Economics

Department Alumni Newsletter

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Bob Stonebraker, editor

Marketing. Higher education once thumbed its collective nose at the concept. Not now. Colleges and universities compete for top students with as much gusto as MCI chases AT&T. Even mediocre students can expect to receive mailings from as many as one hundred schools.

It's all supply and demand. *Of Course!* Colleges and universities expanded to accommodate the surge of baby-boomers that hit campuses in the late 1960's and 1970's. But, schools that rode the boomers' wave ran aground in the backwash. As the baby-boomers moved from classrooms to boardrooms, the market dried up. The pool of fresh high-school graduates plunged into a fifteen-year tailspin that left many colleges groping for warm bodies....*and a reality check.* Marketing no longer seemed so tawdry.

Protected by subsidized tuitions, public schools like IUP were spared early pain. But, by the late 1980's our applicant pool took hits as well. Happily, recent initiatives have turned things around. While applications to most State System of Higher Education (SSHE) schools continued to slide last year, our's jumped more than 25 percent. Can we maintain this edge? With our system's uniform tuition policy, we can't undercut the price of our sister SSHE schools; we can only try to offer a better product.

IUP's newest competitive thrust is the Robert E. Cook Honors College. Set to open in Fall 1996, the Honors College will offer a truly innovative program with special courses, special living arrangements, special mentorship programs and special opportunities. However, every decent market analyst knows that new products — even *good* new products — do not guarantee increased demand. When Kodak introduces a new and improvised film, do sales rise? Or, do sales of the new film simply cannibalize sales of the old?

That's our dilemma. We *expect* the Honors College to attract new applicants. We *expect* it to entice students who would otherwise attend prestigious private colleges. We *expect* to upgrade the quality and quantity of applicants. Will it work? It hinges upon a familiar concept.

If prospective students see the Honors College as a *substitute* for regular IUP admission, we're in trouble. If the Honors College only skins off the cream of our normal freshmen class, we gain nothing. We put bodies into the Honors College, but lose them on our other programs. In fact, by throwing honor students, who would have attended IUP anyway, into special courses, we dilute the quality of other classes and segregate our best students from the rest of the student body. However, if prospective students see the Honors College as a *complement* to regular IUP enrollment, we'll attract *new* students and see the desired increase in demand.

Which will it be? Stay tuned. Better yet, send us you honors students!

Bob Stonebraker, editor

DID YOU KNOW....

Every business office or department seems to have one person who serves as unofficial guru -- the one you run to when your software bombs; who advises you on what printer to buy; who helps you access that data you need. Nick Karatjas has been our guru for many years. In the report below, Nick offers us all a free ride on his World-Wide Web surfboard:

Did you know that there is an incredible wealth of information related to economics available on the Internet? For example, if you have access to the World-Wide Web (WWW), specify the URL:

http://www.ai.mit.edu

Once you are there, select the menu option *Other Topics*. You will find historical price information about a large selection of publicly-traded stocks and mutual funds. You will be able to see graphically, right before your eyes, how well (or how poorly) your stocks are performing relative to the S&P 500. You might also try the menu item *Other Finance Information* which will lead you to a variety of financial information from other sources on the Internet.

Want to try solving the federal budget problem -- and see if you remember those old lectures on macro policy? Try the National Federal Budget Simulation which allows you to change budget assumptions and see what type of damage you can do to the economy. Specify the URL:

http://garnet.berkeley.edu:3333/budget/budget.html

Other sites of interest include:

http://www.antitrust.org
(antitrust news, case studies)
netec.wustl.edu/JokEc.html
(economist jokes!)
http://econwpa.wustl.edu/EconFAQ/EconFAQ.html
(A comprehensive work titled Resources for Economists on the Internet).

The *Economic Report of the President* and many other resources are also available. But, my current favorite is:

http://www.cappuccino.com

..the most comprehensive coffee site on the Web! Want more? If there is enough interest, I will list more addresses in future issues.

Discrimination Redux: It Isn't Easy Being Green

The Muppet Movie, one of history's great cinematic achievements, opens in a deep swamp. The camera pans to Kermit the Frog perched on a lily pad strumming his guitar and singing:

It isn't easy being green;
Having to spend each day the color of the leaves.
When I think it could be nicer being red, or yellow or gold
or something much more colorful like that.

