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Dollarization and Free Choice in Currency

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Abstract

I describe and defend the dollarization of Ecuador in 1999-2000 as a bottom-up phenomenon, an expression of consumer sovereignty by money-users, to which the government finally conceded. From that perspective I rebut common top-down (social planner) arguments against dollarization, and criticize the Ecuadorian government's current plans to introduce a government-issued cell-phone currency. I suggest legalizing private issue of paper and electronic dollar-denominated currencies as a way to neutralize the seigniorage and national-pride objections to dollarization. This is a written version of my keynote address to conferences on "Quince Años de la Dolarización: Análisis y Perspectivas" [Fifteen Years of Dollarization: Analysis and Perspectives] held in Quito, Ecuador, 12 November 2014, and Guayaquil, Ecuador, 13 November 2014.

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Dollarization and Free Choice in Currency

The dollarization of Ecuador was not chosen by policy-makers. It was chosen by the people. It grew from free choices people made between dollars and sucres. The people preferred a relatively sound money to a clearly unsound money. By their actions to dollarize themselves, they dislodged the rapidly depreciating sucre and spontaneously established a de facto US dollar standard. (Many commentators refer to this decentralized process of voluntary currency switching "unofficial dollarization." I prefer to call it popular dollarization, or *dolarización popular*.) Finally, in January 2000, Ecuador's government stopped fighting their choice. Until that point the state tried to use legal penalties or subsidies to slow currency switching. Today the state threatens an attempt to reverse the people's choice through legal compulsion. Such policy actions violate the widely accepted principle that the individual is sovereign over his or her own household property.

Everyone knows that free and open competitive markets better serve consumers (and producers) than state-granted monopolies. For example, it is clearly better for consumers to have several mobile phone companies competing for their business than to be subject to monopoly pricing from a single state-licensed monopoly. To make economic policy with the individual's welfare in mind requires policy-makers to respect the principle of individual sovereignty in markets.

Many economists have thought, however, that currency is an exception to the rule. They don't understand how there can be a competitive choice among currencies. Theory tells them that "network effects" ensure that a single *monetary standard* (silver, gold, US dollar, sucre, Mexican peso, euro, et cetera) prevails in any economy. The usual policy conclusion from this line of argument is that, since the market will only have a single provider in any case, the state should run the monetary system in the public interest.

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Such economists are only looking at the blackboard and not at what is happening outside the window. (Evidently they have never lived where multiple currencies have been widely used.) Transactional network effects do exist, not only at the national level but at the global level: other things equal, you prefer to use the money that more of your trading partners use. Ecuadorans chose the US dollar over (say) the Swiss franc precisely because of such network effects. But current network size is not the only characteristic that matters to consumers and businesspeople when choosing among currencies for use in transacting, saving, or posting prices. The *costs of holding and using a currency* also matter. When people are free to choose, they will abandon an established currency, no matter how locally dominant, that is being so rapidly issued that its purchasing power is rapidly disappearing. If the established monetary standard could *never* be dislodged by free choice, then Ecuador would still be using the sucre.

Economists or policymakers who argue against a country's dollarization, even when its people clearly demonstrate a preference for the dollar, either fail to think about dollarization as a market phenomenon that grows from individual choices, or they don't believe that individuals deserve respect. Instead they think about the monetary system only as a tool to be engineered and manipulated by expert policy analysts (presumably themselves). They conduct themselves not as citizen advocates, but as technical advisors to the state.

Objections to dollarization

There are at least three common objections to dollarization by those who look at currency choice not from the individual's point of view, but from the national government's point of view (for example see Berg and Borensztein 2001; I earlier offered rebuttals in White 2003). *First* is the domestic government's loss of *seigniorage*, the profit from issuing its own currency. Nearly every national government wants to issue its own currency as a monopolist because *even a government* can make a profit producing currency as a monopolist. (It is perhaps the only businesses where national governments *do* manage to make profits, by contrast to post offices

and state airlines.) *Second* is the "national pride" or "loss of sovereignty" objection. *Third* is the hope that a domestic central bank can successfully use discretionary control over the quantity of money to stabilize the economy or dampen business cycles. A government that cites the 2nd and 3rd objections as reasons to reverse dollarization may actually be motivated by the 1st, the desire for another source of revenue.

