

Factors Related to the Location of Housing Units Assisted by The Virginia Housing Development Authority

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Stepwise regression analysis of factors related to location of housing units assisted by the Virginia Housing Development Authority showed that production seemed to respond to shortages. Rental and total production rates were negatively related to a measure of housing need. Political sponsorship had no relationship to production rates.

The Virginia Housing Development Authority (VHDA), established in 1972 by act of the Virginia general assembly, is a unit of state government engaged in housing finance and management with the objective of increasing the housing supply available for low and moderate income people and eliminating slums and blight. The housing authority may sell federal tax-free bonds on the New York Bond Market and make interest funds available at below market rates for construction loans, for home mortgages for moderate income persons, and for multi-family developments for low income renters (Planning and Research Division, 1980a).

The purpose of this paper is to analyze the success of the VHDA in meeting the objectives of the program. Questions to be answered include whether the units were located in areas of greatest need, whether persons of greatest need were served, whether politicians were able to locate units in home districts as favors to constituents and friends, and whether funds went to areas of greatest market demand where the market was growing in any case.

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VHDA Production

The increase in VHDA production has been fairly steady. By the end of the 1980 fiscal year the VHDA had financed 38,616 housing units. A total of \$938,445,000 in long term mortgage bonds had been sold to finance 16,119 homeowner units, 21,913 rental units, and 584 units assisted through rehab and energy conservation (Planning and Research Division, 1980).

In the homeownership programs, the VHDA seeks to encourage young adults with good future income prospects to invest in their own homes. For the 3,305 households receiving first mortgage loans in 1979-80, the average age of the head of the household was 27.8 years, the average household size was 2.3 persons, and the average gross family income was \$15,442 (Planning and Research Division, 1980a). With an average shelter cost of \$405 per month, these homeowner programs were clearly not for the poor, but aimed at the moderate income individual or family.

The 38,616 units assisted by the VHDA represent 24.6 percent of the total number of housing units assisted by the government between 1970 and 1980 in the Commonwealth (Planning and Research Division, 1980a). Farmers Home Administration and HUD provided the majority of assisted units. Presnell-Kidd Associates (1977) estimates that more than one-half of

the government-assisted units were assisted by the Farmers Home Administration and 44 percent assisted by HUD for the years 1970 to 1976. It is estimated that although 151,532 low income households in economic need and ill housed remained, the number of ill housed and in need was reduced by 21 percent between 1970 and 1980 (Planning and Research Division, 1980a). To rehouse the remaining people would cost almost 5 billion dollars at \$30,000 per unit.

While a client profile for all the low income occupants is not available, preliminary data from two rental projects in Norfolk and Lexington indicates an average gross income of \$4,374 per household (Planning and Research Division, 1980b). The family rental project residents are typically black (70 percent), female-headed (84 percent), and have more than three persons per unit. The rental projects for the elderly are primarily occupied by low income Social Security recipients, and the racial composition usually reflects that of the neighborhood in which the project is located.

The Study

To examine the relationship of VHDA production with location and other variables, regression analysis was employed, with VHDA production as the dependent variable. Three sets of analyses were run — one with total VHDA production as the dependent variable, one with owner-occupied VHDA production as the dependent variable, and one with VHDA-assisted rental housing production as the dependent variable. The production variables were ascertained for 133 areas within the state, an area being either a city or a county.

The independent variables in the regression were:

- the proportion of households with housing need
- the proportion of black-headed households with physical or financial needs
- whether the location was the residence or business location of a significant political sponsor or VHDA board member
- population growth of the location between 1970 and 1980
- the growth in total housing units

-whether the area was a metropolitan core city, a metropolitan non-core place, or non-metropolitan area according to the 1970 Census.

Measurement Of Variables

Production

Production was measured as the number of VHDA housing units per 1,000 households (1970).

