

Proposal for a Brazilian Education Complementary Currency

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This note summarizes the key elements of a complementary currency concept developed during a conversation with Prof. Gilson Schwartz from the University of Sao Paulo. It is organized in six sections as follows:

- Background
- Objective
- Scope
- Approach
- Issue of Inflation Control
- Next Steps

Background

When Brazil privatized the mobile telephone industry, it introduced a 1% tax earmarked for educational purposes. This Education Fund has now grown to about 3 billion Reais (US\$ 1 billion). One conventional solution would be to use these funds to directly pay for scholarships to worthy students and/or improve the educational facilities of the country. Prof. Schwartz raised the question whether it would be possible to design a complementary currency that would provide a multiplier of learning compared to these conventional solutions. This note documents one of the possible designs to achieve that aim.

Objectives

The objective of the educational currency is to increase the learning capacity as well as strengthen the social coherence of Brazilian society, by enabling a learning multiplier effect without risking inflationary pressures in the economy as a whole. The ultimate objective is to make Brazil one of the world leaders of the knowledge economy of the 21st century.

Scope

The main learning focus of this project is to multiply the number of students that can afford to obtain a college-level education in Brazil. However, this project will also have a

direct impact on the entire primary and secondary school learning potential, as well as improve the cross-generational and social awareness of the kids that will go to college. Although this project is original as a whole, there are significant and successful precedents of each of its key components, as will be indicated below.

Approach

A special targeted currency, whose unit could be called *Saber*, would be issued under highly controlled conditions as explained below. Its face value would be nominally the same as a Real, and would be redeemable for paying tuition of higher education programs in participating universities. This would be a paper currency (although electronic accounts can be kept where they will accumulate), with all the security precautions against fraud used for printing conventional national currency.

However, there are significant differences between Sabers and conventional money. They are officially redeemable only for tuition payments for higher education for a particular year (e.g. for the 2005-6 academic year). If they aren't used for payment of higher education during that year, they could be exchanged for Sabers of the next academic year (2006-7), but with a penalty of 20% in order to give an incentive not to hoard that currency beyond the deadline.¹

The process starts with the Ministry of Education assessing the capacity of universities to handle increased enrolment for a future year (say 2005-6). Two key aspects are taken into account: the existing spare capacity for additional students under today's mode of operating; and the (much larger) capacity when distant learning technology is successfully implemented. Distant learning could involve for instance only 1 month of on-campus presence per trimester, while the other two or three months the courses are available in the cities and villages of origin of the students. Therefore the universities' capacities will significantly increase as the new distant learning technologies spread.

Let us assume that the additional capacity of enrolment for the year 2005-6 is estimated now at 30,000 students; and that the average tuition costs 3,000 Riais per trimester. The Ministry of Education would make available now 90 Million Sabers per trimester for the year 2005-6. What happens with those Sabers?

There would be several phases of implementation for the program (see graph on next page).

