CANADA SHOULD OPT FOR COMMON CURRENCY WITH THE US OTHERS WILL FOLLOW.

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I. Introduction.

Focus - currency union between Canada and US. Multilateral start of Nauro – not likely: other countries – too poor.

Ratio of per capita GDP:

Poorest/richest Euro member	2/3
Canada/US	2/3
Mexico/US	1/4
Chile (Argentina)/US	1/3

Usually consider a menu of options. But:
- fixed exchange rate – insufficient reserves;
- unilateral adoption of $US – not feasible politically.

$\Rightarrow$ will concentrate on common currency.

Common currency is a permanent arrangement, and so should evaluate long-term effects.

Conclusion: Canada should opt for common currency with the US; other countries will follow.

Paraphrasing Barro (1999):

"[North-American] dollar will rule from Iqaluit to Terra del Fuego"

Organizing Framework

Alesina and Barro (2002):

Three criteria a country should meet to benefit from a currency union:

1. Be a small open economy with trade concentrated on the potential currency union partner;
2. Have a history of high inflation;
3. Have a business cycle which is sychronized with that of the potential partner.

Criterion	**SOE, concentrated trade**	**High inflation**	**Synchronized cycle**
Does Canada meet?	Yes, more than any other country	No	Not really
Common currency beneficial?	Yes, more than any other country	Yes	Definitely yes

Argument - based on one fact, two propositions and a theory.

II. Fact: Canada's foreign trade is the most concentrated in the world.

	Total exports	Exports outside US	Share of external exports
Canada	396,298	49,841	1/8
Ontario	206,729	13,421	1/15
New Zealand – Australia			4/5
Portugal – EU			1/5
Switzerland – EU			1/3

Under flexible rates – smaller fluctuations against other currencies.
Since May 2002 $US lost 20% to the Euro, $Can lost only 10%.

Corollary: Other than for the US, Canada is a closed economy.

Exports outside North-America ≈6% of GDP
Smaller proportion – only Greece, Portugal, Spain.

Conclusion:

from the point of view of international trade, Canada's trade is concentrated without parallel elsewhere and so, on this criterion, it is a prime candidate for a currency union.

What may the Canadian economy look like after 20-30 years of currency union?

Rose (2002) and others: common currency increases trade by over 200% (100%)

Trade volume effect	Implied GDP increase	Share of exports to US in GDP
200%	80%	67%
100%	40%	57%

If 200% increase: trade within Canada still proportionately five times larger than with the US (McCallum, 1995, Helliwell, 1996).

Overall - an attractive prospect.

III. Proposition 1: Canada is no Switzerland.

15 years ago John Crow changed the course of monetary policy. The goals:

- low inflation,
- inflation targets
- transparency and accountability.

Switzerland of the Americas - SOE with sound monetary and fiscal policy, low and stable inflation

$\Rightarrow$will attract foreign portfolio investment and lead to low interest rates.

Goals of policy – exceeded:

- in the last 12 years monetary policy in Canada was outstanding: low, stable inflation at the lower end of the target range;
- in addition - dramatic fiscal improvement.

But interest rates higher than in the US (even though $CAN – significantly undervalued).

Possible explanations:
- to become Switzerland need to run good policy longer (400 years?)
- size.

Investors contemplating North America see the US market first:
- very liquid,
- information – easily available
- lots of specialists.

Need to be offered a premium to invest in other countries.

Corollary: US will, on the average, have lower inflation rates than Canada.

- more conservative population;
- competition with European Central Bank.

Conclusion: little chance of becoming the Switzerland of North America.

What would happen under a currency union? Canadian interest rates would quickly fall to the US level. The average inflation rate can be expected to be lower. Again, an attractive prospect.

IV. Proposition 2. Flexible exchange rate operates as an insurance scheme and propagates the wrong industrial structure in Canada.

The main argument for a flexible exchange rate in Canada: smoothes output fluctuations.

Canada – a resource economy; business cycle – not synchronized with the US.

Exogenous resource prices decrease
$\Rightarrow$currency depreciates
$\Rightarrow$ economy more competitive
$\Rightarrow$ decline in output smaller than under fixed rates.

But – this is actually harmful to the Canadian economy.

Argument – easily applied to any developed country which exports significant amount of raw materials, i.e. Norway, Australia or New Zealand.

Two omissions in the argument:
(i) as terms of trade for developed countries do not have a unit root, must consider a positive resource shock:

Exogenous resource prices increase
$\Rightarrow$currency appreciates
$\Rightarrow$ economy less competitive
$\Rightarrow$ increase in output smaller than under fixed rates.