Need

The definition of housing need combined physical and financial indicators. Physical needs were said to exist if the housing was overcrowded (the units contained more than one person per room); the unit had incomplete or non-operative plumbing facilities; and if the unit was more than 25 years old and valued at less than \$5,000 in 1970. Financial needs were said to exist when units were occupied by senior citizens without capital assets or retirement incomes (other than Social Security), and when the unit was occupied by other families earning less than 80 percent of the local median income (Presnell-Kidd, 1977).

Political Sponsorship

Significant political sponsors were those members of the General Assembly who introduced VHDA legislation between 1972 and 1976 or served on the Virginia Housing Study Commission during that time. The Commission officially initiated most of the pro-VHDA legislation and in almost every instance their votes were unanimous in support of their proposals. They also provided to be effective opponents of bills they disliked which were introduced by others.

Results

Total Production

The zero-order correlations with total production (Table 3) show that the proportion of households with housing needs, and the proportion of black households with needs are negatively related to total VHDA production. Location in a metropolitan core city is positively related to total production. None of the other variables have correlations significantly different from zero. In the stepwise regression (Table 3), the pro-

portion of households with housing needs entered first, followed by the other variables in the order listed. Although the proportion of black households entered the regression third, after the other variables entered, its effect is not significantly different from zero. The regression results suggest that total VHDA production was somewhat higher in cities with high populations growth relative to growth in housing units.

Table 1. — Production of Housing Units Per 1000 Households (Average of 133 Cities and Counties)

| Measure: | Mean | SD |
|---|-------|-------|
| Total VHDA Output Per 1000 Households (1970) | 22.10 | 23.52 |
| Rental Unit Output Per 1000 Households (1970) | 12.38 | 18.18 |
| Homeownership Unit Output Per 1000 Households (1970) | 10.28 | 12.80 |
| Permanent Subsidy Rental Unit Output Per 1000 Households (1970) | 5.09 | 11.04 |

Homeownership Production

The correlations with homeownership production (Table 4) show that being a metropolitan non-core place, and the proportion of black households with need are positively related to homeownership production. None of the other correlations were significant. In the stepwise regression, both of being in a metropolitan non-core place, and the proportion of black households with needs have significant, positive effects. Being a metropolitan core area also has a significant, positive effect on homeownership production. The effects of growth in population and in housing units are similar to the effects for total production, with production higher in cities with high population growth relative to growth in units.

Rental Production

Three variables are significantly correlated with rental output. The proportion of households with hous-

Table 2. — Means of Independent Variables, 133 Cities and Counties, Virginia

| | Mean |
|--|---------|
| Number of Housing Units With Housing Needs (1976) | 2,283.3 |
| Percent of Housing Units With Housing Needs (1976) | .193 |
| Proportion of Black Households, With Housing Needs (1976) | .083 |
| Population Growth, 1970-1980 | 5,052.4 |
| Housing Unit Growth, 1970-1980 | 3,936.5 |
| Sponsor Areas (= 1 if sponsor area, = 0 otherwise) | .188 |
| Metropolitan Core Cities (= 1 if metro core, = 0 otherwise) | .090 |
| Metropolitan Non-Core Places (= 1 if metro non-core, = 0 otherwise) | .211 |

ing needs and the proportion of black households with needs are negatively related, while being a metropolitan core is positively related (Table 5). The proportion of black households with needs was not significant in the final step of the regression. Growth in population and housing units have effects similar to their effects in the total and the owner regressions.

Permanent Subsidy Rental Production

Being in a metropolitan core city is positively related to permanent subsidy production in both the correlation and the regression. The proportion of households with housing needs is negatively related to permanent subsidy production in both the correlation and the regression. No other variables have significant effects.

Table 3. — Correlations and Multiple Regression with Total VHDA Production (1972-1980) Per 1000 Households (1970) as Dependent Variable

| Variable | Zero-Order Correlation with VHDA Output | Cumulative Variance (R ²) | Beta |
|--|---|---|---------|
| Proportion of Households With Housing Needs | -.349* | .1215 | -0.354* |
| Metropolitan Core Cities | .200* | .1591 | 0.284* |
| Proportion of Black Households With Needs | -.161* | .1610 | 0.032 |
| Sponsor Areas | .007 | .1623 | -0.021 |
| Population Growth, '70-'80 | .064 | .1634 | 0.349* |
| Housing Unit Growth, 1970-1980 | .073 | .1750 | -0.316* |
| Metropolitan Non-Core | -.039 | .1758 | -0.031 |

*Significantly different from zero at .05 level using a one-tailed test.