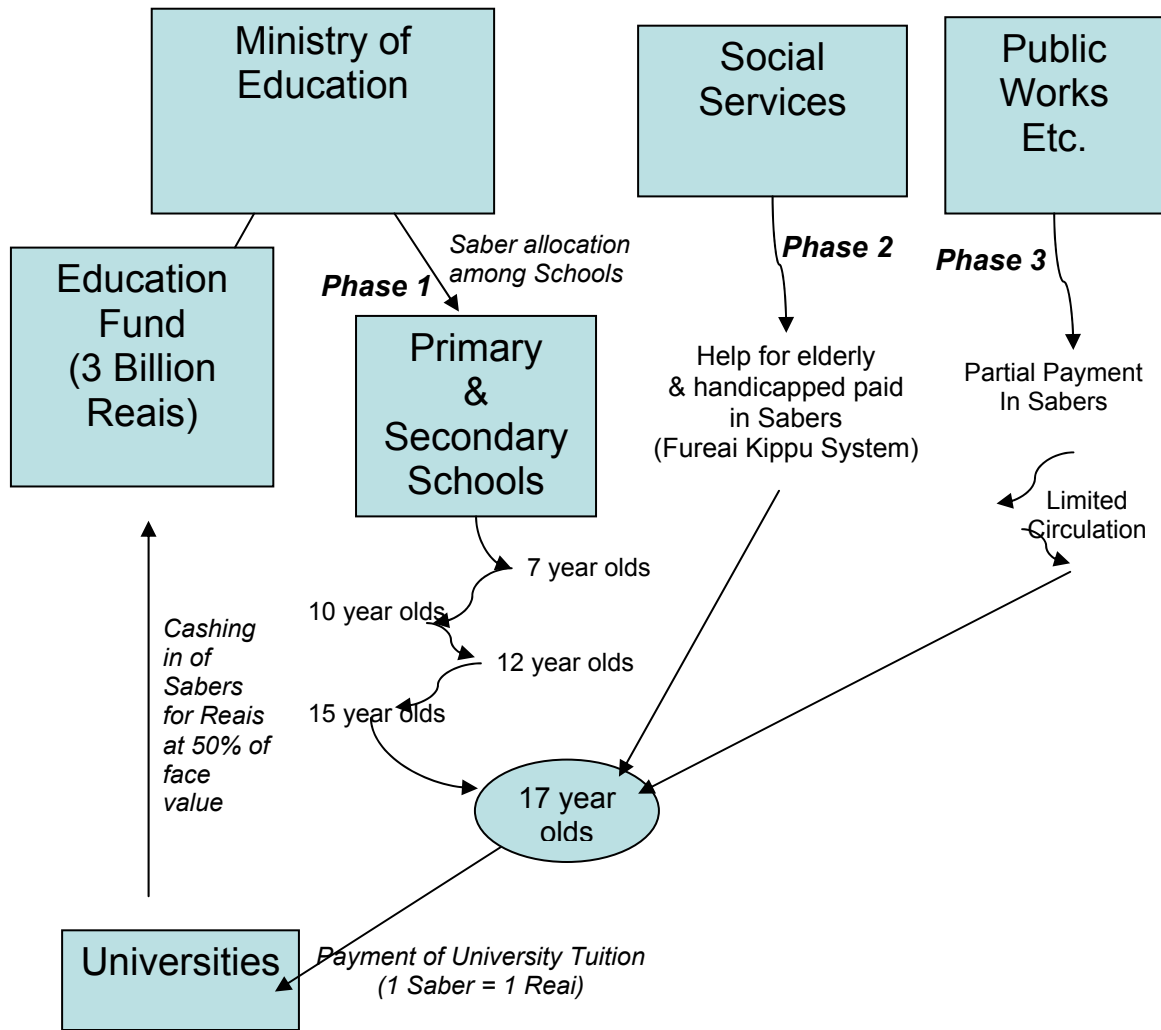
During **Phase 1**, the use and circulation of the Sabers involve only the Ministry of Education from beginning to end. This Ministry allocates the Sabers among schools in economic areas where typically funding will not be available for higher education, even for students that would be capable of such learning. The schools make the Sabers available to its youngest students (e.g. 7 year olds) at the condition that they choose a mentor from an older class (e.g. a 10 year old), and work with him or her on their

¹ Such expiration penalty is a simple form of demurrage. Demurrage is a time related charge on a currency, similar to a parking fee for that currency. It gives a.o. an incentive not to accumulate the currency beyond the deadline. The full effects of demurrage systems is explained in B. Lietaer "Of Human Wealth" pg 104 - 110.

weakest school topics. There is successful precedent of such a system in the form of the use of Time dollars for mentoring among kids. Such a process has proven remarkably effective particularly in underprivileged schools in the US and the UK.² The self-esteem of the older kids is dramatically increased, and they become a better student him or herself as one of the best ways of learning something is to teach it. Furthermore, it seems that it is not OK to let your mentee being beaten up for being “too good a student”, something that unfortunately isn’t uncommon otherwise. Finally, the younger kid obviously learns as well. The Sabers are transferred to the older kid in compensation for the hours spent mentoring at a rate to be determined (e.g. 5 Sabers per hour). The 10 year old can do the same thing with a 12 year old; and the latter with a 15 year old, until at last we are dealing with a Senior of 17 years old who aspires to go to university next year. That 17 year old can use the Sabers he or she accumulated to pay all or part of the tuition for the participating universities.

² Edgar Cahn “No More Throw-Away People” (Essential Books, 2000).

