**HAROLD COLE INTERVIEW WITH WEBPONDO**
**November 21, 2003**

**Webpondo**: **First of all I would like to thank you for accepting this interview for Webpondo. We are really happy to have you here sharing your thoughts with us. The first question is related to the figures that you showed on your work with Lee and Alvaro: in the 1950's the real GDP per adult in Europe, Asia and Latin America (LATAM) was 49%, 20% and 29% of the US respectively. Forty years later Europe improved this figure to 65% and Asia to 57%. LATAM failed to improve the labor productivity. You mentioned that probably the roots are in barriers to competition. Could you elaborate a little bit more on why is it that this is a common feature for every Latin American country.**

**Harold Cole**: Thank you for interviewing me. I appreciate the chance to be here and have this opportunity to speak. I want to split my answer into two parts. The first part, has to do with our striking finding that stagnation in Latin America is pervasive. Every single country has had this experience. Now given that fact and the long-term nature of the stagnation, this leads you to automatically look for some sort of long-run systemic factor that's causing problems for all Latin American countries. This factor, while important for Latin America, should not be important for our Asian countries and Europe countries. The facts from this first part have laid out the question; Why did Latin America stagnate? Now this question is open to everyone. This leads to the second stage, which is where, as the researcher, you've got to start to place your bets in terms of what factors you try to examine for this role. The examples that we talked about in terms of the micro evidence on the impact of competition on productivity at the plant or the industry level suggest that some sort of failure of competitiveness is a possible explanation. Of course, this isn't the only potential explanation. For example, Michele Boldrin did a beautiful job debating the pros and cons of human capital as a possible source of the problem. As both he and we pointed out, the measures of human capital suggest different things, and the importance of this factor seems kind of murky. Overall though, human capital is a variable that you think of as responding to equilibrium conditions just as capital does. The supply of capital in the long run is normally determined by a condition like the marginal product plus one minus depreciation being equal to the inverse of the discount factor. That tends to tie down endogenously what capital looks like. If you thought that Latin America was, say, suffering from some sort of capital distortion, you would expect to see the rate of return on capital looking very high in those countries. That would be consistent with capital scarcity. We didn't see any evidence of that. Similarly with respect to human capital you start to ask yourself: well, human capital is something that is going to be responding endogenously. And therefore I would want to be looking for a distortion that prevented the normal endogenous response of human capital. I'm not aware of that distortion and that, among other things, makes me leery of human capital as the key factor in Latin America's stagnation. Once you think it is probably not human capital, or that while human capital may play a role, it is not the predominant role, then you start to look for things that can affect productivity directly. Unfortunately this is the most nebulous and unsatisfactory area of macro theory right now. We do not have a clear set of factors that affect total factor productivity (TFP) and we have very little in the way of sharp theoretical models and statements to make about TFP. It's measured as a residual. So in my mind, the center stage puzzle is to figure out a way to explain productivity using economic theory. There has been some progress on this question. For example, Ed Prescott has been pushing this question a lot in his most recent work, and has argued that low productivity is due to barriers to adopting new technologies. We ourselves have some ideas but we are in a preliminary stage in terms of pursuing that second leg of the research program. We are trying to come up with theories and stories and evidence that address this productivity puzzle. This is how we're planning on attacking the question of Latin America's long-run stagnation. Of course, other people will probably be going after it from different angles. But at the end of the day, I think that the central focus is going to be coming up with factors and theories that explains labor productivity.

**W.P: Related to this you presented the same figures in a recent seminar in Dallas about sovereign debt. It seems also that Latin American countries, unlike Asian countries, have been prone to increase the level of indebtness during the same period. Do you see any relation between these two facts?**

**H.C**: I think that's a great question. I want to divide the answer in two parts too. First of all, the focus of that conference was what should one do to make the international lending system work better. What I argued there was that this view that helping countries to borrow more was driven by what I called a "status-quo paradigm", which is: these countries that are doing all this foreign borrowing are doing it to finance great investment projects that will increase output, and that all the costs associated with the national debt and the crisis that can arise from it are impeding this process. I think there is basically no systematic evidence to support this "status quo" view. Moreover, as I argued at this conference, the countries that have experimented most aggressively with foreign borrowing, the Latin American countries, are the ones that seem to be suffering from long-term stagnation, and of course a series of crises associated with these debts. So, this opens up the possibility that making borrowing easier is a misguided effort on the part of our major policy organs like the IMF and the World Bank. Large-scale foreign borrowing doesn't appear to have worked well historically in Latin America.

