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Editor's Note

W. Robert Brazelton
University of Missouri-Kansas City

The second volume, 1981, of the Southwestern Journal of Economic Abstracts shows growth. There are forty-seven separate Abstracts of Papers or Comments compared to twenty-three for the first volume, 1980, of the Journal. This means that there are seventy-five pages in 1981 as compared to 37 pages in 1980. This is a substantial increase over 1980. In addition, the Journal is operating in the black which was unexpected for the first few years. However, the Journal still needs some help from you, the participants, authors, and subscribers.

If the Journal is to be a lasting contribution to the field of Economics and if your Abstracts included therein are to be a lasting contribution, more University and College Libraries must be requested to subscribe to the Journal. As faculty members at your University or College, please request your Library to subscribe. Library Subscriptions are $7.50 per year. Individual subscriptions are $5.00 per year. Those who have Abstracts included therein receive a complimentary copy of the Journal.

Please have your Library or Colleagues send their subscription checks to the Editor, Southwestern Journal of Economic Abstracts, University of Missouri-Kansas City, 64110. For more complete information, refer to the back of the cover page.

We wish to thank the participants and the authors for their support in the past. Working together, we can, in the future, continue to expand, build and improve. If you have any suggestions, please let us know. The Journal properly belongs to you, the participants.

Lastly, the Journal wishes to thank Mrs. Jean Jones, Secretary of the Department of Economics, University of Missouri-Kansas City, for her valuable contribution in preparing the Journal for its final trip to the printers.

TRANSFORMING FEDERAL EXPENDITURES INTO LOW-RENT SHELTER: A STUDY OF THE WELFARE EFFICIENCY OF MOVING FAMILIES INTO LITTLE ROCK PUBLIC HOUSING DURING FY 1979

Jack E. Adams

University of Arkansas at Little Rock

This working paper provides an estimate of the average tenant welfare increase per average dollar's worth of Federal resource costs induced by families moving into Little Rock public housing during FY 1979. The discussion appears timely in view of the policy implications of the current administrative review of project rent limitations.

An analysis of the income elasticity assumption implied by a Cobb-Douglas utility function vis-à-vis Kain and Quigley income elasticity estimates is presented. While the welfare efficiency of Federal expenditures appears to be less than unity, the results, in the absence of data on externalities, are certainly inconclusive. Nevertheless, the implications for public housing have become somewhat more complex in an era of housing speculation and shortages, project rent limitations, and rising subsidies due to project rent to tenant family income limitations.

In the final analysis, a Pareto optimum, although unlikely, in existence prior to the provision of Little Rock public housing would necessarily imply that the ratio of the tenant welfare increase to public housing expenditures would be less than unity. Even so, a resource transferred from an alternative use of providing public housing with a resultant increase in value, would imply a Pareto improvement. It would appear that even though public housing is periodically scrutinized, it may very well be "at least" something more than a Pruitt-Igoe generalized graveyard of good intentions.

AN EXPLORATORY ECONOMETRIC MODEL OF AN SMSA

By: Joel Allen, Larry Allen, J.M. Pearson

I. Introduction

This paper reports the results achieved to date in an on-going project to develop a monthly econometric model of the Beaumont, Port Arthur, Orange SMSA. The model is developed as a potentially useful tool for public and private decision making.

The Beaumont, Port Arthur, Orange econometric model was estimated from monthly, rather than quarterly or annual data. A monthly model would be expected to be more sensitive to short-run cyclical fluctuations and seasonal change than the annual or quarterly models. A monthly model also would signal more rapidly the sensitivity and speed of adjustment of the regional economy to cyclical impulses propagated by the parent economy.

A second difference between the Beaumont, Port Arthur, Orange econometric model and other regional models is that it is a model of a truly small region.

A third difference is that this model is not dependent upon any constructed data series.

II. Specification of the Model

Three objectives dominated the specification of the Beaumont, Port Arthur, Orange econometric model: (1) to model explicitly the structural characteristics of the model, (2) to shed some light on the way cyclical impulses are transmitted by the national economy to the model, (3) to develop a model which at some point could provide continuing and timely forecasts.

The major issues raised regarding the specifications of the model were: (1) the appropriate accounting framework for regional economics, (2) the role of exogenous force and the linkages between the national and regional economy, (3) the desirability of explicitly recognizing the interindustry relationships among the industries within a region.

