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Buckaroos: The Community Service Hours Program at the University of Missouri-Kansas City

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1. Introduction

In this paper we explore a new community service program that is being implemented at the University of Missouri-Kansas City. In the United States, there is a growing movement on college campuses to increase student involvement in their communities, particularly through what is known as "service-learning" in which students participate in community service activities organised by local community groups. This paper will not summarise existing programs nor the rationale behind the movement. Rather, we will take this opportunity to explore a novel method for implementing, organising, and administering a community service program. We will then analyse the implications of such a program for developing an understanding of what has been termed "modern money" – that is, of the way that money operates in the modern capitalist economy (Wray, 1998). This, then, leads to a discussion of an alternative view of monetary and fiscal policy in the modern economy. In particular, it should become obvious that a modern monetary economy that adopts an employer of last resort program (or a buffer stock employment program (Mitchell, 1998)) will operate much like our community service hours program.

2. Buckaroos: Program basics

At UMKC we are developing a community service program, already in

operation in the economics department as a pilot program. We have chosen to design a system that is essentially a "monetary" system. We have created paper notes, dubbed "buckaroos" (after the UMKC mascot, a kangaroo), with the inscription "this note represents one hour of community service by a UMKC student", and denominated as "one roo hour". These notes, by the way, feature the portrait of Thorstein Veblen, the most renowned economist ever to hold a position at the University of Missouri. Each student has a community service "tax" of 25 buckaroos (B25) per semester, payable to the UMKC "Treasury" each semester. Approved community service providers (state and local government offices, university offices, public school districts, and not-for-profit agencies) submit bids for student service hours to the Treasury. The Treasury "awards" special drawing rights (SDRs) to the providers so long as basic health, safety, and liability standards are met. The providers draw upon their SDRs as needed to obtain the buckaroos required to pay students for hours of service. Note, for reasons discussed below, there is no necessary limit to the number of buckaroos paid out during any semester. The number of SDRs supplied to any provider is limited only by the provider's needs for labour and by its ability to attract student workers.

When providers draw on SDRs to obtain buckaroos, this is equivalent to "spending" by the UMKC treasury. Service providers then purchase student labour hours by providing buckaroos. When students pay their B25 tax, they return these buckaroos to the UMKC Treasury. Payment of taxes retires Treasury liabilities. In practice, the Treasury might simply burn the buckaroos received, or stockpile them to be used for future Treasury spending – whatever is more cost efficient.

Several implications are obvious. First, the UMKC Treasury cannot collect any buckaroo taxes until it has spent some buckaroos. As the only source of buckaroos, the Treasury has to emit some buckaroos before they can be collected in payment of taxes. Second, the Treasury cannot collect more buckaroos in payment of taxes than it has previously spent. This means that the "best" the Treasury can hope for is a "balanced budget", with tax "revenues" equalling buckaroo spending. Actually, it is almost certain that the Treasury will run deficits as some buckaroos are "lost in the wash", hoarded for future years, or framed and hung on dormitory walls. While it is possible that the Treasury could run a surplus in future years, this would be limited by the quantity of previously hoarded buckaroos that could be used to pay taxes. Third, and most important, it should be obvious that the Treasury faces no "financial constraints" on its ability to spend buckaroos. While the Treasury might decide to limit the quantity of buckaroos supplied to an individual service provider, there is no reason to limit the aggregate quantity of

buckaroos issued to the entire community. Indeed, the quantity of buckaroos provided is "market demand" determined, by the students who desire to work to obtain buckaroos and by the providers who need student labour.

Furthermore, it should be obvious that the Treasury's spending is in no way dependent upon its receipt of buckaroos from tax payments. To drive the point home, we can assume that the Treasury always burns every buckaroo received in payment of taxes. While it is possible that the Treasury might find it more cost effective to inventory buckaroos rather than to burn them, buckaroos received by the Treasury are nothing more than pieces of paper with a (sunk) printing cost. From the perspective of the Treasury, the buckaroos have already done their part in mobilising student labour resources before they have been received in payment of taxes. Actual payment of taxes comes later and is important only in maintaining the incentive for students to continue to supply labour in order to earn buckaroos. In other words, the Treasury does not impose taxes in order to ensure that buckaroos flow into its coffers, but rather to ensure that student labour flows into community service.