Now, let's look at the second part of your question, which is; could this actually be one of the systemic factors? That I don't know. You could imagine it coming from either of two ways. One way is the fact of that the countries who do all this foreign borrowing often do it to finance an over-blown government sector. And a large government sector leads to all kind of other things like high levels of regulation or large state-owned and inefficient enterprises. The second way is what happens once you have a large external debt. In Mexico they talked about a decade of lost growth due to their first major debt crisis. It doesn't take too many decades of lost growth over a fifty year period to put you in the cellar growth wise. I think you've asked an excellent question and I want to go back in response to one of the things I said earlier. The baseline question of Latin American stagnation is open and now there is a bunch of different avenues to pursue. Is this one that I can imagine being pursued? Absolutely!

**W.P: Let's continue talking about sovereign debt, but let's focus on the short run. You have a paper with Tim Kehoe about self-fulfilling crises. Your essential finding, as I recall, is that you characterize what is the optimal policy in terms of managing debt in order to avoid or prevent falling into a crisis. You also characterize the conditions under which a government is more prone to fall into a crisis. There is also a result that caught my attention which is the following: you find that optimal policies are to lengthen the maturity of debt and reduce the debt level. At the same time, policies that increase the punishments without changing the probability of falling into a crisis are policies that can have severe effects. So my question is the following: Colombia has a total debt to output ratio of nearly 50% and is starting a process of a trade agreement with the U.S. Do you think that would increase our exposure to suffering these pervasive effects of the debt crisis?**

**H.C**: Excellent question. Yes. One of the things that we learned from working on that project is a simple insight: if you crank up the penalty without affecting the probability of a crisis, then, exactly as you said, you are worse off. As you suggested in your question, one of the byproducts of increased exposure to international trade agreement openness is that it probably increases the penalty of international debt crises. That could count as a serious cost.

**W.P: Then what should be our policies in order to mitigate or prevent the pervasive effects of a debt crisis?**

**H.C:** As you noted in your question, the policy implications of that model were very conservative. According to the model what one should do is: First, run down your debt to get you out of the crisis zone. Second, this should be done relatively rapidly if the probability of a crisis is high, since such a crisis can be very damaging to the country. Third, one should try to maintain a fairly long maturity on the debt, because if there's a huge chunk of debt, which is rolling over at high frequencies this creates the basis for the crisis. So at some level, what I would take away from that analysis, is that the model not only was supportive of very conservative policy advice, but the model also suggested that some of the things that people have talked about as a way of avoiding a crisis, such as policies designed to select the good equilibrium in which the crisis was avoided through particular government interventions are misguided, and so the risks are serious.

**W.P: Let's switch gears and let's talk about your work on the great depressions. There is also a paper of yours about the Great UK depression in which you conclude that increased unemployment benefits and policies that raised the cost of worker relocation may have contributed to the problem. In Colombia, one often hears arguments favouring these kinds of policies. Do you that these policies, in particular unemployment benefits, may tamper with the slight signs of recovery of our economy?**

