The changing makeup of cities apparently accounts for much of the failure of the educational system in the United States. An ecological model of the educational process suggests that it is possible to distinguish salient characteristics of the social arrangements within which schools are embedded as a means of understanding educational outcomes and identifying support services for change. Using data from 53 cities, drawn from economic, population, and government census data, this report analyzes city characteristics that have impacts on education. The major change in contemporary American cities has been the shift away from a manufacturing economy. Data demonstrate that the more decentralized a city is, the higher the level of instructional expenditure and the heavier the economic burden on the taxpayer. Decentralization is a significant correlate of, and may be causally linked to, fiscal distress. The city dropout rate tends to be higher in cities that retain a high manufacturing base and in which the African American population is large. There is also a substantial correlation between female-headed households and both the dropout level and the level of manufacturing. Findings suggest that the macroecological framework yields significant insights into the externals that affect education in the urban environment. Three related publications are listed.
Community Connection with Education: Macroecology of Educational Outcomes
by David Bartelt
Community Connection with Education: 
Macroeconomics of Educational Outcomes 

by 
David Bartelt

OVERVIEW

Research suggests that the changing makeup of cities accounts for much of the failure of our educational system. The movement of resources, jobs, and people from central cities to the suburbs has created a hostile environment for communities and their institutions within the inner city. The task at hand is to examine how the forces of change in urban economic, residential, and fiscal conditions constrain the effective operation of schools.

One dimension of this task is to establish that there is an empirical relationship between these macrosocial forces (specifically, those forces affecting the ways in which cities grow and decline relative to one another) and educational accomplishments. Another dimension seeks to demonstrate that the educational system—among its students—is part of a larger urban ecology, a "macroecology" of urban relationships that treats the educational system as part of the institutional infrastructure that helps some cities and hinders others in the competition for economic resources, population, and a tax base.

The ecological model of the educational process suggests that it is possible to distinguish the salient characteristics of the social arrangements within which schools are bedded as a means of understanding educational outcomes and identifying support services for effecting change. Much of the literature on the educational deficits of urban schooling ties educational outcomes to two major variables that in turn can be linked to the forces of race and class stratification: inequities in direct educational financing and other finance-related resources and family variables, such as income and poverty levels.

Using a data set from 53 cities, this project systematically examines the consequences of economic transition, national migration, and urban decentralization on a major indicator of how well an educational system is functioning—the proportion of students ages 16-19 who are either not in school or have not earned a diploma. The data set used is a synthesis of several economic, population, and government census data sets, aggregated to the level of central cities and their metropolitan areas. It covers economic census materials from 1929 through 1987 and population data from 1930 to 1990. The major change in contemporary American cities has been the shift away from a manufacturing economy as reflected in shifts in the manufacturing ratio—the proportion of manufacturing jobs compared to wholesale, retail, service, and manufacturing jobs combined.

HIGHLIGHTS OF FINDINGS

The data demonstrates that the more decentralized a city is, the higher the level of instructional expenditure and the heavier the economic burden on the taxpayer. Decentralization is a significant correlate, possibly causally linked with fiscal distress. Cities experiencing the greatest population losses and, by extension, a more diluted tax base must simultaneously carry an increasingly costly educational system.

The analysis indicates that city dropout rates appear to be a function of both opportunities and constraints. Dropout rates tend to be higher in cities that retain a high manufacturing base and in which the African-American population is large. These are cities in which the revenue load is high, the instructional expense is somewhat low, and the needs of students are somewhat higher due to linguistic isolation. The dropout rate is also affected by the growth rate, indicating that there are conditions in which increased opportunity is associated with dropping out (see Table 1).

One very clear force that intersects economically changing cities and the family background of students is the substantial correlation between female-headed households with children and both the dropout level and the level of manufacturing. Modest but significant correlations are found...
between dropout rates and female-headed households; unemployment rates; percentages of people on welfare and in poverty; lower income levels; and the proportion of the population who are living in nonmilitary, noneducational institutions or are homeless.

CONCLUSIONS AND IMPLICATIONS

These findings suggest that the macroecological framework yields significant insights into the "externalities" affecting educational activities in the urban environment.

* This research clearly shows the supplementary burden that an inner-city child must carry, both to attain graduation and to obtain further socioeconomic success. It is not children who are at risk, but communities and neighborhoods, cities and regions—and they will take the schools with them. This means that any approach to educational policy in our cities must be comprehensive in nature, addressing the public health, nutrition, and other support service needs of the community.

* Schools, standing alone, are not sufficient to withstand the effects of economic restructuring that results in capital, jobs, mortgages, and people abandoning the cities of America.

* Cities rooted most deeply in older economic bases face the most serious educational deficiencies, have a significant set of related problems that intersect those being addressed by the schools, and have a counteracting set of negative fiscal factors. In this context, it is impossible for us to limit the discussion of educational effectiveness to a within-classroom or within-school process.

* Future research is needed to show how schools can become collaborative partners with institutions, organizations, and other progressive groups, seeking to reshape and reclaim the city.

* Historically proven models of social change need to be adapted, applied, and tested in the context of urban schools and their surrounding environment of the inner city.

The implications of such an approach are straightforward; educational and economic development efforts must be made to run in tandem. Until these efforts generate a turnaround in inner-city neighborhoods, educators should be prepared to discuss ways in which social welfare, child care, and increased instructional costs, housing, and supplementary educational programming interrelate both within the classroom and within the arenas of fiscal debate.

** **

NOTE


RELATED PUBLICATIONS


If you would like to receive a copy of these publications, or would like other information, please contact the LSS Information Services Coordinator at (800) 892-5550.

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Table 1
Regression Analysis of Dropout Rates

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Ratio¹</td>
<td>.279*</td>
</tr>
<tr>
<td>Percent African American</td>
<td>.341*</td>
</tr>
<tr>
<td>Educational Budget/Population</td>
<td>.297*</td>
</tr>
<tr>
<td>Instructional Expense/Pupil</td>
<td>-.368*</td>
</tr>
<tr>
<td>Linguistic Isolation</td>
<td>.292*</td>
</tr>
<tr>
<td>Metropolitan Growth Rate</td>
<td>.274*</td>
</tr>
</tbody>
</table>

| R²                           | .54   |

*Significant at .01

¹The manufacturing ratio is the proportion of jobs held in the manufacturing sector as compared to those in wholesale, retail, service, and manufacturing combined.
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