More generally, the Treasury's budget balance or imbalance provides no useful information to UMKC regarding the community service program's success or failure. Rather, a Treasury deficit, surplus, or balance provides useless accounting data. Program success is determined by careful assessment of the actual accomplishments of the service providers, by improvement in University-community relations, and by the impact that community service had on the students themselves. In a sense, these are all "real" effects as opposed to the purely "monetary" accounting data that is provided by looking at the Treasury's budget balance. It would be senseless to cut the Treasury's spending of buckaroos merely because it ended a fiscal year with a budget deficit. It would be equally silly to increase the tax on students (say, from B25 to B35) in an attempt to eliminate a budget deficit. It might, however, make sense to reduce the tax (say, from B25 to B15) if it were found that students were providing too much community service (relative to the demand for student labour coming from providers) or that students were devoting too little time to class work. Likewise, the tax could be increased if it was believed that the University, the community, or the student body would benefit by greater provision of student labour hours to community service. (Note that the same effect can be achieved by holding taxes constant but decreasing the wage paid – say, to half a buckaroo per hour worked.)

3. Interest Rates

Each student must obtain a sufficient number of buckaroos to meet her tax liability. Obviously, an individual might choose to earn, say B35 in one semester, holding B10 as a hoard after paying the B25 tax for that semester. In this way, the student would need to obtain only 15 additional buckaroos in the second semester in order to pay the tax.

UMKC can encourage "thrift" by offering interest-earning buckaroo "bonds", purchased by students with excess buckaroo hoards. The Treasury could be said to be "borrowing" buckaroos from the students. The analogous situation for the federal government would be sales of treasury bonds that are said to "finance" government deficits. Indeed, this is usually described as government "borrowing", necessitated by government deficits. Note however, that the UMKC Treasury does not "need" to borrow its own buckaroos in order to deficit spend – no matter how high the deficit, the Treasury can always issue new buckaroos. Indeed, the UMKC Treasury can only "borrow" buckaroos that it has already spent, in fact, that it has "deficit spent". It cannot borrow buckaroos that it has not yet spent, nor would it sensibly try to "borrow" buckaroos that students need for payment of taxes. For this reason, it makes little sense to call this "borrowing". When the Treasury agrees to offer bonds, all it is really doing is offering an interest-earning alternative to non-interest-earning hoards of buckaroos. As discussed above, we can continue to assume that all buckaroos received from bond sales are simply burned. This in no way affects the ability of the Treasury to liquidate bonds if buckaroo savers decided to "cash-in" bonds.

Finally, note that "private" markets need not dictate to the Treasury what interest rate it should pay on its bonds. The Treasury can pay any interest rate it wishes. While it is possible that the quantity of bonds it sells will vary positively with the interest rate, the Treasury can simply accept whatever quantity results at the interest rate it decides to pay because it does not "need" to "borrow" from students. Furthermore, the interest rate paid by the Treasury will become the "base rate" for "market interest rates" in the UMKC community – if private lending and borrowing develops. Students with hoards of buckaroos would not lend them to fellow students at a rate below that set by the UMKC Treasury. Indeed, due to default risk, one suspects that student borrowers would have to offer a rate that is a mark-up over the Treasury's base rate.

If the Treasury did not offer interest-earning bonds, the base interest rate on buckaroos would be zero. "Market" interest rates would then be set as a mark-up over the zero base rate. If, however, the Treasury wants to keep the base rate above zero, then it will have to offer a way to earn positive interest rates on Treasury liabilities. For this reason, Treasury

bonds should be seen as an "interest rate maintenance account" designed to keep the base rate at the Treasury's target interest rate. Without such an account, the "natural base interest rate" is zero for buckaroo hoards created through deficit spending. Note that no matter how much the Treasury spends in this case (that is, without an interest rate maintenance account), the base rate would never rise above zero. Eventually, students might adjust to this by reducing their desire to hoard, and thus to earn, excess buckaroos. However, the point is that conventional thinking about the government deficit-interest rate relation should not be applied to our buckaroo system: deficits do not place upward pressure on interest rates. In truth, unless the Treasury chooses to intervene to maintain a positive base rate (for example, by offering interest on bonds), deficits necessarily imply a zero base rate.

