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# How Does Domestic Food Assistance Affect Rural and Urban Household Incomes?

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In 2011, more than one in six U.S. households (18.3 percent) received domestic food assistance through the Supplemental Nutrition Assistance Program (SNAP), formerly known as Food Stamps. This program is the largest program in the Farm Bill.<sup>1</sup> The number of SNAP participants has more than doubled during the last decade to 21 million households in 2011. Rapid growth of SNAP during the past decade has fueled concern about the cost of the program and has generated proposals to reduce those costs. In order to understand the implications of reductions in SNAP expenditures, it is useful to know who actually benefits economically from SNAP payments.

In this brief we explore the economic impacts of SNAP payments in a particular region – the Portland Oregon urban core and its surrounding rural “periphery” in western Oregon and southwestern Washington.<sup>2</sup> Impact analyses typically focus on one or more of three outcomes: output, jobs and income. In this brief, we focus on the increases to household income generated by SNAP payments. Specifically, we highlight SNAP’s impact on household incomes in the Portland urban core and rural periphery, and in low-income, middle-income and high-income households in these economies.<sup>3</sup> SNAP has an economic impact

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1 The Food, Conservation, and Energy Act of 2008 was a \$288 billion, five-year agricultural policy bill. Nutrition programs accounted for two-thirds of Farm Bill spending and the Supplemental Nutrition Assistance Program (SNAP) was the largest of these programs, making up 95 percent of nutrition spending in the Farm Bill.

2 The impacts of SNAP payments in the Portland urban core extend beyond the “periphery” in western Oregon and southwest Washington because households in the Portland core that receive SNAP and the businesses where they spend the SNAP payments make purchases outside our “periphery.” These impacts are above and beyond the impacts reported here.

3 Our analysis is partial in that it examines only the distribution of benefits of SNAP expenditures and does not consider the distribution of costs of



in the Portland urban core that is larger than the value of the direct SNAP payments to households in the core. The economic impact of SNAP in the core includes the direct SNAP payments to core households, the multiplier effects of these payments to core households, and the spillover multiplier impacts of the SNAP payments to rural periphery households. The economic impact of SNAP on high-income households is primarily earned income generated through the spending and re-spending of SNAP payments.

## Case Study of the Portland, Oregon Economic Region

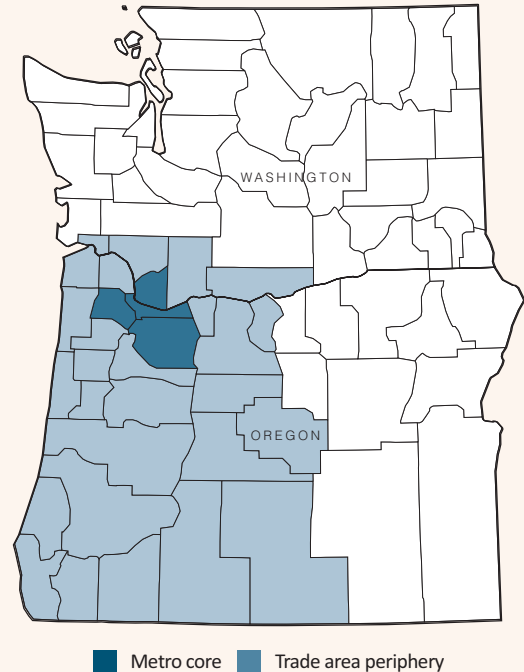
To study how food assistance to poor households spills over between the urban core and its relatively rural periphery and across household income groups, we constructed a Multiregional Social Accounting Matrix model (MR-SAM) for the Portland, Oregon, region and its core and periphery subregions. The core subregion consists of the four primary core counties in the Portland-Vancouver-Beaverton, OR-WA Metropolitan Statistical Area. The surrounding periphery subregion is the 27 counties that have historically been linked through trade with the Portland core<sup>4</sup> (Figure 1). The relatively rural periphery subregion includes Eugene and portions of southern and central Oregon, much of which is linked to Portland as a result of north-south travel on Interstate 5. In 2006, the Portland region had approximately 4 million people, 2 million in the core and 2 million in the periphery. Total personal income was \$144 billion in the Portland region, \$76 billion in the core and \$64 billion in the periphery.

We used 2006 IMPLAN database and software to develop the core and periphery Social Accounting Matrices. We used data from IMPLAN regional trade reports to estimate core-periphery trade, and from the U.S. Bureau of Economic Analysis to estimate core-periphery labor and earn-

paying for the program; the analysis ignores any changes in taxes for taxpayers in the region that would result from changes in SNAP spending in the region.

