Regional integration
and the effect of currency arrangements
on bilateral trade

The case of Oceania

Laïsa ROI
Groupe de Recherche en Economie Théorique et Appliquée
UMR CNRS 5113 – Université Montesquieu Bordeaux 4 (France)
Oceania Island Countries (OIC)

• Focus on 22 OICs:
  
  – 14 Pacific ACP countries
  
  – 8 other OICs
    • Guam, Northern Mariana Is., New Caledonia, Pitcairn Is., French Polynesia, American Samoa, Tokelau & Wallis-and-Futuna
Oceania trade

• OICs main trading partners: Australia and New Zealand

• Increasing trade surpluses with Asian neighbors

• The intra Oceania share of total trade hardly reaches a few percents
Oceania regional trade integration

• Expansion of OICs market for trade through regionalism (WB, 2002):
  – Stepping stone to a deeper integration into the world economy
  – Aimed at overcoming the slight size of OICs internal markets

• Pacific Agreement on Closer Economic Relations (PACER, 2002) and optimal trade negotiation agenda (Nathan, 2007):
  – (1) intra OICs
  – (2) with ANZ
  – (3) with other developed countries

• Pacific Island Countries Trade Agreement (PICTA, 2006)
  – Intra Oceania free trade area in goods: phased tariff reduction
  – Intended to cover services and to be extended to all OICs
Exchange rate regimes and trade

• Flexible *versus* Fixed exchange rate regimes

• « Fear of floating » (Calvo & Reinhart, 2002), especially in the case of developing open economies:
  – Imported inflation
  – Exchange risk
  – Increased transaction costs

• Assuming aversion to uncertainty, fixed exchange rate regimes should act as a stimulation for both trade and investment
Trade and monetary integration

• Formal trade integration is managed collectively on a regional basis

• But paradoxically, **monetary integration** stands out of the scope of Oceania regional integration

• If both phenomena are complementary, the current process of “Oceania region building” should take the currency dimension into account. This complementarity is the postulate investigated in this paper.
The gravity equation of trade and integration

• By analogy with Newton’s Law of Universal Gravitation, bilateral trade may be related to factors impeding trade versus factors inducing trade. These latter may pertain to:
  – (former) colonial links (Eichengreen & Irwin, 1996)
  – Regional trade integration (Frankel et al., 1996)
  – Monetary integration (See Baldwin 2006 for a review)

• Rose (2000) estimated through a gravity equation that currency union (CU) would exert a tripling effect on bilateral trade. But strictly speaking, there is no CU in Oceania (no common monetary policy)

• However, a typology in Bilateral Currency Arrangements (BCA) may be inferred from exchange rate regimes at the country pair level. Following Adam & Cobham (2007), the impact of BCAs on bilateral trade may then be estimated through the gravity equation.
Oceania Bilateral Currency Arrangements (BCA)

• Wide variety among currency arrangements at the country level both in terms of:
  – The degree of fixity in exchange rate regimes
  – The underlying anchor(s)

• Both criteria are combined at the country pair scale in the typology in Oceania BCA, in order to distinguish Fixed BCA from Flexible BCA.

• BCAs and indicator variables of (former) colonial links and of regional trade integration are finally redefined as to be mutually exclusive:
  – Trade effect of combined currency and political links
  – Trade effect of strict currency links
Econometrical constraints

• The panel gravity equation should include country fixed effects in order to control for Multilateral Trade Resistance (Anderson & Van Wincoop, 2003)

• Alternative: country pair fixed effects addressing (even unobservable) heterogeneity (Cheng & Wall, 2005)

• There may be endogeneity between trade, monetary and political links at the country pair level (Méritz, 2001)
Estimation

- **Oceania gravity equations** are estimated by Panel Least Squares with Dummy Variables. Estimation uses Newey West heteroskedasticity and autocorrelation-consistent covariance matrix estimator.

- The required economic and trade data are available from the PRISM, the IMF-DOTS and the IMF-IFS for 13 OICs out of 22 over the period 1980-2005.
Regression results of gravity equations with BCA

• The coefficients on the control variables have the expected signs and are robustly estimated.

• The coefficients on BCAs are jointly significant:
  – Flexible BCA exert a centrifugal trade effect
  – Fixed BCA exert a centripetal trade effect, especially when both countries have the same exchange rate regime \((q_{asame} \text{ and } q_b)\) and when the anchor is either the USD or the French franc/euro \((q_{ae}cu \text{ and } q_{au}sd)\).

• However, those BCAs may reflect country pair characteristics inducing trade while having nothing to do with currency features, such as colonial paths.
Regression results of gravity equation with redefined BCA

• The same results hold for most of the control variables.

• Quite intuitively, the trade effects of a Fixed BCA are all the more important that it is combined with either colonial links or formal trade integration, especially when exchange rate regimes are distinct from one another (*cqabsame* and *sqabsame*).

• On the contrary, the combined and strict effect of a Fixed BCA are comparable when both OICs have a pegged exchange rate with a basket of anchors (*cqb* and *sqb*).
Conclusion and further research

• The available data on intra Oceania trade over the period from 1980 to 2005 suggest that OICs sharing the same anchor tend to trade more with one another than with OICs with separate or no anchor. This pro trade effect is all the more sizeable that (former) colonial links or formal regional trade integration prevail.

• This shed light on the perspective of a deepening in Oceania regional integration via a process of monetary integration based on the emergence of a common (set of) anchor(s) for Oceania.

• The inverse causality (from trade to monetary integration) has thus to be addressed through further research, i.e. the choice of a common exchange rate regime for Oceania.