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## Session 7: Multilateral index methods

*Substitution bias in multilateral methods for CPI construction using scanner data*

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The use of multilateral comparison methods in a time series context is increasingly becoming an accepted approach for incorporating scanner data in a Consumer Price Index. The attractiveness stems from the ability to be able to control for chain drift bias. Consensus on two key issues has yet to be achieved: (i) the best multilateral method to use, and (ii) the best way of extending the resulting series when new observations become available. This paper presents theoretical and simulation evidence on the extent of substitution biases in alternative multilateral methods. The multilateral index number formulae studied include the GEKS, CCDI, Geary-Khamis and Weighted Time Product Dummy Methods as well as some price similarity linking methods. The paper also assesses alternative methods for extending non-revisable series, with particular regard to the possibility of introducing chain drift bias. Overall, our results suggest the use of the CCDI index with a new method, the "mean splice", for updating.