7. Conclusion

In this paper we analyze time series of the underlying FSP and AFDC/TANF caseload data assuming they behave like integrated processes. An examination of the lag structure of previously estimated FSP caseload equations indicated a high degree of persistent in the caseload data. This result suggests that a root in the dynamic structure is close to, or perhaps, equal to one. Formal tests of the hypotheses that these data were generated by unit-root processes could not be refuted.

Tests of cointegration are used to test specifications of the FSP caseload equation for completeness. These tests find strong evidence that AFDC/TANF caseloads must be included, along with measures of economic activity, in the FSP caseload equation in order to define a long-run equilibrium (cointegrated) relationship. This result implies that specifications of the FSP caseload equation that include measure of economic activity but fail to include AFDC/TANP caseloads may be spurious. Regression estimates of the FSP caseload equation that do not include AFDC/TANF caseloads will, therefore, imply coefficients that vary over time and *do not* converge to the true relationship. This means larger sample sizes *will not* improve model performance. In such a case, reliable measures of the extent to which the economy has affected FSP caseload cannot be made. Nor is it possible to obtain reliable predictions of how changes in the economy are likely to affect future FSP caseloads.

When the effect of AFDC/TANF caseloads is added to the FSP caseload regression evidence of a long-run (cointegrated) relationship connecting FSP caseloads with the economy is found. The existence of such a relationship between *long-run* or *permanent* components of the economy and the *long-run* or *permanent* component of FSP caseloads implies that even short-lived economic benefits can result in *permanently* lower FSP caseloads. This finding implies that the robust economy of the 1990's, by itself, resulted in a lower *long-run or permanent* level of FSP caseloads than would otherwise have been observed. It is hypothesized that this lower level of FSP caseloads is associated with the added work experience the FSP-eligible population gained during the economic expansion.

The requirement that the effect of AFDC/TANF caseloads be included in the FSP caseload equation in order to achieve cointegration implies that it is not possible to calculate the full impact of the economy on FSP caseloads using estimates of only the FSP caseload equation. This is a consequence of the fact that AFDC/TANF caseloads are themselves a function of economic variables. At best only a partial measure of the economy's effect on FSP caseloads can be obtained if the analysis is limited to just the FSP caseload equation. What are required in order to estimate the total effect of the economy are estimates of a (cointegrated) system of FSP and AFDC/TANF caseloads equations. The total effect of the economy on both FSP and AFDC/TANF caseloads could then be calculated from the resulting reduced form.

Our test results also indicate that the common practice of including year effects (annual dummy variables) or state-specific time trend in the FSP caseload equation may over-control for omitted variables. Instead, trends in the regressors should be allowed to explain trends in the caseload data. Both Wallace and Blank and Schoeni have expressed concern with the inclusion

of various time trends in the FSP caseload equation, suggesting, in particular, that such trends might affect measures of the importance of the economy and welfare reform. Our results indicate that this is a legitimate concern.