

**Remarks of Jeff Frankel on May 26, 2009 in Washington, DC at the conference  
*Beyond the Fence: Research Lessons on How Immigration and Remittances Shape Global  
Development***

Thank you, Lant. I'll launch right into it. Yeah, the central title of my paper is "Are Bilateral Remittances Countercyclical." And so we are, as he said, moving into the macroeconomics of it.

Now, I was going to recite these statistics about how large remittances are and how important, but I think everyone here knows about it, and Dilip Ratha in the opening session gave statistics that were considerably more up to date than mine. So I'll skip those other than to say that for many countries it is a very high share of export – foreign exchange earnings, and even a high share of GDP in some. But the last point here – until recently macroeconomic aspects of remittances have been even more neglected than the economic study of migration in general.

And when I first started thinking about this, it was three or four years ago, and then the subject was really neglected. But it actually took me a while to get the time to write the paper, but also get the data, which is going to be a central point that you really need enough bilateral data. And by the time I had done it, I had found that quite a few other people have written some very good papers on the same subject. But I think it's the – on the dimension of the quantity of data that I've managed to put together that maybe my marginal academic contribution is.

So my hypothesis is that remittances can play the stabilizing role that capital flows are in theory supposed to play. In theory, capital flows should bring a variety of benefits. And there's three main categories of benefits that I want to mention. First, smoothing short-term income distributions. If your country has a recession, you know, in theory, a temporary downturn, you should be able to borrow from abroad to smooth out consumption and investment during that period, and conversely during a boom. This is theory, remember.

Second, those countries that have high rate of return to capital, because they have low capital labor ratios in theory should be able to finance some of that by borrowing from abroad rather than doing it all through domestic saving. And conversely those countries who would have high capital labor ratios of course are the ones that lend abroad.

In theory this is another way, along with labor flows, which go from low capital labor ratios to high capital labor ratios, and for that matter of fact who base trade – the classic Heckscher-Ohlin theory of trade is that it substitutes for capital – the flow of capital or labor. In theory, these should all be different ways of accomplishing the same thing, which is equalizing disparities in real wages or the wage-to-rental ratio.

And the third of the benefits that capital flows are supposed to have is to discipline the policies and institutions of governments. If you follow bad policies, excessive budget deficits or

monetization and inflation then investors will flee away from you. In Thomas Friedman's book, he talks about the gold straightjacket, that this is an advantage of financial integration that countries will understand that you're going to be facing this discipline.

In practice – at this point I think we can even take out the qualifiers. Capital flows fail to deliver on this promise. I have some qualifiers. You can think of cases where it works it's supposed to in the textbook. I wouldn't dismiss it completely. But if the question is does it more often work that way or more often work the opposite way, I'd say it just as often works the opposite way. Private capital flows are often pro-cyclical. They pour into a country during boom times and they disappear in recessions. And that's especially true in the case of commodity producers, agricultural and mineral producers where the boom is a boom in their export product, and that's when everyone loves to lend to them, as has been the case for the last seven years in many countries.

Then when your export product goes down, that's when they get cut off. Nobody wants to lend to you, although in theory, that's when they're supposed to lend to you the most tide you over. And that cycle is called the Dutch disease. By analogy – well, the commodity part of it is called the Dutch disease but it's been extended by analogy with any kind of pro-cyclical, whether it's capital flows or even foreign aid and so on.

Number two why capital flows have failed to deliver. On average you're supposed to flow from high capital labor ratios to low, but often they flow the opposite direction. In recent years, they've actually flowed the opposite direction into the United States – capital flowing up hill. And third, rather than rewarding countries that follow sound economic policies, and only those, financial markets often – a bit irresponsible, budget deficits. And conversely in time of us in boom times and bad times, they pull out everywhere, including the ones that follow good policies.

And here is just the pro-cyclical in three different regions, the three different cycles we've seen, and we saw the most recent peak in 2008 and we're now in the third of the crash phases of the boom-bust cycle.