4. The value of a Buckaroo

What will determine the value of the buckaroo? Recall that each student must supply an hour of labour to obtain a buckaroo. As such, the buckaroo commands an hour of labour. From the perspective of the student, the "cost" of a buckaroo is the hour of labour that must be provided; from the perspective of the community service provider, a buckaroo buys an hour of student labour. Obviously, students are not homogenous so that an hour of labour provided by one student may be worth more to the provider than an hour of labour provided by a less proficient student worker. Providers compete to obtain the best student workers by promising better working conditions or prospects of career advancement (including transition to permanent, dollar-paid, employment). The last, marginal, student "hired" by a public service provider may have a value just above zero (presumably, a student whose contribution is negative would be employed only due to charitable considerations). Still, on average, the buckaroo is worth an hour of labour – more specifically, an hour of average student labour. Note that the value of the buckaroo will not fall to the value of the contribution of the marginal student because all students (regardless of productivity) need buckaroos to pay taxes. While some students may opt out of community service (obtaining buckaroos, for example, by exchanging dollars for them), there is little reason to believe that this would significantly reduce the average productivity of student labour (as it is difficult to see why the most productive students would opt out, leaving only the least productive – thus, least desirable from the perspective of providers – to supply all the community service hours).

Note that we can determine the value of the buckaroo without refer-

ence to the quantity of buckaroos issued (or received) by the Treasury. Whether the Treasury spends a hundred thousand buckaroos a year, or a million a year, the value is determined by what students must do to obtain them. If the Treasury leaves the value at one buckaroo per hour of labour provided to a community service provider, it makes no difference whether tax liabilities are raised from B25 to B50, or lowered to B15. Nor does it matter whether the Treasury runs a deficit, a balanced budget, or a surplus in a particular year. So long as students can, and must, work for an hour to obtain a buckaroo, the value of the buckaroo will remain equal to an hour of student labour. If, however, the Treasury decided to reduce the value of the buckaroo by allowing public service providers to pay two buckaroos per hour of labour supplied, then the value of the buckaroo would fall to half an hour of labour. On the other hand, the Treasury could require that service providers pay only half a buckaroo per hour of labour, in which case the value of the buckaroo would rise to two hours of labour.

5. Exchange Rates

Since informal campus and off-campus markets have the alternative of purchasing student labour with dollars rather than with buckaroos, arbitrage will keep the exchange rate of dollars against the buckaroo close to the dollar cost of an hour of student labour. In other words, if student labour is valued at, say, \$4 per hour, then a buckaroo (worth an hour of labour) will be worth \$4.¹ Note, again, that the primary determinant of the exchange rate of buckaroo/dollars is not the quantity of buckaroos (or dollars) in circulation. We might expect that the exchange rate in informal markets might temporarily be affected by flows of buckaroos to these markets. If buckaroos are relatively scarce, the exchange rate might rise to \$5 per buckaroo. However, students would increase the supply of buckaroos to informal exchange markets (to obtain "cheap" dollars) – both by releasing hoards and by offering more labour to community service providers (increasing the overall supply of buckaroos). Thus, we would expect deviations from the "labour value" to be temporary and of minor importance.

On the other hand, if the dollar price of student labour were to rise significantly, then the buckaroo/dollar exchange rate would change. For example, if the minimum wage were increased, the dollar price of student labour might rise to \$5.50 an hour. In this case, we would expect the exchange rate to change to \$5.50 per buckaroo – an appreciation of the buckaroo caused by inflation of dollar prices. Conversely, if the University raised the buckaroo price of labour to B2 per hour, then holding

the dollar price of student labour at \$4 per hour, the buckaroo would depreciate to \$2 per buckaroo.

Let us turn to effects of interest rates on the exchange rate. Assume the going exchange rate is \$4 per buckaroo, the default-risk-free short-term dollar interest rate is 6 percent, and the UMKC Treasury's buckaroo interest rate is 3 percent. In this case, there is an incentive to play the arbitrage to take advantage of the higher dollar interest rates. One with excess buckaroos could exchange them for dollars, earn the higher 6 percent interest rate, and then later convert the dollars back to buckaroos. Thus, in today's ("spot") exchange market there would be downward pressure on the buckaroo (as arbitrageurs supply buckaroos in exchange for dollars). Later, when the arbitrageurs exchange dollars for buckaroos there would be upward pressure on the buckaroo. If forward markets developed, this would be reflected immediately in a positive differential between the spot dollar price of buckaroos and the (one year) forward price.