Kermit's lament does turn upbeat. He ends with:

I am green and it'll do fine, It's beautiful!
And I think it's what I want to be.

But, Kermit's right. It isn't easy being green. Although he dreams of being a famous Hollywood producer, Kermit's film adversaries refuse to take his ambitions seriously. After all, frogs belong skewered in a frying pan, not sitting behind a camera. Kermit does persevere. With luck and with considerable help from an assorted cast of mildly maniacal friends, Kermit sheds his stereotypical frog mold and breaks into Hollywood.

Alas, other stereotypes are not so easily shattered. It isn't easy being green. And, it isn't easy being African-American or Hispanic or female. For many Americans, equal opportunity is still more dream than reality.

Last Fall we reported on job market discrimination. .....*Go ahead. I'll wait while you dig the issue out from your newsletter archives.....the article started on page 12. OK? Got it?.....* Matched pairs of young job seekers, one white and one Hispanic, applied for identical, advertised openings within an hour of each other. Despite clear laws to the contrary, pair members were white were four percent more likely to be given an application, 30 percent more likely to be interviewed, and 53.6 percent more likely to be offered a position.

Could this single study be an anomaly? An aberration? Not a chance. In the June 1995 *American Economic Review*, Ian Ayres and Peter Siegelman (AS) document similar results for auto prices. AS trained nineteen pairs of test buyers matched in terms of age, education, and *attractiveness*. The test buyers dressed in similar yuppie-style attire and drove similar cars into the dealerships. They worked from identical bargaining scripts and gave comparable answers to questions about their professions and address. The members of a pair differed only with respect to sex and/or race.

Pair members bargained independently for the same model car in the same dealership; usually within three days of each other. The test buyers negotiated prices for over 300 cars at over 150 dealerships in the Chicago area.

The results were striking. Both initial and final offers supplied to females and/or African-Americans were significantly higher than those given their white male counterparts. African-American males fared the worst, getting socked with prices some $1,000 more than those quoted their white counterparts. The actual differentials are given below.

Average Price Differentials Charged

Buying Group	*Initial Offer*	*Final Offer*
White females	$109	$92
African-American females	318	246

African-American males	935	1,101
All non white-males	407	481

Why? Are the owners bigoted? Do dealership owners push their salespeople to discriminate? Or is the salespeople themselves? As the butt of almost as many scurrilous wisecracks as economists, accountants and attorneys, car salesmen have never ranked among the most respected American professionals. Is racial and/or gender discrimination another layer of ooze on their already slimy image?

Perhaps. But, if owner and/or salesman bigotry were the cause, women and non-whites should be treated most poorly in dealerships owned and operated by white males. And they're not. African-American test buyers were charged the same price differentials by African-American dealers as by white dealers. Female customers were treated just as poorly by female salespeople as by male salespeople. Neither the race nor the gender of dealers and/or salespeople seemed to matter.

Ayres and Siegelman conclude that *statistical* discrimination is the real culprit. Blatant bigotry is not the cause. Rather, dealers and salespeople use race and gender to make statistical inferences about price elasticity.

Do you remember those lectures about *price discrimination?* How firms try to segment their markets and charge different prices to customers with different demand elasticities? The theory was simple. Lower prices to customers with *elastic* demands (they're the ones who will be driven into the arms of your competitors by high prices), and raise prices to customers with *inelastic* demands (they're the ones who are insensitive to price and are likely to buy anyway). In other words, charge $40 for a new tire in your shop, but charge $60 for the same tire to the motorist stranded on the highway.

Such discrimination is fairly common. Discounts for children and/or senior citizens and special introductory rates for new magazine subscribers are more benign examples. But, segmenting the market is not easy. Safeway can't easily identify which customers will acquiesce to a higher price for broccoli; nor can K-Mart easily detect which customers have an inelastic demand for batteries.

Car dealers practice *haggle-every-time* discrimination. They try to guess each individual customer's "reservation price" and charge accordingly. They ask strategic questions about occupation, address, family, and what other dealerships shoppers have visited to help predict what they might be willing to pay.

Consumers play the same game. They hide information and deliberately mislead dealers. You may recall an old *Cosby Show* episode in which Dr. Huxtable dons his rattiest clothes before entering the auto showroom. But, it's tough to hide your race or gender. And, car salespeople regularly use racial and gender stereotypes to infer demand elasticities.

