SOUTHWESTERN JOURNAL
OF
ECONOMIC ABSTRACTS

A SELECTION OF THE
ABSTRACTS OF THE PROCEEDINGS OF THE
SOUTHWESTERN ECONOMIC ASSOCIATION

1990

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THE SOUTHWESTERN ECONOMICS ASSOCIATION
MARCH 27-30, 1991
MARIOTT RIVERWALK HOTEL AND SAN ANTONIO CONVENTION CENTER
SAN ANTONIO, TEXAS

CALL FOR PAPERS

You are cordially invited to attend and to participate in the annual conference of the Southwestern Economics Association to be held in San Antonio, Texas, March 27 - 30, 1991, in conjunction with the Southwestern Social Science Association meeting.

CALL FOR PAPERS, DISCUSSANTS, CHAIRPERSONS:
Papers, discussants and session Chairpersons are invited for the 1991 SWEA Conference. Complete the attached form or provide the following information in a letter by October 15, 1990: Name, Address, Professional Affiliation, Position, and Telephone Number. Give the title, a brief description and suggested topic area with code number for proposed papers or panels. Abstracts of papers and comments by discussants may be published in the Southwestern Journal of Economic Abstracts.

DISTINGUISHED PAPER COMPETITION:
The Southwestern Economics Association will sponsor a Distinguished Paper Competition for the 1991 program. The author of the outstanding paper will receive a plaque and will be honored at the meeting. Additionally, the winning paper will be published in the 1991 Southwestern Journal of Economic Abstracts.

To be eligible for this award, both the completed paper and the abstract must be submitted by October 15, 1990 to : M. Ray Perryman, Editor, Southwestern Journal of Economic Abstracts, 700 South University Parks Drive, Suite 500, Waco, TX 76706.

PLEASE ENCOURAGE YOUR STUDENTS TO SUBMIT!

STUDENT SESSIONS:
Special sessions are planned for student papers with cash awards for the best student papers. Student status should be indicated on your paper proposals. CONTACT: Abdul M. Turay, Department of Economics, Mississippi State University, P.O. Drawer JE, Mississippi State, MS 39762.

MEETING REGISTRATION:
Note that all participants must preregister for the meeting. It is not required that you be a member of SWEA to participate.

DEADLINES AND CORRESPONDENCE

Proposals for papers and interest in participating as discussant and/or chairperson must be received by October 15, 1990. Send information to:

Dr. Rose M. Rubin
P.O. Box 13408
Department of Economics
University of North Texas
Denton, TX 76203

Notification of acceptance will be made by December 15, 1990. Accepted papers must be sent to discussants and chairpersons by March 1, 1991.

THE SOUTHWESTERN ECONOMICS ASSOCIATION
MARCH 27-30, 1991   SAN ANTONIO, TEXAS
PARTICIPATION FORM

MEETING THEME: "GLOBAL CHANGE: INVESTIGATION, UNDERSTANDING, SURVIVAL."

NAME: _____

POSITION: _____

SCHOOL/FIRM: _____

ADDRESS: _____

_____

TELEPHONE NUMBER: (   ) _____

TOPIC AREA AND CODE#: _____

TITLE OF PAPER: _____

BRIEF DESCRIPTION OF PAPER:

Paper presenters are expected to also serve as discussants and chairs. Please indicate your willingness to serve and areas of interest. See areas\codes on back of page.

I will serve as a chairperson in (give topic areas <u>and</u> code#):

1. _____
2. _____

I will serve as a discussant in (give topic areas <u>and</u> code#):

1. _____
2. _____
3. _____

MAIL BY OCTOBER 15, 1990 TO: Rose M. Rubin, Ph. D
                                        Department of Economics
                                        PO Box 13408
                                        University of North Texas
                                        Denton, TX 76203

Minutes of the Annual Business Meeting
Southwestern Economics Association

March 31, 1989
Little Rock, Arkansas

The annual business meeting of the Southwestern Economics Association was called to order by President J. Kirker Stephens, University of Oklahoma, at 5:40 p.m. on March 31, 1989. It was moved, seconded and passed to dispense with the reading of the minutes of the 1988 annual meeting.

The treasurer's report, by Rose M. Rubin, University of North Texas, showed a balance as of February 27, 1989 of $3,607.51. The treasurer's report was accepted as presented.

The program chair, Luvonia Casperson, LSU-Shreveport, reported that the final figures for 1989 would be equal or slightly higher than last year. So far the total participation was not known, but there were 100 pre-registrants.

Chuck Becker, Texas Christian University, Vice President and Chair of the 1989 Student Paper Awards Committee, announced that at the current meeting there were 6 sessions for students. These papers ranged considerably in topic area, were of good quality and represented several campuses. Awards will be forthcoming.

Bob Brazelton, University of Missouri-Kansas City, editor of the Southwestern Journal of Economics Abstracts reported that this year there have been 60 orders for the Journal. The present balance of the Journal fund is $2102.78. Editor Brazelton announced his resignation as editor of the Journal.

Lewis Hill, Texas Tech University, Chair of the Resolutions Committee, presented the following resolution.

"Whereas W. Robert Brazelton established the Southwestern Journal of Economic Abstracts in 1980:

Whereas he has served faithfully and diligently as editor of the Journal for nine years; and

Whereas his service as Editor of the Journal has contributed greatly to the honor and prestige of the Southwestern Economics Association.

Therefore, be it resolved:

That the membership of the Southwestern Economic Association express their deep and abiding appreciation to W. Robert Brazelton for establishing the Southwestern Journal of Economic Abstracts and for his faithful and diligent service as its Editor."

The resolution was accepted by the group and the secretary was instructed to send a copy to Brazelton's dean and president.

Clint Johnson, Arkansas State University, past president, presented certificates recognizing the service of the following program chairs.

1984	Joe Davis	Fort Worth
1985	Richard Leftwich	Houston
1986	Kathie Gilbert	San Antonio
1987	Ray Perryman	Dallas

President Stephens announced that the change in the constitution and by laws was passed by an overwhelming majority in the recently conducted mail vote of the membership.

Clint Johnson of Arkansas State University presented the report of the Nominating Committee. The following slate of officers was presented and approved by the association.

President, Luvonia Casperson, LSU-Shreveport

President Elect and Program Chair, Chuck Becker, Texas Christian University

Vice President, Rose Rubin, University of North Texas

Secretary-Treasurer, Charles J. Ellard, Pan American University

Editor, Southwestern Journal of Economic Abstracts, Ray Perryman, Baylor University

Luvonia Casperson thanked the membership and adjourned the meeting at 6:20 p.m.

Southwestern Economics Association
Constitution and By-Laws

Article I. Name

This Association shall be known as the Southwestern Economics Association.

Article II. Purpose

The purpose of the Association is to promote economic theory and analysis within, but not limited to, the southwestern states through the encouragement of research, discussion, conference, and the publication of dissemination of research.

Article III. Membership

Any person interested in the purpose of the Association shall be eligible for membership by joining the Southwestern Social Science Association as set forth in SSSA By-Laws, Article I.

Article IV. Officers and Executive Committee

Section 1.   The Officers of the Association shall consist of a President, President-Elect, Vice-President, Secretary-Treasurer, and Editor of the SWEA Journal.

Section 2.   Each officer of the Association shall hold office for one year and thereafter until a successor takes office. The officers of the Association, shall be elected at the annual meeting.

Section 3.   The Executive Committee shall consist of the President, President-Elect, Vice-President, Secretary-Treasurer, the Editor, and the last two Past-Presidents.

Article VII. Meetings

Section 1.   The annual meeting of the Association shall be held at the annual meeting of the Southwestern Social Science Association.

Section 2.   For the purpose of conducting any business a quorum shall consist of those members who are present at the annual business meeting of the Association, and a majority of the Executive Council shall be deemed to be a quorum for its meeting.

Article VIII. Amendment

The Constitution and By-Laws may be amended by a two-thirds vote of the members by a mail ballot provided the proposal shall have been approved by a 2/3 vote at the annual business meeting, after at least three months notice prior to the consideration at the annual business meeting.

By-Laws

Article I. Membership and Dues

Section I.
The membership requirements and dues in the SWEA are those set by the SSSA.

Section 2.
Participants in the annual meeting, except for guests of the Association, as determined by the SWEA Program Chair, must pay the SSSA registration fee.

Article II. Duties of Officers and Executive Committee

Section 1.
The President shall preside at all business meetings of the Association and shall also preside at the Executive Committee. The President shall appoint all committees except the nominating committee. The President, along with the immediate Past-President, shall represent the SWEA on the Executive Council of the SSSA.

Section 2.
The President-Elect shall serve as the SWEA Program Chair and publicize and organize the program for the annual meeting.

Section 3.
The Vice President shall preside at any business meeting of the Association or if its Executive Committee in the absence of the President and shall chair the SWEA Student Paper Awards Committee and shall succeed to the office of President in case of vacancy.

Section 4.
The Secretary-Treasurer shall record and preserve the minutes of all business meetings of the Association and the Executive Committee and shall deposit in an Association account all fees collected for the SWEA and allocations from the SSSA to pay all properly incurred Association expenses, keep a complete and accurate record of all financial transactions and submit those financial records for audit at a time designated by the President or the Executive Committee.

Section 5.
The Editor shall be responsible for all details incident to the publication of the journal of the SWEA but shall be guided by overall publication policies, established by the SWEA.

Section 6.
The Executive Committee shall be empowered to act on behalf of the Association during the period intervening between annual meetings, to approve the proposed budget of the SWEA and to conduct other business.

Article III. Committees

Section 1.
The standing committees of the Association shall be:

    (a) Student Paper Competition
    (b) Nominating
    (c) Resolutions
    (d) Plenary Session
    (e) Budget and Financial Policies
    (f) Publications

Section 2.   The Nominating Committee shall consist of the three most recent Past Presidents.   Other standing committees of the Association shall be composed of at least three members.

Past Presidents
Southwestern Economics Association[*]

1948	Morris M. Blair, Oklahoma State University
1949	Jim Reese, Oklahoma University
1950	R. B. Melton, North Texas State University
1951	Alfred Chalk, Texas A&M University
1952	Carey Thompson, University of Texas-Austin
1953	Clay Cockran, Oklahoma University
1954	Frederic Meyers, University of Texas-Austin
1955	John P. Owen, Houston University
1956	Wendell Gordon, University of Texas-Austin
1957	Joe E. Brown, Texas A&M University
1958	Maurice Erickson, Southwest Texas University
1959	John B. Giles, Rice University
1960	Sydney C. Reagan, Southern Methodist University
1961	John N. Fry, Houston University
1962	Billy Hinton, Baylor University
1963	L. H. Merzbach, Southwestern University
1964	John L. Wortham, Texas Christian University
1965	Stephen L. McDonald, University of Texas-Austin
1966	Kendall Cochran, North Texas State University
1967	Joel W. Sailors, Houston University
1968	Richard W. Poole, Oklahoma State University
1969	Gaston Rimlinger, Rice University
1970	Thomas Beard, Louisiana State University
1971	Paul Brinker, Oklahoma University
1972	Carter Murphy, Southern Methodist University
1973	Jared Hazelton, University of Texas-Austin
1974	Ralph T. Green, Federal Reserve Bank, Dallas
1975	Frank Steindle, Oklahoma State University
1976	Robert Rouse, Texas Tech University
1977	Gloria Shatto, Georgia Tech University
1978	James Hibdon, Oklahoma State University
1979	William C. Adams, Eastern Texas State University
1980	Rufus Waters, Oklahoma State University
1981	Clint Johnson, Central Arkansas University
1982	David Gay, Arkansas University
1983	Charles Maurice, Texas A&M University
1984	Joe Davis, Trinity University
1985	Richard Leftwich, Oklahoma State University
1986	Kathie Gilbert, Mississippi State University
1987	Ray Perryman, Baylor University
1988	Lewis Hill, Texas Technological University
1989	J. Kirker Stephens, University of Oklahoma
1990	Luvonia Casperson, Louisiana State University

[*]Compiled from the Social Science Quarterly and its
predecessor, 1948-1985. Prior to 1966, this office carried the title
of Economic Section Chair, Southwestern Social Science
Association.

Revised Submission Form for ABSTRACTS and COMMENTS

REMISSION (send with abstracts)

1. ABSTRACTS of Papers presented at the SWEA meeting--$12.00 per page, two page maximum, single spaced
2. Abstracts of COMMENTS presented at the SWEA meeting--$12.00 per page, one page maximum, single spaced

PREPARATION

1. Use caps for the word "ABSTRACT" in preparing your title for an abstract of a Paper. Follow with the underlined title of the paper, a space, the author's name(s), and the author's affiliation(s). As this example shows, all of the title information is centered:

<center>

ABSTRACT
The Economic Impact of Russian Reforms

Paige Schieffelin
Baylor University

</center>

Begin with the underlined title of the original paper in preparing your title for a "COMMENTS" submission. Then list the author's name(s), author's affiliation(s), and a space. Follow with "COMMENTS" in caps, the author's name(s), and the author's affiliation(s). Center all title information:

<center>

The Economic Impact of Russian Reforms
Paige Schieffelin
Baylor University

COMMENTS
Benjamin Grant
Georgia State University

</center>

2. Continue your text on the same page as the title. Single space, attaching multiple pages with paper clips.
3. Begin each abstract with a brief introduction, not exceeding one paragraph.
4. Place any footnotes at the end of each abstract.
5. Indent the first line of each paragraph. Wordprocessed text should contain a space between paragraphs; typeset copy should contain no space.
6. Prepare two copies to be mailed with your remission. **Acceptance deadline is April 30.**

PUBLICATION INFORMATION

1. One free copy of the journal is mailed to each author.
2. Additional individual copies are available at $5.00 each.
3. Library copies are $7.50 per year.

Address inquiries or abstracts (with remission) to
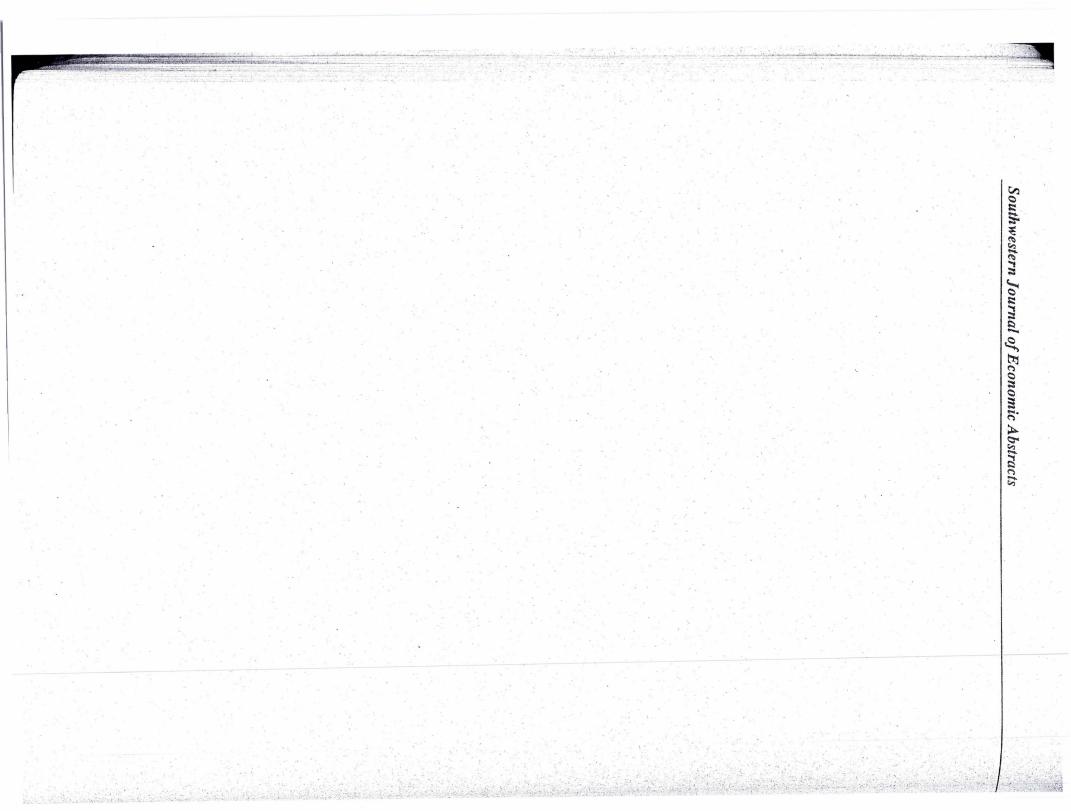
Editor's Comment

This issue of the <u>Southwestern Journal of Economic Abstracts</u> marks my first as Editor. I am pleased to assume these duties and am honored to have been selected. My predecessor, Bob Brazelton, did an outstanding job for many years. He brought the Journal to its present level, and aided significantly in the growth of our organization. We all look forward to his continuing participation in our activities for many years to come.

As a new editor, I obviously need all of the help that I can get. I would welcome any suggestions that any of you might have for ways to improve the <u>Journal</u> in the future. In this year's edition, we made a few cosmetic changes to give the publication a more distinctive identity. A committee was appointed to study more substantive changes in the nature and format of future issues. We will be bringing recommendations to the next business meeting of the Association. As I indicated earlier, any input would be greatly appreciated.

It is my goal to make the <u>Journal</u> a more integral part of the ongoing activities of the organization. I hope that a lot of our members will get involved in the process. I would like to see our publication program expand in accordance with the wishes of the membership.

I would like to thank everyone who contributed to the <u>Journal</u> this year. The abstracts represent a broad cross section of topics and methodologies. Going through the editorial process was most enjoyable, and I encourage all of you to spend a few minutes exploring these pages.

Remarks of Luvonia J. Casperson
Panelist, Women's Caucus

MENTORS

Southwestern Social Science Association Meetings
Ft. Worth, Texas

The art of mentoring is one of the most important roles one experiences in her/his professional life. It is a way to build confidence, foster professional competency, make friends, and maintain integrity in your discipline and institution.

This is true whether you are the mentor or the mentee. Both gain in a successful relationship. Mentors are useful to foster growth whether we are graduate students, assistant professors with that first job or full professors with tenure. A good mentor offers support and encouragement . . . she/he knows/shares unwritten rules.

What appears difficult for many young professionals is the active selection and solicitation of mentors. If you want to be successful in your field, choose someone who is successful that you admire and like. Your next task is to actively enlist that person's support.

You do this by proving that you are worthy of attention and consideration. In the Spring 1990 issue of <u>Managing Your Career</u>, published by Dow Jones, there is an article by Lawrence S. Brewster entitled, "Attracting a Mentor". In his article Brewster makes 10 points that he believes are critical. These are:

1. Listen.
2. Walk tall.
3. Learn from mistakes.
4. Be willing to work twice as hard.
5. Avoid mentors who patronize.
6. Travel.
7. Be persistent and flexible.
   (Develop excellence and be willing to learn).
8. Be sincere, honest and trustworthy.
9. Take care of your health. It affects your physical and mental abilities.
10. Set realistic career goals. Mentors can't help if you don't know where you want to go.

A mentor must be kept informed . . . they can be crucial to getting the most suitable committee assignments, teaching schedules, trips, professional presentations or journal articles. Be prepared to evaluate the particular situation and communicate with your mentor.

Mentors offer support and encouragement based on experience. It is not the role of a mentor to make decisions for you. You are responsible for making the choices. A mentor takes pride in your growth.

Both men and women have long practiced the art of mentoring. The major difference between the two is that men have successfully recruited mentors. Professional women, on the other hand, have generally had fewer mentors from which to choose. In addition, many women in need of mentors have been hesitant to actively select and recruit them. The tendency has been to wait until you have proven yourself and are selected. This panel is evidence that the attitude is changing.

In conclusion, having a mentor is important for a young professional. It is an efficient way to move up the career ladder and generally is a pleasant experience. In addition to the personal growth and satisfaction that accrues to the mentor/mentee in a successful relationship... the organization and the discipline benefit from the increased competence and camaraderie.

Distinguished Paper   1990

DISTINGUISHED PAPER

Unemployment and the GNP Gap: Okun's Law Revisited

Yu Hsing
Southeastern Louisiana University

I. Introduction

Okun's law is one of the widely used tools for policy makers to measure the cost of unemployment and the gain of economic growth. It can be stated in several different ways. In one version, it describes the link between the GNP gap and the unemployment rate. According to Okun (1970), the unemployment rate would decline by 0.3 percentage points if real output grew by 1 percentage point above potential output. He also indicated that the 0.3-to-1 link applied only to the sample with the unemployment rates between 3% and 7.5% and that the 0.3 coefficient might change when the unemployment rate was considerably lower or higher than this range.

