

Economics

Department Alumni Newsletter

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Bob Stonebraker, editor

Oak Groves

Thank you, San Diego. And Chicago. And Tampa. And Dallas. And Memphis. And Philadelphia, Pittsburgh, Indiana, Lancaster, Allentown, Bedford.... Your IUP alumni have funded Oak Grove benches that provide me with hours of rest and relaxation. Yesterday I sat on the San Diego bench. In the sun. And loosened my official administrative tie. And watched the squirrels. And the students. Can you guess which group is more animated? *Hint: It was before 11:00 a.m.!*

My sojourn as Interim Associate Provost has honed my appreciation of IUP's beauty. Spending twenty-three years in a windowless Keith Hall office never lent itself to scenic wonderment. Overlooking the Oak Grove from my Sutton Hall "penthouse" this past year has been a joy.

Recruiting students has also altered my perspective. Seeing Indiana through the eyes of prospective students and parents rather than a jaded professor has been a revelation. Visitors, especially urban refugees accustomed to the concrete sprawl of a Pitt or Temple, are charmed by our campus and community. Families in every tour group sing our praises. Granted, we steer tours away from fraternity row and the local salvage yard, but even these can look good compared to the blighted neighborhoods surrounding our big-city competitors. Once we attract prospective students to Indiana, the campus often sells itself.

Next month I'll end my sabbatical from Economics with many new friends and new insights...for example...never underestimate the strategic importance of a well-stocked candy bowl (*or its waistline repercussions*). But, while my administrative experience has been very positive, I'm ready to return. Student contact in Sutton Hall is limited and my biological clock has been perpetually jammed. When final exams ended, my body cried *vacation, vacation*; but my administrative schedule cried *eight a.m. Deans' Council meeting*. Adjusting to the new work schedule was demanding and, learning a new job in an under-staffed office resulted in more seven-day, seventy-hour work weeks than my rapidly-decaying brain cells could always cheerfully accommodate.

Which is why this newsletter is late. *Did you notice?* Every Saturday morning when I flipped on the computer to begin writing, a dozen new e-mails that demanded immediate attention danced across my monitor. Luckily, Will Radell came through and wrote almost half of the newsletter for me. George Chressanthis ('77) also chipped in and I stole material from Rob Toutkoushian ('84) as well. The result is the most eclectic edition in years. *GOOD!*

Bob Stonebraker, editor

Block Grants vs. Earmarking

by
Willard Radell

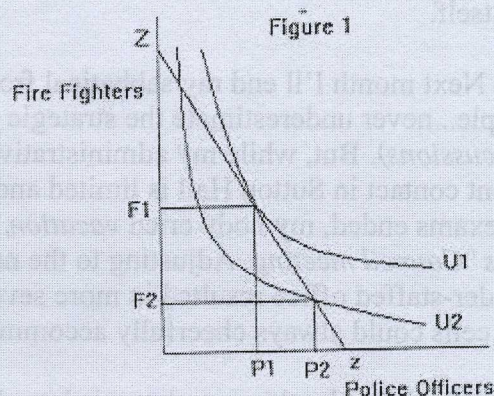
Revolutionary members of the new Congress, as well as the new Governor of Pennsylvania are currently proposing to redirect government funding away from "earmarking" to block grants. The stated objective of such redirection is greater efficiency in the use of government expenditure. Although the current advocates of block granting are politicians, few people are aware that the idea of promoting government efficiency through block granting is grounded in consumer and public finance theories developed by economists 20+ years ago.

Twenty-one years ago, I was studying Public Finance under the notable conservative, A. James Heins, whose office contained two pictures, John Wayne and Ronald Reagan. Professor Heins, as one of the promoters of block-granting, published a paper in the *American Economic Review* on its merits. Fortunately for me, the ideas in the paper were thoroughly presented in class. As a result, every time Speaker Gingrich or Governor Ridge praises block grants, a simple paradigm pops into my head.

For those who are curious about the theoretical virtues of block grants over earmarking, what follows in Figure 1 is the simple paradigm presented so many years ago by A. James Heins. "Earmarking" means allocating government funds for specific uses. "Block granting" means allocating government funds in broad categories that don't specify the precise use of the funds.