4 The Portland region as defined here consists of the Portland and Eugene Economic Areas as defined by the US Bureau of Economic Analysis (U.S. Department of Commerce, Bureau of Economic Analysis, 1975).

Figure 1. Portland Core-Periphery Region



ings flows. Details of model construction are presented in Holland et al. (2009) and Lewin (2011).<sup>5</sup>

## Impact of SNAP in the Portland, Oregon Core and Periphery

With this model, we analyze how SNAP payments to low-income households<sup>6</sup> in the core or periphery affect

5 The model captures pre-recession economic relationships. The model we used to calculate the impact of SNAP assumes that prices are not affected by SNAP transfer payments (no supply constraint), that households consume goods always in the same proportion (expenditure functions for each income group do not change), that industries face fixed commodity input structures (production functions do not change) and that output will increase proportionally to an increase in inputs (if all inputs double, output will double). These assumptions are reasonable if the transfer of SNAP is small for the size of the economy and industrial inputs are tradable, which is the case in the Portland core-periphery region. SNAP transfer payments in 2006 represented 0.11 percent and 0.23 percent of total purchases in the core and periphery, respectively.

6 In Oregon, households whose adjusted incomes are below 130 percent of the Federal poverty guideline are eligible for SNAP. In 2011, the federal poverty guideline for a family of four was \$22,350, so that

incomes of all income groups in both core and periphery of the Portland core-periphery region. To estimate the economic impact of SNAP, we used the Consolidated Federal Funds Report (U.S. Department of Commerce, Bureau of the Census, 2007) to get information about the amount of total direct SNAP payments by county. In 2006, SNAP payments to households totaled \$191.2 million in the core and \$312.9 million in the periphery.

### Who receives SNAP Payments?

We examined the distribution of SNAP benefits across income groups in the 2005–2007 PUMS of the American Community Survey (U.S. Department of Commerce, Bureau of the Census, 2008b). According to the American Community Survey, two-thirds (67 percent) of SNAP benefits are received by households with incomes below \$25,000 per year, and approximately 90 percent of benefits are received by households with income under \$50,000 per year. Since the average household size in Oregon is 3 persons, and since the official income level of poverty in 2006 for a family of 3 people was \$16,600, one would expect that the entire group of beneficiary households would be below \$50,000 per year. Because the Census definition of households used in the American Community Survey differs from the definition of households used in determining SNAP eligibility, it is likely that some low-income SNAP recipients may have been part of higher-income Census-designated households. Furthermore, there is a lot of income volatility in the U.S. population, so it is plausible that some medium-income households had temporarily low incomes due to short-term losses that qualified them for SNAP for part of the year.<sup>7</sup>

In order to estimate how food assistance affects the income of each income group, we multiply the amount of

families of four persons with adjusted incomes below \$29,055 would have been eligible for SNAP. The specific criteria for eligibility have varied over time, as for example during the recent implementation of ARRA, in which eligibility threshold was increased temporarily to 185 percent of the federal poverty guideline.

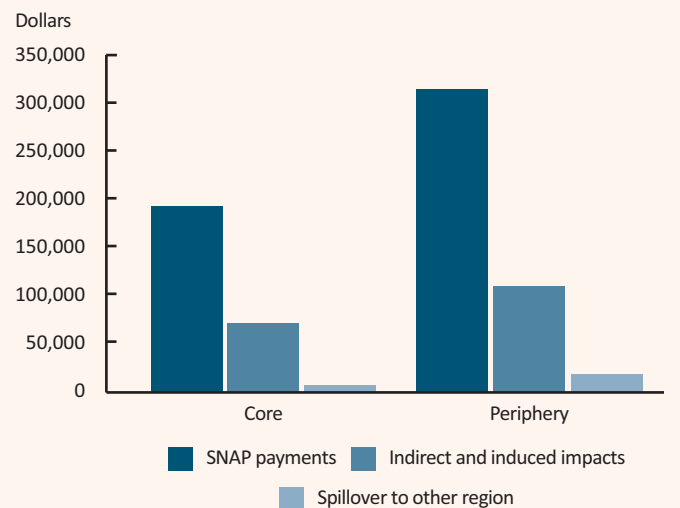
<sup>7</sup> The Economic Security Index website produced by the Institution for Social and Policy Studies at Yale University, for example, indicates that almost 20 percent of Oregonians lost one quarter or more of their income in 2006. See Hacker et al. (2010a) for the report and Hacker et al. (2010b) for the technical report about the construction of the index, and the ESI website (<http://www.economicsecurityindex.org/?p=usmap>) for the data.

