## Nothing paradoxical about thrift



paper: Nothing Paradoxical About Thriftpaper To address our current economic woes, classically-minded economists argue that the government should get out of the way and let the market heal itself. They warn that massive government "stimulus" packages only divert resources away from the private sector, thus delaying recovery. 1Keynesian economists say the opposite.

They argue that the aggregate demand from the private sector is far below the level needed to ensure full employment. Consequently, the government must borrow and spend many hundreds of billions of dollars in order to close the "output gap." The Keynesians do concede that during normal times a government budget deficit tends to "crowd out" private investment. But they claim that the worry about tradeoffs is irrelevant during an economic slump, when many resources are idle. 2Rather than tackling the entire debate in this article, I focus on a crucial component of it: the so-called "paradox of thrift.

"According to this idea, what is wise and prudent for an individual household yields disaster for the community as a whole. During times of uncertainty, individuals naturally react by slashing discretionary spending to bolster their savings. And yet, according to believers in the paradox of thrift, when everybody tries to save more at the same time, the result is less saving and more poverty. In this article, I challenge the simplistic thinking underlying this doctrine and show that there is nothing paradoxical about thrift. As a springboard for the critique, I rely on the EconTalk podcast in which Russ Roberts interviews the eloquent Keynesian professor Steve Fazzari. 3 By letting one of its strongest and most articulate advocates make the case, I

can avoid knocking down a straw man. Yet, as we will see, even Fazzaris position ultimately falls apart. The Heart of the Paradox: One Mans Spending Is Another Mans IncomeFazzari illustrates4 the paradox of thrift by imagining a family that decides to save more, in the hopes of providing for a future vacation or the kids college expenses.

To that end, the family cuts back on how often it eats out at a local restaurant. At first, it might seem that the total saving of the community would rise, but Fazzari argues otherwise: The decision by our [hypothetical] family to not eat out as often forces a reduction in income" indeed destroys the income of the restaurant. Now how does the restaurant adjust to this? One way they might adjust to it" and the simplest way for analytical purposes" is to suppose they keep doing everything the same as they did before.

[emphasis added] So the workers continue to get paid, they continue to consume, the income of the restaurant is lower but the spending of the restaurant and its employees stays the same. Well what does that mean? That means that the saving of the restaurant group has to go down. So yes, the family that decides to eat at home rather than eating out is saving more, but" by exactly the same amount" the restaurant owner and its employees are saving less....

So the initial reaction to lower consumption and higher saving by one group in the economy is less income and therefore less saving by another group in the economy. So they just cancel out. And this is, I think, the deep intuition of what Keynesians call the paradox of thrift. This surprising result" thats

why they call it a " paradox"" rests entirely on the assumption that Ive put in bold above. Fazzari writes as if the assumption is just a harmless convenience, but, on the contrary, his supposition that the restaurant owner and employees maintain their consumption spending drives the entire result. Fazzari is correct that the familys decision to cut back on its restaurant spending entails a drop in income for the restaurant owner. However, why should we assume that the owner will make his own savings take the full brunt of the unexpected drop? Before the sudden disruption, the restaurant owner presumably devoted only a small fraction of his income to savings. Perhaps out of every additional dollar he earned in income, he saved ten cents and " spent" 90 cents.

Why would we assume, then, that if his income suddenly drops by, say, \$200 per month, the restaurant owner would respond by slashing his monthly savings by \$200 and his consumption spending by \$0? To repeat, Fazzaris assumption doesnt merely keep the analysis simple" it drives the whole result. To the extent that the restaurant owner deals with his sudden income loss by cutting back partially on consumption, even on Fazzaris terms the entire community does indeed save more. For example, suppose that when our family spends \$200 less on eating out and contributes \$200 more per month to its savings account, the restaurant owner reacts by spending, say, \$175 less on his own consumption and by contributing \$25 less to his own savings. Even if we focus just on these two groups, we find that aggregate savings in the community has increased by \$175 because the family saves \$200 more per month, while the restaurant owner saves \$25 less. Once we

widen our focus beyond just the family and restaurant owner, we see that there need be no (net) destruction of income at all.

To the extent that any of the familys additional \$200 in savings ends up being spent on investment goods, somebodys income rises due to the familys newfound frugality. What has really happened in the grand scheme is that the family has transferred its spending away from one vendor (the restaurant owner) and towards a different vendor (perhaps a homebuilder). Depending on how the new vendor reacts to his or her own increase in income, the communitys total savings could be higher still. The interviewer, Russ Roberts, raised this point (starting around 26: 45). But Fazzari dismissed the possibility of higher investment spending, reiterating his claim that it was wrong to picture any extra money sitting in the bank. In Fazzaris view, the bank doesnt have an extra \$200 saved by the family every month, because the monthly contributions of the restaurant owner to the bank have fallen by exactly \$200. Yet, as we have argued above, this is a very extreme assumption, and relaxing it causes Fazzaris case to fall apart. What Fazzari is really doing is setting the restaurant owners " marginal propensity to consume" (MPC) at zero, meaning that changes in income have no effect on his consumption.