A. The Appropriate Accounting Framework

A major factor overshadowing the specification issue is the availability of data. Presently, there are no regional data series for output, consumer spending, investment spending, and imports and exports. To be sure, output data is available for some industries regionally, but only on an annual basis with at least a two year lag. Employment, on the contrary, is of interest, and is available monthly with only a six week lag.

The endogenous variables in this model include employment in eight sectors: manufacturing; construction; government; retail trade; mining; transportation; communication; utilities; service and miscellaneous employment; finance; insurance; and real estate.

B. The Role of External Forces

To what content the realization of the regional business cycle can be considered a response to cyclical shocks propagated by the national economy is an issue which should be examined by a regional econometric study. This model would be expected to be highly dependent upon external forces because the region is very small.

III. The Estimation of the Model

The SPSS (Statistical Package for the Social Science) statistical software package was used to estimate the model. The stepwise ordinary least squares procedure was used with the constraints that no variable would be included with an F value less than 1, or if less than 40 percent of its variance was unexplained by other variables already entered into the equation. The log transformation of each variable was taken before the estimation procedure was begun.

MICROCOMPUTERS AND MARKETING CONSIDERATIONS

CLIFTON A. BAXTER

GEORGIA SOUTHWESTERN COLLEGE

The marketing functions for the small business owner consist primarily of selling, collecting, and reordering. The microcomputer will enable the owner to perform sophisticated sales analyses such as analysis of sales over time including, but not limited to, shift, day, week, month and year; analysis of sales by product, product line, and department; analysis of sales by customer, territory and sales representative; and analysis of sales returns and allowances.

A microcomputer-based accounts receivable system will permit the small business owner to provide for different account types, such as regular and lay-away; will permit the establishment of customer credit limits; will compute and bill each customer an account service charge; will generate "late payment" notices; and will produce aged accounts receivable lists.

In addition to maintaining a physical count of the merchandise on hand, an inventory management system will provide for automatic reordering of items as the item quantity reaches the established reorder point; will provide price lists according to supplier and/or manufacturer; will print the physical inventory worksheets in "shelf" order; will allow for the removal of an entire "line" of merchandise from inventory; will increase or decrease the cost of an entire "line" of merchandise by a percent; will permit random updating of cost changes; and will record and keep track of "back ordered" items.

The microcomputer can be programmed to honor the "enter it once" principle. For example, a charge sale of merchandise will be entered; and the system will update the sales account, the inventory account, and the customer's account.

A Note on the Patterson Ambassadorship: Yugoslav-U.S. Diplomacy, 1944-1947

W. Robert Brazelton

University of Missouri-Kansas City

Richard Cunningham Patterson, Jr. was the first post-World War II American Ambassador to Yugoslavia. He was appointed as Ambassador to Peter II, but fate actually determined that he was to represent the United States to Marshal Josef Broz (Tito) from 1944-1947. According to the recently de-classified Diary of Eban Ayres, Patterson was fired in 1947. Later, he was made Ambassador to Guatemala and, still later, Minister to Switzerland.

One may glean from the correspondence of Ambassador Patterson during his tenure in Yugoslavia that he was less than apt to serve as Ambassador at this crucial time in the beginnings of Cold War history and, partly as a result, misunderstood Tito completely.

In his correspondence concerning Tito, Ambassador Patterson wrote that: "Tito's mind can't turn corners." More explicitely, "Is he (Tito) an agent of Moscow? I believe he is ... his blood stream is indoctrinated with the Russian pattern." Also, concerning economic aid, Patterson publically recommended, "make no loans of money, material or food to any communist country (including Yugoslavia) to build up its political machinery and thus fight democracy." Tito later replied to Patterson that pro-Russian anti-American statements "...were in direct proportion to the aid given by Russia and America."

Lastly, in late 1946, Patterson wrote that Tito's absence at the Paris Peace Conference was "... another nail in the coffin of the Tito regime." In retrospect, Patterson's Ambassadorship ended in 1947 and Tito's regime lasted until the latter's death in 1980. Thus, Patterson misunderstood the situation in Yugoslavia and the staying, manipulative power of Tito. The question arises as to how much other situations were misunderstood during this crucial period in World history.

Post Keynesian Economics

W. Robert Brazelton

University of Missouri-Kansas City

Post Keynesian economics has been developed from Keynes by such economists as Joan Robinson, Richard Chase, Sidney Weintraub, Alfred Eichner, Paul Davidson, Hyman Minsky, and the more recent writings of Sir John R. Hicks.