J.M. Keynes advanced an "interest rate parity theorem", according to which either interest rates or exchange rates would tend to move to eliminate such arbitrage opportunities. If the buckaroo and dollar interest rates were expected to hold steady (at 3 percent and 6 percent, respectively), then there would be pressure on the exchange rates as just described, with the buckaroo tending to rise relatively to the dollar. This would tend to reduce the advantage to arbitrageurs since the gain from higher interest rates on the dollar would be at least partially wiped-out by the rising price of the buckaroo. So long as the buckaroo did not appreciate by more than 3 percent, the arbitrageur would find it profitable to hold interest-earning dollar deposits rather than interest-earning buckaroo deposits. The interest rate differential then, places an upper bound on the movement of the exchange value of the buckaroo. In other words, the spot-forward differential would be limited to 3 percent so long as interest rate differentials and wage rates in terms of buckaroos and dollars are expected to remain constant.

When buckaroos are exchanged for dollars in order to make dollar-denominated purchases, this is equivalent to an import into the UMKC community (note, the community includes community service providers and others willing to accept buckaroos). When dollars are exchanged to obtain buckaroos in order to buy goods and services from the UMKC community, this is equivalent to exports. If UMKC runs a trade deficit, more buckaroos will tend to flow into exchange markets than are demanded for purchases of UMKC community exports. This could place downward pressure on the buckaroo. If the buckaroo were to fall to, say 1B/\$3 then it would be more desirable to exchange dollars for buckaroos

and hire labour at the fixed wage of B1 per hour than to pay the going market rate of \$4 per hour of student labour. Thus, any trade deficit that places downward pressure on the exchange value of the buckaroo automatically increases the demand for buckaroos to hire student labour, tending to push the exchange rate back toward B1/\$4 – which is the price of labour in terms of the two currencies.²

In sum, so long as the price of student labour remains at B1 or \$4, the exchange rate of buckaroos for dollars will remain close to one-to-four. A UMKC Treasury deficit or surplus will not impact the exchange rate in any significant or predictable way. The exchange rate will not be determined by the total supply of buckaroos (determined, in turn, by the number of student labour hours offered to community service providers). The interest rate policy of the UMKC Treasury may have minor effects on exchange rates as the interest rate parity theorem predicts. Equilibrating forces are very strong in the case of "imbalanced trade" so that a trade deficit will not significantly affect exchange rates. In other words, all those factors that many economists believe to be important in determining exchange rates will likely prove to have insignificant effects on the buckaroo-dollar exchange rate. Note, finally, that our UMKC "economy" is the ultimate small, open economy – operating in the presence of a huge, dollarised, economy. Still, we manage to float the currency and operate at continuous "full employment" (actually, zero unemployment) without significant exchange rate problems.

6. Unemployment

We have proposed that the Treasury issue as many SDRs as community service providers request. At a minimum, the Treasury will expect to spend as many buckaroos as students will need to meet the total tax liability. If we presume that 10,000 students will participate and that each will have a tax liability of 25 buckaroos per semester, then we know that the Treasury will have to issue at least B250,000 per semester. In practice, students will want to earn, on average, more than 25 buckaroos per semester – to replace lost buckaroos, to save buckaroos or lend them, to make donations to campus charity (providing buckaroos to "needy" students), and to make purchases of goods and services by spending buckaroos on- and off- campus. Let us presume that all of these alternative uses lead to an "extra" demand for buckaroos equal to 50,000 buckaroos per semester. Thus, the Treasury might find that it spends B300,000 per semester and receives B250,000 per semester in tax revenues, for a deficit of B50,000 per semester. Note that the Treasury's deficit each semester is equal to the "extra" demand for buckaroos coming from students;

indeed, it is the "extra" demand that determines the size of the Treasury's deficit. We might call this "net saving" of buckaroos, and it is equal – by definition – to the Treasury's deficit over the same period.