Well, my hypothesis is that remittances can play the role, the stabilizing role that capital flows in theory are supposed to play. I'm going to briefly review the literature. There's a labor component of this, and there's a trade economics component of this. It's mostly a field that's fallen between two stools, and it's a third stool of macroeconomics. But in theory, what you get out of any optimizing model is that immigrant's decision to send remittances back home should be based on inter-temporal optimization, usually with some household utility function where they have – they value their family members back home and their own utility and they're averaging over time.

A few other areas of the literature – bilateral data – up until recently, there was virtually none. And my paper does have in the back in an appendix some regressions for Southern Africa, and I chased over Southern Africa for a while because I was told that somewhere there

existed bilateral data until I eventually decided it didn't exist. And so I ran regressions on this – with the total remittances received by Lesotho and Swaziland and so on, and in that case you could assume that in most cases they're coming from South Africa. But very small samples. And I didn't get good results there, and I think a lot of people had trouble getting good results.

We've now recently been building up to bigger data sets, and I'm going to talk about three. There's a comprehensive data set by now dealing with EU countries, EU as the host country in sending the remittances back. And by now we've got all 27 members and most of the important recipient countries are the source countries where the immigrants originally came from. Recently Lueth and Ruiz-Arranz at the IMF put together what I think is the largest bilateral data set out of miscellaneous countries, mostly in Europe and in Asia. And the then IDP has a data set on bilateral remittances from the U.S., from U.S. countries – from the United States to Western Hemisphere countries, mainly Latin – mainly Central America – excuse me.

Review the literature on cyclicity – well, there are by now a number of important studies. Dean Yang has a couple of them and Devesh Kapur that do find some counter-cyclicity, what I was looking for. There is some evidence of that. But there's also studies that find the opposite, including two from the IMF, which I think are the largest data sets, Lueth and Ruiz-Arranz – and are either of them here by the way – which – who tend to find not countercyclical but pro-countercyclical.

So my goal is to put as much data together as possible to try to answer this question. First, why does the question matter? Why am I so focused on this question whether immigrant's remittances are pro-cyclical or countercyclical? Well, broadly speaking, I think it is especially important because governments in remittance-receiving countries often reflexively treat them as a source of foreign exchange to be harnessed for national development.

Now, Sendhil used the phrase "harnessed" earlier today and I'm not – you know, if you're talking about harnessing by NGOs or the development community thinking how can the people involved make better use of their own remittances, I have no problem with that. I'm talking about when governments say we have to harness some – meaning tax them in some way, you know, the way African countries have sometimes taxed coco farmers or coffee farmers to finance development.

And I think this is a dangerous way of thinking about it. The idea is that people don't know how to spend their own money, and they might waste them on consumer goods – you know, food and clothing instead of capital goods that we need to build up our industry. That's the kind of thing I'm worried about a little bit. And I'm especially worried about it in countries with bad governance where they're going to take it for themselves, the government, but also in benevolent governments.

All right, well, two very specific applications where – the areas of the literature where I think that the cyclicity is very important if you're a country where remittances are important. The first one is the Dutch disease, which started with commodity prices, which then by analogy

extended to capital flows, was then extended even to foreign aid – you know, heaven forbid the idea that foreign aid could actually be harmful – and has more recently been extended possibly even to remittances.

And, you know, in some areas – it's something I don't mention here in my slides – I refer to in the paper – what about the possibility that remittances could keep conflicts going. So even though blood diamonds and all of the theories that – fights over natural resources – a country who has natural resources – part of the natural resource curse is more conflict. Well, think about some places where some conflicts have been going on for many years, and maybe they wouldn't be going on if you didn't have the diaspora funding them. So I'm thinking of Northern Ireland, I'm thinking of Israel-Palestine. I'm thinking of Eritria, Ethiopia.

MR. : Tamil Tigers.

MR. FRANKEL: Sorry? Tamil Tigers, yeah. Well, I haven't addressed that; maybe I will in the future. But the Dutch disease. So the literature is mixed. The question is, is there a Dutch disease kind of phenomenon for immigrant's remittances? And I have on citation where he finds, worries that remittances can undermine the incentives for governments to create a sound institutional framework. So that is the natural resource curse; that is the analogy of the natural resource curse. And then a paper that finds for Latin America and the Caribbean that immigrant's remittances – when remittances are high, there's a real appreciation of the currency, which is, you know, a central characteristic of the Dutch disease, and the worry being that it crowds out other exports. So there is reason to worry about this.