Major tenets of Post Keynesianism are that: (1) there is in the economic system a great deal of uncertainty as indicated for example, in the "financial instability" hypothesis of Minsky; (2) there is in the system the lack of "precise determinability" which questions the preciseness of the IS-LM Model of the Friedman-Samuelson "neo-classical synthesis" and its trust in "fine-tuning"; (3) prices are primarily a function of costs where, as Weintraub points out, the primary cost is the exogenous wage, especially in a non-competitive market; (4) there is in Keynes a business cycle which depends upon movements along and/or shifts in the investment demand and liquidity preference schedules; (5) the multiplier works to increase real income only if there is excess capacity or an output elasticity of 1, so that, if not, as Weintraub and Brazelton point out, the aggregate supply schedule is neither 45^{o} nor linear; and, that, (6) much of what has been defined as "Keynesian" in texts is not "Keynesian" at all as Brazelton has pointed out elsewhere.

The policy implications of the above question "fine-tuning." They also question the elasticities of both demand side and supply side economics, especially in terms of short-term time periods. Post Keynesians doubt the preciseness of equilibrium states and believe, with Keynes, that the economic system is more complex than many accepted economic models indicate.

ENERGY AND INTERNATIONAL TRADE

Steven S. Chang

Kennesaw College

This paper intends to examine the impact of the energy crisis on the patterns and the direction of international trade. Modern theories of international trade and economic development shall be briefly and critically reviewed. Econometric analyses of empirical data will be provided to test the prevailing international trade theory.

The following questions shall be discussed:

1. Is there any link between energy and international trade?
2. Is the volume of trade between the Western industrial powers increasing during the energy crisis? Is the volume of trade between the industrial nations and the developing countries declining during the energy crisis?
3. During the energy crisis, is international trade becoming less important in economic development?
4. How does the energy crisis affect the terms of trade between the industrial nations and the less developed countries?
5. Can the Ricardian theory of comparative advantage predict the patterns of trade of the world today?

Energy shortage does severely affect the pattern of international trade and thus eventually retard the rate of growth of the world economy. The growth of the Western industrial powers has been seriously hampered by the energy crisis and their demand for the primary products from the LDCs is expected to decrease in the years to come. Therefore, the LDCs can no longer rely on the imports of the MDCs for the source of developmental funds. The LDCs should rely on themselves in their developmental efforts by promoting worldwide inter-LDCs trade.

Judging by the empirical data, the traditional Ricardian theory of comparative advantage has at most limited use in predicting the pattern of international trade. According to the result of our econometric model, the iron law of energy is rejected. In explaining and predicting the changing pattern of world trade, we have to take into consideration other factors such as inflationary expectations, technological advance and monetary growth rates in the developing countries, and the life cycles of products. Further investigations of the causes of the changing pattern of world trade should be very interesting.

INDEXATION OF RETIREMENT BENEFITS

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In recent years, concern has been growing over the effects of inflation on retired persons and others largely dependent upon fixed incomes. The purpose of the paper is to discuss briefly the nature of inflation as it affects pension planning and the various approaches that have been utilized to minimize its adverse effects.

Inflation currently is at levels higher than in the recent past. If inflation averages five percent per year, the value of the initial retirement benefit is cut at the end of five years by 22 percent; at the end of ten years by 39 percent; and after 15 year-and thats the average lifetime of retired employees by 53 percent. Thus, if a retired persons' initial benefit is designed properly the benefit will fal to unacceptable low levels over the average lifetime of the employee.

There are several ways to design security into a benefit structure after retirement. The approach to the problem which is used most frequently is to increase dollar benefits periodically tho those persons already on retirement. The increase may be based on what can be afforded, related to some arbitrary formula, or related to need as expressed by changes in the Consumer Price Index, etc. Ordinarily, such increases are sporadic, and not predictable either as to interval or as to amount. In other words, the plan sponsor quite deliberately does not wish to commit himself in any way to future increases. A main problem with sporadic or ad hoc increases is the difficulty in maintaining equity among the various groups of retired employees.