An examination of previous studies reveals that the effect of a change in the GNP gap on the unemployment rate was usually assumed the same in the sample period. This may not be true. When the unemployment rate is greater than the natural rate of unemployment, an increase in real output is likely to have more effect on the unemployment rate due to excess labor supply. These surplus workers are available and can be hired readily at the existing wage rate. When actual real output is greater than potential real output, an increase in real output is going to have less effect on the unemployment rate because it may be getting more difficult to hire additional workers at the current wage rate and because existing workers may be given more hours or overtime to produce extra output. If we plot the unemployment rate and the GNP gap on the vertical and horizontal axes, respectively, the curve is likely to be steeper (flatter) when the unemployment rate is higher (lower).

The purpose of this study is to reexamine Okun's law and to test the proposition that the relationship between the GNP gap and the unemployment rate does not remain the same, but varies with the levels of the variables. Major findings in this study will have significant policy implications since the estimated parameter may help policy makers analyze the link between changes in output and unemployment more accurately.

II.   The Model

The relationship between the unemployment rate and the GNP gap can be expressed as:

$$U_t^{**} = \beta_1 + \beta_2 G_t^{**} + \beta_3 U_t^{**}{}_{-1} + \varepsilon_t \tag{1}$$

where

$$X_t^{**} = X_t^* - \rho X_t^*{}_{-1}$$
$$X_t^* = (X_t^\delta - 1)/\delta$$

U is the unemployment rate, G is the GNP gap or the ratio of actual to potential real GNP, ε is the disturbance term, X is any variable, δ is the Box-Cox transformation parameter, and ρ is the first-order autoregressive parameter, t is time. Note that equation (1) reduces to a linear form when δ equals one. A lagged dependent variable is added to equation (1) to incorporate the partial adjustment process, because it may take more than one period for the actual U_t to adjust to the desired level. In empirical work, we first regress U_t^{**} on G_t^{**} and $U_t^{**}{}_{-1}$ over different values of δ and ρ. The maximum likelihood method is employed to estimate the value of the log-likelihood function. The likelihood ratio (LR) test of the null hypothesis with restrictions on the parameters versus the alternative hypothesis can determine whether the linear form is appropriate.

III. Empirical Results

The sample consists of quarterly data for the U.S. during 1954.2-1988.2. U_t came from Monthly Labor Review, the Bureau of Labor Statistics, U. S. Department of Labor. Actual real GNP in 1982 dollars was obtained from the Survey of Current Business, Bureau of Economic Analysis, U. S. Department of Commerce.

Estimated regressions and other relevant statistics for the BCEA model and the linear form are presented in Table 1. As shown, the unemployment rate and the GNP gap are highly correlated because the coefficient of G_t^{**} is significant at the 1% level in both functional forms. It appears that the incorporation of the partial adjustment model is also appropriate due to the significance of the lagged dependent variable in both regressions. Note, however, that the adjustment process is not sluggish. It is calculated that about 84% of the long-run effect is realized within the first year. In the Box-Cox model, the estimated values of δ and ρ are 0.19 and 0.67, respectively. It seems that the functional form and autocorrelation should be tested simultaneously because the estimated value of δ is different from unity as assumed in the linear case and because ρ is significant at the 1% level.

To see whether the linear form is appropriate, consider testing Ho: $\delta = 1$ versus Ha: $\delta =/ 1$ or the linear form versus the Box-Cox model. The value of the test statistic equals 18.88. The critical value is 6.635 at the 1% level with one degree of freedom. Since the value of the test statistic is greater than the critical value, the null hypothesis that Ho: $\delta = 1$ can be rejected in favor of the Box-Cox model.

Table 2 compiles estimated long-run effects of changes in G_t on U_t. To save space, only effects for selected quarters are reported. The effects varied from -0.280 in 1969.1 to -0.801 in 1982.4. Since the end values of the effects are greater than twice the value of the standard error, the null hypothesis of a constant slope can be rejected. In the linear form, the long-run effect is calculated to be -0.468. If the linear form is chosen a priori, it would underestimate the effects

during the early 1980s and overestimate the effects during the late 1960s. In fact, the long-run effects were smaller than 0.30 in absolute value during 1968.2-1969.3 when actual real GNP was greater than potential real GNP. On the other hand, the long-run effects were greater than 0.70 in absolute value during 1982.2-1983.3 when unemployment rates were between 9.4% and 10.7%. Thus, empirical results have confirmed the proposition that the effect of changes in the GNP gap on the unemployment rate is greater (smaller) when the unemployment rate is higher (lower).

To compare possible different results which may be obtained from the Box-Cox model and the linear form, the fourth quarter of 1982 is selected for illustrative purpose. In 1982.4, the actual unemployment rate was 10.7%, actual real GNP in 1982 dollars was $3159.3 billion, and potential real GNP was $3490.2 billion. The GNP gap expressed in percentage points was 90.52. Based on the linear form, to reduce Ut by 1 percentage point, the actual real GNP will rise to $3234.0 billion. Under the Box-Cox model, when Ut drops by 1 percentage point, the GNP gap will only increase by 1.25 percentage points to 92.77, and actual real GNP will rise to $3203 billion. Therefore, to reduce the unemployment rate by 1 percentage point, we may overestimate the increase in actual real GNP by as much as $31 billion if the linear form is chosen a priori for policy decision making. The difference is large enough for policy makers to reexamine the link between the GNP gap and the unemployment rate.

IV. Conclusions

The relationship between output and unemployment has been reexamined empirically. The Box-Cox model is applied to the U.S. sample to regress the unemployment rate on the GNP gap during 1954.2-1988.2. Major findings in this study are: (1) the linear form assuming constant slope can be rejected in favor of the Box-Cox model; (2) estimated long-run effects of changes in the GNP gap on the unemployment rate varied from -0.280 in 1969.1 to -0.801 in 1982.4; and (3) the effect is greater (smaller) when the unemployment rate is higher (lower).

Relying upon the variable effects found in this study, policy makers would not underestimate dU_t/dG_t during recessions and overestimate dU_t/dG_t during inflationary periods. For instance, in 1969.1, G_t has to rise by 3.57 percentage points for us to reduce U_t by 1 percentage point due mainly to the facts that actual real GNP was greater than potential real GNP and that the economy was operating at an U_t of 3.4% compared to the assumed natural U_t of 5.6%. In contrast, in 1982.4, in order for us to reduce U_t by 1 percentage point, G_t needs only to increase by 1.25 percentage points because large numbers of unemployed labor force were available and ready to work.

There are several potential areas for further research. Empirical results in this study depend partly upon the estimates of potential real GNP. It is expected that different estimates of potential real GNP may yield different results. Equation (1) may include other variables to see whether the link between the unemployment rate and the GNP gap has shifted in recent years. The Box-Cox model may be expanded to cover more specific functional forms.

Table 1
Estimated Regressions Of The Unemployment Rate On The GNP For The U.S.

Independent variables	Box-Cox	Linear
GNP gap	-2.115 (-11.356)	-0.224 (-11.173)
Lagged Ut	0.532 (12.531)	0.521 (11.841)
Intercept	16.492 (11.543)	24.362 (11.506)
R^2	0.981	0.979
Durbin's h		
&	0.19	1.00
p	0.67 (10.56)	0.70 (11.47)
G(&,p)	17.14	7.70

G(&,p) is the log-likelihood function. Figures in parentheses are t-ratios.
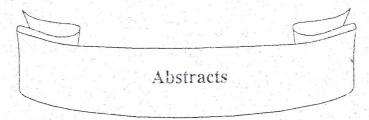
Table 2
Long-Run Effects Of Changes In The GNP Gap
On The Unemployment Rate

Year and quarter	Effect	Year and quarter	Effect
1954.4	-0.418	1971.4	-0.462
1955.4	-0.340	1972.4	-0.418
		1973.4	-0.380
1956.4	-0.337	1974.4	-0.515
1957.4	-0.400	1975.4	-0.624
1958.4	-0.497		
1959.4	-0.445	1976.4	-0.589
1960.4	-0.500	1977.4	-0.513
		1978.4	-0.451
1961.4	-0.483	1979.4	-0.466
1962.4	-0.438	1980.4	-0.564
1963.4	-0.438		
1964.4	-0.397	1981.4	-0.623
1965.4	-0.327	1982.4	-0.801
		1983.4	-0.645
1966.4	-0.301	1984.4	-0.560
1967.4	-0.315	1985.4	-0.537
1968.4	-0.282		
1969.4	-0.301	1986.4	-0.527
1970.4	-0.455	1987.4	-0.448
		1988.2	-0.435

Standard error: 0.114.

References

Box, G. P. E. and D. R. Cox. "An Analysis of Transformation," Journal of the Royal Statistical Society, Series B (1964), vol. 26, pp. 211-243.

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Okun, A. M. and G. Perry. "Potential Output: Recent Issues and Present Trends," in U.S. Productive Capacity. St. Louis, MO: Center for the Study of American Business, Washington University, 1977.

Zarembka, P. "Transformation of Variables in Econometrics," In Paul Zarembka, ed., Frontiers in Econometrics. New York: Academic Press, 1974, pp. 81-104.

Abstracts

ABSTRACT

Inflation, Interest Rates, and GNP

Larry Allen, Richard Drapeau, and Jimmy Moss
Lamar University

Irving Fisher developed what came to be known as the Fisher Equation to explain Gibson's Paradox, which is the observed positive correlation between nominal interest rates and level of prices. This positive correlation between nominal interest rates and the level of prices is no longer observed, and is attributed to the mechanics of the gold standard, (Barsky, 1988). Fisher argued that nominal interest rates should be related to the rate of change in prices and not to the level of prices. During Fisher's time, however, Gibson's Paradox was very evident, and nominal interest rates were correlated with the level of prices but not with the rate of change in prices. Fisher set out to resolve Gibson's Paradox by arguing that nominal interest rates were a function of the expected rate of price change or inflation, and this expected rate of inflation was based upon a distributed lag of past inflation rates. It happens that an expected inflation variable computed from a declining geometric sequence of distributed lags on actual inflation rates takes on a shape that approximates more closely the path of the level of prices as the lag is extended. In effect, according to Fisher, the price level variable acts as a proxy for the expected rate of inflation variable in Gibson's Paradox.

According to Fisher the nominal rate of interest may be decomposed into a real component, based upon the marginal productivity of capital, and a premium, based upon the expected changes in the price level. The real component remains fairly steady, and the nominal interest rate fluctuates one-to-one to fluctuations in the expected rate of change in the price level. That is, in equation (1) the "b" coefficient should show a value of unity. Fisher and subsequent researchers, working with

$$(1) \qquad i(t) = a + b*p\,(t)$$

where: $i(t)$= nominal interest rate at time T

a = real rate of interest

$p(t)$= expected rate of inflation at time T

a bivariate model, have met with poor success in finding a "b" coefficient close to one. Most studies, including Fisher's, arrived at a value for "b" greater than zero but considerably less than one.

The prime objective of this study is to examine the role of the distribution of inflation between the capital goods sector and the consumer goods sector as a variable in the Fisher Equation. The responsiveness of nominal interest rates to inflation should depend upon whether the rate of inflation is greater in the consumer goods sector or the capital goods sector. If consumer good prices are rising faster than capital good prices, firms will be more willing to pay higher rates of nominal interest rates, and lenders will demand higher rates of interest to compensate themselves for the higher expected cost of living. If, on the contrary, inflation were limited to the capital goods sector, firms will be less willing to pay higher rates of interest to finance more expensive capital goods. Under this condition, savers may not feel the impact of rising capital good prices as strongly so they will demand less of an inflation premium.

To study the implications for the Fisher equation of a discrepancy between the inflation rates in the capital goods sector and the consumer goods sector, a variable measuring the difference between these inflation rates is added to the equation. The version of the Fisher equation estimated for this study takes the following form:

$$(2) \qquad i(t) = a + b*p\,(t-j) + \qquad\qquad d*gap(t)$$

$$(3) \quad i(t) = a + b*p\,(t\text{-}j) + c*pcc(t) + \qquad d*gap(t)$$

In equations (2) and (3) the proxy for expected inflation, [p(t-j)], is a 16 quarter distributed lag on past inflation rates, and the relative inflation variable, [pcc(t)], is the rate of growth of capital good prices minus the rate of growth of consumer good prices. The variable gap(t) is the difference between the log of trend GNP and the log of actual GNP. This data can be found in Business Conditions Digest and the Survey of Current Business.

In general our statistical findings suggest that the ratio of capital good to consumer good inflation does enter into the determination of interest rates. Regardless of the sample period, the method of estimation, or the dependent variable, the sum of the "c" coefficients was either statistically significant or very suggestive. As expected in theory, the sum of the "c" coefficients invariably displayed a negative sign. Inclusion of the ratio of inflation variable did not bring the sum of the "b" coefficients closer to one, as expected, in any of the equations. The sixteen quarter lag on past inflation rates seems to serve as a satisfactory proxy for expected inflation for the determination of the 91 day t-bill rate over long sample periods, in this case from 55-87.

ABSTRACT

The Impact of Reagan Economic Policy in the Economic Development of the LDC's. Case of some selected countries.

Banji Babalola and Ayuba Sarki
Hampton University

Introduction. Decade of the seventies was characterized by unprecedented peacetime stagflation and slow growth in productivity. Causes of this poor performance had been the subject of debate for some time in the past and, most likely, is still going to be for other time in the future. While some economists stand to blame the price shock of the decade others choose to point fingers at the overly stimulative fiscal and monetary policies of the sixties and the seventies.

Economic Policy. President Reagan's economic policy rests on theories that are either conventional or pragmatic. His monetary policy required the limitation of the growth of the money supply by the Federal Reserve in order to reduce inflation. His "supply side" theory calls for a tax reduction to provide greater incentives to work, save and invest.

Theoretical Framework. Conventional economic theory postulates a direct relationship between an individual's level of consumption expenditure and that of his disposable income. This theory, on the aggregate, also applies to a nation. In other words, there is a direct relationship between a country's aggregate consumption expenditure and its aggregate disposable income. An economy may either be closed or open. If it is closed then all the goods and services consumed are then produced locally otherwise, they may either be locally produced or from abroad.

The Model. We adopted a polymial regression of the form

$$Y_{jt} - \alpha + \Sigma^k_{t-0} \beta_i * X_{t-i} + U_t.$$

Where Y_{jt} = the Gross Domestic Product of Country J (j=1,2,3,...n) at time t, Xt, the level of aggregate disposable income in the United States at time t. α is constant, $\Sigma^k_{t-0} \beta_i$ is the coefficient of contemporaneous feed and U_t is a vector of white noise with the characteristics $E(U_t) = 0$, cov, $(U_t, U_s) = 0 \; \forall \; t =/ s$

The study adopts the approach suggested by Almon (1965) in choosing the degree of the polynomial. It also adopts a minimum final prediction error in selecting the maximum length of the lag of the independent variable.

The Scope of the analysis was from 1960.1 to 1986.4 and the choice of the countries was randomly made and was solely dependent on the availability of data.

Conclusion and Implication. Though data show a decline in the gross domestic product of the countries sampled, statistical result of our analysis does not lead us to conclude that the Reagan Economic Policy had much to do with the poor performance of the economic growth of these countries during that period.

The implication of this study is that the Reagan economic prosperity of the mid eighties did not filter into the less developed countries' development.

End Notes.

1.   Almon, Shirley. "The distributed lad between capital appropriations and Expenditure." Econometrica Vol. 33 pp. 178-196, January, 1965.

ABSTRACT

Should the Local Government Subsidize the Private Schools?
A Micro Theory Analysis.

Banji Babalola and Ayuba Sarki
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One of the more controversial issues of our time is the debate on whether or not the local government should subsidize the private schools. Proponents argue that private schools are entitled to subsidy for two reasons (i) They participate in programs that benefit the poor and the disadvantaged. (ii) Tax payers bear the cost of the public schools. Children in private schools are entitled to tuition relief because their parents are tax payers too. Opponents, however, argue that the choice of a private school over a public school is one of taste which has the exclusion principle. As a result, the equipartition of tax benefit for primary education does not apply.

In this study, we assumed that the two systems of schools have a market concentration in an industry characterized as oligopoly. We also assume that the output quality is independent of the plant of production (i.e., a high school graduate from a public school is equally as good as a high school graduate from any private school). Since the private schools account for about 18% of the schools in the country, the public schools then enjoy an economies of massed reserve.

The Model. We let $C(Q)$= total expenditure required to produce Q children through public high school and $C(P)j$=total expenditure required to put P children through private school j. Assume the function to be twice differential, then

$$C(Q) = F + \zeta_0^Q C'(x)\, dx \quad Q > 0;\ 0 \text{ otherwise } F>0;\ F'(x) = 0\ \forall\ X\ \varepsilon\ Q$$

Since C' and C" are all well defined then $C''(Q)$ is strictly increasing or strictly decreasing.

(b). For the private Schools, we have a cost function of the form

$$\Sigma^N_{j-1} C_j(P) = \Sigma^N_{j-1} \zeta_0^P C'_j(x)\, dx \quad P > 0;\ O \text{ outside.}$$

The cost in the public schools is sub-additive if

$$\Sigma^N_{j-1} \zeta_0^P C'_j(x)\, dx > \zeta_0^Q C'(x)\, dx.$$

Cases for Subsidy.

(i) If subsidy is a function of the number of students in each private school, then that cost to the public schools, called C* is

$$C^*(Q) = \zeta_0{}^Q C'(x)\,dx + \Sigma^N_{j-1} K * P_j$$

(ii) If subsidy is a lump sum payment to schools without regards to enrollment then

$$C^*(Q) = \zeta_0{}^Q C'(x)\,dx + \Phi_1 + v * \Phi$$

where F is the dollar amount paid to each school.

In any of these cases above, the variable cost or the fixed costs will increase for the public school if there is a kind of subsidy.

Conclusion. We have shown, with cost analysis, that a subsidy to private schools by local government will, indeed, increase the cost of the public schools to the consumers (assuming that we are willing to maintain the same output quality). As a result of this, the local government should not subsidize the private schools.

ABSTRACT

Taxation on Trade Surpluses as a Means of Stabilizing the Global Economy

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The world is gradually moving away from national economies to regional ones. More than twenty regional economic groupings have been formed within the last forty years. These groupings range from the Andean Common Market in South America to the West African Monetary Union in Africa. Recalcitrant worldwide economic crisis, which defy solution by both bilateral and multilateral arrangements, are forcing national monetary and fiscal policies to converge. The energy crisis, international debt and trade imbalances are some of the problems that now confront the world economy. The vibrations of the New York volatile stock market in October 1987, heard at far-away places as Tokyo and London, almost brought economic activities of western industrialized countries to a halt.

The Bretton Woods system worked well under the fixed exchange regime in which the United States agreed to exchanged gold for paper dollars held by foreign central banks. However, the system collapsed in 1971 when the United States declined to redeem its paper currencies held by foreign central banks. The failure resulted in other trading nations to search central reserve assets. The IMF had anticipated the failure of the Gold Exchange Standard. As a result, in 1969 they introduced a global monetary system, the Special Drawing Rights (SRD), to serve as central reserve assets for nations.

Our paper attempts to propose global taxes on international trade as means of stabilizing the global economy. The failure of various attempts in stabilizing the global economy can be attributed to "economic nationalism," which we believe had impeded the emergence of global policies that would either prevent or alleviate major crisis in the world economic system. We need more than the "coordination of fiscal and monetary policies" to achieve a stable and

growing world economy. There has been an explosive growth in world trade within the last two decades. Estimates in 1976 placed the total value of foreign direct investment at about $700 billion, six times the $105 billion for 1967 calculated by the Organization for Economic Cooperation and Development (OECD).

The size of trade imbalances has also increased. The United States had a current-account deficit of nearly $140 billion in 1988. Japan and West Germany had current-account surpluses of $80 billion and $50 billion respectively. Germany's export business accounts for 60% of the country's manufacturing jobs. Since the steep rise in the value of the yen began in 1985, the Japanese economy has become more involved in the outside world. Although the volume of its exports has remained about the same, her imports have increased by almost fifty percent.