Suppose the community pictured in Figure 1 has two pressing needs, fire protection and police protection. "U1" could be thought of as a social indifference curve. Line "Zz" is the iso-outlay function showing all the combinations of police and fire protection that can be purchased with the funding that will be received from the central government.

If the central government gives a block grant to the community pictured in Figure 1, then the community will choose to spend the money of F1 fire fighters and P1 police officers. Alternatively, suppose the central government gives the same amount of money, but earmarks the money with the proviso that P2 police are hired. As a consequence, the community only hires F2 fire fighters. Thus, the immediate effect of earmarking is to force the local community to be over-policed and under fire-protected. In other words, the local community is forced off social utility function U1, onto the lower utility function, U2. Clearly, communities are less satisfied receiving earmarked grants. If U2 is the standard of total satisfaction, then the central government can save a few bucks by giving a smaller block grant that gives the same utility as the earmarked grant.



\$\$Challenge\$\$

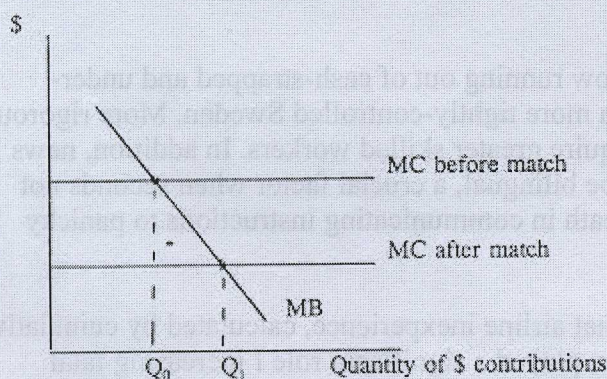
You never know.

When Chris Johnston ('89) visited recently, we enjoyed a pleasant conversation about his

promotion to Regional Manager (*synonymous with paper-work doer, he insists*) with Federated Investors, traded receding hairline barbs with Yaw Asamoah, and ruminated about the role of economics in a college education. Chris, a former student member of the IUP Council of Trustees, contends that the primary skill needed in the business world is problem solving, and that his economics courses were the ones that taught those skills,

As he was about to leave, Chris issued a challenge. He offered to match up to a total of \$300 -- other contributions from Economics alumni received over the summer months. Contributions would be housed in our account with the Foundation for IUP and used to support the department's students and programs.

Yes. A wonderful opportunity. A two-for-one sale on gifts! And, here comes the graph! For those of you who do not itemize deductions for the IRS, the marginal cost of contributing one dollar is, *ta ta*, one dollar. However, the Johnston match generates a one dollar contribution for only fifty cents and cuts your effective marginal cost in half. Since the rational giver will contribute as long as the marginal benefit (MB) of the gift covers the marginal cost (MC), the utility-maximizing quantity of contributions should rise. In the accompanying graph, the equilibrium should rise from Q_0 to Q_1 . The size of the increase will, of course, depend upon the elasticity of the MB curve.



Checks should be made out to the Foundation for IUP and designated for the Department of Economics.

The Determination of Airline and Accident Severity

The following reply was submitted by George Chressanthis ('77). George was recently promoted to Professor of economics at Mississippi State University and is a frequent flyer!

In the fall 1994 Alumni Newsletter, Dr. George Radakovic discussed the academic implications regarding the tragedies afflicting the passengers of USAir Flight 427 and the ferry Estonia which capsized in the icy Baltic Sea. Since then, we have seen American Eagle commuter flight disasters occur in October in the fields of northwest Indiana and again in early December near the Raleigh-Durham Airport.

However, his thoughts really hit home when I experienced a similarly potential fate in an American Eagle flight from Columbus, Mississippi to Nashville on my way to the Southern Economics Association conference in Orlando. The small two-engine plane (the same type which crashed near Raleigh-Durham) experienced a control problem which forced the pilots to shut down the left engine five minutes outside of Nashville. Fortunately, with excellent weather conditions and a clear sunny morning, we made an "uneventful" landing; though emergency vehicles stood by the runway with lights flashing

ready for the worst outcome!

Looking for a pattern

Is there a thread of economic analysis running through these recent airline disasters that we as passengers can learn from when we decide to fly? Or, as policy makers of airline regulation, is there a systematic explanation to the existence and severity of these accidents? The answer is *YES*.