SNAP benefits received by each household group by that group's household income distribution impact multiplier. This way of estimating impacts assumes, among other things, that households spend SNAP benefits as if they were an unrestricted addition to household income, i.e. that the increase in SNAP benefits is spent across the entire range of goods and services consumed by the household.<sup>8</sup> See Lewin (2011) for a fuller explanation of how impacts were estimated across the income distribution.

### SNAP Payment Impact on Core and Periphery Incomes

The \$191 million in SNAP payments to households in the Portland core boosted household incomes by an additional \$70 million in the core and \$6 million in the periphery. Similarly, the \$313 million in SNAP transfers to households in the periphery expanded household incomes by an additional \$108 million in the periphery and \$18 million in the core (Figure 2).

Figure 2. Impacts of SNAP Payments on Core and Periphery Regions, 2006



<sup>8</sup> Hanson (2010) indicates that “As stipulated by program rules, recipients spend all the benefits on food at home, but empirical research finds that recipients shift some cash income that was being spent on food into non-food expenditures upon receiving the benefits. Consequently, food expenditures increase by only a percentage of the total increase in benefits, while nonfood expenditures increase by the remaining amount” (p. 8).

Because SNAP payments are larger in the periphery and because periphery businesses and households make a relatively large share of their purchases in the Portland core, spillover impacts in the core from periphery SNAP payments are much greater (three times larger) than spillover impacts in the periphery from core SNAP payments. Nonetheless, because spillovers are a relatively small share of the total impact, about 60 percent of the both SNAP payments and the total income impact of SNAP in the periphery go to periphery households.

*SNAP Payment Impact on Low-Income Households*

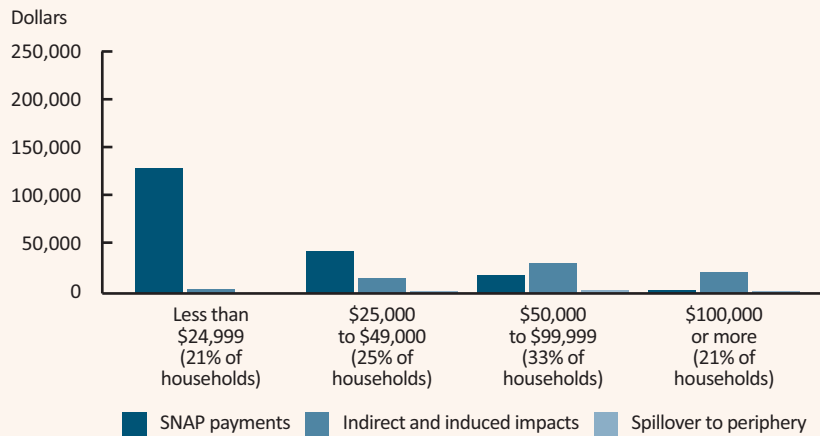
Households with incomes below \$25,000 comprise slightly more than one-fifth of the Portland core households and one-quarter of periphery households (Figures 3 and 4). These households receive about two thirds of the SNAP payments in both core and periphery but receive less than 10 percent of the indirect and induced income impacts. Just less than half of the total impact of SNAP in the Portland core-periphery region accrues to these households.

*SNAP Payment Impact on Higher-Income Households*

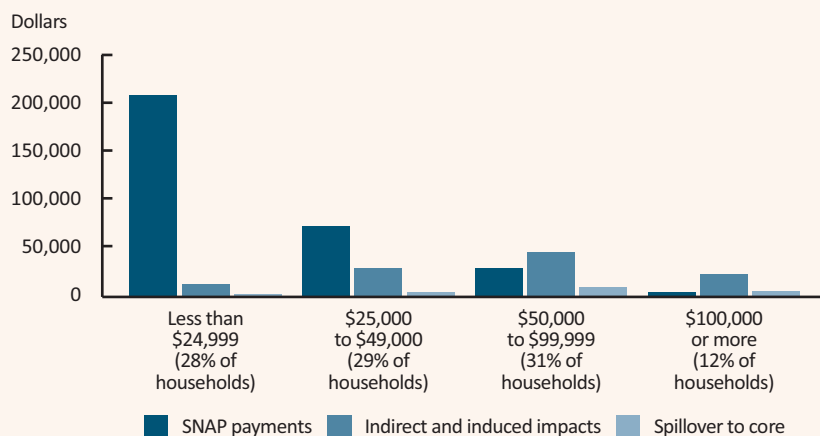
Higher-income households comprise about three quarters of the population. Although they only receive one third of the SNAP payments, they get over 90 percent of the indirect and induced income impact and just over half of the total income impact of SNAP payments in the core-periphery region. Upper-middle income households (\$50,000 to \$99,999 annual income), with slightly less than one-third of the population, receive less than 9 percent of SNAP payments but about 44 percent of the indirect and induced and spillover impacts and 19 percent of total impacts. Households with incomes of \$100,000 or more receive less than 2 percent of SNAP benefits but they obtain over 30 percent of the indirect and induced impacts and 8.6 percent of the total economic impact of the program.