Any global economic policy, whether monetary or fiscal must be aimed at achieving three objectives: (1) stabilizing the exchange rate; (2) reducing trade imbalances, and (3) reducing the international debt crisis. The three objectives are related. Strengths or weaknesses in exchange rates usually can be traced to trade imbalances. We will therefore touch on policies aimed at reducing trade imbalances among trading nations. To begin, a five percent Trade-Surplus Tax System (TSTS) should be imposed on nations with persistent surpluses. This tax has to be paid in the nation's currency. The TSTS should be imposed on any nation with three annual consecutive surpluses. A separate world organization known as Global Trade Bank (GTB) is to be established to administer the funds and to manage the fiscal and monetary activities under the program.

CONCLUSION:

To some, the idea of a GTB, with power to conduct global monetary and fiscal policies may mean the loss of a nation's complete economic independence . But we must not ignore the benefits that economic interdependence has produced in the past and will continue to produce in the future.

ABSTRACT

Constrained Market Pricing for Public Utilities

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Economically efficient pricing for public utilities requires that rates be based upon marginal costs, with the necessary deviations determined by the elasticities of demand. However, problems associated with the measurement of marginal costs as well as the relevant demand elasticities, prevent in most circumstances the direct application of second-best pricing principles by utility managers and their regulatory counterparts.

This paper analyses how "constrained market pricing", which allows for flexible rates within a predetermined range, allows for some of the efficiency benefits of marginal cost based pricing to be realized without having to rely on explicit information regarding demand elasticities.

"Constrained market pricing" is a term used to describe a set of pricing rules adopted by the Interstate Commerce Commission and several state regulatory agencies. The principle idea of this method is that regulated prices must be constrained to lie between incremental and stand-alone costs. The reasoning is that one cannot legitimately infer that monopoly power is exercised from data showing that rates do not exceed stand-alone costs. Hence, stand-alone costs constitute the proper cost-based ceiling for rates. Incremental costs on the other hand are the proper cost-based floor, since prices equal to or greater than incremental costs are subsidy free. Where exactly the rate for a particular service or customer of the utility falls within this range depends upon the market demand conditions.

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Interstate Commerce Commission, <u>Coal Rate Guidelines Nationwide</u>, Washington, D. C., 1985.

ABSTRACT

Backward Linkages (or Lack Thereof) from Maquiladoras to Mexican Local Suppliers

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During 1980-1987, purchases by maquiladora ("in-bond") plants of material inputs originating in Mexico never attained 2% of the total. This contrasts with other off shore assembly activities in South Korea and Taiwan that have far more robust local subcontracting. If a healthier local sourcing could be stimulated in Mexico, employment and balance of payments could be improved; backward linkages to supplying firms would enhance technical learning; fiscal linkages would lead to improved infrastructure and forward linkages from elevated levels of income would encourage regional production of consumer goods and services.

In order to explore Mexican local sourcing in more detail a questionnaire was designed to determine the extent of local sourcing; specific products obtained locally; characteristics of supplying firms; general attitude by management about procurement; and perceived advantages and disadvantages of buying Mexican material inputs. Eighty-two in-plant interviews were conducted in Ciudad Chihuahua (11), Ciudad Juarez (21), Mexicali (21), and Tijuana (29). The questionnaire was sent to Vice Presidents of Purchasing of parent corporations of which 45 responded which represented approximately 30% of the total sample.

The following preliminary conclusions emerged from the study. First, not surprisingly, high price, poor quality and unreliability of delivery were cited as the most important obstacles to local sourcing. Second, our results showed a similar order of magnitude as official Mexican data for quantity of Mexican-supplied inputs. Third, if one looks at material inputs procured in the border region, as opposed to the Mexican interior, the goods involved provide very little opportunity to develop engineering capabilities or gain experience in product design. Fourth, maquiladora management is much more receptive to local sourcing than are purchasing agents of

the parent companies. Fifth, the practice of central purchasing by parent companies may be as big an obstacle to local sourcing as price, quality and delivery.

The research was a collaborative effort of the University of Texas at El Paso (UTEP) and El Colegio de la Frontera Norte (COLEF). The results were preliminary because a computer analysis of the data has not yet been done. Research is continuing with emphasis being placed on suggesting a policy package for encouraging more purchases by maquiladoras of material inputs from Mexican suppliers.

ABSTRACT
Alvin Hansen and the Fiscal Revolution

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If John Maynard Keynes was the messiah of governmental economic policy, then Alvin Hansen was his most important prophet and kindled the fire that started the Keynesian revolution in the United States. This study outlines some of the major contributions of this great scholar, teacher, and public servant in that effort.

Although Hansen was encouraged by his former professors at Yankton College to do his graduate work at the University of Chicago, he felt that his credentials proved more acceptable at the University of Wisconsin. He went there in 1914 and pursued a degree in Economics under the direction of John R. Commons and Richard T. Ely. Hansen was then offered a job with the University of Minnesota in 1919, and he stayed there for nearly twenty years.

The mid 1930s brought about two great changes in Hansen's life. First, Harvard University was given a grant in 1936 to establish a Graduate School of Public Administration. Hansen's record as a policy economist qualified him for this position, so he moved to Harvard in 1937 as the first Littauer Professor of Political Economy. Secondly, Hansen's views on macroeconomics underwent a great change. He had reviewed Keynes' General Theory in 1936 and had been less critical than most. As the depression deepened, Hansen realized that Keynes' work would open the door to some answers.

While at Harvard, Hansen and John H. Williams, the first dean of the Graduate School, combined to offer a Fiscal Policy Seminar. The Seminar became the core of Alvin Hansen's teaching. He made the Seminar the workshop where he examined and tested the concepts of Keynesian economics. Hansen became very enthusiastic about these new ideas and his

eagerness, matched with William's skepticism, made this Seminar work. It left a deep impact on the future development of macroeconomics and public policy in the United States.

The Seminar had significant indirect influence on national economic policy. Many alumni of the Fiscal Policy Seminar went on to become important officials of the federal government with significant economic duties. All of these people had received hands on training with Keynesian policy under the guidance of Alvin Hansen, so his influence on economic policy in the United States was far-reaching and benefitted from a "multiplier effect" as his students taught others.

Paul Samuelson, in a glowing tribute to Hansen outlined the following major pioneering efforts:[1]

(1)   Discovery and analysis of the incidence of tax and expenditure changes upon the Keynesian system

(2)   Analysis of the causes and consequences of stagnation and policies to overcome it

(3)   Study and development of incomes policies and analysis of creeping inflation

(4)   Use of the C+I+G apparatus for the Keynesian model

(5)   Development and analysis of the balanced budget multiplier

(6)   Analysis of the interaction between the multiplier and the accelerator.

Hansen's legacy lives on in legislation, theory, policy, and textbooks. It is time that we remind ourselves of the debt we owe this gentle revolutionary.

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[1] Samuelson, Paul A., "Alvin Hansen as a Creative Economic Theorist", The Quarterly Journal Economics, XC, (Feb., 1976) p. 25.

ABSTRACT
New Leasehold Farming in the Soviet Union

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Recently I came back from three weeks of farm tours in the Soviet Union with a delegation of 29 agricultural economists from 19 states and 3 nations. This is first such delegation from the U.S. to the USSR. During the visit, I gave my special attention to the new leasehold farming there. Agriculture is the most dramatically troubled section of the Soviet economy. The country has experienced severe food shortages and has to import more than 30 million tons of grain annually. The Soviets have maintained the basic prices of food distributed through State outlets at 1962 levels. The State subsidizes the difference between the price the State pays the farms for farm products and the lower retail prices in government run food stores. The subsidy in 1989 cost 90 billion rubles which was 11% of GNP. Forty-one percent of all state and collective farms operate at loss or makes a negligible profit. The payment collective farmers received for their work was rather symbolical. They had to live mainly off their small private plots. The peasants are abandoning the land in many regions. Mikhail Gorbachev acknowledges the failure of collectivized agriculture and wants to encourage more private farming. The Soviet new agrarian policy is to restore the peasant as the master on the land and dependably resolve the food problem. The new agricultural perestroika (restructuring) is a massive shift away from the inefficient state and collective farms to family farming on land leased from the farms. The movement was attempting to provide incentive to peasants to increase farm production and to reduce food subsidies. The peasant house-hold, individuals or small groups of individuals can sign a contract to lease land, cattle, and other assets from the state and collective farms, government agency or individual firm. The contract is the basic document that governs the relationship of the lessee and the lessor. It also covers such things as the life of the lease, the method of payment, the responsibilities of the lessor for maintenance of

facilities and equipment, and whether the lessee may sublease. Now the lease period is allowed for any period between 5-50 years and grants members of the lessee's family the right to inherit the lease after his or her retirement or death. A lessee who improves the leased property is entitled to be reimbursed for his expenditure. There are various forms of leasehold farming, the most popular one appears to be the family contract.

"Lease" is the watchword with rural dwellers and in local newspapers. When we travelled from Moscow to Kishinev in the western Soviet Union, I visited several leased farms and interviewed leaseholders. During our visit to the Friendship Collective Farm in Vinnitsa, Ukraine, I interviewed 6 household leaseholders. They lease 260 heads of cattle from the farm. When the cattle were 7 days old, they leased and fatten them up to six month old for sale. They use big farms's feed, supplies, machineries and facilities to raise beef-cattle. After paying all costs, 50% of the income will be paid to the farm as rent. They told me that the cost of one ton of meat is approximately one-third of what it used to be for collective farm. Their feed costs are almost 20% lower as well. We toured a state farm named Lenin in the village of Tsaul in Dondvsbanya District, Moldvia. There are 67 vineyard leaseholders. I talked to one of them, Mirceo Petrovici, who leased 15 acres of grape vineyard from the state farm. He likes the lease system because he can make his own production decision, arrange his own work schedule and produce more good quality grapes with low cost to increase his income. He received monthly payment of 260 rubles and 50% of his grape output.

After my visiting above lease farms, it is clear that the leasehold farms are within the existing state or collective farms. These farms are not quite the family farm in the West. The leaseholders do not own the means of production, they simply take care of the livestock, crops, or orchards. Since their payment are determined by how much they produce, they carry a greater responsibility and work harder. The leaseholders are fully dependent on the big farms to obtain inputs and services and are not an independent unit. The operation of the lease system has only

been four years since Gorbachev's rise to power. There is no official figure on leaseholders. After I talked with agricultural economists, government agencies, chairmen of collective farms and managers of state farms, they estimated there are only 6-8% of the state farm workers or collective farmers had signed leases. Thus far, there have been few peasants willing to surrender the largely guaranteed pay of state and collective farms for the risk of leasing arrangement. Many potential lessees fear reversal of current favorable policy, difficulty of getting machinery, fertilizers and other supplies. In addition, many farm administrators and managers resist such family farming for fear of losing their power and positions. The increasing importation of grain and budget deficit are alarming, the State will make every effort to overcome the resistance to leasing and open the way to peasants' autonomy. As time goes on, the peasants' confidence on leasehold farming will be developed, more peasants will be inspired by the system and sign lease contracts.

ABSTRACT

The Impact of Highway Construction Expenditures on Economic Growth, Planning Policies, and Transportation

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Transportation investment has long been an important factor contributing to a State's economic infrastructure base. State expenditures for construction, maintenance, and rehabilitation of a transportation network create direct, secondary, and tertiary benefits. These expenditures for public highways support the third largest function of state and local governments. Expenditures for education and welfare are first and second. The relationship between transportation expenditures, and the variables that determine the level of public expenditure on transportation facilities, and how they affect the economic viability of the regions within the state of Texas are examined.

The general objective of this research is to improve the understanding of how economic and political determinants of highway policy can enhance the effectiveness of highway planning, promote economic development, and improve transportation policy in the state of Texas. Texas has over 72,000 miles of highways, including 3200 miles of interstate highways, over 27,000 miles of primary (U.S. or state-numbered) roads, about 41,000 miles of secondary (farm-to-market) roads, over 100 miles of recreational roads, and about 20,000 bridges. The data consist of annual observations for the 254 counties of Texas covering a time period from 1969-1986. A series of linear regression models were used to test the structural relationships between total employment, personal income, and transportation expenditures. The effect of political influence in highway expenditure policy was modeled using variables to measure voter participation, partisanship, political competition, and membership on the Texas House Transportation Committee. The only political variable that was significant in any of the models is partisanship.

From this we conclude that the other political variables as they were defined and included in this study have no statistically significant relationship to public expenditures for transportation construction and maintenance.

Regression models were of two types: (1) time series models using dummy variables to pool the data, and, (2) cross-sectional time series models with dummy variables. There are twenty-four highway districts in Texas; therefore, twenty three dummy variables were used to pool the data in the time series models and to measure the differences between highway districts within each model. The pooled data provided more observations than non pooled cross-sectional or time series alone, and thus increased the degrees of freedom available in the analysis, allowing more lagged terms as variables than otherwise would have been possible with only eighteen annual observations.

The regression results indicate that the effects of transportation expenditures, oil prices, and per capita personal income on total employment using time series techniques are similar to those estimates when the cross-sectional time series techniques were used. This means that the cross-sectional effects on total employment has not shifted through time but have remained relatively constant during the years of this study. These models indicate that public expenditures on transportation, in a two year lag pattern, do positively affect the amount of total employment in each of the highway districts. The same coefficients are significant in both models, and the transportation expenditure lags appear to follow a two year pattern.

To test if this positive effect on total employment was universal across the different industries in the state, the same time series model was tested on a sector basis. The five industries modeled were the construction, manufacturing, mining, services, and wholesale trade sectors as defined by the U.S. Department of Commerce. The findings of the industry analysis are quite uniform across the economic sectors. In each case, transportation expenditures showed a positive relationship to the level of total employment. The wholesale trade sector was the only

sector where there was not also a lagged positive relationship. Only in the manufacturing and mining sectors was total employment affected by oil prices, and in both cases it was a negative relationship with the price four years previous. In all models the level of per capita personal income was the dominant independent variable determining total employment. Also, the impacts on the various sectors differ across highway districts as one may expect. Moreover, there is a difference in effect between urban and rural districts as indicated by the direct dummy variable coefficients. For example, the districts that include the larger metropolitan concentrations of the state, districts 2 (Fort Worth), 12 (Houston), 14 (Austin), 15 (San Antonio, and 18 (Dallas) have coefficients that are relatively close to each other in size and are significantly different from those in the more rural districts.

In summary, this means that when public money is spent on transportation it increases the level of employment in the highway districts of Texas. However, there is a difference between the districts in the amount of employment that is generated. Also there is a difference in the economic sectors regarding the timing of the employment effects and the length of those effects. These findings are important because as highway planners and State Department of Highways and Public Transportation (SDHPT) personnel, and others, go through the process of deciding where to construct roads, they can better estimate the timing and amount of economic growth as measured by changes in total employment. These results also provide information that can be helpful to policy makers in promoting growth in specific industries within individual districts thus augmenting strategic planning and policy formation regarding statewide economic diversification.

ABSTRACT

An Economic Model of Teenage Fertility Decision-Making

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For the adolescent girl who is contemplating her sexual future, decisions will be made regarding initial intercourse, sexual partners, contraceptive usage, abortion, and motherhood. For some teens the desire to become a mother at an early age is quite strong. Empirical studies have shown, however, that only 10 percent of all teenage pregnancies were intended before conception occurred (Moore, 1977). The remaining 90 percent of teen pregnancies are unintended; nonetheless, a large percentage of these are carried to term.

Theoretically, it is expected that the individual teenage female will attempt to maximize net benefits when making choices about childbearing. The availability of information about costs, explicit and implicit, and available resources will determine her desired fertility outcome. Additionally, the teenager will be motivated to act based on her attitudes (value system) about any given alternative.

For adolescents who wish to give birth early in life, the fertility decision-making process is clearly defined. However, the unintentional nature of most adolescent pregnancies suggests that the majority of sexually-active teenagers do not accurately assess all available options. Information inadequacies will hinder a teenager's ability to accurately assess the costs associated with sexual intercourse. A lack of contraceptive availability may also prevent many teenagers from taking evasive action to avert a pregnancy or sexually transmitted disease. As a result, many teenagers become pregnant unintentionally.

Adolescent childbearing is a phenomenon which cannot be wholly explained in terms of any one social science. It is better explained and understood using an eclectic approach. An interdisciplinary approach will afford a more complete and stronger theoretical foundation for

analyzing the issues associated with adolescent childbearing. This study borrows a general theoretical model from the sociological literature and transforms it into an economic framework for examining adolescent fertility behavior. This paper presents a theoretical framework only and is not an empirical study. However, the model can be operationalized and sufficient data exist for future studies which may address the issue of empirically testing the model.

ABSTRACT
The Impacts of Conservation Compliance on West Texas Farms

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The Food Security Act of 1985 (PL 99-198), Title XII, establishes several provisions designed to address the erosion of highly erodible land. The conservation compliance provisions require a conservation plan to be written for all highly erodible cropland being used to produce program crops. Failure to comply results in the loss of eligibility for most USDA program benefits. Conservation plans must reduce erosion to an acceptable level as specified in USDA guidelines. Questions have been raised about the economic viability of farms in highly erodible areas that must comply with the new regulations. This study was undertaken to investigate the effects on farm income of following conservation practices in an area well known for susceptibility to wind erosion--the Texas High Plains. Both farm and area impacts were considered.

The study area included eleven counties which make up a large portion of Major Land Resource Area (MLRA) 77 in the Western Panhandle of Texas. They are Lamb, Bailey, Cochran, Hockley, Yoakum, Terry, Lubbock, Lynn, Dawson, Gaines, and Andrews. However, Andrews was dropped because of its relatively low amount of cropland and different type of agriculture. The 1982 National Resource Inventory (NRI) reports an average wind erosion rate of 24.3 tons/acre for MLRA 77, with more than 7 million acres of cropland losing soils at a rate greater than 10 tons/acre. Crops in the study area include feed grains, wheat, cotton, and some miscellaneous crops, but cotton is the major crop in the region. Over 30 percent of the value of Texas cotton originates from the area, totalling over 1.14 million bales in 1985. Government payments received by farmers for these three crops exceeded 184.77 million dollars for these counties in 1985. Thus the threat of loss of program benefits for noncompliance could come at a substantial cost to the farm community.

The study was done by principal soil groups. The Soil Conservation Service (SCS) Texas State Office provided soils data which allowed the classification of dry and irrigated cropland in each county as to type of soil and wind erodibility group. County base acreages and program payment rates for irrigated and dryland cotton, wheat and sorghum were obtained from county ASCS offices and adjusted for participation in the Conservation Revenue Program. These data were aggregated to management areas. Texas Agricultural Extension Service budgets for these crops for 1987 were modified to reflect actual cultural practices used by farmers in each county through a series of on-site interviews with producers. Input prices were adjusted to 1991 levels using the Texas A&M Conservation Compliance study.[1] Yields used were adjusted county averages for the period 1976-85 adjusted for soil type using soil survey yields as weights.

Representative farms were first determined for each county based on interviews with professional agriculturists and data from the 1982 Census of Agriculture. Then a weighting system based on relative acreage was used to develop a single representative farm for each management area. Linear programming (LP) was used to obtain optimum crop mixes for each representative farm that followed accepted conservation practices so as to comply with the program provisions using several price levels for crops including 1987 prices, 1991 base prices from the Texas A&M study and two other 1991 projected price levels. Results were obtained with and without deficiency payments. Fixed costs were found to be the same for each farm and thus held constant in this study. The study area was divided by SCS into a sandy or special management area composed of most of the southern counties and a regular management area composed of most of the southern counties and a regular management area composed of the remainder. In the sandy area, an alternative set of guide sheets applies which are more lenient with respect to soil loss allowed to be in compliance. Thus two models were constructed and solved--one for each area. Once LP solutions identified the most income efficient farm plans

that included conservation practices by soil type, annual erosion loss was obtained by including these in the Erosion Productivity Impact Calculator (EPIC) simulation model developed by SCS to estimate the annual erosion loss associated with farming practices over a fairly long time frame such as 50 years or more. The area analysis was done by expanding the representative farm programming models to an area basis and calculating the change in income for the area that occurred from adopting conservation practices.

