variables only. Results of these two experiments are now discussed.

Table 2: Wu-Hausman test of weak exogeneity

	Type of equation	
Variables	*Co-integrating Equation*	*ECM**
Income	3.92	0.37
Price	2.43	0.982
Population	0.009	0.465
All Regressors	1.24	0.591

Source: Author's Computation.
Note: * We apply this test to the unrestricted ECM (see Table 3)

In table 2, neither of the Wu-Hausman test statistics reported is significant at the 5 per cent level. Hence, we conclude that the variables used in both equations are weakly exogenous and the estimates are therefore efficient.

In the ECM we determine the optimal lag-length of each of the explanatory variables according to the AIC, and this turns out to be 4 in an unrestricted model. However, we apply Hendry's General to Specific approach subsequently to capture the relevant short run dynamics and eliminate insignificant variables through the re-estimation of the ECM in a restricted form. The general specification for this ECM is given by:

$$\Delta LogG = \sum_{j=1}^{4}\chi_j \Delta LogG_{t-j} + \sum_{k=1}^{4}\phi_k \Delta LogY_{t-k} + \sum_{l=1}^{4}\varphi_l \Delta LogP_{g,t-l} + \sum_{m=1}^{4}\omega_m \Delta LogN_{t-m} \qquad (12)$$
$$+\sigma LogG(-1) + \mu LogY(-1) + \zeta LogP_g(-1) + \pi LogN(-1) + \xi_t$$

To obtain the long run elasticities, we re-parameterise equation (10) as follows:

$$\Delta LogG = \sum_{j=1}^{4}\chi_j \Delta LogG_{t-j} + \sum_{k=1}^{4}\phi_k \Delta LogY_{t-k} + \sum_{l=1}^{4}\varphi_l \Delta LogP_{g,t-l} + \sum_{m=1}^{4}\omega_m \Delta LogN_{t-m} \qquad (13)$$
$$+\sigma[LogG(-1) + (\mu/\sigma)LogY(-1) + (\zeta/\sigma)LogP_g(-1) + (\pi/\sigma)LogN(-1)] + \xi_t$$

In equation (13), the speed of adjustment of the dependent variable towards the long-run relationship following any temporary deviation from this relationship is given by σ. Moreover, the long run elasticities are tracked by (μ/σ) for income, (ξ/σ) for price and (π/σ) for population. We wish to point out at this stage that to strengthen our reliability on the above approach in an empirical context, a non-nested test is also performed between the single-step model (Equation (12)) and the two-step model (the standard Engle-Granger's ECM). Based on both AIC and J tests, the single-step ECM model is favoured; and the above equation is empirically estimated. The results are displayed in Table 3. An analysis of the diagnostics clearly reveals to what extent the elimination