Economists who cite seigniorage loss as a reason not to dollarize are assuming that dollarization means a wealth transfer from the domestic economy to the Federal Reserve System of the United States. They view each million dollars in Federal Reserve Notes held by domestic consumers as a million-dollar interest-free loan to the Fed that the domestic government could otherwise have had. In truth, the domestic government could *not* have had the entire loan, because consumers find the domestic currency unattractive. In a country that is 80% popularly dollarized, as Ecuador was, official dollarization only accounts for 20% of the seigniorage loss. More importantly, to argue that it is a tragedy for *any* seigniorage to go abroad, when consumers prefer to import foreign currency, is to make a protectionist argument – a neomercantilist argument – identical to advocating that the government should block imports of automobiles to give unearned profits to inefficient domestic carmakers. We all recognize such a policy as anti-consumer, as rent-seeking, in other fields. So too in currency. Analysts who complain about loss of seigniorage are not acting as consumer advocates, but as technical advisors to the state on how best to extract resources from the public.

I will explain a bit later why the domestic government seigniorage lost by officially dollarizing *need not* go abroad, if government will allow commercial banks to issue dollar-denominated currency notes that provide a substitute for Federal Reserve notes.

Regarding the national-pride objection, I like the response of Pedro Pou, an advocate of dollarization for Argentina even while he was the President of the Central Bank of the Republic of Argentina. He wrote: "We do not suggest that each country should produce every possible good. We are happy with the idea that we should import automobiles or TV sets from the more

efficient producers. Why should we not apply the same logic to money? Should a small emerging economy produce its own money, or should it buy it from a more efficient producer?"

The logic of Pou's argument applies to the dollar *standard*, not to physical dollar bills. To dollarize you need to import enough dollar assets to back your banking system's liabilities, but you do not need to import Federal Reserve notes to use as currency if the government allows local banks (or mobile phone companies) to issue circulating paper (or electronic) claims to dollars that the public accepts because it trusts them to be redeemable in practice.

The Keynesian objections of Sachs and Larrain

The third objection to dollarization, the hope that a domestic central bank can successfully run a monetary policy that will moderate domestic business cycles, is founded on a kind of wishful thinking known as Keynesian macroeconomic theory, which is also embodied in the theory of "optimum currency areas." A well-known article by Jeffrey Sachs and Felipe Larrain (1999) declares in its title that "Dollarization is more straitjacket than salvation." This is a false dichotomy. Dollarization is a salvation *because* it is a straitjacket on domestic monetary policy that would otherwise produce high and volatile inflation. As Mauricio Pozo has pointed out, during a period of great political turmoil in Ecuador, with five presidents between 2000 and 2006, dollarization saved the economy from inflation, devaluation, and soaring interest rates. "The dollar has acted as a sort of shield," protecting the monetary system "from political influence." Otherwise the series of governments would have tried to finance their deficits with money-printing.

Rather than call dollarization a straitjacket on policy-makers – the poor policy-makers, struggling to escape – I prefer a nicer image. We can say that full dollarization has allowed domestic monetary policy-makers to *retire* from the difficult task of printing sucres. Now they can relax while the people use a more reliable imported money.

It pays to revisit the Sachs-Larrain article in order to recall the kind of dire warnings that we used to hear about dollarization. We hear these arguments less often today, because they have proven false. Sachs and Larrain warned that the choosing to adopt the US dollar is "unwarranted, even reckless. Dollarization is an extreme solution to market instability, applicable in only the most extreme cases." But Ecuador's problem in 1999 was not "*market* instability" if that means arising from the working of markets rather than from irresponsible government policy. The official dollarization of Ecuador, eliminating the problem of irresponsible domestic monetary policy, is no more "reckless" than the official dollarization of Panama.

Here is what Sachs and Larrain thought was a case against dollarization: "For legitimate reasons of its own (perhaps to lend pesos to the government to cover a budgetary shortfall, or perhaps to spur the domestic economy), country X may need a monetary expansion even if the United States does not." Under dollarization, the government of country X is unable to produce such a monetary expansion at will. Dollarization means that the country "is, in effect, tying its monetary policy wholly to U.S. monetary policy." They warn: "That decision makes sense only if U.S. monetary policy is wholly appropriate for its national economy, which is rarely the case."