Results indicated that the farm income effects of the compliance provisions of the farm bill are not very large, with the greatest impacts coming from the assumed drop in prices between 1987 and 1991. However, no farmers could afford to produce outside the program; they would go out of business. Thus conservation compliance is not an option. The relatively low estimate of farm income effects does not mean that there will not be significant changes in cropping patterns and farming practices, which may have serious implications for rural communities, as well as producers. Future programs may make it desirable for farmers to produce cotton in this region, given its comparative advantage over wheat and sorghum. The use of rotations and wheat as a green manure crop behind irrigated cotton provided the greatest returns in a compliance setting. Wind strips were not as profitable and did not enter into the optimal farm plans.

Soil erosion for the compliance alternatives is not much different than that for those who did not comply, except on the sandiest soils in the special management area. While the compliance cropping patterns lower erosion from 12 to 15 percent, the reduction in many cases is not significant according to the simulations obtained from the EPIC model. Productivity losses due to erosion were generally 2 to 19 percent of budget lint yield for cotton, 1 to 8 percent for sorghum, and less than 4 percent for wheat in a 50-year period, and were not generally affected by conservation compliance reduced productivity losses according to EPIC. Area affects of the conservation compliance provisions of the farm program could be significant if

farmers actually reduce planted acreage by the percentages indicated in the farm models. Direct income effects on the region may be about 10 to 22 percent according to the multiplier analysis, not considering secondary effects such as reduced purchases of farm inputs because of the lower planted acreage.

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[1]Lippke, L. A., et. al. Impact of the Conservation Compliance Provisions of the Food Security Act of 1985--Interim Rules--on the Texas Southern High Plains. Agricultural and Food Policy Center, TAEX, TAES, Texas A&M University, College Station, Oct. 1986, 38 pp.

ABSTRACT
The Definitional Problem of "Disposable Income" In the Family Farmer Bankruptcy Act (Chapter 12)

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A bankruptcy petition usually leads to one of two results: liquidation of the debtor's property to satisfy creditors (typically under Chapter 7 of the Bankruptcy Code) or reorganization of debtor's financial condition to allow his continued operation (Chapter 11, 12 or 13). There is little doubt that reorganization of a debtor's property is favored over its liquidation. From the debtor's standpoint, the property's value as a "going concern" is greater than its liquidation value. The creditor knows that reorganization offers a better chance that there will be new income generated to retire debts, especially unsecured debts.

Nowhere is public policy favoring reorganization of the debit more evident than in Congressional enactment of Title III of the Bankruptcy Judges, United States Trustees and Family Farmer Bankruptcy Act of 1986. This Act was part of a Congressional effort to stem the tide of farm failures brought on by adverse economic conditions in the early 1980s. The stated purpose of the Act contains the forceful language "to give family farmers facing bankruptcy a fighting chance to reorganize their debts and keep their land." The part of the Act designed to assist farmers in their debt/insolvency condition is the new Chapter 12, a temporary addition to the bankruptcy code.

One of the basic themes of the Act is that creditors should share in farm reorganization cost so as to encourage the survival of family farms. That sharing of cost is especially evident in treatment of the disposable income provision. The farm debtor is allowed to cover <u>necessary</u> personal and operating expenses out of his income. The creditor is to receive the debtor's disposable income, i.e., income above necessary expenses, for some designated period. What, then, is disposable income?

The problem of defining disposable income is contained in the bankruptcy court's decision as to what income of the debtor is available to pay different classes of creditors. This problem, the principal research focus of this paper, is examined against case law in which three specific questions are asked and answered. (1) Should the debtor be allowed to retain a "cushion" against unforeseen contingencies as part of necessary expenses, i.e., some funds are shielded from distribution to creditors as not disposable? (2) Should the debtor be provided a sufficient expense allowance to obviate his need to borrow to finance future farm operations? (3) Should farm commodities stored or carried over be counted as income in the year produced or in the year sold?

Answers to these questions in case law lean toward a liberal interpretation of the law to favor the debtor, diminishing the funds available to the creditor as disposable income. Implicit in that position is identification of three standards of "necessity", a suggested categorization of expenses made explicit here to help refine public policy on farm bankruptcies: absolute necessity allowing only farm survival; simple necessity based on the farm's history of income and expenses; reasonable necessity permitting probably growth of the farm business. Of the three standards of necessity identified, the middle standard of "simple necessity" is deemed most defensible. That standard emphasizes the real world business conditions facing the farmer after bankruptcy discharge. Bankruptcy courts to date have expanded the definition of necessary expenses, limited the amount of disposable income payable to creditors, and have favored the debtor thereby. The key determinant of farm bankruptcy policy in the long run, therefore, may be how literally courts take the Congressional injunction to give all farmers a "fighting chance".

ABSTRACT

The Economics of Gray Marketing
After the K-Mart Decision

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After several decades of dormancy, trademark rights again became a prominent policy concern in the mid-1980s. The reason for the revived interest was the high volume of "gray market" activity: the sale and resale of trademarked goods through unauthorized trade channels. While that activity has lessened in recent months with the weakening of the U.S. dollar against other currencies, debate on the gray marketing issue continues, stimulated by the May, 1988 decision of the U.S. Supreme Court in K-Mart Corporation v. Cartier, Inc. That decision effectively legalized the bulk of gray market activity.

The major public policy issue in gray marketing is the value of international free trade. The focus of private litigation on gray marketing, however, is the property right in a trademark. Gray marketers contend that since the goods they handle in international channels are at least once sold, no trademark right is infringed. Their trading is simply arbitrage of price differentials set by the producer in different markets. Consumers realize lower prices so long as free trade is permitted. Trademark owners emphasize their cultivation of goodwill in the mark, insist that goodwill is "territorial" or localized in one national market (not universal or worldwide), and contend that some goodwill value is wrongfully appropriated from trademark owners in all forms of gray marketing. They and their licensees state the free trade argument by gray marketers is subterfuge for gray marketers' free riding on trademark goodwill created at substantial expense by the owner or licensee. Authorized dealers' opposition to gray marketing alleges damages in the form of lowered produce price, profit margin, and market share.

The analysis of the free-riding charge begins with definitional questions addressed in this paper. What are the trademark property rights protected under U.S. law? Is the goodwill of a

trademark territorial or universal (the pivotal question in legal "exhaustion" theory)? Are trademarks a public good? Under what marketing conditions does free riding occur?

The paper concludes that free riding occur on trademark goodwill in limited, specific instances. While free riding can occur with any public good, profitability of gray marketing depends finally on the very territorial market divisions trademark owners have sought to protect legally. Because of (a) the public good nature of the trademark in practice, with (b) differential product pricing based on territorial goodwill, it may be impossible to eliminate free riding.

However, profit-conscious producers probably are not damaged by free riding since their initial sales prices in several markets are assumed to cover all costs, including product promotion. Authorized distributors may be unfairly damaged if their higher product price is due to the promotional, service, or warranty costs they pay which are not incurred by the gray marketers who benefit from these expenditures.

It is questionable whether public policy should negate the benefits of free trade in order to control the free riding on the trademark goodwill that occurs, especially since that free riding is preventable by the producers themselves. Moreover, the diminished price discrimination (particularly against U.S. markets) that would accompany producers' "prevention" of free riding could have positive social welfare consequences.

The Supreme Court has now ruled that (in three of five instances) gray marketing is legal regardless of territorial goodwill claims by trademark owners. A total ban on gray marketing by the Supreme Court in the K-Mart case would have further limited price competition in markets already characterized by varying degrees of market imperfection. Since the bulk of gray marketing has been approved by the Court, and barring significant judicial or legislative reversal of part or all of that decision, a flood of gray market goods could resume if produce price differentials or currency exchange rates between countries change significantly.

The irony of the K-Mart decision may turn out to be that, while most gray market trade is freed from legal proscription, limits are placed on the ability of trademark owners to segment markets and price discriminate. For when price discrimination decreases, the profitability of free riding on trademark goodwill decreases also. Trademark owners desire that outcome but not the price paid to achieve it.

ABSTRACT
Grain Sorghum Futures at the Kansas City Board of Trade

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During the 1970s, grain sorghum futures traded at the Chicago Mercantile Exchange and the Kansas City Board of Trade (KCBT). There was very little trading interest in either contract, however. In 1988, the KCBT revised its grain sorghum futures contract and initiated trading in the revised contract in May 1989.

Because a sorghum futures contract has not been available in the past, corn futures have been widely used by elevators, feedlots, and farmers to hedge grain sorghum. However, basis risk in a cross hedge in corn futures is greater than in a direct sorghum futures hedge. A cross hedge involves a futures position in a different commodity than the cash commodity being hedged (e.g., corn futures as a hedge for sorghum). This research estimates that hedging risk can be reduced 17-44 percent by hedging sorghum in the KCBT sorghum futures market compared to cross hedging sorghum in corn futures (Table 1).

Futures research indicates that a sorghum futures contract will be successful only if hedgers use the market. However, it is difficult to convince cash sorghum traders to place sorghum hedges in a new market that is just starting to trade. Hedging sorghum in corn futures has an advantage because of the liquidity in the corn futures market, which allows hedges to be placed and lifted easily for minimum cost. Regarding the chance for the KCBT sorghum futures market to succeed, the question is whether a reduction in hedging risk of 17-44 percent is sufficient to attract sorghum hedges away from the corn futures market.

To provide some indication as to the level of reduction in hedging risk that is sufficient to attract hedges away from the corn future market and into sorghum futures, comparisons were made between hedging risk for direct and cross hedges for other commodities such as oats and different types of wheat (soft, hard and spring). For these commodities, the reduction in hedging

risk with a direct hedge over a cross hedge ranged from 24-53 percent. The situation that showed the smallest reduction in hedging risk for a direct hedge was for spring wheat hedged at Minneapolis versus Kansas City.

The Minneapolis futures market calls for delivery of spring wheat, and thus the Minneapolis market provides a direct hedge for spring wheat. By comparison, the Kansas City wheat futures market is a larger futures market that can be used to cross hedge spring wheat. Spring wheat prices from several locations in the U.S. were used to compare hedging risk for spring wheat hedges placed at Minneapolis and Kansas City. The average reduction in hedging risk of 24 percent with a direct hedge at Minneapolis has been sufficient to attract hedgers to Minneapolis and sustain trading at Minneapolis for many years. The 24 percent reduction in hedging risk provides an estimate of the minimum level of reduction in hedging risk that is required for a small futures market (like Minneapolis) to attract hedges away from a larger, more liquid futures market (like Kansas City).

A similar situation to that of hedging spring wheat at Minneapolis versus Kansas City exists for sorghum. The small sorghum futures market is competing with the larger corn futures market to attract sorghum hedges. This research estimates that by hedging sorghum directly in sorghum futures versus cross hedging sorghum in corn futures hedging risk is reduced an average of 32 percent across the four markets reported in Table 1. This is 8 percentage points greater than the reduction in hedging risk for a direct hedge (Minneapolis) verses a cross hedge (Kansas City) for spring wheat. Based on hedging spring wheat at Minneapolis versus Kansas City, it appears that the 32 percent reduction in hedging risk for a direct sorghum hedge should be sufficient to attract hedgers to the KCBT sorghum futures market.

The challenge the KCBT faces in starting a sorghum futures market is in providing a liquid market (i.e., a market that can absorb large orders with little price change). Unless liquidity develops in the KCBT sorghum futures market, there will be little chance to attract

hedges away from the corn futures market. And, unless commercial sorghum traders use the market to hedge, there is little chance that sorghum futures will succeed.

Table 1. Hedging Risk for a Direct Sorghum hedge in Sorghum Futures vs. a Cross Hedge in Corn Futures, 1977-88.

	Hedging Risk[a]		
Market	Sorghum Futures	Corn Futures	Hedging Risk
	-----dollars per buschel--	----percent----	
Texas High Plains	0.197	0.359	-44.5
Houston	0.243	0.298	-16.6
Los Angeles	0.243	0.401	-39.4
Memphis	0.263	0.368	-28.1

[a]Defined as the standard deviation of the difference between the net (actual) price for a hedge and the target (expected) price. Details are provided in a paper titled "The Potential for a Grain Sorghum Futures Market" which is available from the authors.

ABSTRACT

Hedonic Price Analysis of Cotton: The Transition to Market Reporting

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A joint research project between the Department of Agricultural Economics, Texas Tech University and the Market News Branch of the Cotton Division, Agricultural Marketing Service, U.S. Department of Agriculture is being conducted to develop a system to identify and report cotton prices and fiber quality premiums and discounts under the high volume instrument (HVI) grading system, which is scheduled to become the industry standard in the U.S. in 1991. The procedure involves adopting hedonic price analysis models and techniques into a daily price reporting framework. To date, some 15 different model structures have been examined and tested, with two of them, a linear difference model and a constant elasticity type model, being selected for intensive evaluation, now underway. Data needs and computer hardware and software needs have been evaluated, with computer systems currently operating and data sources identified and data for the Texas-Oklahoma markets currently being collected and analyzed. The models selected for in-depth evaluation are being estimated daily for the Texas-Oklahoma market areas and sample results from a four month period are presented. Remaining work to be done includes selection of the final model for the Texas-Oklahoma markets and adapting of the system to other market areas in the U.S.

ABSTRACT
Accelerating Change and Forecasting

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It has been said that if you laid out all the economists in a row, they would assume different directions. In his book 2081, Gerard K. O'Neill suggests that the most common error in anticipating the future is to underestimate technological change and overestimate social and political change. If change is occurring at hurricane force, as Tom Brokaw has indicated, why are things so much the same? With this condition, how can commodity prices and the standard of living remain relatively stable? Are technological advances and growth in the capital base offsetting the cumulative, negative effects of human activities on the natural domain. This paper may provide more questions than answers with regard to the problems of forecasting as they relate to change and uncertainty. Perhaps the well-known adage, "he who buys and sells in markets sooner or later will be humbled, also applies to forecasters. Is the traditional seven out of ten measure of accuracy for success in investing an acceptable measure for forecasters? Is traditional forecasting methodology taking into account a sufficient number of variables, and is there a need for more holistic approaches to the problems of forecasting. According to UNICEF Goodwill Ambassador, Liv Ullmann, the decision making of the American Indian was based on a seven-generation consideration which contributed to their sustainable life-giving systems. Short-term forecasting is generally regarded as having greater potential for accuracy than long-term forecasting. However, long term forecasting may magnify other wise indiscernible short run change. Would greater emphases on long-term forecasting provide more optimum use of forecasting resources? I recently attended a seminar on economic forecasting in which the emphases were on interest, inflation, exchange, and growth rates. Nothing was said regarding global warming. At the 1989 convention of the World Future Society, a number of papers were given related to the green house effect, global warming, climate instability and depletion of the

ozone layer. Clearly, differences in emphasis are due to disparities in time horizons. But whether we are developing a long-term or short-term forecast we can benefit from the approaches used in other forward-looking disciplines such as futures research planning, budgeting, investing and even science fiction. Considering the validity found in responsible science fiction, serious science fiction writers could do well to synthesize economics into their conceptionalization. Accordingly, our legacy of economic knowledge provides the best bases for forecasting. The limited use of one discipline in forecasting methodology may be expected to result in diminishing marginal returns.

In spite of sharp rates of change and social uncertainty, there are variables that appear to be relatively certain in both the short and long runs:

1. The growth of knowledge and information

2. The development of new technology

3. Overuse of free goods and goods that are priced below their full economic cost, e.g., fresh air, fossil fuels and water

4. Increasing complexities of technology and systems

5. Increasing emphasis on quality to reduce down time in more complex systems

6. Population growth and greater stress on economic systems

7. Increasing demand for food, energy, building materials and medical services

8. Medical costs representing a higher percentage of GNP

While there are trends that seem certain to continue, there are variables that cast a cloud over most any substantive forecast. Some factors contributing to uncertainty include:

1. Possible reversal of some existing trends

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2.   Incomplete, inaccurate and distorted information

3.   Wars of natural disasters near major economic centers

4.   The impact of AIDS and other health epidemics on consumer demand and the supply of labor

5.   Political decisions and modifications in economic systems such as those taking place in Eastern Europe, South Africa and Latin America

6.   The impact of climate instability on agricultural production and human health

Senator Albert Gore has indicated that changes in the ratio of temperature at the equator in relationship to temperatures at the poles, caused by the rapid warming at the poles, could cause more than proportional changes in ocean currents, wind current and rainfall patterns. Lester Brown, President of The World Watch Institute, states that the first major impact of global warming will be manifested by rising grain prices. Such a development would likely carry over to increases in wages and prices and contribute to general price inflation. But the good news is that the demographic make-up of the population is favorable to deflation because (1) the baby-boom generation is approaching their peak years of production and (2) the benefits of new technology. A major focus of research is likely to be on developing new sources of clean energy. The development of clean, inexpensive sources of energy may be our greatest hope for the future.

Abraham Lincoln said, "The best thing about the future is that it comes only one day at a time."

ABSTRACT
An Analysis of the Role of Homeownership
in the Accumulation of Household Wealth

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Wealth accumulation plays a key role in planning for retirement, determining consumer saving and spending, providing bequests to descendants, and influencing national capital formation and economic growth. This paper explores the role of homeownership in the accumulation of household wealth.

The paper has four sections. The first section reviews trends in the level of household sector assets, liabilities, and net worth, relying on household sector balance sheet data prepared in conjunction with the Federal Reserve's flow of funds accounts (FFAs). In addition to discussing household sector trends, the section reviews many of the intricacies of the FFAs themselves, including the link between FFA measures and capital stock measures generated from the national income and product accounts, reasons for potential mismeasurement in the FFA household sector, and related technical issues.

The second section analyzes the sources of change in net worth. Particular emphasis is placed on the role of capital gains. Evidence in the section suggests that wealth accumulation through homeownership provided a very effective hedge during the 1970s, mainly as a consequence of the strong demand for housing generated by demographic forces and the extraordinarily low real after-tax mortgage interest rates of the period. However, in the 1980s, housing appreciation did not keep pace with inflation. The section also finds a link between stock market fluctuations and fluctuations in household sector wealth excluding home equity.

The third section examines the distribution of wealth using Census data on homeownership by income classes, and the comprehensive wealth statistics from the 1962 Survey of Financial Characteristics of Consumers and the 1983 Survey of Consumer Finances,

both conducted for the Board of Governors of the Federal Reserve. The data show the broad distribution of homeownership and clearly illustrate that housing wealth is more equitably distributed than almost all other forms of wealth, including checkable deposits, time deposits, stocks, and bonds.

The final section summarizes the paper and draws some conclusions. The fundamental conclusions are that homeownership has been an important contributor to the growth of aggregate household wealth in the U.S. since 1960, that capital gains play a critical role in wealth accumulation in general and in portfolio composition in particular, that homeownership is a relatively more important source of wealth for low- and middle-income households than for the very wealthy, and that, as a consequence, homeownership contributed to a more equitable distribution of wealth in the U.S. in the past three decades.

ABSTRACT
Problem Loans: Trends, Causes, and Outlook for the Future

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Since the late 1960s, problem mortgage loans have risen substantially, particularly loans 90 days or more delinquent and those in foreclosure. This paper analyzes trends in delinquency and foreclosure rates, examines the determinants of defaults, and discusses the outlook for problem loans.

The paper has six sections. The first section discusses national trends in delinquency and foreclosure rates and provides a historical perspective on problem loan rates. The section also presents new estimates of problem loan rates based on conceptually improved weights compared to those used currently in published estimates.

The second section discusses regional trends and explores the hypothesis that economic troubles in energy-producing states accounted for the increase in national problem loan rates since the 1970s and in the severity of loan problems in the 1980s. The conclusion is that loan problems in the energy-producing states clearly did increase dramatically, but not enough to account for the significant rise in the national problem loan rate.

The third section discusses some recent research on the determinants of delinquencies and foreclosures. Based on option-pricing models and similar theoretical frameworks, net equity appears to be the most crucial determinants. Consequently, variables such as home price appreciation, initial loan-to-value ratios, and the like should influence defaults because they determine net equity. Variables related to mortgage payment-income imbalances, although theoretically plausible explanations of defaults, generally are not found to be statistically significant in explaining defaults. Finally, institutional characteristics related to state foreclosure procedures appear to influence foreclose rates by state.