While dealers and/or salespeople may know little or nothing about a particular customer, they know quite a bit about *statistical* differences among races and genders. They know that women and African-Americans typically come to the showroom with less information and less proclivity to bargain. Although white males often salivate at the chance to lock horns with car dealers in a bargaining struggle, many females and African-Americans are unaware that bargaining is even possible. A recent Consumer Federation of America survey discovered that many female respondents, and more than one-half of African-American respondents, believed that sticker prices were non-negotiable.

Armed with such knowledge, salespeople will rationally adopt a more stubborn stance while

bargaining with female and African-American customers. Their stern posture may not be the result of bigotry, but the results are the same. Women and non-whites pay more.

Beauty and the Beast

It isn't easy being green.....or female or African-American or Hispanic or a member of any other ethnic or linguistic minority. But, what about *ugly*? Is discrimination confined to race and gender? If racism and sexism exist in the marketplace, what about *lookism*?

Well-wishers often assert "it's what inside that counts." But, do job markets agree? According to a recent study published by labor specialists Dan Hamermesh of the University of Texas and Jeff Biddle of Michigan State, raw physical beauty bestows a major employment edge on both men and women.

Drawing on three surveys encompassing more than 7,000 respondents, Hamermesh and Biddle tried to statistically isolate the impact of beauty on earnings. In addition to gathering data on employment and earnings, the interviewers rated the respondents' physical attractiveness. Respondents were categorized as either *strikingly beautiful or handsome, above average for age, average for age, below average for age, or homely.* Overall, 34 percent of the respondents were rated as striking or above average while only 8 percent as below average or homely. [The interviewers must have been generous!]

Even after adjusting for such factors as education, experience, age, race, and occupation, the authors find that beauty has a significant impact on earnings. The impact is not as great as that of race or gender, but it is significant nonetheless. Respondents rated as striking or above average earned a wage premium of about 5 percent, while those rated as below average or homely suffered a wage penalty of about 9 percent. The total earnings gap between the two groups was about 14 percent. Interestingly, the impact of physical appearance was somewhat greater for males than for females, though the difference was not statistically significant.

Hamermesh and Biddle theorize that attractive workers might be more productive in some industries. Fashion modeling is an obvious example, but there are many others. If customers prefer dealing with good-looking employees, attractive sales representatives might bring in extra revenue for the firm and attractive waiters/waitresses might lure more paying clients into a restaurant. In these cases, higher productivities could justify higher earnings.

The authors do find some evidence that attractive employees gravitate to those occupations in which physical beauty is most likely to matter, but the quantitative importance of this occupational sorting seems quite weak. According to Hamermesh and Biddle, the wage differentials are most likely the result of simple employer bias.

Prices and Politics

The budget is balanced. *Or is it?* The Republicans have slashed federal spending. *Or have they?* At least they have slowed the growth of federal spending. *Maybe.* The projected growth rates were guesswork, as are the projected savings.

In fact, no one is terribly sure what will happen. Annual deficits *are* likely to fall over the next

several years....if Congressional assumptions about GDP growth and inflation prove accurate. Will they be correct? More importantly, will it matter? Will bringing the federal deficit under control make a difference in long-run economic performance? Will it enrich the economic fortunes of future generations? As Willard Radell's article in the last newsletter explained, most budget arguments are steeped more in mythology than in economic logic.

Conventional macroeconomic wisdom does agree that smaller federal deficits will raise Gross Domestic Product in the long run. But the impact is likely to be small. Smaller deficits mean that U.S. Treasury borrowing can be cut. With the government borrowing less, more *loanable funds* will be available for private firms to borrow to finance new capital investments in plant and equipment. In a nutshell, smaller deficits divert funds from government spending to private investments. If private investments are more productive than government spending, GDP will grow.

Regrettably, political posturing, not sound economic analysis, has dominated recent budget debates. The rancorous rhetoric delivered insipid sound bites to the media, but did nothing to clarify real economic issues for the typical citizen-in-the-street. And, it was so unnecessary. Many of the deficit objectives could have been achieved with little or no debate, acrimony, or obfuscation. A few extra *million* dollars to the Bureau of Labor Statistics could have saved several hundred *billion* dollars of federal spending over the next decade. Easy.