Another way of thinking about the distributional impacts of SNAP is to examine the average indirect and induced impact of SNAP payments on different income groups. High-income households received larger average economic benefits from the extra economic activity generated by SNAP than lower-income households. Households in the highest-income group in the core received an average indirect and induced income increase per household from SNAP benefits paid in the core of \$137 while the

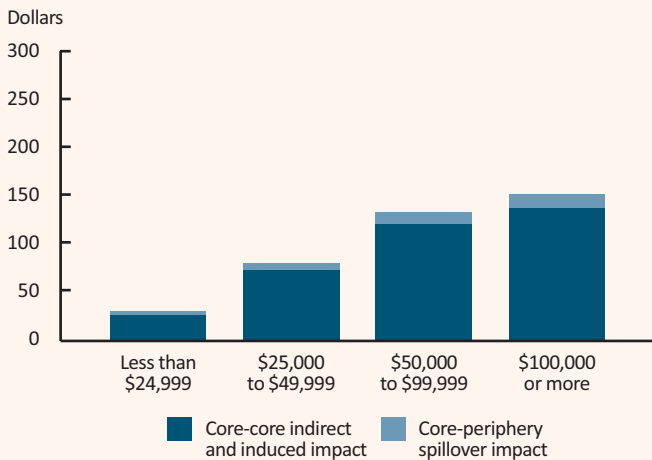
**Figure 3. Impacts of Core SNAP Payments by Household Income Group, 2006**



**Figure 4. Impacts of Periphery SNAP Payments by Household Income Group, 2006**



**Figure 5. Average Indirect, Induced and Spillover Impact of Total SNAP Payments in the Core, 2006**



poorest households obtained an average of \$25 (Figures 5 and 6).

The average indirect and induced income increase per household for high-income households in the periphery from periphery SNAP payments was \$250 while the poorest households obtained an average indirect and induced income impact of \$48 per household.

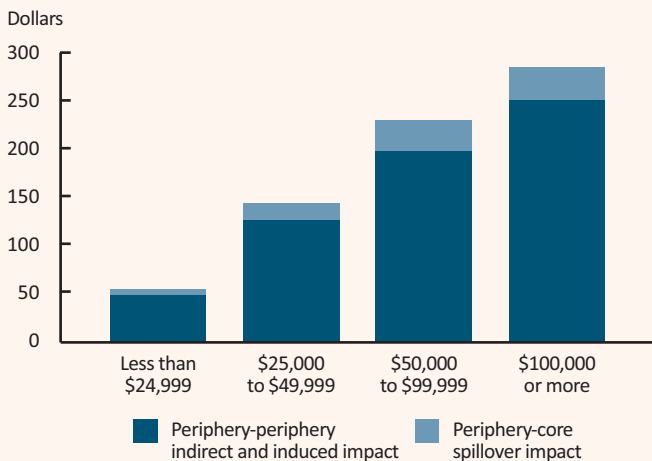
### Conclusion

In 2006, households in the Portland core-periphery region received \$504 million in benefits from the Supplemental Nutrition Assistance Program. Of this amount, \$191 million went to households in the Portland-metro core and \$313 million went to households in the periphery.

In this brief, we examined the extent to which household incomes in the core increase because of food assistance to (primarily) low-income households in the periphery as well as from food assistance in the core. Food assistance program spending generates a significant amount of local re-spending and some of the benefits spill over between core and periphery. Because of these spillovers, core households benefit more from a given level of SNAP payments in the periphery than periphery households benefit from the same level of income transfer in the core. Furthermore, high-income households benefit more on average than low-income households from the indirect and induced economic impact of SNAP.

In summary, food assistance programs benefit more than their direct target population. SNAP programs affect incomes not only in the area where the SNAP recipient lives but also in regions that are economically linked to that area. SNAP payments generate sizeable positive economic impacts for households in all income groups, not only for the low-income households. ■

**Figure 6. Average Indirect, Induced and Spillover Impact of Total SNAP Payments in the Periphery, 2006**



## ACKNOWLEDGMENTS

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## FOR FURTHER READING

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