The fourth section estimates a series of stochastic equations--with FHA delinquency rates, the percentage of FHA loans in foreclosure, conventional delinquency rates, the percentage of conventional loans in foreclosure, etc. as regressands--to examine the causes of the secular rise in default rates. The section also examines lead-lag relationships among problem loan rates through a series of autoregressions with terms added to incorporate problem loan rates of shorter duration in equations explaining problem loan rates of longer duration (e.g., autoregressions with a 30-day delinquency term added to help explain 90-day delinquencies, etc.). All of the equations are highly explanatory. The appreciation of home prices, the initial loan-to-value ratio, the unemployment rate, consumer debt burdens, and, to a lesser extent, the divorce rate appear to be the most important explanatory variables in explaining the rise in problem loan rates since the late 1960s. Other variables, such as the extent of self-employment and changes in interest rates, are important in some equations, but not in others. Finally, shifts in housing market activity toward states with relatively streamlined foreclosure procedures may have contributed to the rise in national foreclosure rates.

The fifth section discusses a new survey on the foreclosure process-the National Foreclosure Survey--and presents some pilot results.

The final section discusses the outlook for delinquency and foreclosure rates and draws some conclusions. With respect to the outlook, the most likely forecast scenario is for little improvement in loan problems in the early 1990s.

ABSTRACT

Determinants of Income and Employment in Erath County, Texas

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The purpose of this study is to develop a framework for a local community to evaluate its resources and identify the sources of future growth. The study will focus on Erath county, which is located in the north-central region of Texas.

I.   County Economic Resources

A brief profile of the county's resources is presented in this section.

(a)   **Area and Population:** Erath county has an area of 1,080 square miles and is surrounded by Comanche and Eastland counties to the west, Hood and Somervell counties to the east, Palo Pinto county to the North, and Bosque and Hamilton counties to the South. The most recent (1988) estimate of Erath County's population is 25,700 and compares with 16,236 in 1960. In terms of population growth, Erath county has grown at a faster rate (58%) than most of its surrounding counties. It is located 60 miles south of Fort Worth and about 90 miles southwest of Dallas, Texas.

(b)   **Demographic Characteristics:** The total number of households (1986) in Erath county was 9,897, with a median household income of $17,439. The age distribution follows a normal curve with 24.1% of the population in the 0-17 age group, 28.5% in the 18-34 group, 27.8% in the 35-65 group and 19.5% in the 65 and older age group. Whites constitute 95.8% of the county's population. In terms of the distribution of income, it is interesting to note that although the median household income is $17,439, almost 30% of the total county's population income is below the poverty level.

(c)   **Other Resources:** There are seven school districts in the county, a 172 bed hospital, a tax base of 0.22/$100 of real estate and several financial services and recreational facilities. The mean temperature of the county is 64 degrees on a yearly basis. The county has also an active chamber of commerce which is located in Stephenville.

II.   Employment

The total civilian labor force (1980) as reported by the U.S. Department of Commerce is 9,507. A historical comparison of figures provided by the Texas Employment Commission indicates that the distribution of employment among various sectors have remained relatively stable in Erath county in the last decade. In the last ten years, retail trade and services combined represents almost one half of all the employment in the county. The average unemployment rate in 1989 was estimated at 4.2% which was below the state's average unemployment rate of about 6%. A strong factor which is often mentioned in the local circles for the stability in employment and income in the county is the existence of Tarleton State University. The university currently employs about 500 people, and has experienced a sustained growth in student numbers over the past ten years. Using a multiplier of 3 as used in other studies the total Erath county employment impact of Tarleton is estimated at 1,500.

Another significant feature of Erath county's resources is its dairy industry. Erath country is the state's largest milk producer, generating more than $100 million in direct sales in 1988. Using a multiplier estimated by the State Comptroller's office expands the total economic impact of this sector to over $245 million. Data from the same source suggests that over 400 county jobs were directly or indirectly tied to the dairy industry in 1988.

Other sources of employment include (a) three manufacturing firms with more than 100 employees (b) several small (less than 100 employees) light manufacturing and agribusiness

firms and (c) retail outlets that draw shoppers from both Stephenville and surrounding communities.

III. Future Growth Areas

The most striking figure in Erath County employment pattern is the "under" representation (only 11 percent) of manufacturing in the county's economy. Data provided by the Texas Employment Commission tend to verify this observation, noting a mere 15 percent manufacturing employment. There is clearly a potential for growth in this area. As indicated above, Erath county is within "reasonable" distance of the Dallas-Fort Worth metroplex, and offers transportation economies for firms servicing that market. A constraint which is noted by local economic planners is the crowded two-lane highway which links Stephenville with the Metroplex market area. Efforts are being made by local politicians to include Highways 377 and 281, both of which run through Stephenville, in the proposed Texas Highway Trunk System.

Other sources of future employment and income for Erath county may be identified through a study to determine the gaps in availability of goods and services needed by area businesses, but are available from local sources. This approach follows the Import Substitution Industrialization (ISI) strategy as prescribed by international economic development specialists. The ISI approach examines the imports of a region and evaluates if they can be economically produced locally.

Still other potential avenues for growth include development of tourism, development of retirement facilities, and entrepreneurial development and local processing of raw materials such as the cheese processing plant recently constructed by the Associated Milk Producers.

IV. Summary and Conclusions:

There is a growing recognition that small communities will need to become more aggressive in order to survive in a dynamic economy. Local businesses, policy makers, and Chamber of Commerce must take a conscious effort to "sell" their communities to outside investors in order to survive and grow.

ABSTRACT

A Comparison of Regression Modeling Techniques for Income Distribution Analysis

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Alternative regression techniques were performed to determine socioeconomic and institutional factors significantly related to the distribution of income in southern oil-producing states between 1981 and 1985. Data from Louisiana, Texas, and Oklahoma were used in model development.

Previous studies by the authors have indicated that the distribution of income within Louisiana, Texas, and Oklahoma changed significantly between 1981 and 1985, a time of great economic instability due primarily to the oil crisis. This study extends their work by developing models relating various socioeconomic variables to the Gini ratio, a common measure of income distribution. Models developed using ordinary least squares (OLS) and maximum likelihood (MLE) regression techniques were tested for modeling ability.

Multiple regression using OLS is a commonly employed tool for the development of economic models. However, as with other parametric techniques, the assumptions of normality and constant variance must be met before valid models can be produced. If the models are inherently linear, they can be expressed in a linear form by an appropriate transformation, and OLS regression can be applied. However, if they are inherently nonlinear, a different estimation technique must be used. With MLE, normality is not required, but the distribution function of the dependent variable must be specified.

Since the functional form of economic models is often multiplicative, the authors developed three alternative models--two using OLS and the other using maximum likelihood estimation (MLE). For OLS regression, log transformations were applied to all variables except the dummies to produce a linear model. For MLE regression, independent variables were logged

as before, and the dependent variable, Gini ratio, was specified as having a lognormal distribution.

Socioeconomic and institutional variables theorized to be related to the Gini ratio were median age of the head of household, percentages of female and white heads of household, per capita funding for education, and percentage of employers with over 100 employees. The Herfindahl Index was included as a measure of economic diversity, and dummy variables were used to differentiate between data for 1981 and 1985 and between Texas and the other two states.

Both methods produced similar results. However, the mean absolute percentage error (MAPE) for the MLE model (4.77%) was lower than that for either OLS model (over 6.5%). Median age of household head, percentage of female household heads, per capita funding for education, and whether the time period was 1981 or 1985 were the most significant variables. The effect of the Herfindahl Index in Texas was significantly different from that in the other two states.

Given the similarity of results, the MLE model could be regarded as slightly superior to the OLS models. These results indicate that maximum likelihood estimation is a satisfactory technique to use when data are not normally distributed. The main drawback to MLE is the computational difficulty involved. The authors plan to extend the study by comparing the methods used in this study to a nonparametric technique, such as the modified robust regression suggested in Hollander and Wolfe (1973).

ABSTRACT
Democracy and Development: Compatible or Incompatible?

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When dealing with the underdeveloped countries, the Western world has traditionally endorsed democracy almost as a prerequisite for the betterment of those countries. Moreover, in some instances democracy is brought as a condition for initiating or improving relations with the underdeveloped countries, without paying much attention to the questions of feasibility or compatibility. When it comes to institutional economics, this trend does not seem to differ much. Institutionalists promote democracy as "the" system among other political structures for overcoming the barriers to growth and the ends of democracy are regarded as proper human growth and development.

However, there is not much literature in institutional economics; as well as other orthodox schools; specifically analyzing the role of the political system in a country's development process and formulating a political system which would enhance the economic progress of a developing nation. On those rare occasions, when the question of a political system suitable for development was addressed, the answer has been "democracy," making democracy one of the few issues that institutionalists share with the "mainstream."

But, it should be noted that underdeveloped countries suffer very much from the deficiencies of their political system in their quest for development. Among these, instability happens to be the major problem associated with the political structure of most developing nations. Unstable administrations are inefficient and the circumstances that lead to administrative turnovers and thus to instability are often chaotic and/or violent, devastating any climate appropriate for progress which is already very scarce in underdeveloped nations. Political instability causes further retardation of development which may trap the country in a vicious circle.

Numerous studies within the realm of political science discuss the reasons for the poor performance of the democratic systems in developing countries. The incompatibility of a democratic political structure to the cultural nature of most developing countries and the unawareness of the masses due to the inherent educational anemia are the two major factors that were found to be explanatory in these studies.

The development record of some developing countries which have a democratic form of government (e.g. Turkey) are compared with other developing countries which have relatively less democratic forms (e.g. South Korea and Taiwan). Among these three countries that were almost at the same level, the one with the democratic political system (Turkey) is lagging far behind with a large and probably increasing gap, inspite of its significant relative advantage in terms of natural resources.

More caution is suggested in prescribing democracy as the political framework that will nurture economic progress, especially for those countries in which there exists a historical/cultural incompatibility and low levels of education. Under such conditions democracy may become another "disvalue" for development. Democratic institutions and procedures may not be essential in reaching the greater end of development, the latter will provide the necessary environment for the growth of substantive democratic values. The enlightment of the public through education is the "means" that will further development Democracy is the ultimate "end" which will be achieved after a certain level of technology-in the Ayres' sense-is accumulated and absorbed in the society.

ABSTRACT

Privatization in Great Britain and the U.S.: Questions Regarding Industry Productivity

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Throughout the Reagan Administration, the dictum has been: "regarding government, the less the better." A corollary to this may interpreted as the private sector routinely offers higher quality goods and services at lower costs and with greater efficiency. The Administration has structured this thinking into formal policy on several occasions. Privatization has come to the United States.

Privatization - the transfer of federal properties and activities to the private sector and also the reduction in the role of government as the creator of markets - is not a new economic phenomenon. The United States is experiencing a renewed interest in the systematic examination of the boundaries between public and private deliveries of goods and services. This interest has been stimulated in part by the concern that the federal government has become too large, too expensive and too intrusive into our lives.** The interest might also reflect the belief that new arrangements between the government and private sector might improve productivity and efficiency while offering greater opportunities and satisfaction for the people being served.

The United States, however, is not unique in its renewed interest in privatization. Privatization policies are currently in progress the world over - in Europe, the America's, Japan and numerous developing and newly industrialized countries. Even countries organized on socialist principles, including the Soviet Union and the People's Republic of China, have taken measures that seem to move in the direction of loosening the ties that bind their enterprises to the apparatus of government.** Privatization would seem to be high on the political agenda of various countries throughout the world.

Although the worldwide trend toward privatization has accelerated dramatically in the past few years, the unquestioned "champion" for sweeping privatization is Great Britain. Prime Minister Margaret Thatcher's government has made the sale of government commercial entities one of the principal themes of her administration. This paper provides a brief overview of some of these developments both in Britain and in the United States to provide a basis for the proposed empirical research. It also attempts to develop an empirical model which could be used to estimate, and ultimately compare, various parameters associated with industry productivity for those industries which have undergone privatization. This would be done as an attempt to address the important economic question of what are the effects of the privatization process on the relative productivity of those industries involved.

ABSTRACT
The European Economic Community:
Prospects for a Monetary Union

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The Treaty of Rome in 1957 was not concerned with the goal of monetary integration. At a time of fixed exchange rates, the possibility of a common monetary policy took second place to other objectives such as a customs union and a common agricultural policy. But with the collapse of the Bretton Woods system in 1973 the Europeans have gradually recognized that floating exchange rates represented a risk and a cost to their economies which were involved in a large volume of intra-EEC trade. Thus, through a series of initiatives they eventually agreed to establish the European Monetary System (EMS) in 1979.

The primary purpose of the EMS is to promote monetary cooperation and monetary stability in Europe. It represents a joint effort for exchange rate stability and for convergence of economic policies. It is comprised of three components: the European Currency Unit (ECU), the exchange-rate mechanism and the financial solidarity mechanisms. ECU, which is an artificial monetary unit, is calculated as a basket of set amounts of each EC currency (10 EC currencies). It is used for fixing central rates in the exchange rate mechanism and for denominating creditor and debtor balances in the process of intervention in EC currencies; also, it serves as a reserve and settlement instrument among the central banks in the EMS. Although there have been a number of exchange rate readjustments among the EC currencies since 1979, and the non-participation of the sterling in the EMS has been a negative influence on its functioning, a substantial degree of exchange rate stability has been attained. But now, given the objective of the Single Act for economic and monetary cooperation leading to a monetary union, greater progress in exchange rate stability will be needed. In addition, the establishment of the ECU as a common currency, the liberalization of the capital movements among the EEC

countries and the creation of a European central bank are issues that will need to be moved forward. Their resolution will require, apart from coping with a myriad of technical details, a spirit of supranationalism as the transferring of monetary and fiscal authority from the national governments to European institutions takes place. However, recent developments associated with German reunification may complicate the goal of monetary union.

ABSTRACT

Generative Teaching and Learning of Cost-Benefit Analysis: An Empirical Investigation

James D. Laney
University of North Texas

This study applied brain research and a model of generative teaching and learning to economic education. The purpose of the study was to determine the effect of verbal-only, imagery-only, and integrated (verbal-to-imaginal) strategies on third-graders' level of economic reasoning (i.e. use or non-use of cost-benefit analysis) in their personal decision making.

One hundred eleven third-graders were randomly assigned to three treatment conditions-- instruction on cost-benefit analysis using (1) a verbal-only strategy, (2) an imagery-only strategy, and (3) an integrated strategy.

At pretest and posttest, students were asked to respond to a hypothetical dilemma not seen during instruction. Each response was scored by two expert judges in terms of a three-level hierarchy of economic reasoning.

A one-way analysis of variance revealed no significant differences between groups at pretest.

A set of planned comparisons was used to analyze posttest data. Results favored the two verbal strategies (verbal-only and integrated) over the imagery-only strategy. No significant difference was noted between the verbal-only and integrated strategies.

ABSTRACT

Expert Systems Applications to Economic Forecasting

Bin-Shan Lin and James C. Owen
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Economic forecasting is the quantitative technique used most frequently by U.S. business firms (Kathawala, 1988). There is a wealth of information about forecasting methods but little has been referred about forecasting systems (Lin, 1990). This paper suggests that the most significant potential for improved economic forecasting performance and decision flexibility will be through increasing system intelligence, not through increasing model complexity or sophistication. The attention should be focused in an attempt to develop intelligent forecasting systems.

The application of expert systems (ES) to a variety of business problems is beginning to emerge. This paper concentrates on describing applications of ES to economic forecasting. ES are a knowledge base of information which can perform as an expert: given sufficient data, it can make valid, reasoned deductions that can aid the user in making decisions within a particular domain. ES are an attempt to capture in computer programs the reasoning and decision-making processes of human experts, providing in effect computerized consultants. The components of these systems include a knowledge base, inference engine, user interface, and knowledge acquisition facility.

The artificial intelligence (AI) technology has caused a switch in focus from the statistical aspects of forecasting models to the strategic issues of combining forecasting models (Bunn, 1988). It can be shown that ES is more effective in running multiple forecasting models to examine alternatives than in developing an optimal forecasting model.

Five considerations are included in the framework of ES. These considerations are (1) general decisions, (2) cost factors, (3) model considerations, (4) forecast control, and (5) forecast

presentation. The framework integrates salient concepts from the literatures cited, as well as other relevant economic concepts, in particular, those related to the concepts of econometrics (Judge, et al. 1982). Modeling strategies (Olford and Peters, 1986) are addressed as well.

A forecasting model may, however, be very useful even if it is inferior to other models in a forecasting system. It implies that the search for forecasts may differ from one selection to another and the sequence of questions will also vary. A good ES can better assist managers in combining or selecting forecasting techniques to meet a situation such as a sudden increase in demand. The capability of model selection in the ES helps the manager determine what forecasting models are available to generate the requested forecasts and then automatically allows the decision maker to evaluate a forecasting model for execution.

ABSTRACT

Economic Liberalization of Egypt's Agriculture: A Quadratic Programming Study

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This study uses a quadratic price-endogenous programming model of the agricultural sector in a Delta region to analyze the impact of changes in Egypt's agricultural policies toward increased roles for markets, freer trade and reduced price distortions.

The model is primarily based on data from a survey in the Delta area. It includes both crop and livestock production. The producers are disaggregated into two farm sizes. Uncertainty enters production decisions. One important feature of the model is that farm household demand for local produce, expressed as a function of prices and household income, is endogenous and treated separately from market demand. An iterative solution procedure is used to avoid undesirable interaction between the maxim and farm-level consumption decisions. The validation tests include a close fit between survey and simulated data.

The general results confirm the findings of other studies which have addressed the same issues: (a) the reform would raise average farm incomes and agricultural value-added; (b) the cropping patterns would shift away from grain crops to cotton and/or vegetables; and (c) in the context of current options, animal-based techniques would become more attractive.

Additional results highlighted by this study include: (a) availability of imported feed plays a crucial role in making the gains in value-added possible; (b) the income gap between small and large farmers would increase due to that the reform favors crop production, representing a larger share of large-farm incomes; (c) the impact on the size of the buffalo stock is sensitive to assumptions regarding the link between domestic and international markets for meat and milk; and (d) the gains in farm incomes are of such a magnitude that a government tax

on land holdings could compensate for the net loss in government revenue associated with the reform while leaving both farm sizes with higher incomes than before the reform.

ABSTRACT

A Comparison of Executive Women in the Meridian, Mississippi, Area to the Dallas-Fort Worth Metroplex

Robert L. Lorentz
The University of Tennessee at Martin

The role of executive women in American business is crucial to the understanding of our contemporary society, its structure, underlying premises, and development. EXECUTIVE WOMEN OF MERIDIAN not only focuses on the role of women in business, but specializes on the significant problems and strategies of executive women in the South, traditionally and ideally a bastian of male dominance.

With minor modifications based on the fact that Meridian, Mississippi, is not a financial, industrial, or service megatropolis, the thrust of the research project was based on a 1987 research paper entitled EXECUTIVE WOMEN IN THE DALLAS/FORT WORTH METROPLEX, SIGNIFICANT PROBLEMS AND SUCCESSFUL STRATEGIES.

The primary emphasis of this paper was towards the collection and presentation of data, with correlation to the Dallas/Fort Worth study. The information presented was the result of four months work by six night-time graduate business students who also managed jobs, family, and other graduate coursework during the same periods of time.