In "Profitability and Product Quality: Economic Determinants of Airline Safety Performance" which appeared in the October 1990 issue of the *Journal of Political Economy*, Nancy S. Rose examined a sample of 726 fatal airline accidents from 1957-1986. She found a significant *negative* relationship between airline operating profit margin and the number of fatal airline accidents. Producing greater airline safety, like the production of any good requires more and/or better inputs. Firms with lower profit margins have less resources to devote to such activities relative to other firms, all else held constant.

While the executives of USAir and Secretary Pena of the U.S. Department of Transportation have been quick to say that no systematic pattern can be reached between the huge losses being accumulated by USAir and the unusual string of USAir airline disasters in recent years, in light of the Rose paper, a reevaluation may be in order.

Even in the Estonia disaster, the ferry owners, now running out of cash-strapped and under-regulated Estonia, once operated out of wealthier and a more tightly-controlled Sweden. More rigorous safety regulations would cost more to maintain and require greater skilled workers. In addition, news reports indicated that the crew out of Sweden used to be bilingual, a crucial factor when seconds not minutes could mean the difference between life and death in communicating instructions to panicky passengers.

In addition to severe weather, Rose also found that airline inexperience, calculated by cumulative airline operating experience in billions of aircraft miles, played a significant role in increasing fatal accidents.

For those who have favored deregulation of the airline industry as a way to achieve greater social efficiency (like yours truly), the Rose paper suggests some important tradeoffs. Deregulated competitive markets mean zero economic profits in the long run while allowing for newer and inexperienced entrants to compete. While competitive pressures will certainly provide disincentives for airlines to act or be perceived as unsafe -- since waiting alternatives are in the wings (*pun intended*) -- nevertheless, deregulation can have detrimental effects on the production of greater airline safety. The matter becomes one of relative degree. You decide.

A study by Richard A. Phillips and Wayne K. Talley in the October 1992 *Southern Economic Journal*, reached similar findings with respect to the severity of damage in airplane accidents. Looking at a sample of over 300 scheduled commercial and commuter airline mishaps, the authors estimated that the amount of likely damage was especially high for commuter aircraft flying at night in poor weather. Both American Eagle commuter flights crashed in these conditions!

The model also showed that increases in pilot experience and the introductions of stall warning systems reduced accident severity while greater pilot age and pilot fatigue increased accident severity. In the name of protecting or enhancing airline safety, their study supports the current requirement of forcing pilots to retire at 60, advocates the introduction of greater capital safety equipment, the provision of better training for pilots, and changes in work rules and flight schedules that reduce pilot stress and fatigue.

Economics everywhere

As a student of economics, I continue to be impressed at the extent to which economists have applied their powerful paradigm to a wide variety of issues and topics that on the surface may seem external to economic investigation.

There are undoubtedly alternative theories and approaches to address these questions. Not even economists have a monopoly on the truth. However, these papers provide convincing evidence that recent disasters can be connected and that we can take steps to reduce our risks from such events -- provided that society is willing to pay for such investments in enhanced safety.

Happy flying!

According to the *Economist*, a woman psychologist has determined that men, because of their disproportionate involvement in crime and related activities, are not cost-effective. She suggests a special tax on men to compensate for the external costs they impose on society. Hmmm. If nothing else, we could probably balance the budget with that one.

ABS Brakes: Why the Jury is Still Out

by
Willard Radell

A recent insurance industry report has concluded that, as of the end of 1994, it could not be shown that the introduction of ABS (anti-lock) brakes had reduced either the number or the severity of accidents. While this is a surprising result to many people, there are several elements in economic theory that would predict such a result. The problem is more than academic, since insurance companies are granting many tens of millions of dollars in rebates for ABS equipped vehicles, reasoning that encouraging safety features decreases money paid out in claims. What follows is an eclectic summary of standard economic theories that would predict failure of ABS systems to reduce accidents and damage claims.

Moral Hazard

When individuals are insulated from the adverse consequences of increased risk-taking, they will assume more risk than they will if they are forced to pay. A recent popular movie contained a scene of an altercation between a young and older woman over a parking space. The young woman sneaked into an open space the older woman was waiting for with the taunt, "I'm younger and faster." The older woman then proceeded to smash the younger woman's car out of the space with the counter-taunt "but I'm older and better insured." (*Remember kids, don't try this at home.*)

If people believe ABS brakes work, they are likely to revise upward their belief in their own ability to do emergency maneuvers. Thus, you would see no reduction in accidents even if the ABS brakes work on each car. Individual drivers respond to ABS brakes not by driving at the same speed and enjoying more safety, but rather by driving faster and following more closely under the assumption that they will be able to stop faster.