The debates did focus correctly on one thing. The most-rapidly increasing slice of the federal budget is entitlements; especially Social Security and its Medicare companion. In 1965, Social Security accounted for 14.7 percent of the federal budget. By 1994, it had ballooned to 31.3 percent of the budget. The adoption of Medicare in 1966 and the increasing number of retired citizens caused much of the surge, but indexation has also played a major role.

To counteract the ravages of inflation on fixed-income recipients, we tied or *indexed* social security payments to the Consumer Price Index (CPI). Payments adjust automatically. If the CPI goes up 3.8 percent one year, social security payments go up 3.8 percent the next. In theory, indexation makes sense. Without it, inflation will redistribute purchasing power from retirees to working men and women whose wages rise with prices. Protecting social security recipients from inflation is a laudable, and reasonable, economic goal. But, the reality is less sanguine than the theory.

First, it is expensive. Since indexation began in 1972, the CPI has rocketed 366 percent. That translates into an extra $240 billion in social security payments for 1995 alone. Second, indexation maintains real purchasing power only if the CPI accurately measures changes in the cost of living. And, it does not. The CPI overstates *true* inflation. As a result, indexation has raised social security payments *faster* than prices. Instead of protecting retirees from inflation, we have rewarded them for it.

And the problem goes well beyond social security. Veteran's pensions, federal retirement pensions, supplemental security income programs for needy aged, blind and disabled citizens are also tied to the CPI. Even the personal income tax system is indexed. The standard deductions, personal exemptions and tax brackets automatically adjust with changes in the CPI.

Measurement biases

Every 10 to 15 years the Bureau of Labor Statistics (BLS) surveys consumer buying patterns to determine a *market basket* of goods purchased by typical urban consumers. The CPI measures how the cost of this market basket changes over time. If, after one year, this market basket costs 4.2 percent more, the CPI rises by 4.2 percent, and media pundits proclaim the cost of living has risen by 4.2 percent. But, the media pundits are wrong. The index is biased. The biases, well-known to economists,

come from several sources:

1. Substitution Bias: Remember the Law of Demand? When price rises, the quantity demanded falls. Suppose I initially spend $4 per week on restaurant meals -- one meal per week at McDonald's for $2 and another at Wendy's for $2. If prices at McDonald's rise to $2.50 while prices at Wendy's fall to $1.90, I'll switch both meals to Wendy's. My cost of living will fall to $3.80 (a five percent drop from the initial $4). But the BLS methodology ignores the substitution. It assumes I continue to eat one meal at each restaurant per week and rings up the new cost at $4.40 (a 10 percent rise). By ignoring consumer shifts to cheaper products, the CPI overstates our cost of living.

2. Outlet Bias: When the new Wal-Mart opens down the road, consumers line up at the doors to save money. Because the BLS continues to measure prices at the "full-price" store we patronized earlier, it misses the drop in our shopping tab.

3. Quality Change Bias: Suppose our new radial tire costs an extra 15 percent, but is guaranteed to roll for 20 percent more miles. The cost per mile drops, but the CPI still rings up a 15 percent increase in tire prices. Part of what the BLS measures as inflation is more aptly chalked up to improved quality.

4. New Product Bias: When a new $50 drug saves patients $5,000 of painful surgery, our cost of living takes a plunge. But, because the drop came via a new product not included in the CPI market basket, the BLS methodology misses the change.

What we don't know is the magnitude of the bias. Is it enough to make a significant difference? Most economists answer *yes*. Yale's William Nordhaus recently tracked the price of lighting services from 1800 to the present. Tracing the costs of providing light from fires, candles, gas lights, and kerosene lamps through modern fluorescent tubes, Nordhaus concludes that the price of light has tumbled dramatically. The same 1,000 lumen-hours that cost consumers in 1800 close to 40 cents now cost only about 1/10 of a cent. But, according to a traditional BLS-type index -- one that misses quality improvements and introduces new products slowly -- the price of light has risen 180 percent since 1800.

Errors in other prices are probably much smaller, but might still be significant. A group of respected economists led by Stanford's Michael Boskin issued a report this Fall pegging the CPI bias at 1.5 percentage points per year. The implications are enormous. If Boskin's estimate is correct, we are *over*-indexed; social security recipients and other beneficiaries of indexation are *over*-compensated for inflation. A revised CPI that eliminates the known-biases could lop nearly $1 *trillion* off projected Federal deficits over the next decade!