ABSTRACT

Blacks and Whites: One Market or Two?
Further Evidence Provided by Consumer Expenditures

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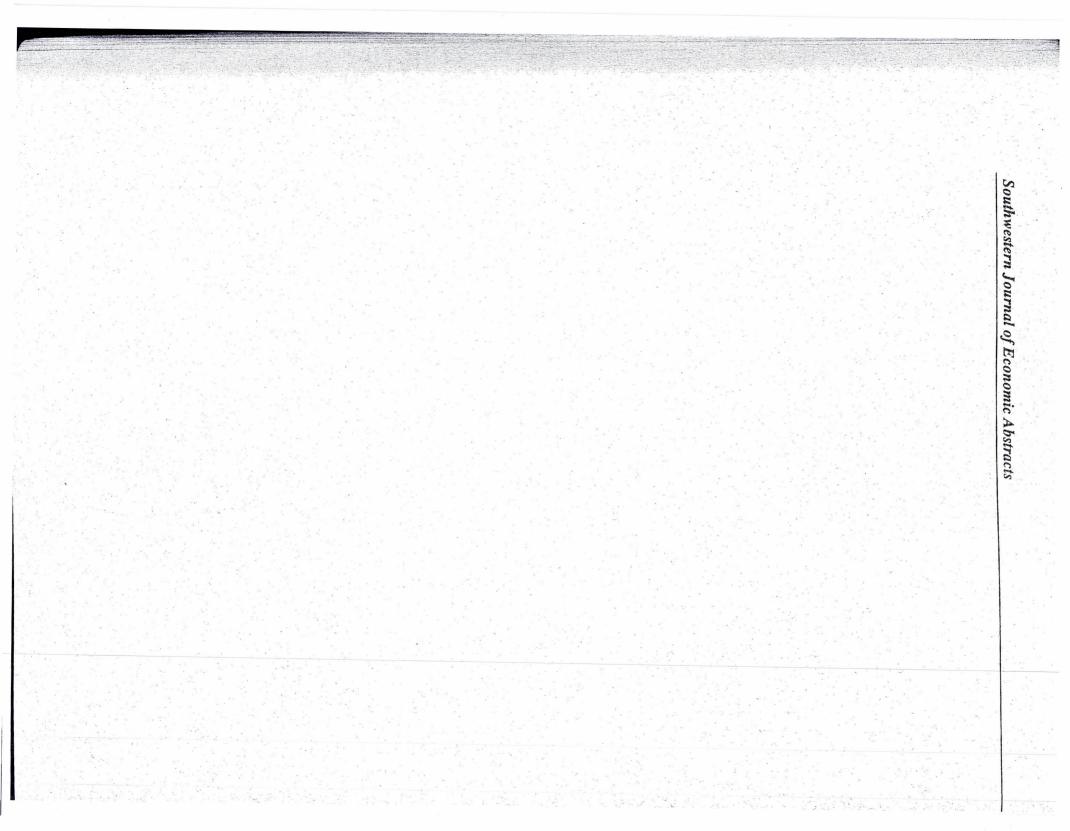
Differences in aggregate expenditures for consumer goods and services between blacks and whites have long been a matter of investigation. The results of previous research have shown similarities in expenditures for some goods while showing differences in others. This paper compares black and white consumer expenditures from the U.S. Department of Labor Consumer Expenditure Survey published in 1986. Findings show that the differences in the expenditures of blacks and whites for various goods and services greatly outnumber similarities.

ABSTRACT

Executive Women in the Meridian, Mississippi Area: Significant Problems and Successful Strategies

Robert L. Lorentz
The University of Tennessee at Martin

Facing unique problems of mentorship, social acceptance, and conflicts among the demands of marriage, family and career, female executives have now successfully entered offices and boardrooms of many American organizations. This paper provides a profile of such women in the Meridian, Mississippi area following the format set in the 1987 study of executive women in the Dallas/Fort Worth Metroplex conducted by Texas Woman's University and the University of Texas, Dallas. Successful strategies used to deal with the work-related problems of these women are identified. This study should be useful to females already in executive positions, as well as those wishing to join the increasing number of female executives.

ABSTRACT

Computer: Foe or Friend to the Black Educator?

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With the proliferation of personal computers in the home and in the workplace, there is an ever increasing demand for the integration of computers into the curricula of both secondary and institutions of higher learning. Invariably, the approach taken to satisfying such demands involves the training of the current staff of educators in the use of personal computers as a teaching tool and as a research and administrative tool. Studies have indicated that teachers receiving instruction in the use of computers have a higher level of anxiety than students.

The anxiety experienced by educators has been mainly attributed to a generalized fear of technology and the fear generated when one is being affected by events one cannot control. Exposure to the use of computers can cause a significant decrease in anxiety. One way to measure such anxiety is to look for possible exposure to the computer in a classroom setting.

The purpose of the current study is twofold:

1. to measure the anxiety of the black educator prior to training on the computer, and

2. to measure the change in attitude resulting from exposure to a one semester laboratory course in microcomputer applications.

ABSTRACT

Choice of Optimal Production Technology for a Small Developing Country using a Linear Programming Model

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University of Tennessee, Martin

One of the fundamental issues with regards to the choice of optimal technique of production is whether smaller developing countries such as Tanzania should acquire their technologies from highly industrialized economies such as U.S.A. or from other low wage but relatively more industrialized developing countries such as India.

In line with this, the objective of the duty is to conduct an empirical study to find out whether the gain of acquiring technologies from the larger developing countries is higher than that from the advanced nations.

Three countries (each with eighteen industrial sectors) are considered in the study. They are: Tanzania, India and U.S.A. For each of the countries, a production technology matrix is constructed using data gathered from the input-output table of each respective country.

Then using Multi-Purpose Optimization System (MPOS), a linear programming problem is constructed and programmed in the light of the various assumptions being adopted.

To determine optimal technological choice, we convert the data which represent the production techniques of each country into a system of linear equations; and solve these equations using the process of substitution.

Having solved the linear equations, we compare (product by product) the optimal feasible solutions of the three alternative production techniques and choose that technique which has generated the highest optimal value and hence the largest contribution to total income. Now, continuing the comparison of the optimal feasible solutions for each good, we count the number

of times U.S.A. and Indian technology replace Tanzanian technology. Based on the number of counts, if U.S.A.'s technology is frequently indicated, we conclude that Tanzania will benefit more by acquiring its technology from U.S.A. On the other hand, if Indian technology occurs more often in our count, we conclude that Tanzania will be better off importing its technology from India. In contrast, if Tanzania's technology appears relatively more frequently than that of U.S.A. and India, we conclude that Tanzania need not rely heavily on foreign technology and that it should depend more on its own local domestic technology.

ABSTRACT

The Japanese Economic Growth: Postwar Period

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In The Year 2000 by Herman Kahn, he predicted that Japan will make a correction in its cultural and social orientation as it assumes a greater role in world affairs. In his view, Japan will be the leading nation in the next century. His above prediction is obviously correct unless for some unforeseen and unexplainable reason Japan would slide significantly backwards. However, Kahn's projected growth in gross national product were higher in his Emerging Japanese Superstate than the actual growth rates. Nonetheless, it is now evident that Japan will compete against other Oriental countries such as China, Korea and Taiwan in the next century.

Through the occupation years, Japan struggled from ruins of defeat and postwar disorder. The American policy in Japan was best described as being "punishment and reform". The policy expressed itself in various reforms calculated to diffuse wealth and economic initiative more widely such as: Land Reform, introduction of Labor Laws, promotion of social welfare and trade unionism, dissolution of the Zaibatsu, and the enactment of Anti-Trust Laws.

It was the outbreak of the Korean War that swept the economy on to a new plane. The United Nations forces used Japan as an arsenal while the United States spent millions of dollars in the form of "special procurement". The remarkable surge deserves close examination not only for its transformation of Japanese society but for its testing of policies and attitudes in the political economic growth.

The major characteristics of the Japanese growth and development are as follows:

1.   High Pitched Industrial Growth & Development
2.   Increasing Productivity Levels
3.   Capital Formation - latest acquirement was Seven Eleven Stores in March 1990.
4.   High Level Savings
5.   Increasing Consumption Levels - still at least half U.S. level

6. Dual Industry - large enterprise and many tiny establishment
7. Strong Banking & Finance System
8. Laissez Faire complemented with a Planning Economy
9. Increase in Real Output vs. Slow Increase in Wages
10. Unbalanced Growth - rise in industrial output relative to Japanese GNP
11. Change in Composition of Output - Exporting New Products
12. Import-Saving Pattern of Industrial Growth

The Japanese explosive growth since 1953 has attracted an enormous amount of attention in the postwar period. From 1953 to 1965, GNP grew by 9.4% yearly. Such a rate exceeded 14% of 1968 and was well above that of any other developed country. According to the United Nations, National Accounts Statistics: Analysis of Main Aggregates, 1985, the average rates of growth of Japan's gross domestic product for the period 1970-1975, 1975-1980, and 1980-1985 were 4.6%, 5.0%, and 3.8% respectively. The Japanese experience was, therefore, an extreme case of a general phenomenon which took place in a booming world economy.

In conclusion, Japan has reached economic success and no doubt will continue to prosper through an effective bureaucracy combined with active business enterprise. No single determinant or dynamic impulse can well be singled out unless it is something called "Will to Develop" --- a phrase that says very little and yet sums up as well as any other the whole record of Japan since 1868.

ABSTRACT

The Practical Use of Moving Averages
To Determine Bond Market Trends

Allyn B. Needham and Harry Drummond
Mutual Fund Portfolios
Charles M. Becker
Texas Christian University

During the period running from January 1978 to December 1987, short term and long term interest rates fluctuated greatly. The 90 day Treasury Bill rate moved from 6.14% (April 22, 1978) to a peak of 16.67% (December 19, 1980) before moving back to 5.08% (October 10, 1986). The 30 year Treasury Bond rate also made a large swing from 8.08% (January 7, 1978) to a high of 15.07% (October 2, 1981) before declining to 7.16% (July 18, 1986). The movement in rates created opportunities for large profit or loss in a once relatively stable market. Astute (or lucky) investors purchasing 20 year Treasury Bonds on January 1, 1982 achieved a 40.35% total return by the next January 1. However, purchasers of the same security on January 1, 1978 had to endure three years of total return losses before obtaining a minimal gain of 1.85% in 1981.

Thus, this period necessarily created a concern for investors who traditionally have relied on a buy/hold strategy for bonds. An investor purchasing 20 year Treasury Bonds on January 1, 1988 and selling them on December 31, 1987 achieved an annualized compounded rate of return of only 9.06%. If the same investor had purchased one year Treasury Bills at the beginning of each year instead, the annualized compounded rate of return would have been 9.88%. While the stated results for this period ran contrary to the traditional wisdom of buying and holding bonds, tremendous opportunity existed for more aggressive investors using a buy/sell strategy. One strategy allows investors to use a series of models to assist in creating buy/sell signals. The use of tandem models to create a single strategy can be successful and provide protection. By using

a CRB Index (CRB) moving average and Dow Jones Industrial 20 Bond moving average (DJ20), buy/sell and confirmation signals may be generated to create such a tandem, single strategy.

The CRB Index reflects the changes in a basked of 27 commodities. These movements may reflect shifts in the economy and/or future changes in the investment markets. Relative to bond yields, movements in the CRB, on average, lead movements in The U.S. Treasury 20 year bond yields by eight months. Therefore, the CRB would appear to be a good indicator for the bond market because of its normally inverse relationship to bond prices. While the use of one model to generate buy/sell signals for a particular market may be successful, it may expose an investor to undue market risk. Therefore, a second model should be introduced to support and confirm the signals generated by the other. We thus recommend as a second model a moving average of the Dow Jones Industrial 20 Bond index. The DJ20 moving average, like all market trend averages, lags the peaks and troughs of its own market. Because of this it seems the likely model to compliment the CRB model. Through this tandem relationship, the CRB buy/sell signals may be confirmed by the DJ20 model.

For this study, both moving averages used a measurement period of 65 weeks. By comparing the daily price to the moving average price buy/sell signals were generated. When the daily DJ20 price rose above the moving average price, a buy signal was given, indicating that bond prices were moving higher and interest rates lower. When the daily DJ20 fell below the moving average price, a sell signal was given, indicating that bond prices were moving lower and conversely, interest rates higher. The inverse was true for the CRB Index.

The period January 1, 1978 to December 31, 1987 was selected to examine the results of this tandem model. Although several strategies may be created by this tandem model, a conservative one was selected. Bonds were not purchased until a confirmation was given by the DJ20 model. Sales out of bonds were made when the first sell signal was given.

To test the buy/sell bond model (Bond M), the strategy was compared against two alternative strategies:

1)   A portfolio comprised of one year Treasury Bills (TBills)

2)   A portfolio comprised of 20 year U.S. Treasury Bonds (TBond)

The TBill strategy provided an investor with an annualized compounded return of 9.88%. The annualized compounded return for the TBond portfolio was 9.06%. These strategies used U.S. government backed securities, and therefore presented little market risk to the long term investor. By following the Bond M buy/sell strategy, the Bond M portfolio achieved an annualized compounded return of 16.92%. Although the use of the Bond M strategy required the assumption of some market risk, Bond M the return exceeds TBond and TBill returns even with an additional 4% risk premium. With a performance in excess of the risk premium added returns, this model shows that the use of a buy/sell strategy in the bond market may be effective and profitable turning a once dull market into an additional avenue for asset growth.

ABSTRACT

Impact of Alternative Production, Demand and Transportation Rate Changes on the Northeast Mississippi Grain Marketing System

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Mississippi State University

The objectives of this study were (1) to estimate an economically efficient combination of grain elevators, feed mills and modes of transportation for handling soybeans, corn, and wheat in Northeast Mississippi and (2) to estimate how the optimal combination of grain elevators, feed mills and modes of transportation obtained in objective one would be affected by (a) a 30% increase in grain production, (b) a 30% increase in feed demand, and (c) a 20% and 40% increase in rail rates. To accomplish the objectives of this study, a linear programming model was employed.

The results indicate that grain receipts by intra-region feed mills originated at farms or out-of-region supply points. This implies that it was less costly for feed mills to receive grain directly from sources of supply than to receive grain from elevators. The optimal solution used a mixture of transportation modes for moving grains from origins to destination points. Truck was for short distances while rail was used to move grain long distances.

An increase of 30 percent in grain production decreased feed grains imported while increasing the volume of grains marketed to firms from farms. However, an increase of 30 percent in feed demand increased the volume of feed grains imported into the region and in some cases, decreased the volume of corn and wheat shipped from farms.

When rail rates were increased by 20 percent, no major changes occurred in the area. However, when rail rates were increased by 40 percent, changes in transportation mode occurred. In most cases, truck was used instead of rail.

ABSTRACT
Abstraction in Macroeconomic Analysis

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Sunday Ndoh
Johnson Smith University

When current economic environments are compared with those of the earlier periods, one finds that the nature of the essential variables that characterize the economy has altered tremendously. In a large sense, there is a tendency to call to question the orthodox maintained hypotheses that formed the building blocks of macroeconomic inquiry. Due to increased openness and interdependence of the world economy, the domestic economy has become more vulnerable to developments in other economies. In consequence, macroeconomic modeling has become a more difficult exercise and the predictive power of most models has decreased.

The study investigates the nature and relevance of abstraction in conceptual thoughts in macroeconomic inquiry. An effort is made to examine the state of methodological inquiry in other domains of science, (since the subject of inquiry overlaps several fields of scientific disciplines) and contrast it with that of macroeconomic inquiry. The study elucidates some of the conceptual problems in abstraction process that macroeconomic investigators encounter in their study in the face of volatility and interdependence of economies.

Abstraction is an attempt to reduce the complexity of an economic phenomenon to a simple picture language, while recognizing the essential variables, their characteristics and the nature of the interaction of such variables. Abstraction is an attempt, designed to consider an object or group of objects under one viewpoint while disregarding other properties, or elements. While shedding intellectual light on a phenomenon it helps in concept formation that leads to a recognition of similarities or dissimilarities, or patterns in an economic system.

Abstraction plays a critical role in any serious investigative endeavor that follows scientific methodology of inquiry. In either of the two dominant knowledge claims, those which

are testable or confirmable (or disconfirmable) by experience and those whose veracity or falsity depend on their logical or conceptual properties, abstraction is relevant. It aids conceptual thought that leads to building a thinking apparatus which serves as a basis for generalizing information in either the empirical or purely theoretical studies. A useful thinking apparatus, while being a structure in the world of logic has two implications. One, if such an event occurs, that such results will occur. This is based on the premise that once the complex process of a phenomenon is known to be following a basic law, any other process with similar characteristics and properties can be explained and the outcome, though unobserved, predicted from the initial conditions. Two, its utility rests on its power to suggest the next rung in the ladder of scientific advance.

Economic Science, in a large measure, is a tool for understanding and analyzing man's interaction with his fellowkind, and the larger environment as economic agent. A useful economic tool, in terms of the analytical and predictive properties can only be as reliable as the abstraction exercise. It is recognized that in the contemporary economic environment, due to advances in information technology, the stock of available information on macroeconomic phenomena become obsolete soon. Therefore, macroeconomic investigation--a process that involves abstraction, modelling and possibly testing and prediction to narrow the range of plausible scenarios, must include an explicit consideration of the changing characteristics and dynamics of macroeconomic environments, and inclusion of "export-import" variable(s) in the model.

ABSTRACT

Economic Systems and World View

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In this paper the author examines economic systems, religious systems, and philosophical systems in the context of worldview. He defines economic systems, ideology, and worldview and utilizes a grid for analyzing each. Is there a resurgence of ideology in the economic systems today? Is there a moral dimension in economic systems? What alternate economic worldviews are influencing the global economy?

The author classifies major economic systems, major schools of economic thought, major religious systems, major philosophical systems, and worldviews with this GDMI grid system. The grid system is designed to evaluate four questions:

(1)   What is the Goal of the system?

(2)   What is the Diagnosis of the system?

(3)   What are the Means for attaining the goals?

(4)   What is the Image of the system?

The author evaluates some of the implications of the grid system. He concludes that worldview is largely responsible for molding economic systems.

ABSTRACT

An Economic Interpretation of the Relation Between Police Powers And Substantive Due Process

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The late nineteenth-century Supreme Court rulings on the constitutionality of state labor laws offer a fertile field for application of models of economic regulation. This study examines several key pieces of litigation, including the famous Slaughterhouse Cases (1873) and the case of Butcher's Union Co. v. Crescent City Co. (1884), which marked out the Court's approach to the economic due process clause in the Fourteenth Amendment. The interest group model of regulation is found to be of limited value in understanding the Court's limitations on state police powers. It is argued instead that the market failure model, as interpreted in the framework of the common law's approach to economic regulation, provides a more credible explanation of the Court's opinions. They are better understood in light of the common law distinction between the legitimate and illegitimate application of regulation under state police powers.

ABSTRACT

The Role of Entrepreneurship in Market and Non-Market Economies

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This abstract will focus on the role of entrepreneurship in market and non-market activities and on the components of entrepreneurial supply and economic development. It will use a synthesized definition first developed in my doctoral dissertation (and later discussed in an unpublished paper entitled "The Entrepreneur in Economic Development"). It will combine my definition of the entrepreneur and utilize "A Common Model of Schumpeter, Hagen, and McClelland's Entrepreneur in Economic Development."

The common model synthesizes: (1) the historical sequence of economic development with the business cycle of the economy, social change, and personality formation and (2) a personality formation theory of the entrepreneur. The basic economic paradigm is drawn from Schumpeter's model, while the models of Hagen and McClelland provide the backdrop of social change for the formation of the entrepreneurial personality.

Following Schumpeter's definitions, economic development occurs from internal sources, such as the entrepreneur and economic growth occurs from external forces. The carrying out of new combinations is development in the Schumpeterian sense. Five examples of the execution of new combinations are as follows: "(1) the introduction of a new good or of a new quality of a good, (2) the introduction of a new method of production, or it may be a new way of handling a commodity commercially, (3) the opening of a new market, (4) the conquest of a new source of supply of raw materials or half-manufactured goods, (5) the carrying out of the new organization of any industry or the breaking up a monopoly position." The entrepreneur may be a person, a firm, a government, or some combination of these.

Many of these changes are a movement away from Marxism toward modified capitalism; from a centrally planned economy to a more "hybrid market economy;" totalitarianism to democracy. Entry to exploit the markets of the upcoming United European Community will be done via joint ventures. There is also a move by the Communist bloc toward a market economy. If change continues at this pace, then it is quite likely to cause a tremendous rise in the number of entrepreneurs--not only individuals, but also companies, and groups of countries.

One of the most significant changes in the past twenty years has been the movement toward a global economy. With global competition there are no borders. If a firm is not globally competitive, in this day and age, it is not likely to stay in business (unless there are significant national security interests, special pressure interests, or government subsidies or regulations). Economic models and economic systems will probably be replaced by hybrid models and systems. What is likely to happen? Clearly, there will be a synthesis of those values, parameters, models, and economic systems to be sure that those items that work will be kept; and those items that do not work will be discarded.

In the non-market and market economies entrepreneurs exist in the black (underground) markets as they do in the market economy with illegal goods. With this movement away from non-market economies (i.e., centrally planned economies) toward market-based economies, there will be opportunities for the entrepreneur as a person, firm, or joint venture to provide goods or services. The repression that existed in Soviet-styled economies fits well in Hagen's traditional society and the withdrawal of status respect. For the past forty-five years of the cold war, the psychological back drop has been set for the rise in entrepreneurship. Gorbachev's reforms, the experiment with democracy, the failures of Soviet-based economies to satisfy consumer demand to price goods and services with no relation to cost, and their failure to centrally plan their economies successfully are additionally fanning the fires of destruction for Marxism.