To dissect this argument, first note the curious claim that is a "legitimate" reason to print whatever quantity of money the government wants to "cover a budgetary shortfall," that is, to finance spending beyond its ordinary revenues, or live beyond its means. What does it mean to call "legitimate" a policy that has driven every hyperinflation in history? Secondly, note the claim that printing money is an appropriate policy to "spur" the domestic economy. As though the economy were a horse with the policy-maker in the saddle. In truth, a monetary expansion is warranted only when, and only to the exact extent that, the economy is suffering from a shortage of money (in technical terms, the quantity of money balances held falls short of the quantity demanded at the prevailing price level). Ecuador in 1999 was not suffering from a shortage in

the number of sucres. Under dollarization, any shortage of money is soon remedied by an inflow of dollars – an adjustment mechanism that Sachs and Larrain failed to mention.

Finally, note in their argument what Harold Demsetz (1969) has called the "nirvana fallacy." Sachs and Larrain judge dollarization by a standard of unobtainable perfection: "only if U.S. monetary policy is *wholly appropriate* for its national economy" does it "make sense" for a country to dollarize. But a monetary policy that is "wholly appropriate" or *perfect* for the national economy is not the relevant benchmark for achieving an improvement when the domestic monetary policy is very far from perfect. Ecuador's choice was not between the best *imaginable* sucre and the actual dollar, but between the *actual* sucre and the actual dollar. The relevant question in 1999 was: Is the U.S. dollar more trustworthy than the sucre in practice? This was the choice that individual citizens of Ecuador faced and appropriately made for themselves. They voted with their pocketbooks. The choice of which currency to use need not, and should not, be a top-down decision for economist-advisors to make and for government to impose on everyone.

A related and common macroeconomic objection to dollarization is the absence of an official lender of last resort. What is a "lender of last resort" supposed to do? A central bank that strictly applies the classical prescription for a lender of last resort provides *only* short-term loans of liquid reserves to commercial banks that need them (perhaps due to bank runs), *only* to banks that are solvent and worth saving, and *only* at a high interest rate that penalizes the borrowing banks, in order to discourage them from getting into liquidity trouble in the first place. In practice, central banks – especially when subject to political pressure – far too often use their discretion to lend to banks far too loosely, encouraging "moral hazard" in banking (skimping on reserves, risky portfolio strategies), and thereby *weakening* the banking system. An alternative for banks in a dollarized economy, as even Sachs and Larrain recognized, is to establish collateralized lines of credit with larger money-center commercial banks in the United States. Such lines of credit do not create moral hazard because commercial banks as lenders – unlike the

domestic central bank – insist on being paid back. They are constrained by market forces to avoid lending at below-market interest rates or to insolvent banks.

Ecuador's success with dollarization

Although some local critics of dollarization in 1999 predicted that the transition from the sucre to the dollar would cause a deep recession with high unemployment, the opposite happened. Due to high inflation, the people had of course already dollarized themselves by the end of 1999. Making dollarization official in January 2000 helped to complete the transition from the disorder of a collapsing currency to the calm of a relatively stable currency. The economy did not fall further into recession but responded with growth. After a steep drop in real output in 1999 (-4.74%), output growth returned to the positive range in 2000 (1.09%), then resumed a healthy pace in 2001 and 2002 (4.02% and 4.10%). Growth under dollarization has continued to be much healthier than under the sucre regime. From 2000 to 2013, Ecuador's real GDP grew 75% in total, a compound annual rate of 4.4%. During the previous 13 years, 1987 to 2000, total real growth was only 36%, an annual rate of only 2.4%.

Today, the Ecuadoran economy is doing quite well on several standard macroeconomic indicators. The American economist Steve Hanke (2014) provides one way to rank its performance against other countries. In his "misery index," a country's current misery score = inflation rate + lending interest rate + unemployment rate (all bad things), minus per capita GDP growth over the previous year (a good thing). Venezuela has the worst score for 2013, the #1 highest measured macroeconomic misery not only in South America, but in the world. Ecuador's score is the *best in South America*. Is dollarization responsible? Yes. The only two countries with better scores in Latin America are El Salvador and Panama, the only other dollarized countries.