Table 4. — Correlations and Multiple Regression with VHDA Homeownership Production (1972-1980) Per 1000 Households (1970) as Dependent Variable

| Variable | Zero-Order Correlation with Homeowner Output | Cumulative Variance (R ²) | Beta |
|--|--|---|---------|
| Metropolitan Non-Core Places | .171* | .0292 | 0.171* |
| Proportion of Black Households With Needs | .153* | .0489 | 0.159* |
| Metropolitan Core Cities | .106 | .0677 | 0.289* |
| Sponsor Areas | -.068 | .0862 | -0.123 |
| Population Growth, 1970-1980 | .119 | .0951 | 0.429* |
| Housing Unit Growth, 1970-1980 | .091 | .1095 | -0.356* |
| Proportion of Households With Housing Needs | -.003 | .1114 | -0.054 |

*Significantly different from zero at .05 level using a one-tailed test.

Table 5. — Correlations and Multiple Regression with VHDA Rental Unit Production (1972-1980) Per 1000 Households (1970) as Dependent Variable

| Variable | Zero-Order Correlation with Rental Output | Cumulative Variance (R ²) | Beta |
|--|---|---|---------|
| Proportion of Households With Housing Needs | -.258* | .0665 | -0.235* |
| Metropolitan Core Cities | .175* | .0954 | 0.189* |
| Metropolitan Non-Core Places | -.116 | .1055 | -0.101 |
| Proportion of Black Households With Needs | -.178* | .1062 | -0.041 |
| Population Growth, 1970-1980 | .002 | .1065 | 0.167* |
| Housing Unit Growth, 1970-1980 | .025 | .1090 | -0.157* |
| Sponsor Areas | .041 | .1092 | 0.016 |

*Significantly different from zero at .05 level using a one-tailed test.

Table 6. — Correlations and Multiple Regression with VHDA Permanent Subsidy Rental Unit Production (1972-1980) Per 1000 Households (1970) as Dependent Variable

| Variable | Zero-Order Correlation with Perm. Subsidy Output | Cumulative Variance (R ²) | Beta |
|--|--|---|---------|
| Metropolitan Core Cities | .223* | .0496 | 0.215* |
| Proportion of Households With Housing Needs | -.214* | .0935 | -0.229* |
| Metropolitan Non-Core Places | -.087 | .0972 | -0.082 |
| Population Growth, 1970-1980 | .019 | .0992 | 0.047 |
| Proportion of Black Households With Needs | -.097 | .1005 | 0.044 |

*Significantly different from zero at .05 level using a one-tailed test.

Conclusions

Political or board sponsorship has no apparent impact upon location of units. The negative associations of VHDA rental and total output rates with housing needs is the most important policy finding of this study. If the Commonwealth's housing goals are to be met in both the quantity and the locations where they are most needed, then attention to both the size (volume) and the distribution of the product are appropriate planning considerations. The finding of some tendency to produce units in areas of population growth without much housing growth may show the VHDA responding to needs in terms of shortages.

References

- Bennett, Larry. 1979. "An Economic Interpretation of Selective Policy Outcomes: Chicago Model." Paper presented at the annual meeting of the Society for the Study of Social Problems, Boston.
- Planning and Research Division. 1980a. "Community Programs and History of Production, Fiscal Years 1972-1980." Virginia Housing and Development Authority, Richmond, Virginia.
- _____. 1980b. "Eligibility for Housing Assistance Programs and Production of Assisted Housing, Commonwealth of Virginia, 1970-1980." mimeographed. Richmond, Virginia.
- Presnell-Kidd Associates. 1977. *Virginia Housing Needs Assessment*. Office of Housing, Commonwealth of Virginia. Richmond, Virginia.