What if the Treasury decided it did not want to run such large deficits, and so proposed to limit the total number of SDRs to 250,000 per semester in an effort to ensure balanced budgets? In this case, it is almost certain that some students would be unable to meet their tax liability. Their shortfall would be exactly equal to the buckaroos hoarded by other students. Students who by luck, good connections, or foresight obtained community service jobs early and who quickly earned B25 to meet their tax liability might be able to continue to work in order to obtain extra buckaroos to hoard. Unlucky, procrastinating students without connections would then find it impossible to find a community service job to earn required buckaroos simply because all SDRs had already been used by providers. These students would find themselves "unemployed", desperately trying to work for buckaroos. Finding no job openings, they would be forced to borrow, beg, or steal buckaroos to meet their tax liabilities. Some in the community might conclude that these unemployed students were deficient in character, perhaps lazy and unskilled as demonstrated by the fact that they were unable or unwilling to obtain community service jobs. Others might suggest that special training programs were required to raise the skills of the unemployed students so that they might find jobs. Hard-nosed Malthusian realists might assert that poverty and unemployment will always be with us, so that it is best to just let the unemployed "die" (fail to meet degree requirements).

Of course, any objective analysis would find the source of the unemployment in the Treasury's policy, and not in the characteristics of the unemployed. Unemployment at the aggregate level is caused by insufficient Treasury spending. Improving the skills or motivation of today's unemployed students will merely shift the unemployment to other groups. If there is any (positive) desired net saving, the Treasury must run a deficit in order to prevent unemployment from occurring. Further, as we have discussed above, there is no rational reason for the Treasury to limit its deficits because the cost to the Treasury of running deficits is simply the printing and other costs of issuing buckaroos – certainly not much higher than the cost of providing letter-head stationary to University departments. Thus, the only rational policy is for the Treasury to provide as many buckaroos as community service providers request.

It is possible that the total number of hours of student labour desired by community service providers might be less than the number of buckaroos desired by students. In this case, unemployment might result even

though the Treasury is willing to increase its deficit. If the University cannot find a sufficient number of jobs for students in order to increase its deficit to the level of desired net saving by students, then the recommended policy would be to reduce the tax liability (say, from B25 to B15).

Finally, there may well be some level of unemployment even in the presence of job openings at community service providers. This could be attributed to the sorts of "micro" factors that are often cited as causes of unemployment: inadequate motivation or skills mis-match between unemployed students and desires of employers. In this case, counselling and training may indeed be necessary. However, unless the number of job vacancies exceeds the number of job seekers, counselling and training alone cannot resolve unemployment problems but would only shift unemployment from one group to another.

7. A Retirement System

Graduation from UMKC is equivalent to retirement from the University, or, more accurately, from the community service hours program because graduates will no longer need to work in order to pay taxes. The University may wish to provide an "alumni package" of benefits that would include an annual buckaroo retirement benefit, of, say, 10 buckaroos per year. This would allow alumni/retirees to purchase student labour to mow lawns, run errands, or even to conduct library research. How can the Treasury ensure that, when the time comes, it will be able to provide 10 buckaroos per year to retirees? One option would be to run the UMKC retirement plan much like the US Social Security system: place a "payroll tax" on current student workers (say, 10 percent on each hour of labour such that students would have to work an hour and six minutes to obtain a buckaroo) and pay retirement benefits out of payroll tax receipts. The Treasury would keep separate accounts for the retirement system, showing expenditures, revenue, balance, and accumulation of buckaroos in a trust fund. As the number of retirees will grow (tremendously!) relative to student workers, the UMKC retirement system would presumably begin to run deficits. Thus, like the US Social Security system, it would need to build up a huge trust fund by running surpluses today in order to meet expected deficits in the future. One option would be to issue interest-earning Treasury bonds to be held by the retirement system trust fund. All of this would be consistent with the current operation of the US Social Security system. No doubt, within a year or two the Treasury's accountants would recognise that the retirement system would be "bankrupt" a few years down the road, leading to much

hand-wringing and plans to slash retirement benefits, increase taxes, or invest buckaroos in riskier assets to increase the rate of return on the trust fund.