Dollarization has also brought improvement to Ecuador's banking system, according to two analysts at the Federal Reserve Bank of Atlanta (Quispe-Agnoli and Whisler 2006). They

correctly note that dollarization, by ruling out an official lender of last resort able to create dollar bank reserves with the push of a button, eliminates an important source of moral hazard. In this way dollarization has the potential to reduce risky bank behavior, and thus so "make banks runs less likely because consumers and businesses may have greater confidence in the domestic banking system." Lacking the expectation that "the monetary authority would come to the rescue of troubled banks" whether solvent or insolvent, banks in a dollarized system "have to manage their own solvency and liquidity risks better, taking the respective precautionary measures."

We have long seen this benefit realized in the stability of banks in offshore centers like the Cayman Islands, the Bahamas, Jersey and Guernsey, and Panama, which have no official lenders of last resort – and no crises. The Atlanta Fed analysts saw it being realized in Ecuador as well. Ecuadoran banks now hold higher reserves and a greater share of liquid assets overall, and hold safer asset portfolios than in the 1990s. Just as importantly, because it has eliminated large swings in the inflation rate and in the expected inflation rate, dollarization "fosters an environment beneficial to financial intermediation." In particular, it encourages the public to hold greater bank deposits (the ratio of deposits to GDP in Ecuador, which was just below 20 percent in 2000, is today just above 30 percent) and thereby provides a greater volume of funds to investors. On the lending side, loan quality has improved because banks no longer face loan default risks due to exchange rate swings that render borrowing firms unable to repay. Meanwhile, as compared to a system with partial dollarization, banks themselves have become less prone to large devaluation losses, because dollarization eliminates the devaluation risk that used to arise from currency mismatches on bank balance sheets.

While 15 years is only a fraction of a century, it is not too much to hope that Ecuador's banking system is following in the path of Panama's. With more than a century of dollarization, Panama has the deepest financial markets and most efficient banks in Latin America.

To summarize, official dollarization in Ecuador has (1) lowered inflation, (2) fostered financial deepening and thereby real growth, and (3) lowered transaction costs for importing,

exporting, and making remittances. What it has not done, of course, is to limit the growth of government spending while government revenue has grown, although it has eliminated the ability to cover deficits by printing money.

A proposal to extend the gains from dollarization: Allow competition from private issuers of currency notes and electronic claims

I would like to propose that Ecuador take a further step to enlarge the benefits of dollarization and to complete the liberalization of its payment system. Specifically, it should allow local private banks to issue redeemable notes, just as they now issue checkable account balances, and local mobile phone companies to issue transferable credits. Dollarization does not require the exclusive circulation of Federal Reserve Notes. Locally and privately issued banknotes, and their digital equivalents, can provide an effective circulating medium denominated in dollars and redeemable for dollars.

Here I am not proposing castles in the air. Looking to financial history, private banks were the main issuers of paper currency in most countries before the era of central banking. Adam Smith in *The Wealth of Nations* praised private currency for the benefits it had brought to his native Scotland, benefits that apply just as much to present-day Ecuador. In his day, by persuading the public to hold banknotes in the place of silver and gold coins, and backing those notes mostly with loans and only fractionally with silver and gold, local banks freed the silver and gold to be exported to buy the capital equipment that fueled Scotland's economic growth in the Industrial Revolution.

Likewise, local Ecuadorean banks that persuade the public to hold their dollar-denominated notes in the place of imported Federal Reserve notes will back their notes mostly by loans to local businesses and only partly by holding dollar-denominated reserve assets. The banking system can then provide more loanable funds to the entrepreneurs who drive economic growth. The economy can operate with less wealth tied up in Federal Reserve notes and more in

capital equipment to fuel twenty-first century growth. The financial system will deepen. An important article by William Lastrapes and George Selgin (2012) formally develops this argument and provides sizable estimates of the growth gains available from private note issue in developing economies.

Scotland today, and also Northern Ireland and Hong Kong, provide living examples of systems where private commercial banks continue to issue most of the paper currency. In Scotland, three private banks issue notes. The banknotes issued by the private Bank of Scotland compete against the notes of two other private commercial banks, the Royal Bank of Scotland and the Clydesdale Bank, as well as against the government's Bank of England notes. In Northern Ireland, four private commercial banks compete in issuing banknotes: Ulster Bank, the Bank of Ireland, First Trust Bank, and Danske Bank (formerly the Northern Bank). Bank of England notes also circulate, but are not as common. All of these brands of private notes are denominated in pounds sterling, and redeemable for pound coins. In Hong Kong, the banknote currency is denominated in Hong Kong dollars and is issued by three commercial banks: the Hong Kong and Shanghai Banking Company, the Standard Chartered Bank, and the Bank of China. These three economies have currency competition in the same sense that most economies have checking-account competition.