Imagine a joint venture with a western firm and a Soviet-styled government firm. They could shake up the production and cost functions and transfer technology, then productivity and output are likely to improve, assuming a competent and motivated labor force. Even if above assumption is violated, productivity and output are likely to be higher than they are now.

There are many virgin markets and underutilized markets that any entrepreneur could tap. For example, in the fast food industry, imagine McDonald's or Burger King becoming household names throughout the Soviet bloc and developing countries.

One problem in doing a deal with the Soviet Union is the lack of convertibility of the ruble--a joint venture's profits have no way of exiting the Soviet Union. The rules of the game have changed, are changing, and will change provided the rise of nationalism does not result in the typical totalitarian response (send in the troops). The rise of nationalism might just separate the states of the Soviet Union. The ballot box and the failing economy are likely to be the catalyst for a swarm of entrepreneurial activity. Think of the possibilities for just consumer goods for a united Western Europe in 1992, the failing COMECON countries, and those possibilities with Schumpeter's carrying out of new combinations. Those opportunities may very well boggle the mind.

In conclusion, it will take time to see if the hypotheses are verified by the empirical evidence. Theory and conjecture is all we have to go on now.

ABSTRACT

Use of a Contingent Valuation Model to Estimate Potential Reductions in Recreational Benefits

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A contingent valuation model is developed to estimate potential reductions in recreational benefits due to sedimentation in Reelfoot Lake in western Tennessee. Hicksian compensating variation measures of consumer surplus were estimated from the model. Both individual willingness-to-pay and total annual willingness-to-pay values were calculated for this study. In addition to the consumer surplus estimate generated by the model one other aspect of the study was significant. A methodology was developed by which estimates of the recreational value of Reelfoot Lake could be used to suggest how much cost could be justified for soil erosion control on agricultural land surrounding the lake.

ABSTRACT

The Effect of Floodplain Location
on Residential Property Values

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Introduction

The effect of floodplain location on the sales price of residential property in Southwest Little Rock, Arkansas is examined in this paper. Some authors have postulated that buyers are myopic when it comes to the purchase of a home. I discovered in this analysis that home buyers do adjust the purchase price when buying a home located in floodplain. The passage of the National Flood Insurance Program (NFIP) in 1968 and its implementation have affected the planning and zoning regulations throughout the United States. The NFIP was established as a result of the National Flood Insurance Act of 1968. The NFIP has encouraged over 17,000 communities to adopt flood plain regulations and acquire flood insurance. Today many lending institutions require the buyers to purchase flood insurance.

Previous Studies

Numerous studies that have attempted to explain the effect of floodplain location on residential sales price. Zimmerman[1] and Donnelly[2] have studied the effects of these factors. However there is more work to do on the effects of floodplain location on the sales price of residential property.

Methodology

The following study is part of a larger study covering the city of Little Rock, Arkansas which is composed of nine designated residential areas. The study focus is on area nine, in the

southwestern part of the state. The area is considered progressive with inhabitants who earn moderate income. In 1988 there were over 300 residential sales in this part of the city. From this population a random sample of one hundred and fifty sales of residential property were chosen. Of the one hundred and fifty sales a random sample of sixty-three properties were selected. The regression model is a single equation model with price being the dependent variable and variables tax, square feet, lot size, age of the house, floodplain location, and fireplace representing the independent variables, i.e., PRICE = f (tax, square feet, lot size, age, floodplain, and fireplace.)

Results

The mean property tax liability for these homes was calculated to be $505.00. The average age of the homes in the sample was fourteen years old and the home size average 1,326 square feet. The mean price was $47,300. The age variable indicated that the price of the house would be reduced by $763.00 and if the house contained a fireplace it would be increased by $7,000.00. The flood variable was negative 13 indicated that the price of the house would be reduced by $13 for each dollar of tax liability thus the floodplain discount is $6,565. The flood insurance premium is calculated by using rates for the structure and the contents with a $45 fee added to the price. The premium is calculated on a $50,000.00 single family home, 1 foot above the base floor elevation, and it did not include a basement. It is assumed that the content value was $25,000.00. The pre-firm premium is $408.00 and the post-firm rate is $213.00. Assuming the annual premiums are converted to their equivalent annuity value (assuming a 10% rate of

interest) the pre-firm and post-firm charge would represent $4,080.00 and $2,130.00 in value respectively. When the pre-firm and post-firm premiums are subtracted from the flood plain discount the difference is $2,485 for the pre-firm and $4,435 for the post-form constructed home. The Pre-Firm results indicated that buyers who purchase homes in a flood plain discount the capital value of the property by an additional 5.0 percent over and above the capitalize value of the mandated flood insurance premiums, while the post-firm discount amounted to 8.9 percent. The additional amount over and above the insurance premium has been labeled the "hassle premium".
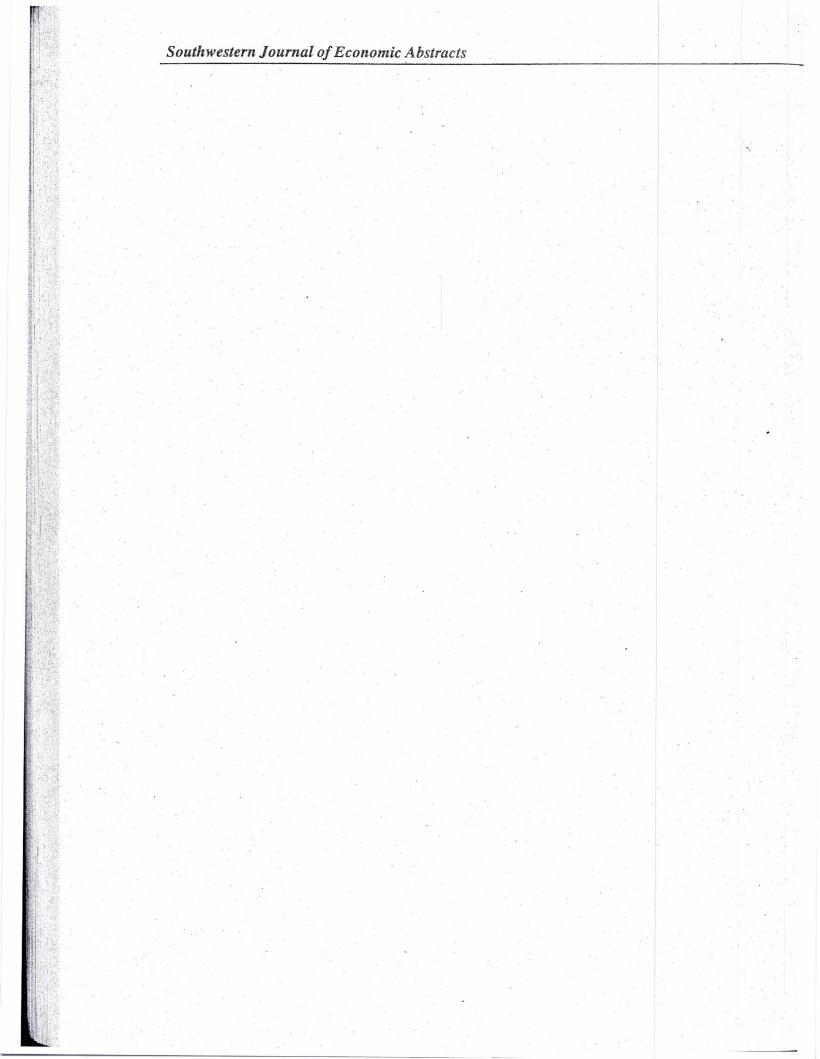
Conclusion

The results of the analysis indicate that home buyers do take into account the purchase price of a home when the house is located in a floodplain. Ironically, some of the modest homes were built in floodplains years ago. There is no specific rule to follow about deciding whether to buy a home located in a floodplain, but it would be a good idea to find out when the last floods occurred in a particular area if the house to be purchased is located in a floodplain.

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[1] R. Zimmerman, "The Effect of Flood Plain Location on Property Values", Water Resource Bulletin 15 (6): p. 1635-1665.

[2] W. A. Donnelly, "Hedonic Price Analysis of the Effect of a Floodplain on Property Values", Water Resource Bulletin 25 (3): p. 5815-5850, 1989.

ABSTRACT

An Infrastructure Crisis: An Analysis of the Urban Bus Transit Industry

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Introduction

The main purpose of this research is to look at a single industry, urban mass transportation and test hypotheses about the effects of unions on the technical efficiency of bus transportation. This research also focuses on the implications of governmental subsidization for firms which act as public monopolies for given areas.

The study is unique for two reasons. First it provides empirical evidence of the effects of unions on productivity in a specific industry, the urban bus transit industry. Secondly, it employs a direct productivity measure, the relationship between physical inputs and outputs.

Unionization and productivity have long been the focus of research. In their study, Bok and Dunlop (1970) note that economists have debated the effects of collective bargaining on the efficiency of business enterprises. Empirical studies have shown that unions can impact the conduct and performance of firms in many different ways. Lewis (1963) found that unions raise wages by 10 to 20 percent. According to Lewis when an union succeeds in raising employee compensation, management will respond by hiring "higher quality" workers and increase the capital/labor ratio until the value of the marginal product is equal to the wage. Freeman and Medoff (1979) argue that productivity is higher when collective bargaining is present in the work place. However, Perry, Angle, and Pittel (1979) in a study of the urban bus transit industry found that there is no significant union effect on labor productivity.

STATEMENT OF THE PROBLEM

The empirical question to be addressed is whether productivity-enhancing or productivity-diminishing behavior dominates as a result of unionization. The study will examine 163 transit systems where motor buses are the main element of public transportation. The sample includes 48 firms where collective bargaining agreements were in effect during 1985. The sample of firms will be drawn from Urban Mass Transportation Administrations data (UMTA, 1985). These statistics were reported by operating systems which were engaged only in bus transit activities during the year studied.

The basis for the data analysis rests on the following framework: The current knowledge established a union-productivity linkage. The question of whether unions enhance productivity has produced mixed findings. Additional studies are needed to add to the existing research which examines the union effect on productivity. In particular, total capacity miles of an intracity bus system is hypothesized to be a function of a set of variables which includes labor, capital, fuel, and unionization. A measure of governmental subsidization is also included in the study to show how output, and therefore productivity, is affected by the degree of federal, state, and local operating subsidies. These subsidies may also illustrate how expenditures are standardized between firms, thereby controlling for public policy toward productivity and growth.

The results indicate there is no union-productivity linkage and that additional federal funding is highly questionable with respect to increases in capacity or ridership.

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ABSTRACT

The Impact of Technology on the U.S. Labor Market

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I began my analysis with the hypothesis that recent advances in technology have been destroying median-skilled jobs. One portion of that market was requiring more and more skills to keep up with the ever more sophisticated technology available, while the other portion was having its jobs either automated or simplified to the point where the only skills necessary were two operable hands.

Given this hypothesis we would expect to observe the following things: an increase in wage inequality characterized by more workers moving into the tails of the wage distribution, an increase in demand for skilled workers, and, in the long run, division of the economy into a dual labor market.

Observation of the economy over the last twenty years confirms that these things have in fact occurred. Starting in the early 1970s, when computing and information technology began to filter through the economy, wage inequality began to rise, driven by an increase in demand for skilled workers to service the new technology (Juhn, Murphy and Pierce, 1989). The distribution of workers around the mean wage flattened as workers moved from the mean into the tails. This intriguing development has only recently been commented on and is in desperate need of more research.

By 1985 various tests confirmed that the labor market had indeed split into distinct primary and secondary sectors, although these sectors do not appear to be divided along industrial or occupational lines (Dickens and Lang, 1985. Shapine, 1990). This result is contrary to standard dual labor market theory but is consistent with the way we would expect technology to impact different areas within the large industrial and occupational categories. It is

significant that the observed phenomena, both in the case of the dual labor market and in that of the wage distribution, while not predicted by standard theory, are consistent with the hypothesis of technological change.

Although it is certainly not the only possible explanation, the hypothesis of technological change appears to be able to tie together a diverse group of otherwise puzzling phenomena.

ABSTRACT

Educational Crisis in America and Japan

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This paper represents a collaborative effort by the authors to assess the comparative strengths and weaknesses of two vast educational systems, each of which are deemed to be in a state of crisis. The distinctive features of each crisis is described in terms of magnitude, causes, remedial strategies, and the probable social and economic impact on the respective nations. Evidence that a crisis exists in American education is presented in terms of steadily declining scores on standardized achievement tests; lack of basic skills by a substantial percentage of high school graduates; extremely low rankings in specific subject matter areas when compared to students from other nations; high drop out rates; and a functional illiteracy rate, especially among ethnic minorities, which has reached potentially calamitous proportions. The specific weaknesses pointed to in American education appear to be strengths of Japanese education in terms of basic skills, low drop out rates, and a very high literacy rate. This paper looks beneath surface appearances to the psychic costs of Japanese achievements in terms of group submergence and the school refusal phenomenon. The question is raised as to whether or not the suppression of creativity is endemic within Japanese education.

ABSTRACT

National and Retail Advertising: Their Effects on Competition

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There are two basic theoretical views of how advertising affects competition. One school of thought believes that advertising decreases competition through product differentiation and economies of scale in advertising. The other school of thought believes that advertising increases competition by providing information to the consumer. Hence, there are plausible economic arguments on both sides of the issue: does advertising increase or decrease competition? Comanor and Wilson (1979, p. 457) state, "While these theoretical models are important for their explanations of how advertising might work, it is evident that no consensus has developed."

This paper suggests the effect of advertising on competition is not ambiguous. Rather, some types of advertising are anticompetitive while other types are procompetitive. Following Norris (1984), it is helpful to seperate advertising into two different types, national and retail.

National advertising, which is largely ran by manufacturers, tends to be more persuasive than informative. Hence, television is an important media for national advertising. In particular, this persuasive advertising works best when it is difficult for consumers to determine whether one product is in fact superior to another. A good example is ReaLemon lemon juice, which in 1973 had 80 percent of the market but charged a price 35 percent higher than its identical rival products.

In addition, larger firms have some advantages over smaller firms in using national advertising, most which can be considered to be a barrier to entry. Conglomerates have an advantage over smaller rivals (often single-product companies) due to their ability to employ cross-subsidization. There also exists both real and pecuniary scale advantages in advertising,

though the pecuniary scale advantages are probably greater. In his interviews, Levmore (1978) found that advertising personnel from small and large firms, the networks, and advertising agencies all believed that large advertisers enjoy these rate advantages. Also, there exist a number of restrictive practices that favor large advertisers, as receiving more favorable time slots. Finally, advertising agencies favor larger advertisers.

In contrast, retail advertising, which is largely run by retailers, tends to be quite informative, especially on price. Examples include the classified ads in newspapers, the yellow pages, some mail-order catalogs, and some retail store ads. More information will make market demand curves more elastic, putting downward pressure on prices. Also, this information could help new entrants to overcome loyalty and familiarity with established products. Therefore, retail advertising in most cases is likely to be procompetitive.

To further contrast the economic effects of national versus retail advertising, two case studies of each national and retail advertising are presented. The case studies involving national advertising illustrates past activity by Folger's coffee and Miller Brewing Company (after it merged with Phillip-Morris). In both cases, during a short period of time after advertising was greatly increased, the number of firms in each industry fell dramatically while industry concentration rose. The case studies involving the retail advertising illustrates how advertising brought down price for eyewear and lawyer services.

Also shown are some average level and changes in concentration ratios (CR) for a broad sample of U.S. manufacturing industries for 1963-82. Advertising ran by firms in these industries would be mainly national advertising. The average CR for all industries during this period were very stable. But when separated into consumer and producer goods industries, the consumer-goods industries have a higher level of CR that increased during this period while the producer-goods industries experienced a falling CR. Similar results were obtained when the industries were separated by high, medium and low advertising intensity (measured by

advertising-to-sales ratios). The high advertising intensity industries had the highest average level of CR and also the biggest increases in CR for the period.

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ABSTRACT

Secured Deposits Instead of Insured Deposits

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The case for deposit insurance rests on two generally accepted beliefs: (1) deposit insurance is necessary to prevent panics and bank runs such as the Panics of 1873, 1884, 1893, 1907 and the failure of over a third of U.S. banks from 1930 to 1933; and (2) deposit insurance is necessary to protect unsophisticated depositors from incurring losses as a result of bank failures. The first belief is irrelevant since the conversion from gold to managed paper in the 1930s made our monetary system panic proof. Secondly, with respect to protecting unsophisticated depositors, requiring banks to offer secured deposits is vastly superior to mandating deposit insurance.

Apparently a failure to understand the implications of the fundamental change in the U.S. monetary system in 1934 (from a gold standard system to paper standard system) was a major reason for establishing federal insurance of deposits in the 1930s and for retaining deposit insurance in 1989.

Writing in 1963 on the differences between a gold and a paper monetary system, I placed the blame for money panics and bank runs on the gold system, and argued that a paper money system makes the banking system panic or run proof.[1]

Today, the Federal Reserve has legal authorization to loan Federal Reserve Notes to all banks (commercial banks and thrifts) in amounts equal to 100 percent of the banks' deposits, if necessary. Thus it is no coincidence that recurring monetary panics ceased to be a part of our national experience when we adopted a paper standard monetary system. Deposit insurance makes depositors feel secure, but it is not necessary to prevent panics and runs.

As an aside to the main argument in this section it should be noted that since a money panic and a run on the banking system is impossible under a managed paper standard monetary system, the popular contemporary argument that some banks are too big to fail is fallacious. In 1984, the FDIC should have permitted Chicago's Continental Bank to fail. Uninsured deposits in excess of $100,000 should not have been protected. We should not now have a deposit insurance double standard in which all deposits in very large banks are insured in fact, if not legally, while in all other banks deposits are protected only to the legal maximum of $100,000.

Because small deposits are rationally ignorant regarding the credit worthiness of banks in general and of banks in their locale in particular, there is universal agreement that small depositors should not be impaired either by loss of principal or loss of liquidity as a result of bank failure. Therefore, even though replacing the gold standard with a paper standard in the 1930s made the banking system panic or run proof, a case can still be made for federal insurance of deposits owned by rationally ignorant firms and households.

There is no reason to examine here the many disadvantages of government insurance of deposits. It is sufficient to note that the existence of an insurance system forces government to protect the insurance trust fund and/or taxpayers through rigid regulation of bank asset selection decisions and through severe entry restrictions. The effect of these regulations and restrictions is to lessen competition in banking markets and to cause misallocation of resources. If concern for competition and resource allocation induces government to "deregulate," then highly leveraged banks will exploit the opportunity to borrow at low, riskless rates of interest and then acquire high risk and high yield assets. And, of course, the end of this deregulation scenario is an increase in the number of bank failures, exhaustion of deposit insurance trust funds, and heroic bailouts of the deposit insurance system by taxpayers.

The point of this paper is that a single banking regulation--i.e., a requirement that all banks offer customers the option of secured deposits--would satisfy society's demand for safe

money for unsophisticated depositors just as well as deposit insurance. Unlike the insurance system, however, enforcement of the secured deposit requirement would remove the need for government regulators to influence the lending and investing decisions of banks, and to restrict entry into banking.

Under the system of secured deposits, banks would acquire funds for risk bearing loans and investments by offering appropriately high interest yields to purchasers of unsecured deposits. Of course, bank depositors opting for secured deposits would earn lower, riskless rates of return. In sum, free, competitive banking markets and prices would emerge to guide the allocation of financial resources through the banking system.

[1]David Townsend, "Gold vs. Paper, and The Contemporary Monetary System of the United States," Texas Business Review, September, 1963, p. 216 and 217.

ABSTRACT

Institutional Economics at Oklahoma: A General Perspective and a Personal One

Roger M. Troub
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In the history of economic thought and policy, "schools of thought" have played major roles, and they continue to do so. Institutional economics is commonly deemed a school of thought composed of "sub-schools." This paper examines the proposition that economics at the University of Oklahoma during the 1950s and 1960s either comprised a sub-school of a larger institutional school of economics or otherwise provided a significant contribution to it. It was prepared for a panel comprised of Oklahoma economics doctoral products asked to describe, explain, and assess the Oklahoma contribution to "institutionalism."

