage can set prices which allow no one firm to earn excess profits.

[9] For the scholarship of and on Keynes, there is no better place to start than Keynes' *General Theory* (1936). Also see Shackle (1974) and Davidson (19xx).

[10] If demand were not at least partially independent of supply, then "supply could generate its own demand," a macroeconomic proposition known as Say's Law of Markets. Say's Law implies that the stimulation of supply is the core macroeconomic problem: for if producers can be induced to make additional goods, the incomes they generate will be used to purchase these goods. Keynesian theory disputes this conclusion. Certainly, creating additional output simultaneously generates new income claims equal in value to that output – and hence capable in principle of buying it. But those accruing this additional income are not compelled to spend it; indeed, they can withhold it from expenditures, storing it as savings in some form. Non-Keynesian macroeconomic theory is confident that market equilibration will lead *someone* to borrow these savings so as to purchase the untaken stock of produced goods and

services. Keynesian theory objects that this may not occur if agents instead desire liquidity; hence, agents' expenditure decisions are more fundamental determinants of realized output any period.

[11] This definition of investment differs completely from the financial-market use of this term; there, "investment" means the purchase or exchange of financial assets.

[12] The rapid growth of many East Asian nations in the 1970s and 1980s provided evidence that financial liberalization and higher interest rates was not required to generate high saving levels. These nations also followed a path led by government guidance and planning, and thus were following an alternative path to that laid out in the neoclassical view.

[13] The ideas presented in this subsection are based on several publications, especially Dymski and Veitch (1992, 1996), Dymski and Mohanty (1999), Dymski (1996, 1998, 2001).

[14] This model is actually an application of the Sraffian/Leontief input-output framework. See Nijkamp, Rietveld, and Snickars (1986) and especially ten Raa *et al*. (1987). Implementing this model requires many arbitrary assumptions, which are discussed in these sources and in Dymski (2001).

[15] These conditions are as follows: (Revenues earned on X_1) = (Cost of X_1 and X_2 used in making X_1) + (wages paid to labor employed in making X_1) + (Profits of owners of means of production for X_1); and (Revenues earned on X_2) = (Cost of X_1 and X_2 used in making X_2) + (wages paid to labor employed in making X_2) + (Profits of owners of means of production for X_2).

[16] This constraint also exists in the interregional urban model; but in that model, different regions produce different basic goods by definition (which are exchanged across regional borders). Our inner-core/suburban model defines regions solely on the basis of geography.

[17] Of course, such uncertainty gaps might be capitalized into asset prices in these various neighborhoods. If increasing-returns processes are at work, however, this sort of capitalization will always lag events.

[18] Wealth decumulation processes sometimes involve sales of wealth assets, a service associated with the many pawnbrokers that arise in many inner-core neighborhoods. However, these processes can be

passive – notably, they can involve the failure to perform timely maintenance and upkeep. Of course, small savings from deferring maintenance in the short run can hasten asset devaluation in the longer run.

[19] Becker (1971) argues that those who discriminate will pay some cost for restrictively refusing to transact with a significant share of the market. Dymski (1995, 2002), among others, shows that the opposite scenario – wherein victims of discrimination pay costs such as higher prices and worse employment prospects – may also occur.