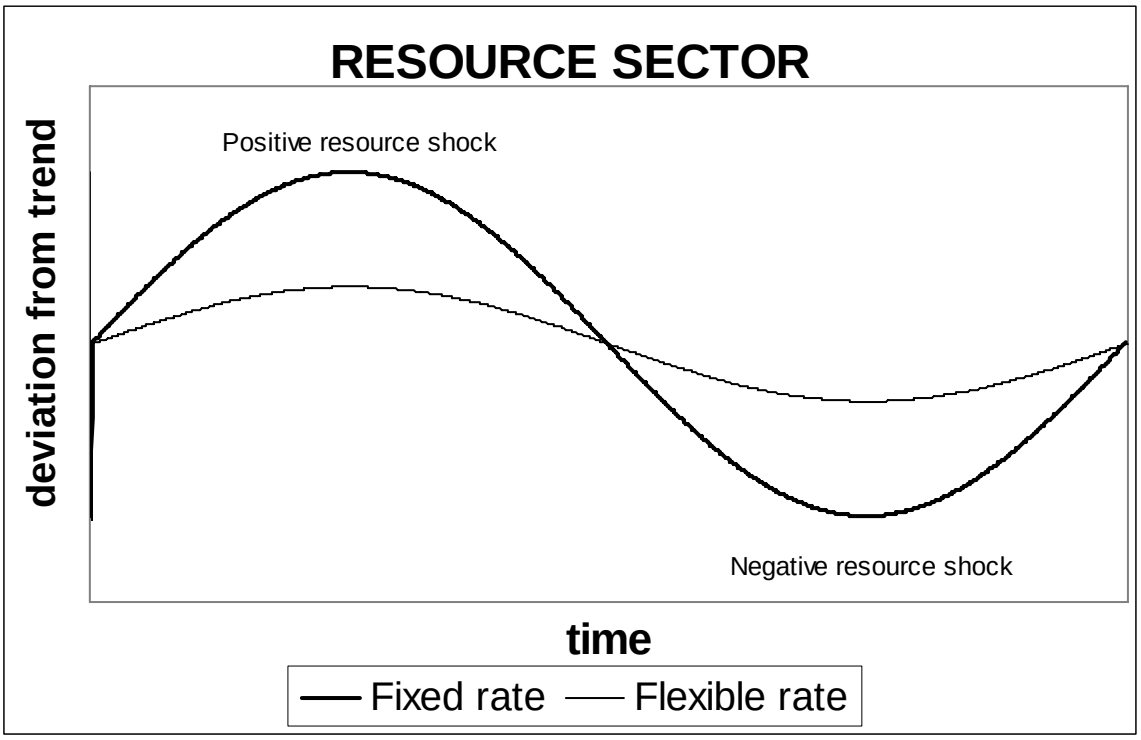
(ii) the story does not address the effect of these changes on the rest of the economy:

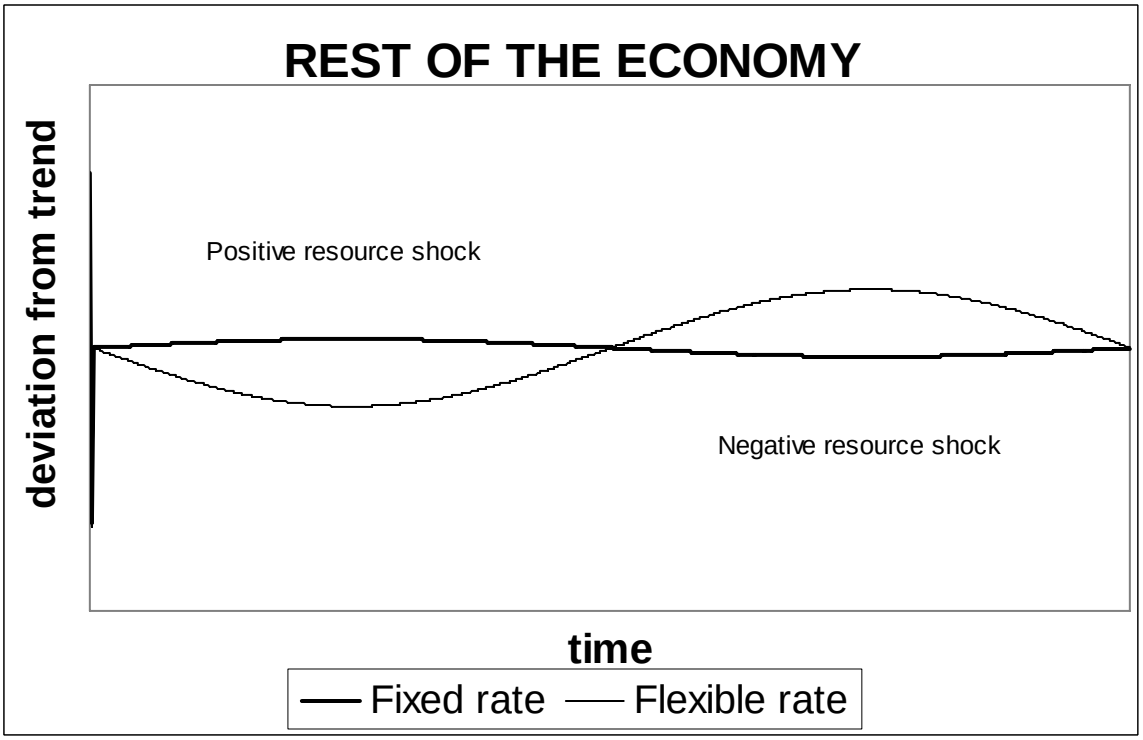
Exogenous resource price decrease
$\Rightarrow$currency depreciates
$\Rightarrow$exports and output in the rest of the economy rise;