**H.C:** In looking at this kind of policy, one's always trading off an insurance issue versus an efficiency issue. The damage comes when one gets the tradeoff wrong and the policy gets too extreme. These two events, the pervasive high unemployment in the UK during the 20's, and the combination of depression and deflation in the US, were typically seen as the two canonical events that led us to think that the nominal rigidities were important in understanding how the world works. However, what we found when we went and looked at the UK data, was how big this insurance intervention on the part of the government was, and that this insurance was implemented in a very naive way. They had a very high replacement rate (the rate at which your insurance payment covers your income) that was not conditional on your individual wage or on your unemployment history. It was simply a fixed payment. So, if you were looking at two workers, one of whom was highly productive and the other not very productive, the replacement rate for the unproductive worker would be extremely high. During the 1920s England was going through a period of big readjustments in which the old "staples" industries were dying and new industries were coming on line. In that paper we argued that this combination of very high replacement rates (which encourages everybody in the old industry not to switch over to the new ones) and a bunch of subsidies that were location-specific and discouraged displaced workers from moving to the locations of the new industries, meant that there were a lot of frictions to prevent the reallocation of workers. From a policy perspective the insurance program in England during the 1920s was too extreme and poorly designed. But this doesn't lead one to say in a draconian way "no insurance." You do want to provide people with some insurance, but you have to think pretty carefully about what is a reasonable level of insurance. There is some beautiful work by Sargent and Ljundqvist, where they talked about how the way in which an insurance program is designed, and how when people receive long-run unemployment benefits, they have big incentives to stay unemployed, especially in response to big shocks. So, I think proper design of these insurance programs then becomes an extremely important question. If I was a Colombian and I was putting in one of these programs I would be nervous that you can put it in wrong and actually have very negative effects. I would be very cautious about that, and obviously poor countries cannot afford these kinds of mistakes.

**W.P: OK, let's leave policy aside and talk a little about our profession and the way we practice it. You have a paper about the role of monetary and banking Shocks on the US Great Depression. There, you conclude that the depression remains a puzzle because different observed facts appear at odds with what usual theory predicts. From a scientific point of view, it sounds as if we should then abandon the theory. What do you think the problem is?**

**H.C:** Let's remember what the state of the play was. There was a conventional wisdom that was on the table which said that we understand depressions, we can tell you what happened, and we can actually prevent them from happening again. What was this conventional wisdom based on? Lee Ohanian and I looked at the evidence that this conventional wisdom cited and found it amazingly weak. The empirical work wasn't really systematic. There was some suggestive qualitative modeling, but nothing very solid. In retrospect, this was one of the most surprising things that we found: the conventional wisdom was based upon so little. Going back to your question of whether we should abandon theory, I tend to come at things from a model-driven perspective. In terms of politics, I'm not a right-wing or left-wing (laughter) but I am particularly extreme on this: I believe that a model is the fundamental entry level into having a conversation. A model allows you to have a story and show that you can tie the pieces together in a coherent way. If you don't have that… what do you have? You have chat. I don't know what to make out of chat. A model on the other hand allows you to have a scientific conversation. Here is what I view as a scientific conversation: I have my model on the table and you have yours. Now we can talk. I can discuss your assumptions versus mine, you can criticize my model and say look: I change a feature of your model to be more realistic, and all of a sudden your results change. That's a scientific conversation. You can come and say to me, if I put reasonable numbers into your model, then suddenly bam! All your results go away. Or I can look at this other implication of your model, that seems grossly inconsistent with the data and if that implication is fundamental for your story then I can cast doubt on story. That's a science-driven discussion that we as scientists can debate! It's an intelligent debate and we can try to make progress. So I view a model as the entry into a scientific discussion. One of the things that I've learned from working with models is that it's not so easy to get them to exhibit the story that you had in mind. Also, models are incredibly rigid. I mean, you can be creative, you can put in two or three features, and you can find a model to generate a particular outcome, but then … you are stuck with it! You are stuck with the assumptions and you are stuck with the implications. For example, Milton Friedman talked about there being long and variable lags in the impact of monetary policy. Well, first of all, it is not too easy to get long lags on the impact of monetary shocks. Second, it's even harder to get variable lags. Once you fix you model, then you put in a particular shock and the model says this is the outcome you are going to get. This locks you into a very stark way of looking at the data. I think that it is exactly the lack of rigor and starkness, with which other people went at the data on the Great Depression because they didn't come at it through the lens of a model that allowed them to talk and say that the data was consistent with their story, when it wasn't. For example, take the work that Lee and I did on the international evidence of the great depressions. People talked about how the international evidence was really consistent with their nominal rigidities stories. But all they'd done was run these reduced-form regressions and got the coefficient sign they wanted. As soon as you looked at the data through the lens of the sort of model that their story implied, you saw right way: That data is going to be extremely hard to get out of the kind of model we are talking about. If you thought that deflation was driving down output, through nominal wage rigidities, then if you had a 20% deflation and I had a 10% deflation, you know right away who's going to have a bigger fall in output! That's locked in. So when we looked to see if cross-sectionally, if monetary shocks are driving it, we are going to see a very stark prediction in regard to the relationship between deflation and output and real wages and output. But the relationship predicted by the model wasn't in the data. In fact, real wages and output were positively correlated. And the correlation between output and inflation was either zero or negative in 3 of the first 4 years of the Great Depression. Moreover, you know from working with these kinds of models, that getting away from the implications of the model that are inconsistent with the data is going to be extremely difficult if deflation operating through nominal rigidities is the fundamental shock. That's because the false implication of the nominal rigidities model is right at the heart of the story. So, looking at the data through the lens of a model, the data can falsify your model in a way that it can't do to loose chat. And that's why the model-driven program is going to experience a lot more failures than the chat-driven program, because models can be rejected and typically are. But at the same time, we can learn something from the data and be guided towards certain models and away from certain others because models are falsifiable. Now, going back to your to your question about: What is the role of banks in the great depression? One of the things you learned is that, if a banking shock story is going to work, and I am not ruling it out, it has to work differently than the ways in which people have been talking about it. For example, people talk about financial frictions and financial shocks reducing the amount of labor or capital you hired. We can look directly at labor and capital and we know that the residual, TFP, is huge. So, if we are thinking about banking somehow playing a huge role there, we have to make it mimic the outcome of a TFP shock. That banking model may yield a different estimation of the true TFP shock but in the end, it has to walk and to talk like a real business cycle model being hit with a standard TFP shock. That's a huge insight, because we know in advance that having it simply change the amount of labor or capital is not going to do it, we need a story that is going to work through misallocations of resources. In other words, we need a banking story that is going to give us a big fall in measured productivity. So the facts that we've uncovered push us to think about the world in a different way, and go down a different path than the one we were on before.