However, it should be obvious that running a retirement system surplus today, accumulating a buckaroo trust fund, or earning more interest on the buckaroo trust fund will in no way help to provide for future retirees. First, there is no reason to accumulate hoards in the retirement system trust fund – the Treasury can always pay retirement benefits by issuing buckaroos when payments come due. There is thus no reason to keep separate books for the retirement system. Buckaroos will be supplied as community service providers draw down SDRs and as retirees receive annual buckaroo benefit payments (together, these represent total treasury spending). The total demand for student labour will depend on the demand coming from community service providers, plus retirees, plus other holders of excess buckaroos. It is possible that as the retirement community grows, the demand for student labour coming from retirees, alone, might become sufficient to meet student needs for buckaroos to pay taxes. Thus, the University may have to make a decision concerning the appropriate allocation of student labour – is it better to allocate more labour to community service providers or to retirees? Note, however, that this is a “real” decision and not a monetary decision – it cannot be resolved simply by running larger buckaroo surpluses today or by earning more interest on trust fund assets. The University could, for example, (temporarily) resolve the problem by raising taxes on students – not to “balance” the retirement system’s budget, but to increase the supply of student labour. Or, it could cut retiree benefits – not to balance the budget but to reduce retiree demand for student labour. Indeed, the retirement system’s annual budget provides no useful information regarding the operation of the retiree system. Rather, the Treasury must set tax rates and retirement benefits at the level that will ensure that a sufficient supply of student labour is directed to providing services both to retirees and to the UMKC community.

8. Implications For Real World Economies

Some of the analysis above applies directly to our economic system as it actually operates, while some of it would apply to the operation of our system if it were to adopt an employer of last resort program.³

In our national system, the dollar is issued by the government whenever it spends, just as the buckaroo is issued by the UMKC Treasury when it spends (that is, when providers draw SDRs to pay student labour). Dollars are then drained through tax payments, just as UMKC

taxes drain buckaroos. Government deficits allow US (and Australian) households (and firms and financial institutions) to hoard dollars, just as UMKC Treasury deficits allow students and others to hoard buckaroos. As government surpluses would drain dollars, they are made possible only by previous budget deficits; a balanced budget is the “best” that is sustainable. In a system (such as the American) in which the central bank is allowed to issue dollars as it “lends” or buys assets (such as foreign currencies), central bank provision of dollars must be added to treasury spending to obtain total government spending. Admittedly, this is not normally done, thus, a country can appear to run continuous surpluses (on its treasury budget) because its central bank continually supplies currency (not counted as government spending).

It is normally believed that a government budget deficit requires bond sales because the government must borrow to finance its spending in excess of tax revenue. The UMKC community service hours program demonstrates that this is not correct, nor is it correct for any national government that issues the national currency (technically, the base or high powered money) accepted in payment of taxes. As the only supplier of “that which is necessary to pay taxes” (high powered money), the government (again, consolidating the treasury and central bank) must spend before it can tax. Bond sales thus come after the government has already spent and must serve some purpose other than “financing” government spending. In the UMKC system, bond sales are undertaken to provide students with an interest-earning alternative to non-interest-earning buckaroo hoards. In national economies, government bond sales serve the same purpose. They are really nothing more than an interest-earning alternative to non-interest-earning hoards of high powered money.

In our UMKC system, the Treasury decides what interest rate it will pay on buckaroo bonds; this then establishes the base interest rate on buckaroo lending. In national economies, the base interest rate is established by the central bank (in the US, this is the fed funds rate) while arbitrage determines the rate on government bonds. In both the UMKC system and in national economies, the “natural base rate” on high powered money hoards that result from government deficit spending is zero. In other words, government deficits do not place upward pressure on government bond interest rates, no matter how high the deficit may go. The base interest rate is always set “unnaturally” above zero as a result of monetary policy – by the interest rate offered by government (treasury plus central bank) as an alternative to non-earning high powered money.

As discussed, above, if UMKC were to offer a “retirement” program, it need not build a trust fund. Likewise, in any modern national economy

in which government issues high powered money, it makes no sense to maintain separate accounts for Social Security. Further, accumulating a trust fund cannot help to provide for future retirees, thus, it makes no sense to run a surplus today in order to deal with a "baby-boomer" bulge of retirees in the future. In the national economies, tomorrow's workers will have to provide the real goods and services required by tomorrow's Social Security recipients – and no amount of financial fixes today can change that. In the year 2030, total government spending (including benefit payments to retirees) will be covered by issuing treasury cheques (plus, as discussed above, creation of high powered money by the central bank as it purchases assets). Existence of a trust fund does not change this in any way. In the year 2030, tax revenue will drain high powered money created by the government spending. The budget stance that will result (balanced, deficit or surplus) cannot be changed in any way by anything we do today regarding today's "financing" of Social Security.