Exogenous resource price increase
$\Rightarrow$currency appreciates
$\Rightarrow$ exports and output in the rest of the economy fall.

Corollary: the main effect of the flexible exchange arrangement is to reduce the variability in the resource sector at the expense of higher variability in the rest of the economy.

Figure 1


RESOURCE SECTOR
deviation from trend
Positive resource shock
Negative resource shock
time
Fixed rate
Flexible rate


REST OF THE ECONOMY
deviation from trend
Positive resource shock
Negative resource shock
time
Fixed rate
Flexible rate

So: flexible exchange rate regime is a

forced insurance scheme without reserves.

Whenever the situation in the resource industries departs from trend, there is an offsetting transfer, financed by the rest of the economy.

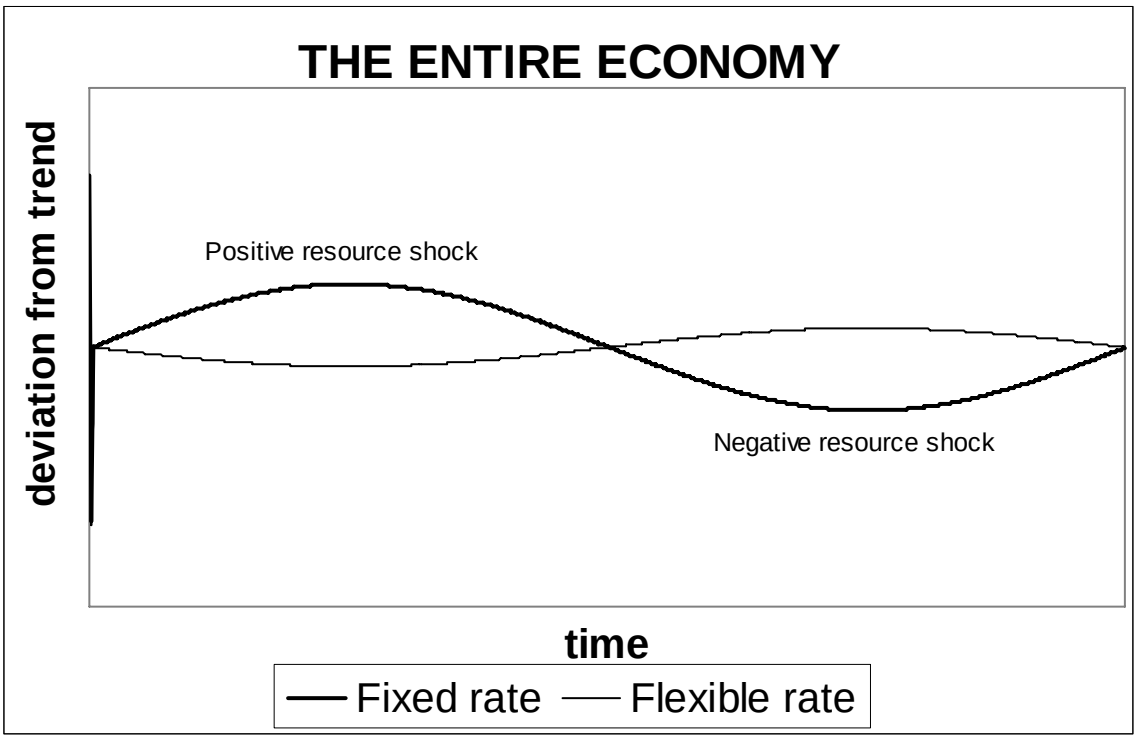
The appropriate question is whether such an insurance scheme is desirable.

Example:

Firms locating in Canada are affected by resource prices, firms locating in the US are not.

Potential benefit: stable aggregate GDP.

Figure 2



Is GDP stability through variability shifting beneficial?

Yes – if labour market adjustment is fast;
? – if labour market adjustment is slow – then it is again a forced insurance scheme without reserves.