The same arguments that show the benefits from competition among shoemakers apply equally to competition among banks of issue. Consumers benefit more from competitive than from monopolistic markets not only in checking accounts and traveler's checks, but also in circulating currency.

Economists who object to allowing competition in the provision of banknotes are denying members of the public from using the brands and forms of currency that they would prefer. But there is no sound economic argument for that position. If we care about the interests of ordinary money-users, then no bank – including a central bank or a "currency board" -- should have a legislated monopoly on the basic currency unit or on the issue of banknotes. Neither should any

foreign central bank. Ecuadorans should be as free to use Bitcoins (which the Assembly recently outlawed) or Swiss francs or Peruvian sols as they are to use US dollars.

As the examples of Northern Ireland and Scotland remind us, allowing domestic banks to issue currency notes provides an alternative to importing foreign currency. Where the US dollar is the voluntarily adopted monetary *standard*, we can expect consumers to insist on notes that are directly redeemable for US dollars at a rate that is contractually fixed.

Private banks tend to show more creativity than central banks in designing their notes. Where central bank notes almost always feature dead politicians, Scottish and Northern Irish banknotes carry the faces of local heroes from many fields. This feature, incidentally, minimizes the force of the second objection, concern about the loss of national pride from adopting an external standard. The Bank of Scotland's notes feature the poet Sir Walter Scott, who also wrote a pamphlet defending the free banking system around him in the nineteenth century. Various denominations of Clydesdale Bank notes feature the scientist Lord Kelvin, the economist Adam Smith (on its ₤50 note), the missionary Mary Slessor, and the poet Robert Burns. Adam Smith was an even earlier defender of Scotland's system of competitive private banknote issue, and an opponent of monopoly privileges, so that it is rather ironic that his image also currently appears on the ₤20 note of the Bank of England, which has monopoly note-issue privileges in England and Wales. Danske Bank notes feature John Boyd Dunlop of Belfast, who invented the inflatable tire, and Harry Ferguson, who developed the modern farm tractor. A few years ago the Ulster Bank issued a note featuring a celebrated Northern Irish footballer, George Best.

Domestic banknotes retain the would-be seigniorage locally (except to the small extent that the banks hold non-interest-bearing foreign currency as reserves). The transfer does not go the banks' owners, however. Competition among the banks distributes the gain to their currency-holding customers, typically in the form of unpriced services. For example, to get their notes into circulation, as seen in Scotland and Northern Ireland, competing banks of issue install

more automatic teller machines and charge zero fees for withdrawing their notes from the machines.

The seigniorage transfer associated with the circulation of Federal Reserve notes in Panama, Ecuador, and El Salvador, and the corresponding transfer to the United States, is thus avoidable, to the extent that the circulation is due to legal restrictions that prevent domestic banks from issuing notes, rather than due entirely to consumer preference for Federal Reserve notes. We can leave it to the market to sort out which institutions are trustworthy enough to issue currency. The same argument applies to electronic money in the form of bank account balances transferable through the internet, or in the form of credits transferable via mobile phone.

The popularity of the US dollar

My country has something very important in common with Ecuador: we also use the US dollar. But as you know, our two countries are not alone. Panama has been dollarized since 1904, El Salvador since 2001. The US dollar is *popularly* used throughout the Americas. For example, Costa Ricans hold about 50 percent of their bank deposits in US dollars. In Uruguay, Peru, Paraguay, and Bolivia, the reported deposit dollarization ratios run from 45 percent to 75 percent. In Nicaragua, 80 percent. The dollar is also popular in Russia and other former Soviet-bloc countries, in much of Africa, and in many parts of Asia. For example, Cambodia almost entirely dollarized. (There is a remaining local paper currency, but it is of such low value that it acts only as small change at a fixed rate to the US dollar, in the place of coins.) Conservative estimates place the current volume of Federal Reserve notes circulating *outside* the United States at around 55 percent of the total. Based on the most recent figures, this means around $715 billion out of the $1.3 trillion in circulation.

The move to full dollarization in Ecuador in January 2000 most fundamentally meant that the government finally bowed to the verdict of the people, who had already popularly dollarized their own transactions and finances.