Risk-constant Behavior

A driving force behind moral hazard is a psychological trait buried deep in what we call human nature. An experiment was done on a popular on-ramp, on a commuting route, outside a large city. A hidden sensor measured car speed at a point on the ramp, while simultaneously a video camera recorded the license number. Each day the surface friction of the ramp was measured and observations were made of how individual drivers responded to changing road conditions.

The results were striking!!! It was found that each driver had a nearly constant preferred level of risk. Thus, on a clear day, Sally Leadfoot would take the ramp at 40 mph causing some lateral slippage and squealing tires. On a wet day, Sally would take the ramp at 30 mph, causing the same lateral slippage. On a snowy day, she would ramp at 25 mph with, you guessed it, the same lateral slippage. Grandpa Radell would do the same thing, but at 25, 20, and 15 mph, respectively.

This indicates that each individual has a constant idea of acceptable risk. Give a person a device to increase traction in an emergency and they will respond by driving faster, or following closer, so that their risk of catastrophe is the same with the safety device as without.

Lags

Most of you remember that effective fiscal and monetary policy needs to anticipate where the economy is going because there are lags between the time the policy is needed and the time the full policy impact is felt. Two of the most troublesome lags in macroeconomic policy are the recognition lag (the time that elapses from when corrective policy is needed to when you know it's needed) and the decision lag (the time that elapses from when you know corrective policy is needed and when you take the corrective action).

ABS brakes, if they work, do nothing to deal with recognition lags and decision lags. Thus, if a driver with ABS needs to make an emergency stop, he/she may avoid contact with the car in front. But while the ABS car is in the recognition and decision lag phases, the car behind the ABS car has not yet entered its recognition and decision lag phase. Thus, the third car's forward velocity continues while the second car is rapidly decelerating. By the time the third car takes corrective action, the difference in forward velocities is too great and the distance between them is too short for impact to be avoided. Note that this effect applies even if the third car has ABS brakes.

Note also the paradoxical result, that the introduction of ABS brakes requires maintaining greater, not shorter, intervals between cars to maintain constant safety. Oddly, the introduction of ABS brakes has the same effect as introducing more cars with inferior brakes, once the problem of lags is considered. The problem will be compounded to the extent that people have confidence in ABS brakes and respond by shortening their intervals.

Other Problems

There are road conditions for which ABS brakes are worse than standard brakes (loose gravel, dirt, sand, wet snow). What happens if people have confidence in their ABS brakes and encounter these conditions? Some systems seem to have problems because the anti-lock brakes are only installed on two wheels. And it has been argued that the lack of demonstrable safety comes not from a failure of ABS brakes themselves, but because people don't know how to use them. In a way that is a silly argument, because the car and the driver are an integrated system. Introducing a safety device that costs extra money but doesn't yield extra safety because drivers engage the device improperly, is an engineering

failure as surely as defective device would be.

What is the effect of mixing ABS and non-ABS cars in the same transportation system? It would be nice if we could arrange cars so that the ABS cars are always behind the non-ABS cars, but is that really possible? We have a similar problem with trucks and cars which is approached by having a lower speed limit for trucks.

The ABS brake controversy is a classic example how elusive is the pursuit of an absolute like "more safety." As economists, we use what Froyen and Greer call the two question logic: "What is to be gained?" and "how much will it cost?" Many devices and policies that solve a particular problem do not make economic sense. ABS brakes may be one such example.

Ways to Apply Economics at Thanksgiving

or

How My Professor Ruined My Appetite

Toutkoushian ('84) gave the following assignment to students in an M.A. in Public Affairs program taking his intermediate microeconomics class.