On the other hand, there's a paper by Rajan and Subramanian that – they find the Dutch disease does apply to foreign aid – causes real appreciation, slows down growth, crowds out exports, but they find that it does not apply to remittances. So mixed picture, but that's one reason why – one reason why I think the question of whether it's countercyclical or pro-cyclical is interesting.

The last area of application is optimum currency area – question whether you should follow – form a common currency area with your neighbors. For those who aren't familiar with the literature, the question is, for what countries do the benefits of adopting a common currency outweigh the costs? And the benefits include facilitating trade and international transactions. The costs include losing the freedom to run one's own monetary policy. Why do you want to run your own monetary policy? It's because if you've got a downturn recession – bad times – you want to have the freedom to expand the money supply, low interest rates, depreciate, and you lose that if you give up a currency.

Well, the textbook answer as to when the benefits outweigh the costs is either if you have few asymmetric shocks so you seldom need a monetary policy different from that of the anchor country. So Austria has had the same – has had its monetary policy completely determined in Frankfurt for years, and they don't mind, because their economy moves so much in synch with German economy that when – when interests rates are high in Frankfurt, that's

pretty much what they need. When they're low, that's what they need. Ireland? Different story.

What if you have asymmetric shocks like Ireland versus Germany? Well, the textbook answer is it's still okay; you can give up your own monetary policy if you have some alternative cushions such as labor mobility, which was Mandel's original article, fiscal transfers, capital flows, things that you can tide you over so you don't have devalue. Well, I'm going to argue that remittances belong on this list. There should be the fifth member of the list of criteria for what suits you for a currency area to give up your own free monetary policy. That presumes counter-cyclicality. It only works if it's countercyclical to smooth you over.

As a political scientist at MIT who finds that countries are already doing this. In effect that one of the reasons El Salvador gave up its currency to adopt the dollar was El Salvador had so many immigrants to the U.S. and that then they were sending remittances back. He doesn't actually study where they're countercyclical. He just cites others.

Let me mention something that also came up in the introductory session today. Not all senders are industrialized countries. My statistic was roughly 10 percent comes from developing countries. South Africa, for example, receives many immigrants from neighbors and sends remittances back. Gulf countries – I don't know if you call them industrialized or not, but they are a very important host country and sender of remittances. Our remittances from Saudi Arabia are 7 percent of the global total. Well, the hypothesis that I'm going to look at is the remittances respond not just inversely to income in the receiving country, but also that they respond positively to income in the sending country. It's a differential that matters. And that matters both to get a good empirical estimate, and it's what we should really care about. Let me try to convince you of that.

First, you would need to control for the income of sender. Here I mean the sender of the remittances, the host country of the worker. You would need to control for that even if you were only interested in the other coefficient because as we know, ordinarily squares regression, the more variables you control for, the more likely you can get the right answer. And since it should be in there in theory, you know, American workers would have money to send back home if income is higher here and unemployment is lower.

And if you admitted in practice, it's not just a matter of theory; in practice if you omit it, you often get the wrong sign. So I had a student in our PMID program write a thesis. She was from Jamaica and she did remittances back to Jamaica. The first time she ran the regression, she got the wrong sign. When Jamaican income went up, they got more remittances, not less. Well, it was pretty easy to see the reason: You needed also to control for U.S. income. Jamaican income and U.S. income were so highly correlated that she was getting the other effect. If you put both in, it worked just fine. That conditioning on U.S. income – it was countercyclical the flow of remittances back to Jamaica, that when Jamaica had high income, remittances fell off, and when Jamaica was in trouble, remittances went up. And some of the other studies I think also miss this.