But rather than this extreme end of the spectrum, suppose, instead, that everybody in the community has an MPC strictly between 0 and 1. I point out with some irony that if we further assume that everyone has the same MPC, and if we also assume that the bank is able to lend out any new savings in order to finance new investment spending, 5 then there is no net change in the communitys income at all. With these types of thought experiments, its

easy to get lost thinking through the infinite chains" the restaurant owner spends less, so that means further income loss to others, who then spend less, etc. etc. But if we make the assumptions I suggested, all of the mess cancels out through symmetry. In other words, for every person losing income due to the initial hit to the restaurant owner, there are counterparts who are gaining income (and thus raising their consumption spending) due to the initial surge in income for the homebuilder on whom the extra savings is first spent. If the Private Sector Cant Increase Savings, Then Government Cant Reduce SavingsTo underscore the importance of Fazzaris implicit assumption that the restaurant owners MPC is zero, 6 we need only remember that the Keynesian case for deficit spending relies on a positive MPC.

7 For example, if the government decides to borrow and spend an additional \$100 billion, then Fazzari thinks this will have the reverse effect of our family that wants to save more. The \$100 billion is additional income for those initial recipients, who then go out and spend a large fraction, creating even more income in the economy. Notice that if we treat the family scenario and the government scenario equivalently, then there is no Keynesian multiplier. Remember how Fazzari " proved" that the familys attempt to save more would be perfectly offset by the restaurant owners dissaving; it was only by relying on the assumption that the restaurant owner would not alter his consumption in response to the income drop. So, for consistency, let us suppose that the recipients of government spending do not alter their consumption spending in response to the hike in their income. The extra

\$100 billion in government borrowing is, thus, perfectly offset by an increase in savings of \$100 billion by the recipients of the funds.

Notice that I am not making an argument about Ricardian equivalence; that is, I am not raising the possibility that taxpayers will save more because they expect higher tax payments down the road. Rather, I am saying that Fazzaris approach to the restaurant case shows that government deficits lead to offsetting increases in saving, and provide no boost to aggregate consumption beyond the initial burst of government spending. Fazzari "demonstrates" the impotence of private saving, and the power of government deficits by changing his assumptions between the two scenarios. In the first case, he assumes a sudden drop in income had no effect on the restaurant owners spending. But in the second case, he (implicitly) assumes that a sudden rise in income does lead to higher consumption spending by the recipients of the government funds.

It is this inconsistent treatment" not the inherent efficacy of government action" that drives most of Fazzaris analysis. The Timeless Keynesian AnalysisEven a committed believer in the paradox of thrift shrinks from applying it absolutely. After all, modern capitalism managed to get by for centuries without countercyclical fiscal policies. And surely there is something to be said for the folk wisdom that a penny saved is a penny earned" even standard neoclassical growth models show that higher savings rates lead to higher long-run income. We can solve all of these apparent contradictions by formally incorporating time into the analysis. In order to illustrate the paradox of thrift, Fazzari relies on a static, "circular flow"

model of the economy, in which expenditures equal income (because of simple accounting).

Then, to analyze the effect of a change" such as the familys decision to spend less on the restaurant" Fazzari switches to a new, timeless static equilibrium with a different level of aggregate expenditures and, hence, of aggregate income. Although the circular flow model is useful for some applications, it is a very poor choice when analyzing the effect of changes in saving because, by its very nature, saving involves the future. To consider saving, therefore, one must incorporate time, perhaps by modeling the economy in discrete periods. For example, we could imagine that a household receives a certain amount of income in t1, which it must divide between consumption and saving in t2.

Fazzaris accounting truism still holds in this world, with the slight modification that peoples total spending decisions (including investment) in t1 constitute total income in t2. In this more-realistic model, a households problem would not be the one-shot decision to take income and prices as given and then maximize utility by choosing consumption and saving. On the contrary, the household would take an entire vector of external income indexed by time" in other words, possibly different levels of income accruing at t1, t2, t3, t4, and so on" as well as all of the spot prices indexed by time period, and would then maximize utility, taking full account of the potential for transferring current income to a future period through saving. In this richer framework, we can analyze the effect of an increase in one familys saving by simply changing the values of the affected variables. For example, perhaps the familys consumption at time t11 is \$200 lower than its

consumption at time t10, while its t11 savings are naturally \$200 greater than its t10 savings.