1. Call your least-favorite relative and convince him or her not to come to dinner since the marginal cost exceeds the marginal benefit.
2. When everyone is seated at the table, determine if there are increasing, decreasing, or constant returns to scale from adding more relatives.
3. Calculate the marginal utility per bite of each item on the table, and use this information to determine how many bites of each item to put on your plate.
4. Trace out the "income expansion path" in your mashed potatoes made possible by successively loosening your belt during the meal. How would you identify the "normal" and "inferior" goods?
5. Convince your mother that the kitchen is experiencing decreasing returns to scale and, therefore, the family would be better off if you watched the football game instead of helping with dishes.

From a recent Principles of Economics I exam...

Exam question: *What is the fundamental problem of economics?*

Student answer: *It is too hard and confusing.*

Truth is where you find it.

The Balanced Budget Fetish

by

Willard Radell

This year has been a tough time to be an economic historian. All the myths and half-truths about the federal budget, so carefully laid to rest 60 years ago, have been resurrected by new wave politicians. There isn't space to deal with all the pseudo-economic nonsense uttered about the deficit, but I will deal with some of the worst.

Myth 1: *"I balance my check book. Why can't the federal government balance its books."*

The U.S. government *does* balance its "check book." No government checks bounce. So where does the deficit come from? The government borrows about \$200 billion on "income" of about \$1,500

billion. If you think that \$200 billion deficit is dangerous, ask yourself whether a household that earns and spends \$150,000 in a given year on income of \$50,000 is a dangerous situation.

Before you answer "yes," consider that the family buys a house for \$100,000 that year, financed by a mortgage. Their one year deficit is \$100,000 (\$50,000 of income and \$150,000 of expenditure). They would only be considered in a dangerous situation if they either pay too much for the house, or if they can't handle the periodic payments to retire the debt. Households carry large debts in the form of mortgages and automobile notes even though they don't have the power to tax and to print money. Can the U.S. government handle payments on the national debt? Yes, it can. Does it have to use all its powers to tax and print money to accomplish that? No, it doesn't.

Myth 2: *"No corporation could stay in business running deficits like the federal government runs."*

If businesses accounted for their expenditures the same way the federal government accounts for its expenditures, businesses would show big "deficits." Businesses separate their expenditures into capital expenditures, accounted for on a balance sheet, and operating expenditures, accounted for as expenses on an income statement. When business managers boast that they always balance their books, they mean that operating expenditures do not exceed operating income.

Putting the federal government under a constitutional mandate to balance its "budget," is the equivalent of requiring the federal government to pay cash for everything it buys. What business buys its buildings, vehicles, and machines by paying cash? American business could not function if a corporate balanced budget law forced businesses to give up borrowing. That otherwise intelligent people who claim to be "patriotic," want the U.S. government to be the only corporate entity prohibited from ordinary borrowing is bizarre.

Myth 3: *"When I was governor of South Slobovia, I was required to submit a balanced budget every year, and I did."*

Like businesses, most states separate their capital spending from their operational spending. The former governor of South Slobovia submitted a balanced *operating* budget. She isn't counting the \$100 million in bonds that were floated to finance bridge replacements on Route 422. In contrast, if the federal government gives money to South Slobovia to build a sewage treatment plant, that grant is treated as deficit financing by Uncle Sam because his total "spending" was greater than total taxes collected.

If the local government had financed the plant by floating bonds, it would still claim a "balanced budget." But if Uncle Sam floats bonds to grant money to South Slobovia to build the plant, he (Uncle Sam) is not let off the hook and is forced to claim a federal "deficit."

The bottom line is that a large majority of families, businesses, municipalities, school districts, states and counties sell bonds to finance purchases in excess of their current income. Almost no private or public entity of any size transacts purchases of durable equipment and buildings on a cash-only basis. If the constitutional amendment passes to require the federal government to annually pay cash for every aircraft carrier, road, bridge, F-16, or office building, it will weaken and hobble the U.S. government in a way that state and local governments, private businesses, and private individuals are not.

Requiring a balanced budget without consideration of the difference between capital and operating expenditures is one of the silliest economic proposals of our lifetimes. It ranks right up there with

George McGovern's plan to give everybody \$1,000 in the middle of an inflation wave. *[editor's note: This proposal was made in 1972; the author is showing his age.]*

A proposal for a balanced budget amendment is the kind of proposal you'd expect from disgruntled losers after a war, or from anarchists. That it comes from representatives and senators who claim to be patriotic shows clearly that malice is not a necessary condition for doing great harm. Ignorance is sufficient.

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