But not just is that they way you want to run the equation. I would argue that cyclical with respect of the sender country, the sender of the remittances, the host country, is of interest in its own right. And so let me show this by picking these two examples of South Africa and the Gulf, which are two places, two parts of the world that are hosts to many immigrants and that send back a lot of remittances, and there are also two places where there's a lot of talk about regional currency unions. Such talk always deserves some skepticism. The Gulf countries had a deadline – had a plan to do 2010. And last week is the first time that I think they're willing to admit that this probably won't happen given that the UAE just pulled out. But in any case it's a possibility. And in Southern Africa they've been talking about it for years.

So often optimum currency area considerations, it's not just the receiving country where you hear about this cyclical, it's also the sending country. And both regions happen to have minerals – oil obviously in the case of the Gulf and gold and platinum and other things in the case of Southern Africa. When mineral prices are high, it is useful to South Africa to have the unilateral transfers deficit and the balance of payments automatically moderate so there's less likely to have a balance-of-payments problem.

When mineral prices are high, which has been the case up till now for the last six years, outward remittances provide a break on reserve inflows and inflation. So I don't know if you follow events in the Gulf, but the big problem up until very recently, up until eight months ago was inflation. They were pegged to the dollar, excessive inflows, and their inflation was rising. So if they're not going to float against the dollar, the fact that in boom times the immigrants – the immigrants into the Gulf send more money back to India and Pakistan or wherever is a useful stabilizing factor.

All right, let me turn to my results. I'm going to give you just three tables out of many that I've done. The first two tables are based just on this data set that I got from the IMF, and I'm very indebted to these two authors to – for supplying me with the data. I did abide by an agreement that I wouldn't use it until they had published their paper, which is another reason why this project was delayed for two years.

But they have 64 parish of countries, and I'm going to show you in table one a cross-section just for the year of 2005, a clean cross section. Then I'm going to show you a panel study moving over a period from 1979 to 2005. And lastly I'm going to splice the data, which you remember is an eclectic data set of a lot of countries around the world, especially Asia, with a data set that covers all of the EU countries, a third data set from the Inter-American Development Bank that is Western Hemisphere, primarily Central American countries. And the hope is by bringing together as much data as possible to get better estimates, which is kind of like a motto of mine. You're more likely to get better estimates by having another 10 percent data than by having the kind of metric technique that's 10 percent faster than the last guy's econometric technique is my theorem.

Just to look at the data first, this is about 500 observations from 2003, 2004, bilateral observations. So each data point represents a pair of countries. Horizontal axis is migrants, cumulative stock measured five years before, and the vertical axis is remittances. So this is just to get a little bit of a feel for the data. This is what you'd expect of course, that there would be a relationship here. In some sets maybe it's surprising that there's not a stronger relationship. But anyway, the stock of migrants is one of the variables that we're going to control for when we run this equation.

Here I have normalized by the scale, on the vertical axis. It's remittances per migrant, per migrant five years before. And on this – on the horizontal axis is one of my measures of the difference in cyclical position. Now, I've got multi-varied regression. The whole point is we want to control for several variables at the same time. But even the bivariate plot shows you I think some relationship.

Okay, I'm going to show you table one, but table one reports – it's regression. It's pure cross-section. Sixty four pairs of countries. The year 2005. One of the variables that we're controlling for is the lag stock of migrants, and other studies have shown that it's highly significant as you might expect from that graph, and I do find that myself. I also control for sender country. Here I mean sender of the remittances, so host of the worker – for sending country income per capita. But the variable of interest is the difference in cyclical position between the sender country and the recipient country.

In this particular table, the way I compute cyclical position is the different – the logarithmic differential between income in the year 2005 and the long run trend of income. I'm assuming long-run trend is potential output or whatever. And it's a crude calculation, but it's a – that's by definition of the cyclical variation. The finding is that the estimated coefficient is positive and highly significant. In fact, the T statistic is almost four.

Also, my worry that the stock of migrants includes some flow in it that might respond to economic conditions, so I use instrumental variables. But you'll get the same results. I'll skip over that. How much time do I have?

MR. PRITCHETT: Five.

MR. FRANKEL: Five. I can do that.