In the buckaroo system, involuntary unemployment of student labour results only if the Treasury limits the supply of buckaroos. In the national economy, involuntary unemployment results when government spending is too low, such that the supply of high powered money cannot keep pace with demand for high powered money. The solution is to cut taxes or raise spending. The problem, of course, is that this might generate inflation even before full employment is reached. However, this problem can be eliminated through creation of an employer of last resort program-affordable in any nation that issues the currency. (We will not address the relatively few cases of countries in which governments do not issue high powered money – for example, countries that operate with a currency board arrangement. These operate quite differently from the UMKC system and cannot operate an ELR program without fear of running out of "money".) In such economies, the government would stand by, ready to employ all ready, willing, and able labour at a fixed wage. Any labour not needed by the private and (non-ELR) public sectors would be able to find work in the ELR program.

It is not necessary for the federal government to actually provide all the ELR jobs, indeed, we recommend that the ELR program follow the UMKC example in decentralising employment as much as possible. Thus, just as in the UMKC system, the US treasury would supply dollars to all eligible community service providers (charities, not-for-profit organisations, state and local government) to hire as many ELR workers as they desire at the fixed ELR wage. If any involuntary unemployment still remained, the federal government would create jobs directly for the remaining job seekers. Note that under this arrangement, the ELR wage would become the base wage rate, with all other employers offering a

wage that is a mark-up over the base wage. Further, employment in ELR would fluctuate counter-cyclically: as aggregate demand rises, non-ELR employers hire workers out of the ELR pool; in recessions, workers shed by the private sector flow into the ELR pool. This means that government spending on the ELR program would also fluctuate countercyclically, moving strongly to deficits as the economy slowed while deficits would fall (perhaps even to the point that the budget swings briefly to surplus) during booms. This would ensure that the supply of high powered money would fluctuate with demand, and that deficits would always be at just the right level to eliminate all involuntary unemployment. Note that none of this precludes discretionary "Keynesian" policy: if the ELR pool shrinks too much in a boom, the government could cut non-ELR spending or raise taxes to slow the economy and increase the size of the pool. On the other hand, if the ELR pool grows too much, the government can cut taxes or increase non-ELR spending.

In most countries today, situations of high employment are feared because it is believed this will lead to wage inflation and thus to overall price inflation. Thus, most economists recommend keeping government spending at a level sufficiently low to maintain a substantial portion of the labour force involuntarily unemployed. However, in the UMKC system, we operate at continuously full employment with zero involuntary unemployment. Note, also, that this has no effect on buckaroo wages – which are fixed and hold steady at B1 per hour. With an ELR system in place, full employment and zero involuntary unemployment can be similarly maintained with no pressure on the base wage because it is set by government policy, say, at \$6 per hour. Other wages are then set as a mark-up over that wage. When aggregate demand is high such that employers begin to draw workers out of the ELR pool, they will need to offer a mark-up over the ELR wage to obtain workers. So long as the ELR pool remains sufficiently large to serve as a buffer stock of employable labour, it will always help to dampen wage demand just as any buffer stock helps to dampen inflationary pressures on prices of the buffer stock commodity.

It has commonly been feared that government deficits raise interest rates, which then cause currency appreciation and result in trade deficits. There is surprisingly little evidence of this, given widespread concerns. In any case, however, our analysis above has shown that base interest rates are determined by monetary policy, and far from placing upward pressure on interest rates, the "natural base rate" is zero in the presence of government deficits. As we have shown, the buckaroo/dollar exchange rate is primarily determined by buckaroo and dollar wage rates – although expectations of interest rate policy as well as trade imbalances

can affect the exchange rate. However, because arbitragers can always choose to hire labour in either buckaroos or dollars, there is pressure to return the exchange rate back toward "wage parity" – the ratio of wages in terms of buckaroos to wages in dollars. Similarly, with an ELR program in place, foreigners always have the option of using dollars to hire workers out of the ELR pool. If the dollar depreciates too much relative to, say, sterling, there is an incentive to buy dollars in order to hire ELR workers in dollars rather than UK workers in pounds sterling – stopping the dollar depreciation. Thus, the labour buffer stock also helps to stabilise the external value of the currency.