I stress that this richer, time-indexed model does not build in any assumptions about the ability of markets to adjust to unexpected changes. Starting from an initial, general equilibrium" in which every persons lifetime consumption plan perfectly meshed with everyone elses" we could use the time-indexed model to show that things get horribly out of whack if too many people deviate from the initial equilibrium. On the other hand, we could tell a story in which forces quickly bring everyones plans back into compatibility, both with respect to each other and also to the available physical resources and technology. My point is merely that the time-indexed model at least shows us where the action is and where one must take a stand on ones view of the economy. In particular, the time-indexed model shows us that it is not changes in spending per se that pose even the possibility of a problem, but only unexpected changes in spending. By contrast, in Fazzaris much more simplistic circular flow model, any change in spending is prima facie disruptive.

For example, because retail spending always falls in January, there would always be a depression in January. But, of course, that is not the real issue; the only possible problem for a smoothly functioning market economy occurs when the post-holiday drop in consumer spending is greater than what the merchants forecast. Another benefit of formally introducing time into the analysis is that it helps us remember that current savings decisions will affect future income. To see this, lets return to Fazzaris original scenario and grant, for the sake of argument, that the households additional \$200 saving

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every month is perfectly offset by the restaurant owners \$200 dissaving. Considering this hypothetical scenario, Fazzari made the correct observation that the familys increased frugality would not increase aggregate savings, and there he let the matter drop. But lets push it further and see what happens.

Every month, the familys wealth increases by \$200 (plus the compound interest accruing from the first month of the change) above what it would have been in the "alternate timeline." At the same time, every month, the restaurant owner falls (at least) an additional \$200 behind his net worth, relative to the original timeline. This is because he stubbornly refuses to cut back on his consumption in periods t11, t12, t13 and so on, even though his income in those periods is now \$200 lower than in the original timeline. If we wish, we can cut out the bank altogether and suppose that every month, the family continues giving \$200 in cash to the restaurant owner. But now, instead of receiving food in return, the family gets an IOU from the owner. Some of the issues covered in this article are also covered in the comments section of the Fazzari/Roberts podcast on Keynesian Economics. See, for example, the comment by Lauren Landsburg, Jan.

14.; and also several comments by Josiah Neeley, including Neeleys second comment on Jan. 12. Fazzari is correct in saying that the communitys net savings have not increased in this contrived scenario.

But so what? The family wanted to save more, and it is saving more" every month it adds another \$200 claim on the restaurant owner to its growing stockpile. Its also clear that this situation cannot persist. At some point, the

family will increase its absolute level of consumption spending, and at some point, the restaurant owner must face reality and reduce his own consumption. The family wasnt accumulating IOUs just for kicks; the point was to defer purchasing power to the future.

And no lender would, in reality, allow the restaurant owner to pile up interest-free debt indefinitely. ConclusionThe paradox of thrift is a key component of the Keynesian critique of the "classical" approach to diagnosing and fighting recessions. However, the standard expositions of the paradox sometimes involve assumptions that not only are unrealistic, but also undercut the Keynesian fiscal solutions. The paradox of thrift relies on a static, circular flow model of the economy. It is unsuited to examining the effect of sudden changes in savings decisions, which, by their very nature, involve considerations of time. A more appropriate framework or model would explicitly involve multiple time periods, in which the household can augment its income in future periods by decreasing its consumption spending in earlier time periods. The Keynesian could still tell his story with such a model. However, though it would be theoretically possible that government deficit spending could speed recovery, in this intertemporal model, the Keynesian story would be much more involved.

Rather than simply pointing to a shortfall in aggregate demand, the Keynesian would need to show how, say, the announcement at period t29 that \$100 billion would be spent on bridges and roads in equal installments during periods t45 through t69, would somehow lead the restaurant owner to maintain his own consumption spending, even though his customers had cut back on dining out back in t11. Furthermore, the Keynesian would need to

demonstrate that the deficit-spending plans (produced by the political process) were more conducive to restoring interlocking general equilibrium in everyones long-range plans than were the operation of such everyday market forces as budget constraints and price adjustments. The more realistic we make the framework of analysis, the more dubious the Keynesian solutions appear. The classical wisdom survives Fazzaris assault; there is nothing paradoxical about thrift.

After a speculative boom, during which people consumed beyond their means, the correct response is for all to live below their means in order to replenish their savings. In such a scenario, government efforts to prevent savings" by engaging in its own counterbalancing borrowing" simply hamper recovery. ;,?