A simple point: Such insurance scheme is inefficient.

Reducing variations of labour income in the two sectors over time can be better accomplished by an appropriately designed scheme, for example

employment insurance, rather than with the blunt instrument of an exchange rate arrangement.

Main problem: the insurance scheme perpetuates the wrong structure of the economy:

<u>the resource sector, which it supports at the expense of the rest of the economy, is a low growth sector.</u>

- improvements in exploration technology;
- conservation;
- changing structure of production:

steam engine $\rightarrow$car $\rightarrow$computer $\rightarrow$cell phone

Trend – likely to continue:

CDs$\rightarrow$hard drives, operating rooms $\rightarrow$nanorobots.

The nominal exchange rate taxes the rest of the economy to the benefit of the resource sector and promotes the role of resources in the Canadian economy

$\Rightarrow$ lower growth; obstacle to new, fast growing companies.

A computer company in San Francisco does not have to worry about the price of lumber; a computer company in Vancouver does

$\Rightarrow$ computer companies locate south of the border while lumberjacks locate north of the border.

The argument can be criticized on the basis of comparative advantage: it is good to have natural resources. This is where Canada's comparative advantage is and it should be supported.

But:

(i) if that is where comparative advantage is, there is no need to support the resource industries.

(ii) abundant resources may actually work to an economy's disadvantage.

4. A Theory of Comparative Disadvantage.

Simple growth model:

Two countries: *C* and *U*.
Two goods: lumber and computers, denoted *lum* and *com*.
Dixit-Stiglitz (1972) preferences – both countries produce varieties of good(s).
Two types of labour: *T* and *N*. *T* is scarce, *N* is abundant. Type *T* is more productive.
Production function for computers:

$$Y_{com}^{j} = F(T_{com}^{j}, N_{com}^{j}), \; j = C, U$$

Country C has an endowment of trees which are necessary to produce lumber and are not tradable.
Production function for lumber:

$$Y_{lum}^{j} = F(T_{lum}^{j}, N_{lum}^{j}, Tr)$$

Productivity depends on the ratio of type *T* to type *N* in the industry:

$$\frac{\partial Y_i^j}{\partial (T_i^j + N_i^j)} = H\left(\frac{T_i^j}{N_i^j}\right), \; i = com, lum$$

Given the endowment structure:
C produces computers and lumber, exports varieties of computers and lumber;
U produces computers and exports varieties of computers.

Growth rates of productivity are:

$$g_{com} > g_{lum}$$

Implications:

Country *U* has higher rate of growth and higher productivity.

The model is, I believe, a reasonable explanation of Canadian and US economic growth in the last 20 years. Canada has a large resource sector, which exists because resources are there.

Talented individuals in Vancouver may, reasonably, choose careers as geologists or foresters, while in San Francisco they are more likely to choose computer science, microbiology or nanotechnology.
Increasing returns, especially to talented individuals, in these industries.

Conclusion:

flexible exchange rates act as an insurance scheme, shifting variability from the resource sector to the rest of the economy, which is precisely the wrong thing to do.

What would happen under currency union? The resource sector will lose its harmful advantage over the rest of the economy and its role will diminish. The result will be faster economic growth.

V. Output variability may be larger under flexible exchange rates.

Variability shifting – sometimes detrimental.

A slowdown in the US economy $\Rightarrow$Greenspan reduces interest rates $\Rightarrow$ \$Can appreciates $\Rightarrow$Canadian producers less competitive $\Rightarrow$slowdown in Canada.

Similarly for an upturn in the US.

VI. A Simple Calculation.

How large are the potential benefits and losses from adopting a common currency?

Difficult question because of Lucas (1976) critique: under a common currency the behaviour of output in Canada will be quite different than today.

Common currency reduces trading costs - about 0.5% of the value of trade. For Canada it means about 0.2% of GDP.
I assume, conservatively, that it is 0.1% of GDP.

The present value of the gain is given by:

$$PV = 0.01 * GDP \int_0^{\infty} e^{(g-r)t} dt$$

g - the rate of growth of the volume of trade
r - the real interest rate.

Over 12/1952 to 12/2002 for exports volume from Canada to the US: g=6.3%

So the integral is unbounded.

Conclusion: The potential benefits are large.

VII. Other issues.

Canadian output variability: at present – 30% higher than in the US; probably no major changes.

Issues to be addressed if common currency is established:

- excessive dependence of Canada on trade with US;
- labour mobility.

US view:

- limited interest;
- may change if the Euro makes strides as an international currency.

Other countries:

– have higher inflation rates than the US;
- have lower share of trade with the US;
- alternative to resource sector is important.

Long term:

Common currencies will be established, especially since monetary policy directed towards controlling inflation.

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