The larger paper is comprised of three parts: an examination of how economics at Oklahoma differed, a review and reassessment of the nature of the history of American institutional economics, and a sketch of the observer's background, experiences with, and "findings" about institutional economics at the University of Oklahoma. The paper ends with concluding observations.

Economics at Oklahoma was different in at least three ways. One was the emphasis given to learning-through-inquiry relative to simply acquiring existing perspectives, opinions, and "theories" (and the skills needed to replicate and apply them through emulation; inculcation in orthodoxy). The former involves "rigorous education" and the latter "rigorous training." A wide range of mixes between the two were tolerated and students allowed a significant measure of capacity to select the mix which best matched their personalities and inclinations. A second was the nature of the State at the time. It was a state with "pioneering" in memory (homesteading in this century with statehood coming in 1907), a present primarily tied to past technological advances in agriculture and oil and natural gas driven

industrialization/urbanization (elsewhere and in the State), and an expected future tied to further technological pioneering. A third was the faculty. It was a heterogeneous group which prominently included (but was far from limited to) institutional economics working in the tradition of all of institutional economics' "founders" (Thornstein Veblen, John R. Commons, and Wesley Clair Mitchell).

Martin Bronfenbrener is correct in specifying institutional economics as a movement rather than a school ("Early American Leaders - Institutional and Critical Traditions," American Economic Review, Vol. 75, No. 6 (December 1985), 13-17), but wrong about their lacking any commonality other than dissent to orthodoxy. The early institutionalists shared infrastructural perspectives (about generally how things are, how they have come to be that way, and what might be brought into being) which provided the common concerns and perceptions of kinship; sometimes close, sometimes not. The early institutionalists did not fully identify, much less adequately articulate the essential nature of their emerging common intellectual perspectives. But they should not be faulted for it since the contours of the still emerging evolutionary/ecological/instrumental (EEI) post-modern scientific worldview have only recently come into view. Because this was the common but nascent basis for the movement (beyond various other objections to orthodoxy), and for several other important reasons, the development of institutional economics confronted great obstacles.
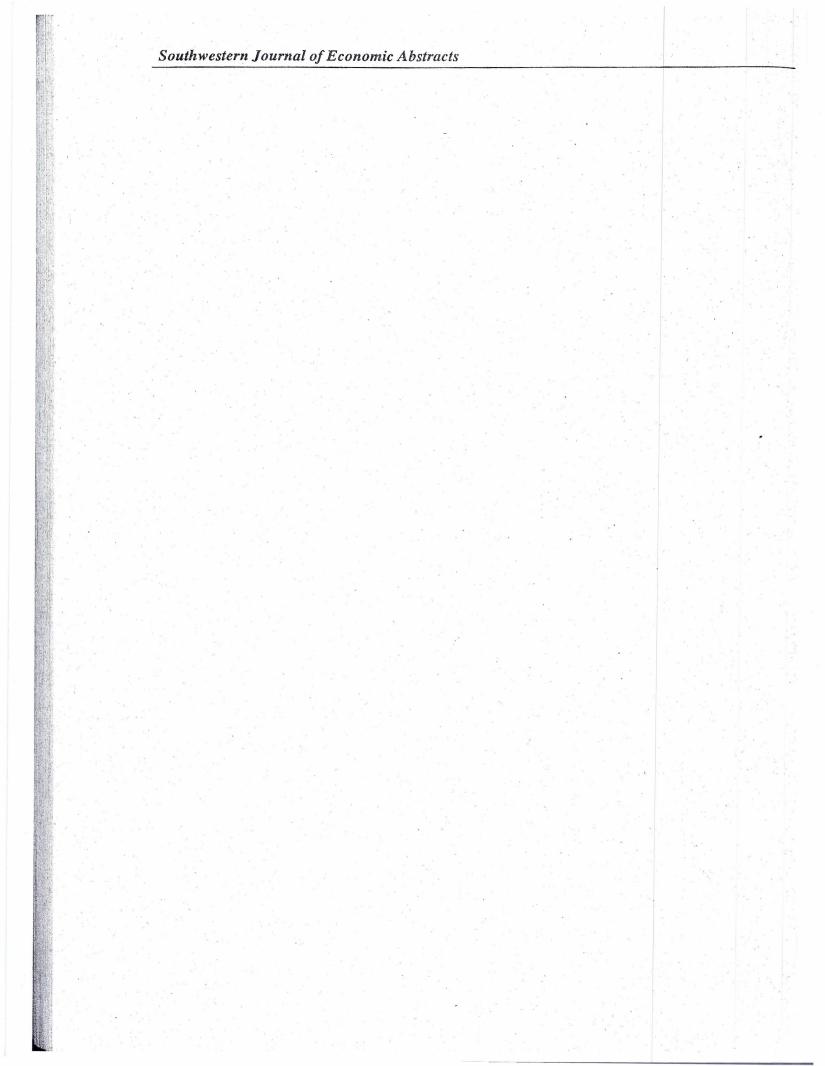
Attending to the various domestic and international concerns of the aftermath of World War II diverted institutional economists from consolidating and further developing an institutional economics paradigm. But the movement was revived in the 1960s and 1970s. Generally, the Oklahoma institutionalists were approaching the latter years of their academic careers and did not actively participate. (They were not replaced with other institutionalists.)

During the 1950s and 1960s (and into the 1970s), there was a University of Oklahoma Economics Department which contained institutional economists--each markedly different in

their work and their approach to economics. And Oklahoma had a distinctly institutionalist flavor, but their was no doctrinal school and no effort known to the author to establish one. To have done so would have been contrary to institutional economics which emphasizes science rather than dogma or doctrinare schools.

The author's personal history and interests matched what was dealt with and accommodated in terms of learning-through-inquiry. His inclinations before arriving at Oklahoma were consistent with the perspectives and concerns of institutional economics. He chose largely institutionalist oriented study. Some others did too, and some didn't.

From the point of view of institutional economics, the Oklahoma contribution is clear. It participated in keeping the institutional economics movement alive by being one of the few places students who viewed themselves as having an institutionalist orientation (or later discovered they did) could collect and take "collective action" to study economics with each other and professors working in not one but all of institutional economics' founders. It provided an environment not too inhospitable for multiple students with institutional propensities to obtain the doctorates needed to introduce a few more students to institutional economics. And it produced several of the economists active in the revival of institutional economics, in its focus on public policy problem solving, and in work toward its further conceptual development.

ABSTRACT

Rural Hospitals and Economic Decline

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The State of Nebraska consists of 93 counties, 88 of which are considered to be rural or non-metro. Due to the unusual geographical composition of the state, it can be divided into three types of regions: the metropolitan area located near the Missouri River in the southeastern section; the farming sector, located in the central area; and the sandhills ranching sector, located in the northwestern region of the state. Travel distance between communities increases and population decreases the farther west a person travels.

The declining population, labor force and employment in many rural Nebraska counties have given rise to concern about the ability of various communities to provide adequate medical care. Hospitals are experiencing many complex problems in today's environment. Some of the problems include the difficulties of covering costs with current levels of Medicare and Medicaid reimbursement according to DRG schedules.

Rural hospitals are further affected by the rural-urban differential in computation of DRG payments. Legal and regulation based problems further complicate hospital operation and cost structures. Many of these problems, while difficult, are "internal" problems. The "external" problems such as declining population are not within the realm of normal operating problems and are largely beyond the ability of the hospital to influence. Part of the population problem is the aging of the rural population and consequently of the rural patient base.

The hypothesis of this paper is that those communities that have a hospital will only be able to support such a facility while there are favorable economic conditions in the county. Economic decline will eventually cause closure of the hospital facility due to the inability of the

area to retain population sufficient to support it. Population is viewed as the basic macro economic or external variable affecting hospital volume.

County data utilized include Nebraska Department of Health hospital statistics, resident labor force, resident employment, population.

The hospital variables measure both stocks and flows. The stock data measure the existence of staff and facilities. Flow data measure hospital volume or utilization including acute patient days, total patient days, discharges and bed occupancy rates.

The first step in examining the county demographic employment data is to determine the growth rate of the series for each county. The growth rates were calculated for the period 1980-88. The 1988 data are revised estimates. The percentage change for the whole period as well as annual average growth rates are calculated. The basic analysis consists of regressing percentage changes and average annual growth rates in the demographic variable to percent changes and average annual growth rates in the hospital variables. The data are changes in each variable for each county so these are now cross section data, rather than time series data.

The process here is to analyze the relationships between the declining population counties and declining volume hospitals. Not all hospitals decline on all volume measures for population loss counties. Population is the variable that declines for most counties. Labor force and employment can show growth in population loss counties due to workers crossing county lines to work. This shows up in workforce data, however. Resident data frequently indicate narrow labor force employment ratios since in many counties people must have a job in order to continue to live there. This causes a low unemployment rate to be misleading since the people by definition cannot live there unless they have a job. The attempt to isolate and compare the negative county population change to the negative hospital variable change results in a relatively short list of observations in which all variables are negative. This reduces the number of observations for the regressions.

The regression results indicate that the population, labor force and employment do explain, in part, the changes in the hospital variables of acute patient days and discharges. The R^2 values for the hospital and county variables range between .20 and .25 with all significant t statistics. This makes sense inasmuch as the acute care patients reflect the medical aspects of the hospital itself. The existence of a hospital depends in part on the amount of acute care needed by a community. Discharges are head count figures representing the volume of people involved with the hospital. Since population is a headcount variable, it is logical that these two would be most closely related. The long term care is not being counted, hence total patient days is a less useful variable.

The overall conclusion is that in the absence of any forces that stabilize population, in this group of rural counties hospitals will continue to be adversely affected by population decline. The problems are compounded by the difficulties of retaining doctors and other trained medical staff in the rural communities. In many communities it is almost inevitable that the hospitals will close. It will take a magnificent degree of cooperation, coordination, and consolidation to slow the process.

ABSTRACT

Comments on the Quality of the Population Statistics of the Imperial Austria and the Republic of Poland

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The primary purpose of the Comments is to reappraise the consistency of the census enumerations undertaken in the Imperial Austria between 1821 and 1910 with the vital statistics and the migration statistics applying the technique of the balancing equation. The same is true of the Republic of Poland in the period from 1919 to 1939.

No statistical information is available that would allow a researcher to question the overall consistency of the census totals with vital and migration statistics in the Imperial Austria from 1821 to 1910 and the Republic of Poland between 1921 and 1931. The unexplained migration, the residual error e, is relatively small and is equal to 0.5% or less in all intercensal periods except 1830, 1880, and 1910 in Imperial Austria, where it is slightly higher. The data on population and population movement of Imperial Austria and the Republic of Poland are available for use to interested researchers and of good quality.

"The most basic method of demography is the decomposition of population change into its components, or conversely the synthesis of the components to estimate the total population change. Schematically, we may express this process in terms of the fundamental equation $P1 - Po = B - D + I - O + e$, where:

$P1$ is the population at the end of the intercensal period,

Po is the population at the beginning of the intercensal period,

B are the live births in the intercensal period,

D are deaths in the intercensal period,

I is immigration in the intercensal period,

O is outmigration in the intercensal period, and

e represents the residual error.

On the basis of additional knowledge about the accuracy of the various terms, one may be able to decide whether e can be attributed as a measurement error almost wholly to a particular term of the equation." (1)

The above balancing equation was applied to the statistics on population and population movement of the Imperial Austria in 1821 to 1910 and of the Republic of Poland from 1921 to 1931. In the process of application the following steps were undertaken:

(a) The intercensal increases were determined by subtracting successive census totals form 1821 to 1910 and from 1921 to 1931. The totals were adjusted for the population additions resulting from territorial acquisition. The sources of data are publications of the Central Statistical Commission of Imperial Austria in Vienna and the publications of the Chief Bureau of Statistics in Warsaw for Poland.

(b) The natural increase was computed by deducting deaths from the live births. Necessary adjustments were made for the fraction of the year, since the live births and deaths were reported in Imperial Austria for the year that started on November 1 and ended on October 31 for the first half of the nineteenth century till the census of October 31, 1850. Afterwards the births and deaths were reported on the basis of the regular calendar year.

(c) The net migration was estimated as a residual deducting from the natural increase the intercensal increase. When necessary it was adjusted for the territorial acquisitions.

(d) The officially recorded net migration between 1819 and 1869 was computed by subtracting the authorized arrivals form authorized departures. But, when residents of Austro-Hungarian Monarchy were granted freedom of movement in the Constitution of

December 31, 1867 the state lost control over migration of population and municipal authorities stopped being a source of statistical information.

(e) The overseas migration net is based on reports of the port authorities as recorded in the official statistical publications for Imperial Austria. The data on embarkation and disembarkation were issued by the German seaports of Hamburg and Bremen and in various time periods included also data from Le Havre, Bordeaux, Marseilles, Amsterdam, Antverp, Trieste and Fiume.

(f) The unexplained migration was computed in the following manner:

   (i) For the years 1821-1869 the officially recorded migration net was deducted from residual migration computed under (c) to establish the unexplained portion.

   (ii) For the years 1869-1910 the residual migration calculated under (c) was adjusted for the net overseas migration to determine the unexplained portion.

   (iii) In the Republic of Poland the officially recorded net migration was deducted from the residual migration to estimate the unexplained migration.

(g) The unexplained portion of the population movement was computed as a percent of the total population at the preceding census if e (error) was positive and at the last census if e was negative.

There were three exceptional periods (vide supra) ending in 1830, 1880 and 1910 which may require some additional explanation. In the case of the census of 1830 natural increase figures reflect the onslaught of the cholera epidemic. This invasion of cholera is not reflected in the census data. There was no large official migration into Austria recorded in historical documents.

In the intercensal period 1869 the overseas migrations primarily based on the seaport authorities reports of Hamburg and Bremen and starting in 1875 also French seaports of Le Havre, Bordeaux and Marseilles. Migrants using other seaports of embarkations were not

included in the net overseas migration figures. This will allow for the discrepancy between observed census data and the net residual migration.

The first decade of the twentieth century witnessed reemigration from the overseas on a noticeable scale. The available data cover only three years: 1908, 1909 and 1910. The rest of the decade is omitted from the data. This will make the statistics on overseas migration overstated for the intercensal period ending in 1910.

REFERENCES

(1) U.S. Bureau of the Census. <u>Methods and Materials of Demography</u>, 2nd printing rev., Shyrock, Henry et al (eds.) U.S. Government Printing Office, Washington, DC, 1973, pp. 6-7.

ABSTRACT
Nearly-Free Banking

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This paper introduces Nearly-Free Banking (NFB). NFB combines characteristics of the Black-Fama-Hall payments system and a conventional monetary system using an interest-rate operating target. All means of payment are issued by competing banks and the clearing system is privately operated. The monetary authority implements its policy by fixing the price of a security used by the banks to settle their net clearing balances. The process of clearing arbitrage generates liquidity effects that force all market interest rates to adjust to a level consistent with the yield on the clearing security.

The monetary authority can usually follow a laissez-faire policy, allowing market forces to determine the price and yield on the clearing security. If it has a credible commitment to a target for nominal income or the price level, speculation on financial markets tend to cause changes in market interest rates and aggregate demand that automatically implement the target. NFB allows a monetary authority to exploit the market's ability to gather and utilize decentralized knowledge relevant to its target.
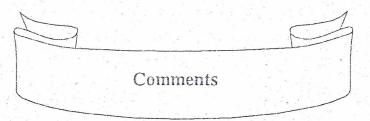
ABSTRACT

Demand for Currency Holdings: An Examination of the U.S. Case
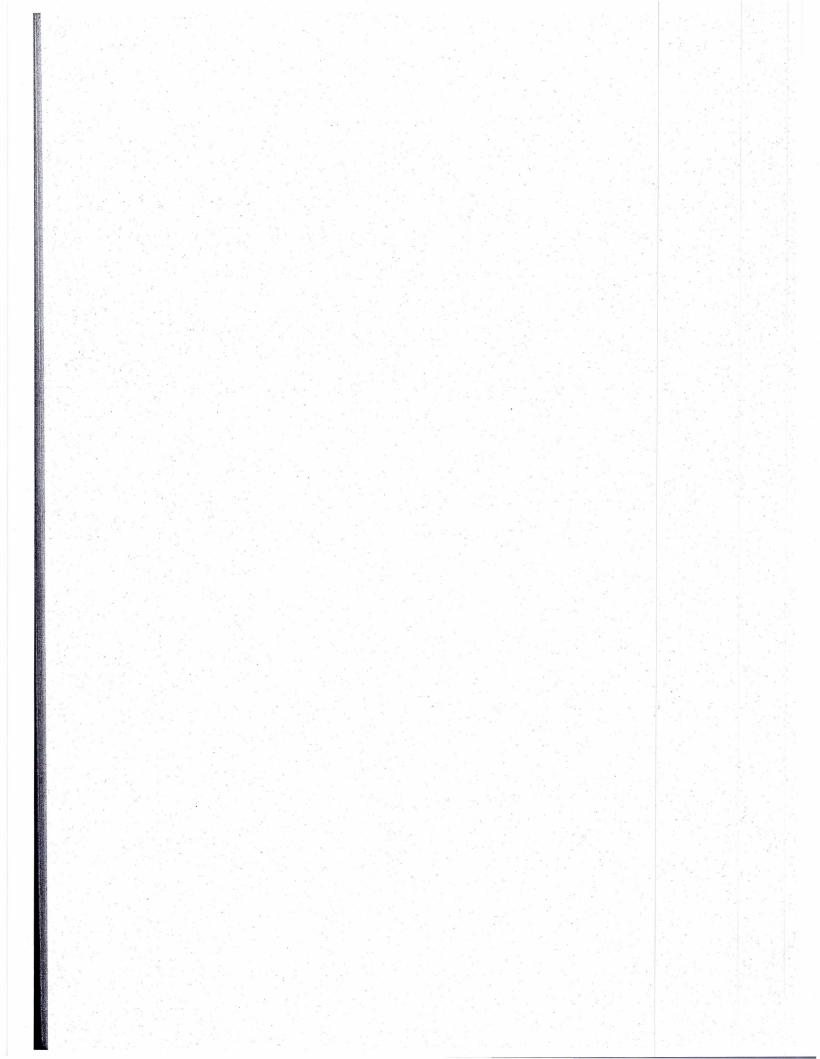
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Between 1960 and 1987, currency in circulation in the U.S. increased by 532 percent, and per capita currency holdings increased by 504 percent, from $160 to $806. Although the increase in real per capita currency holdings were not as rapid as that of nominal increase, nonetheless, it rose by 132 percent between 1960 and 1987.

Approximately about 90 percent of all currency held outside the banking system is held by individuals within the country. The bulk of this currency is held for transaction purposes and since 1961 the currency deposit-ratio has been rising steadily.

Several plausible explanations are: increased female participation in the labor force, a rise in the number of families headed by women, and changes in the overall income distribution. The primary focus of this study is on the increased female participation in the labor force and, more specifically, the increasing number of families with more than one wage-earner and their demand for cash. A model incorporating all these changes is constructed. Time-series data spanning 1960-1988 are utilized to empirically test the validity of the proposed model. On the basis of our findings, we suggest that the rate of growth of currency holdings can be explained without overemphasizing tax evasion as a motive or the underground economy as the repository. A convincing explanation, albeit a partial one, is the rise in the number of two income families.

Comments

Impacts of Highway Construction Expenditures on Economic Growth, Planning Policies, and Transportation

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COMMENTS

Albert J. Allen
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This is a good paper and I personally want to extend my appreciation to the authors for a paper well done. Since the paper was well done, I have only a few comments about the paper. My comments should not be considered critical of the paper, but only suggestions that might make an already good paper into a great paper.

The authors are advised to show which variables are significant (or non-significant) and at what level of significance. These could be included as footnotes on the appropriate tables found in the text. Also, the authors are advised to explain the reasons why some of the variables selected for the analysis were lagged 2-years, 3-years, and 4-years while others were not.

In the paper the authors did not reveal if they had any problems with multicollinearity, therefore the authors are encouraged to check to make sure that this problem does not exist in the paper. Finally the authors are encouraged to show in the paper if the variables utilized in the models show the correct economic signs. For example, do the authors expect highway expenditures to have positive (or negative) effects on economic development and employment?