The treatment of unmatched items in rolling year GEKS price indexes:
Evidence from New Zealand scanner data

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Geneva, May 2012
% June 2008 models still available
Churn

Geneva 2012
Digital cameras
GEKS method

Superlative bilateral index (fisher, tornqvist etc) jan-mar ‘SI(1.3)’ based on only.

GEKS(1.3) = [SI(1.1)/SI(3.1) x SI(1.2)/SI(3.2) x SI(1.3)/SI(3.3)]^(1/3)

.. So all possible matches in the entire time series are used.
Imputation Tornqvist RYGEKS
(the weighted time dummy method)

\[ P_{TD}^{0t} = \exp \hat{\delta}^t = \prod_{i \in U_0^t} \left( \frac{p_i^t}{p_i^0} \right)^{s_i^t/s_i^0} \prod_{i \in U_D^{(t)}} \left( \frac{\hat{p}_i^t}{p_i^0} \right)^{s_i^t/2} \prod_{i \in U_Y^{(t)}} \left( \frac{p_i^t}{\hat{p}_i^0} \right)^{s_i^t/2}. \]
Geneva 2012
Volatility

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Aggregated to ‘consumer electronics’