Of course the government's concession to freedom of choice in currency did not happen just like that. I am reliably informed that it took years of ideological groundwork laid principally by the Instituto Ecuatoriano de Economia Politica in Guayaquil, led by Dora de Ampuero, and the Foro Economico in Quito, led by Joyce Higgins de Ginatta, with foreign assistance, I am proud to say, from my own former student Kurt Schuler. I am informed that "the arguments in favor of dollarization" were also promoted by "the presidents of universities in Quito and Guayaquil that espoused the idea during 1998 and 1999."

Wisely, these proponents of dollarization rejected the half-way reform of a currency board, on the grounds that a currency-board-style arrangement was unlikely to remain strictly orthodox and non-discretionary. It would therefore leave the government with a continued power to monetize its own deficits. These concerns were validated when the government of Argentina used its unorthodox *caja de conversión* to buy dollar-denominated Argentine sovereign bonds and carry them on its balance sheet at fictitiously high values. This behavior eventually undermined the credibility of its 1:1 peg and triggered a speculative attack. The result was sharp devaluation of the peso in 2002, accompanied by the forced the "pesofication" of its citizens' legal US dollar deposits, an incredible breach of the rule of law. By dollarizing, Ecuador avoided a similar tragedy.

(My source for much of this history of the local debate is a term paper written for my monetary economics class at George Mason University by a promising graduate student in economics (Gangotena 2012). I have noticed that he has the same name – Santiago Gangotena – as our conference host, the President of the Universidad San Francisco de Quito. I thought it must be a common name in Quito, until I learned that the GMU student is the son of USFQ's President.)

Ecuador's prospects

While we celebrate Ecuador's fifteen years of success with dollarization, and think about extending it, we must take note of two dark clouds on the horizon.

First, Ecuador still has a central bank. Although the BCE is presently precluded from issuing paper currency, it continues to be assigned by public law "the responsibility of implementing the monetary, credit, foreign exchange and financial policies formulated by the Executive." Why? We should have no doubt that the Executive would dearly love to once again have a monetary policy to conduct. We should expect the BCE's own *funcionarios* to seek to enlarge the scope of the bank's discretionary powers, if only in the sincere hope that they could do more good. But we know that the direction of greater discretion in monetary policy leads back toward the conditions of 1999. With dollarization, a central bank is completely unnecessary.

Second, I have been learning with concern – as I am sure you have – about the plans of the national government of Ecuador to issue its own digital mobile-phone currency. The idea is for the Banco Central to issue dollar-denominated electronic credits that customers of the government-owned mobile phone network CNT can use to make payments by phone. As the Associated Press reported August (CBS Market Watch 2014): "Such mobile payments schemes are already popular in African nations including Kenya and Tanzania, where they are privately run. The new currency was approved, and stateless crypto-currencies such as Bitcoin simultaneously banned, by Ecuador's National Assembly last month. … The official in charge of the new currency, Fausto Valencia, said the software is already used in Paraguay by cellphone companies."

There is no reason to believe that a national government can run a mobile payment system more efficiently than private firms like Vodafone (which originated and runs the successful M-Pesa system in Kenya) and Tigo (which runs the Giros Tigo system in Paraguay). Why not let the private mobile phone companies also compete to provide mobile payments in

Ecuador, issuing their own dollar-denominated account credits? Instead they are banned unless they use the government's credits. Such a ban is costly to ordinary consumers. Evidence from around the world shows that payment by mobile account credits is the type of service that firms in a competitive market *can* produce, *will* produce when there is a normal rate of return to be earned, and *produce at lower cost* than state-owned enterprises.

The government insists that its new system will be "voluntary." But when the state gives itself a monopoly on a service, blocking individuals from the voluntary choice to use another provider, the option to "take it or leave it" is not fully voluntary. If the government sincerely wishes to help the poor and unbanked, it should let private providers enter the competition, which will drive down the fees that the poor and unbanked will have to pay.

It is very curious that a law supposedly seeking to provide the poor with low-cost access to payment systems would ban Bitcoin. (The only other country in South America to ban Bitcoin appears to be Bolivia.) In countries that receive income from remittances, Bitcoin has the potential to noticeably increase national income by lowering the cost of remittance. What the family in the home country receives is much closer to the amount that the worker abroad has paid to send when the worker uses Bitcoin rather than Western Union or another old-fashioned high-priced system. Researchers at the Pew Center in the United States estimate that remittances account for about 3% of Ecuador's GDP. In 2012 the average Ecuadoran working in the United States sent home $2607 dollars. So this is not a trivial matter. Bitcoin remittances could contribute many dollars to the pockets of Ecuador's poor.