**W.P: Continuing with the methodological discussion, as a macroeconomist, what do you think are the desirable properties of a model?**

**H.C:** First of all, I think of macroeconomic research as a theoretically driven rather than a purely data driven program. It's nice to see a minimal departure from standard theory to capture what you are trying to get at, rather than building a totally new machine. Second of all, your model needs to capture the forces that you think are driving the story. So, if you think the key thing is lack of competition, then you want that in your model. Ideally, you'd like a model such that, either by using some prior categorization or some empirical work, you can put numbers into the model. Those seem to me to be desirable features. But to be honest with you… there are no rules! What I do is to look at the people that have been successful in their research program. I look at the people who are doing the kind of research I really like. I look at what they do, and I try to imitate that. When you look at successful programs, they are not generated by methodology, they are generated and sustained by success at research. So, I try and develop a modeling strategy and a strategy for approaching the data that enables me to make the most progress. There are no rules in this enterprise. One makes up the rules as one goes along, and whether the next generation decides to buy your rules or not and determine whether you have been successful.

**W.P: Let's get a little bit more personal. I know it's been a short visit to Colombia, but what has called your attention the most?**

**H.C:** Well… normally you say some things about the country and so on, but I really I haven't had enough time to have a feel for that. What I would say is that there is actually a very interesting intellectual community here. To the extent that I have had time to do anything, it has basically been to talk to people about the issues and concerns in the economic policy side in Colombia. Another thing that struck me is the extent to which the intellectual community in Colombia is connected to other groups of people in Latin America and the United States.