Other economists estimate the bias more conservatively. But, even a small CPI revision could generate huge savings in the long run. A relatively meager sum, quietly allocated to remedy BLS methodological flaws could probably have accomplished more deficit reduction than months of anguished and contentious polemic. Should we do it? Yes. *But only after I've finished collecting social security myself!*

What is a Medicare Cut?

by
Willard Radell

One of the recent budget controversies is whether the congressional Medicare proposal is a "cut" in Medicare. Rush Limbaugh and Newt Gingrich agree that the Democratic assertion that the proposal is a "cut" provides an object lesson in the failure of American public schools.

Here's how Gingrich stated the problem on C-Span (I am paraphrasing):

Medicare payments per recipient are scheduled to increase from $4800 to $6700 from 1995 to 2002. Since 6700 is greater than 4800, then only an innumerate illiterate could describe what's proposed for Medicare as a "cut." What kind of school would offer a lesson that says, "which is greater - 48 apples or 67 apples," and then tells the students that 48 apples is more than 67 apples. By making that argument, the Democrats are showing us "symptoms of the decay of American schools."

The confusion about whether the Republican Medicare proposal is a cut is a confusion that economists resolved long ago by distinguishing between "real" and "nominal" dollars. Economists even have a phrase to describe the fixation on nominal values. It is called *money illusion.*

When congressional critics assert that "Medicare is being cut," they are clearly saying that real (inflation-adjusted) Medicare spending will decrease. They are forecasting that 6700 of year 2002 dollars will buy less medical care than 4800 of year 1995 dollars.

Looking at Newt's apples, what the "cut" proponents are saying is that if you have 48 six-ounce apples in 1995 and 67 three-ounce apples in 2002, then you are worse off (in weight of apples) in year 2002 than you are in year 1995. Apple weight was "cut" from 288 ounces *(48 times 6)* in 1995 to 201 ounces *(67 times 3)* in 2002. Now Gingrich and Limbaugh are correct that the *nominal* number of apples is greater in year 2002. But it would be disingenuous for Gingrich to tell senior citizens they are better off because they have "more apples" to eat in 2002 when they will have fewer ounces of apples in that year than in 1995.

Gingrich's argument is like convincing someone to accept 3 quarters in change for 1 dollar. You tell them, "you're better off because you are only giving me *one*, while I'm giving you *three*." Newt's apple argument is clearly specious.

Once the specious argument is set aside, what are the possibilities for who will be right? The answer hinges on how well we forecast medical prices.

Imagine a perfect medical goods and services price index that we will call the PMCPI (Perfect Medical Consumer Price Index). Call the proposed levels of Federal Medicare Expenditure Per Recipient the FMEPR. By comparing the expected changes in PMCPI and FMEPR it is possible to summarize the possible changes in real Medicare funding.

If from 1995 to 2002:	*Then in real terms:*
(1) % change in FMEPR > % change in PMCPI	Medicare per recipient increases
(2) % change in FMEPR = % change in PMCPI	Medicare per recipient is frozen
(3) % change in FMEPR < % change in PMCPI	Medicare per receipient is cut

Democrats in Congress seem to be saying that case 3 is what will happen. If critics of the "Medicare cut in real terms" argument don't believe it's a cut (in real terms), then their only honest line of argument is that the Democrats are over-estimating the increase in medical prices. Once the politicians frame the argument as the relationship between the prices of Medicare services and the funds

allocated to purchase those services, the debate can proceed on the substantive economics of the problem. It is not honest to take advantage of the average person's lack of distinction between nominal values and real values to score debating points.

One of the greatest values of economic education is that our students can distinguish between nominal and real changes. If a larger percentage of the population understood basic economics, politicians of any party who make specious, one-sided nominal arguments wouldn't have to worry about term limits. They would be shown the way out.

* *

Two young men, unprepared for a biochemistry exam, called their professor and claimed thay were stuck out of town with a flat tire. The professor, and agreeable sort (*aren't we all?*) agreed to give the students a make-up exam. The students, gloating over their ill-gotten reprieve, glided in to take the make-up the next day. The professor placed them in different rooms and gave each a copy of the exam. The first question, worth 5 percent, was a simple, straightforward concept. With audible sighs of relief, they penned answers in their respective rooms. But, each paled at the sight of question number two. It was brief. And, it was worth 95 percent of the exam. It was, "*Which tire?*"

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