“Saber” Complementary Currency System = Learning Multiplier



NB: 1 Saber is equivalent to 1 Reai redeemable for tuition in higher education

There has been a pre-negotiated agreement between the Ministry of Education and the participating universities on the conditions of reimbursements of the Sabers. The marginal cost of having an extra student is only a fraction of the average tuition that the university would normally charge (often in the order of 10%). Furthermore, these are students that the university would otherwise not have at all. Therefore, from the university’s viewpoint, any income from additional students beyond their marginal cost is a gain to the university.

In the graph it has been estimated that the Ministry of Education would reimburse in Reais the Sabers received as tuition payments at 50% of their face value. But because

investments in distant learning facilities would significantly increase the capacity of the universities, but further reduce the marginal cost of an additional student, reimbursements at a lower percentage should become increasingly acceptable to the universities as well.

Notice that the full “additional learning” that the Saber complementary currency enables is a factor of the order of 10 times what a direct allocation of the resources of the Education Fund to scholarships (2 times for the university discount of Sabers, and 5 times for the circulation of the Sabers in mentoring of kids).

As the capacity of the universities increases over time, and the Saber system has established its credibility, additional ways to bring the Sabers into circulation can be envisaged. Examples of such additional channels are described next as Phase 2 and 3 of the project.

In **Phase 2**, one could apply what has been very successfully done with the *Fureai Kippu* system in Japan.³ What it would mean is that children or adults who are helping elderly or handicapped people could also earn Sabers. This program has been very successful in Japan and has contributed to reinforce cross-generational interaction in that country, not to speak of the substantial improvement of the quality of life for the elderly that is obtained without burdening governmental budgets.

In **Phase 3**, one could imagine extrapolating the system to other governmental projects. For instance, let us assume that the labor content of a road construction project is estimated at 100 million Riais, and that the base salary for that work is 100 Riais per week. One could make the following offer to the workers on that project:

- either you take the 100 Riais per week;
- or you accept only 80 Riais plus 70 Sabers (for a total of 150 equivalent Riais).

Obviously people who have kids ready to go to university would have an obvious interest in accepting the second offer. But even those who don't have kids may prefer to choose that option, and use the Sabers in partial payment in whatever good or service from someone who has a kid that wants to go to college.

The benefits include that the government would be able to reduce the labor budget for the building of the road from 100 million Riais to 80 million Riais. In addition, more students of modest means would be able to obtain higher education, and Brazil would further improve its human capital as well.

Issue of Inflation Control

One of the objections that one may expect from the IMF or conventional economists is that the creation of a Saber currency would risk fueling inflation.

This section explains why – if the Saber system is managed correctly – no such risk exists either in the Saber currency itself or in the national currency.

³ See Lietaer “Future of Money” pg 201.

The reason is that the creation of Saber currency is different from the creation of conventional national currency in four significant ways:

- Sabers are ultimately redeemable into Reais only by universities through the Ministry of Education, and only for educational purposes.
- the quantity of Sabers issued is controlled by the Ministry of Education on the basis of the university capacities to increase the number of students, so that no more Sabers are created than the universities can accept as additional students, thereby avoiding the inflation problem generated by a currency that is created in excess of the goods or services available;
- the Sabers have an expiration deadline at which point the 20% penalty comes into play, so that the Sabers would circulate only for a limited and controlled time period, thereby further reducing the probability that excess currency is circulating;
- and finally, the gradual expansion of the system would ensure that any problems can be dealt with before they become significant.

All three of these factors make the dynamics of the creation of Sabers fundamentally different from those of conventional national currency, and avoid that they would have an inflationary impact similar to what would happen if additional billions of Reais were pumped into the national economy

Next Steps

Implementing this project would involve the following six steps:

1. Review and modify the design of the Saber system as described here to better match the specific requirements of Brazil today;
2. Prepare a more fully fleshed out version of this text in the form of a formal White Paper for review by the appropriate authorities;
3. Ensure that the IMF and other relevant agencies are informed and understand the implications of the Saber system, to avoid that it is being suppressed by lack of understanding;
4. Implement a pilot of Phase 1 limited to involve only some specific universities and schools;
5. Ensure that the distant learning technologies are growing in parallel with the extra demand for education.
6. Gradually implement Phase 1, 2 and 3 as described above.