A news story (Imran 2014) says of the government's mobile payment project: "The currency will serve as… a way for the country to regain some control over its economic system. The production of the new currency would completely depend upon demand." But *these two sentences can't both be true.* The new system can't *both* allow the government to "regain some control" over the economy and *also* make the volume of credits "completely depend on demand," which implies that the government is passive and exercises no control.

Given that is doesn't make economic sense, why does the government want to issue mobile payment credits as a monopolist? It seems likely that the project is meant as a fiscal measure. One million dollars held by the public in the form of government-issued credits is a million-dollar interest-free loan from the public to the government. According to the same story, "The government has said it won't use the [new] currency to fund public spending," but this is hard to fathom. If the project makes a profit, where else would the profit go?

If the government *can* make a profit at mobile payments, even though they have no expertise or comparative advantage in the area, surely Movistar or Claro can operate more efficiently and make larger profits, even while charging lower fees. Why not let the private sector operate in this area? Why not let the public choose which firm has the most reliable and trustworthy service? If the government desires to subsidize the use of the service by the poor, it has the option of issuing them vouchers. It need not provide the service itself, and certainly not as a monopolist.

Personally, I would find dollar-denominated account credits that are claims on Movistar or Claro more credible than claims on the government of Ecuador. After all, unlike the government, neither company defaulted on its bonds in the past 12 years. Claims on private companies are legally enforceable. The company cannot suspend payment or devalue its IOUs without taken to court and forced to pay or dissolve. Competition for business compels payment firms them to worry about reputation, and so compels them to manage the business so that their readiness, ability and willingness to pay is not in doubt. A government agency, by contrast, cannot be sued for breach of contract, and has no concern about maintaining a good reputation when it has no competitors. If CNT or the BCE decides to devalue mobile credits against the US dollar, holders have no remedy in court. People who are thinking about holding the credits need to consider the default risk. The "backing" requirements in the law are completely toothless against a government that chooses to default.

In sum, there is no plausibly efficient or honorable reason for the Ecuadoran government to go into the business of providing an exclusive medium for mobile payments. Consequently it is hard to make any sense of the project other than as fiscal maneuver that paves the way toward official de-dollarization. I gather that President Correa does not like the way that dollarization limits his government's power to manage the economy. He has compared the limitation to "boxing with one arm." But as I have already emphasized, retiring the government from boxing against the economy by means of money-printing is precisely dollarization's great virtue.

The new legislation, the "Código Orgánico Monetario y Financiero," creates a "Junta de Política y Regulación Monetaria y Financiera" and gives it the power to "declare and define the monetary, credit, foreign exchange and financial policies." As the IEEP has warned us, provisions of the act threaten a government takeover of the banking sector. Other provisions, including the introduction of government-issued mobile credits, threaten an exit from official dollarization. After all, what is the point of creating a *junta* for monetary policy in a dollarized economy?

Official dollarization is not irreversible. But all experience indicates than a reversal, a de-dollarization, would not be graceful. Consider the case of Liberia. Before the Second World War, US Federal Reserve notes were the only form of paper currency in the country, with the government issuing only subsidiary coins that were interchangeable at 1:1 against the US dollar notes. After the War the government introduced Liberian dollar notes, initially also at 1:1. Soon enough the government devalued the Liberian dollar against the US dollar. Today it takes more than 90 Liberian dollars to buy one US dollar. Over the past year alone the Liberian dollar's value has fallen 12.5 percent against the US dollar. Fortunately, popular dollarization is harder to undo. The Liberian people continue to prefer the US dollar, and keep an estimated 90 percent of their currency and deposits in US dollars. The Liberian dollar currency is only a nuisance to the people that provides little revenue to the government.

I'm sure that Ecuadorians don't need an outsider's advice on this issue, and I'm sure efforts are already underway, but I would advise Ecuadorian friends of dollarization to resist the project to have the government issue mobile-phone credits before it starts. I believe that the appropriate expression is: *Corten de raíz*.

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