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Scotland as an Optimal Currency Area

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Aims and Objectives

- ❖ To test whether the UK currency and the UK currency minus Scotland are consistent
- ❖ Does Scotland form an optimal currency area?
- ❖ Should an independent Scotland join the Euro?
- ❖ The future?

Introduction

- ❖ The 23 June 2016 referendum on EU membership has reopened the issue of independence of Scotland from the UK
- ❖ First referendum held on 23 September 2014 where independence was defeated by a 55.3% to 44.7%.
- ❖ The "No" side won, with 2,001,926 (55.3%) voting against independence. 1,617,989 (44.7%) voting in favour of independence.
- ❖ The turnout of 84.6% was the highest recorded for an election or referendum in the United Kingdom since the introduction of universal suffrage.
- ❖ The Scottish government published its draft bill on a second independence referendum in October 2016.

Introduction

- ❖ More can be gained for the people who live in Scotland in terms of wealth, talent and resources through a stronger economy
- ❖ Tackling the inequalities will enhance the competitive position by increasing opportunity and participation
- ❖ A Scottish government would be empowered to have discretion over fiscal policy to allow greater independence

Introduction

- ❖ If Scotland charts a course of independence from the rest of the UK, then they would likely either issue their own currency or join or form another currency area.
- ❖ We test the microeconomic foundations of a common currency area for Scotland, UK and the UK without Scotland.

Scottish notes are backed



- In The Bank of England's vaults are a small number of very large banknotes. Called "giants" and "titans", they are not in circulation for good reason - each is worth a sum of money most of us can only dream of.
- The £1m pound note - known as a "giant" - is not in circulation and it is inconceivable it will be made available from cashpoints.
- Would we risk carrying one around in our wallet, let alone have sufficient funds in our account to get one out?
- **No ordinary notes**
- 4,040 giants and titans printed, total value £8bn
- Titans are A4 size, giants are A5
- First giant was sanctioned in 1908
- Made from different material to normal notes, and printed in Bank of England itself
- The monetary value of the giant is relatively small compared to the "titan" - a banknote that promises to pay its bearer £100m.

Introduction

- Benefits of common currency area:
 - No transaction costs
 - No currency fluctuations
 - Price transparency
 - National money seems empirically to act as a significant barrier to international trade (Rose and Wincoop, 2001)

Introduction

- Costs of common currency area:
 - Loss of domestic monetary control and seigniorage for each country
 - Huge constraints for an economy in terms of borrowing constraints
 - Trade-offs between exchange rate flexibility and monetary policy autonomy are examined in detail in Fratzscher (2002)

Introduction

- Macroeconomic foundations of Common Currency Area
- They consider mostly the political criteria that influence monetary policy
- The direction of this thinking runs opposite to the idea that the determination of what actually constitutes money depends on the decisions of the people of a particular nation or nations

Findings

- We find that the UK without Scotland meets the microeconomic criteria for a common currency area.
- We find tentative evidence against the UK and Scotland each alone forming a common currency area. We also find differences in the UK less Scotland and Scotland economies in loan data.
- We further find that neither the euro bloc nor the euro bloc including Scotland meet the microeconomic criteria for a common currency area.

Weak Separability of $U(\cdot)$

Definition (Blackorby et al 1978)

Let $u(x)$ be a utility function over x , an arbitrary group of goods. The utility function is *weakly separable* in an arbitrary subgroup of goods, y , if there exists a subutility function $V(y)$ and a macrofunction $U(V(y),z)$, such that $u(x) \equiv U(V(y),z)$.

Note partition of x -goods into y -goods and z -goods

Revealed Preference Tests

- ❖ Non-parametric tests
 - Requires only a limited number of observations
 - No estimation involved, or choices about functional form

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 - Requires only a limited number of observations
 - No estimation involved, or choices about functional form
- ❖ Revealed preference test is a three part test
 - Test if the goods in the hypothesized utility function are consistent with GARP
 - Test whether the data in the hypothesized subutility function are consistent with GARP
 - Test a sufficient, but not necessary, condition for weak separability that is whether the data with the goods in the hypothesized subutility function replaced by an aggregate good calculated using the Afriat inequalities are consistent with GARP.

Varian (1982,1983)

- ❖ Implemented in **nonpar** software
 - Test is sequential and does not require a common functional form or large numbers of observations

Data

- The data used in this paper for the UK and Scotland are from the Office of National Statistics, the NOMIS – Official UK Labour Market Statistics and the Bank of England Interactive Database.
- These data are quarterly observations on consumption and monetary asset from 2009Q4 through 2015Q4.

Data

- Gross value added - UK, Scotland, Euro bloc
- Consumer price index -UK, Scotland, Euro bloc
- Population - UK, Scotland, Euro bloc
- Labour hours worked - UK, Scotland, Euro bloc
- Wage rate - UK, Scotland, Euro bloc
- Notes and coins - UK, Scotland, Euro bloc
- Benchmark rate - UK, Scotland, Euro bloc

Weak Separability Results

Reveal Preference Test Results

<i>Area</i>	<i>Utility Function</i>	<i>Subutility Function</i>	
	<i>GARP(Number of Violations)</i>	<i>Necessary</i>	<i>Afriat Sufficient</i>
UK	Y (2)	-	-
Scotland	Y(2)	-	-
UK without Scotland	Y	Y	Y

Note Y implies the condition is met and N means a condition is not met. The reader is reminded that the Afriat sufficient condition is not necessary and that other sufficient conditions might hold.

Results

- ❖ We also looked at some bank lending data for Scotland and the UK without Scotland to test whether lending in Scotland and the rest of the UK are statistically different from each other.
- ❖ The test strongly rejects the null hypothesis that the samples have the same median and we conclude that loans are different in Scotland and the rest of the UK.
- ❖ This result suggests differences in the economies meaning that the UK including Scotland is not a common currency area.

Conclusions

- ❖ The UK without Scotland meets the microeconomic conditions for a common currency area.
- ❖ Our results also tentatively suggest that the UK as currently constituted and Scotland by itself do not form a common currency area.
- ❖ If we drop offending observations, the revealed preference evidence against a UK or Scottish common currency area is in our view tentative.
- ❖ By going it alone, the people of Scotland would be imposing unnecessary transactions costs on themselves and the people of the rest of the UK.
- ❖ Finally, banking data suggest that lending in Scotland is different from lending in rest of the UK.

Thankyou

Questions?