**W.P: But what were your priors?**

**H.C:** What strikes me is the extent to which people seems to be conversent with the current debate in economics. For example, if you look at undergraduate textbooks in the U.S. in macroeconomics, the pervasive paradigm is the static IS-LM model. You might come to Colombia thinking, well I'm going to be talking to a bunch of people where the pervasive paradigm is going to be the static IS-LM, and you know, no one has that paradigm! Everyone has moved on not just to the next generation of theories and models, but to the generation after that. That's striking, and also it is a funny difference between the U.S. and the Latin American countries, which despite the strong background in economics you observe this behavior in labor productivity! (Laughter) Another thing that strikes me is the sophistication of the economic policy debate when you interact with people, especially government officials outside of the United States. I mean, personally I was very lucky, I went to the Minneapolis Fed where you have a tremendous research environment, great people, great research structure, and so on… but overall… you know the level of policy debate in the United States is not particularly high. Here, people are very well informed about the modern debate in monetary policy, for example.

**W.P: Great. Now, just to conclude, let us ask your opinion on a couple of issues that have been debated in Webpondo. First, let's talk about drugs. It seems to us that there is a consensus amongst economists that repression of drugs is having an effect opposite to what is wanted, since it has created enormous rents to drug traffickers. This argument suggests that governments should (in coordination) legalize, educate and regulate. Do you agree with this position?**

**H.C:** Yes. Certainly, and this goes back to the other question, which is the way in which the debate is conducted. We all know that the drug policy in Latin America is driven by and large by the United States and the conditions that the U.S. has imposed on Latin America. The question comes up then: there is an obvious very large cost of this repression, so are there sufficiently outweighing benefits? Certainly, if I was a Colombian I would feel that I was at the very sharp end of those costs. I would ask, if I was a Colombian, are we being compensated for those costs that the U.S. drug policy is imposing on us? I personally have not undertaken that kind of careful evaluation. My prior is that this is a mistake, and that it is very costly for Latin America. I am also not sure even, looking inside the U.S., that the costs outweigh the benefits. So, I agree with your view.

**W.P: But do you think that at the practical level, legalization is somewhat close in the future?**

**H.C:** In the United States?

**W.P: Yes.**

**H.C:** Well, I am not a very sharp political observer, but my guess on that would be no. And in fact I am actually kind of surprised by this, because, if you would asked me 15 years ago, given that the next generation that grew up in the 60's and early 70's experimented heavily with drugs, wouldn't you expect to see legalization? I would have said yes. But that's not what happened, and given that this hasn't happened, I guess my prior would be negative.

**W.P: There was also a recent article in Webpondo about the effects of legal abortion (in Colombia it is illegal). The point there was that if one looks at figures about criminal activity in the US, these decreased significantly some 25 years after the Federal legalization of abortion. The reason given for this effect was the reduction in the number of unwanted children. Would you see flaws in the argument? Do you agree with that vision?**

**H.C:** Well, as you know, it's based on what I think of as very simple empirical analysis which tries to establish correlation and claim causation. In a similar vein, you see a lot of studies from the medical profession, especially regarding the dietary studies, where they use simple data-mining techniques to try and uncover the truth. I think that methodology has not been terribly successful. Moreover, I think it is actually much harder to use it in economics. So, what weight would I put on that empirical finding? Very little. Could there something there? Sure, but the magnitude of the connection could be very small.
With respect to the abortion per-se, at some fundamental level that's not a question that lines up well for economic policy analysis. It's primarily a moral question. Hence, I really don't think this is a good question for an economist to take on, as an economist! I don't think the discipline is well suited to that question.

**W.P: Before I finish, I can't resist asking you this one. We've known from highly trustful sources, that you are a high-end surfer. If I had to go surfing any place in the world, where is the hot-spot?**

**H.C:** The hot-spot? Hawaii! The only problem is that in Hawaii the waves tend to be big and there are some big fishes there in the water! (Laughter) So, go to Hawaii. I am not a Hawaiian-level surfer. I have a brother that lives out there and is much better than me. I can't really surf waves that are too much higher than my head. My brother can go higher than that, but he's more a serious surfer. I'm still working on that it!

**W.P: Well, thank you very much for accepting this interview; we hope we can see us in Hawaii some time!**

**H.C:** Thank you guys!