Here's the table that I was just telling you the reports for. And so the stock of migrants, very highly significant. That's the first row. The three star – three asterisks mean the 1 percent level. The main variable is cyclical differences, and that's highly significant – T statistic almost four. So that's sender versus recipient – again sender of the remittances. And so one income is high in the country where the worker is relative to the country that he or she came from originally, that differential, when that differential is high, they send more money. When it's low, they send less money. And the same thing when you controlled for the overall sender –

GDP per capita income. And the same thing, whether it's OLS or instrumental variables, there's the key variable.

The second study is the same data set but a panel study following it over time. I've got 64 pairs of countries, and I'm following it – forget that 2005. I'm following it from 1975 to 2005 – 1200 observations. So that's a pretty big gain. Now, I don't have stock of immigrants in every year so I lose that. But I think it's worth it because I'm going to learn a lot more from having more data, but also I'm going to control for that by including the geographic and historical and cultural determinants of the stock of immigrants. So that has to do with common language and whether they were former colonial relationship and distance and common border, all of this sort of thing.

And in this one, I'm measuring cyclical difference by the difference on the unemployment rate, but between the host country and the country of origin. The estimated coefficient on the unemployment difference now is negative, which is what it should be. When unemployment is high in the U.S. or Europe they don't send as much back. But if it's high in the home country, the source country, where the immigrant came from, then they send more back. The T statistic now is a whopping nine.

And the same thing happens when I apply fixed effects for countries or country pairs. Here is the table that I was just describing. The cyclical difference has a coefficient of nine. The standard error is about one. There's my T ratio of nine or 10, and as you can see the senders per capita is significant. Some of the other gravity variables, geographic variables are significant countries that are landlocked. People have a harder time ever getting out. Distance between the pair has a negative effect, and so on.

This is the same one, which is the panel over time. But now I've got time effects and fixed effects in there, in which case a lot of things are going to drop out as variables. But again T statistic of about 10 on the cyclical difference – very highly significant.

The third table is the one where I try to bring all of the data together. So the data I've been doing from these nice folks at the IMF, Lueth and Ruiz-Arranz, plus the Western Hemisphere data which was gathered from the finance ministries and the central bank and – we got via the Inter-American Development Bank, plus the EU data which has been used at the European commission and this three-authored paper is the most recent citation of it that I – use of the data that I know about, we now have approximately 330 bilateral observations – cross section again. Going back to using the lag stock of migrants in the year 2000 – I'm going back to using – it's a cyclical difference, the GDP per trend, the difference between the two countries. Estimate coefficient is positive and highly significant.

I also now can put in a dummy variable for currency union. The other data set didn't have any countries that were members of currency unions, but now that I have El Salvador and Panama. I think maybe those are the only two I've got – currency unions with the U.S. – we can put that in, and that is – that is significant. But I wouldn't want to make any claims about the

causality. In fact, I think causality goes both directions, and the number of observations is so few that I think that that's just suggestive, and I wouldn't draw too much from it. And here is that table that I was referring to. And again, the variable of most interest – cyclical difference – highly significant. Here is the currency union. It's significant under OLS not when you use instrumental variables.

Okay, to summarize the findings, splicing together a larger bilateral data set from three individual data sets used by others allows I think probably more powerful statistical tests, and it shows a moderately strong verdict, a fairly strong verdict on the question of cyclical. And the verdict runs contrary to the analogy with capital flows or the Dutch disease. I find that the remittances respond positively to the cyclical position in the sending country where the worker is working, and negatively to the cyclical position in the receiving country; in other words, the source of the immigrant.

Last, policy implications. This countercyclical pattern is precisely what one wants. It suggests that immigrant's remittances can place some of the stabilizing role that capital flows often promise but seldom deliver. If it holds up under further investigation, and I'm not done yet, it carries at least two quite specific policy implications.

First to me – and maybe it's a little bit of a leap here – but to me suggests that governments should not try to harness remittances in the name of national development, but rather should allow immigrants to transact freely. And maybe there's a little bit of my – parallel with my concern about immigration reform bill that in the name of making things better you could always make things worse. It really depends on the specifics of what the government program is in both cases.

Second, it suggests to me that remittances belong on the list of optimum currency area criteria along with the more standard criteria of trade, labor mobility and transfers. Acknowledgements, research assistants, et cetera. (Laughter.) Everything's on my Web site.