In the case of small open economies, critics tend to raise two objections: if ELR increases employment, that will increase income, thus increase imports and worsen the trade balance, causing the currency to fall. Second, it is feared the increase of government spending will worsen the budget deficit, causing financial markets to react and run out of the currency. In reality, exchange rates are very complexly determined, and it is pretty clear that the trade balance alone does not determine exchange rates. Furthermore, counter-measures can be taken to prevent a trade deficit from occurring, or to prevent a trade deficit from leading to depreciation of the currency. However, for the sake of argument, let us say that after implementation of ELR, a trade deficit does result and that tends to cause the currency to depreciate. That means that the currency was previously being propped up by keeping people unemployed. Is it really worth that cost? Think of all the negative implications of this – from emigration (New Zealand comes to mind) to illegal activity – and contrast that with the benefits of a PSE program that provides public infrastructure, gives people job experience and training, and generally improves the welfare of the population – all at the cost of a possible depreciation of the currency. The lower currency plus the pool of experienced workers in ELR would attract foreign firms to invest. Exports would rise. The long run path for the currency should actually be higher, not lower; and this path would be "bought" by lowering unemployment. The notion that a country is made weaker by reducing unemployment makes no sense. It is equally senseless to argue that keeping a portion of the labour force unemployed is necessary to keep the currency strong. (If it were true, then Mexico – with an unofficial unemployment rate above fifty percent – ought to have the strongest currency in the world!)

As John Maynard Keynes argued:

The Conservative belief that there is some law of nature which prevents men from being employed, that it is "rash" to employ men, and that it is financially 'sound' to maintain a tenth of the population in idleness for

an indefinite period, is crazily improbable – the sort of thing which no man could believe who had not had his head fuddled with nonsense for years and years.... Our main task, therefore, will be to confirm the reader's instinct that what *seems* sensible *is* sensible, and what *seems* nonsense *is* nonsense. We shall try to show him that the conclusion, that if new forms of employment are offered more men will be employed, is as obvious as it sounds and contains no hidden snags; that to set unemployed men to work on useful tasks does what it appears to do, namely, increases the national wealth; and that the notion, that we shall, for intricate reasons, ruin ourselves financially if we use this means to increase our well-being, is what it looks like – a bogey. (Keynes 1972, 90-92)

Notes

- ¹ Informal surveys have found that buckaroos are indeed exchanged in informal markets at a rate of \$5 to \$10 per buckaroo. Markets are now thin, but as the program expands, we expect the spread to narrow.
- ² If a student had buckaroos and wanted to reduce future work hours, she might become a rentier earning the 6 percent dollar interest rate – selling buckaroos spot for dollars, and obtaining a dollar deposit at 6 percent. However, if the dollar were to depreciate by more than 3 percent by the end of the term of the deposit, then she would have to work more, not less. Thus she wants to hedge by selling her dollar deposit and interest earnings forward against the buckaroo. This drives the forward dollar rate down (the buckaroo rate up) until there is no longer any advantage of one currency over the other, which is at approximately a depreciation of 3 percent. Now, things get quite complicated in the real world, because this is the forward rate – which is not always a good unbiased forecast of the future spot rate. And while it might seem that sales of buckaroos to buy dollar deposits (to take advantage of higher dollar interest rates) would cause the buckaroo to depreciate, this ignores the fact that the student needs to get the dollars back into buckaroos to pay taxes, or that the social service providers need to get back to buckaroos to hire student labour.
- ³ The terminology "employer of last resort" (ELR) is used, although the program is termed "job guarantee" in Australia and "public service employment" in the USA. In discussion outside academic journals, the terminology "last resort" must be avoided. The program provides "last resort" hiring in the sense that the government provides sufficient funding to ensure there are more job vacancies than job seekers at the fixed ELR wage and benefit package. In other words, the government ensures an infinitely elastic demand curve at that wage.

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