Another approach followed with some frequency is to adjust benefits by "excess" investment performance. This seemingly painless solution may be at least and possibly more expensive for the plan sponsor as any other solution. The same type of inflation measures will probably lead plan sponsors to help out their employees should investment adjusted annuities fail in relation to need. Another problem with the investment adjusted benefit is that while studies suggest that over almost any period of 20 years, investments in common stocks probably offset the inroads of inflation, for shorter intervals, quite the reverse maybe true. The correlation between the moves in the market and moves in the cost-of-living index for individual years during the last 35 years was only 0.09.

The most direct and responsive method of adjusting pension benefits of retired persons to changes in the price level is to stipulate in the plan that benefits will be modified in accordance with a prescribed procedure to reflect variations in a specific index of consumer prices.

Thus far, plans adopting this approach have designated the Consumer Price Index as the measuring rod, but there is some pressure for the construction of a more specialized index that would show changes in the prices of items affecting the budget of retired persons. The major drawback of cost-of-living benefits written directly into the plan is that the plan sponsor appears to lose control of benefits. One check and balance of runaway inflation in the pension plan is to limit the increase in benefits in any one year to a stipulated maximum percentage such as 3 or 4%. Considering the volatility of cost-of-living changes you could limit the cumulative effect of cost-of-living changes to 3 or 4% per year. Other types of limitations are possible. Some plans compromise as between investment oriented benefits and index adjusted benefits by deliberately setting aside a pool of investment earnings in excess of some minimum determined by the plan. Increases in benefits are geared to cost-of-living changes but no new increases are granted unless the investment surplus pool is sufficient to cover the present value of all post and current cost-of-living increases.

If it is considered desirable to protect a person's relative position in society as opposed to merely protecting his buying power, then it would be more reasonable to use a wage index adjustment. A general index should be used in most instances. If there is a desire to link the pension benefit to the actual pay of the previous job, a job station index should be used. This latter method is fraught with difficulties.

By count of the work of the Pension Task Force of the Committee on Education and Labor of the U. S. House of Representatives there are over 6000 retirement systems for state and local governments in the United States. There appears to be no dominate procedure for adjusting benefits after retirement. In three states there is a procedure for adjusting benefits after retirement. In three states there is a procedure which coincides with indexing by the investments returns of the systems trust fund. One state indexes current pensions by changes in the overall salary level of current employees. Fifteen states have benefits adjusted from changes in the consumer price index. Benefit adjustment which are set at prescribed yearly percentages are used in five states. The remaining states have no automatic procedure for adjusting benefits after retirement. Many of these have used ad hoc increases in the past.

It does appear that inflation is a very real problem that is likely to continue. One of the most obvious ways to deal with this problem is to provide index adjusted benefits after retirement. Checks and balances of various types can be imposed on such benefits to prevent runaway costs. If such benefits are going to be granted, and, in practice, they are increasingly being provided in one fashion or another then it seems to make sense to plan for these in an orderly fashion by funding them so as to produce appropriate cost accounting during the working lifetime of the employee.

THE MICROCOMPUTER AND PRICING STRATEGIES

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Application of economic principles drawn from the theory of the firm are equally applicable to the small as well as the large organization. A profit-oriented firm should be able to utilize the concepts most functional for their specific strategy and of pricing in an appropriate manner to facilitate achieving the objective function previously derived by top management.

The assumption that an adequate share of market is only the responsibility of the large firm is one that has led to the bankruptcy and extinction of many small firms. Therefore, the ability to rapidly change prices through use of microcomputers will greatly facilitate a small firm as it endeavors to gain adequate market share in its attempt to gain a market foothold. The first objective function for the small firm, similar to the large firm, should therefore be to maximize market share. One basic consideration the small firm must remember is that there are price leaders and price followers, even among smaller firms, and that in general prices will remain very sticky upward but will not be sticky downward.

After the small firm has secured an adequate market share the price strategy should then consist of one that has as an objective function the maximizing of profits. Maximum profits and optimal profits are often confused but the small firm will probably do best to use the microcomputer to derive an analysis of its fixed, variable, marginal, and other costs. After costs have been derived then revenue may be determined through strategic pricing decisions germane to the strategy in effect. Revenue becomes deterministic and prices determined.

Economic swings usually dictate that the third and least desirable pricing strategy be one where prices are used as a tool to ensure the survival of the firm and its particular product or service line. Therefore, the firm may resort to the concept of charging prices that reflect only the variable cost because there is no need to give consideration to fixed costs.

The marginal pricing phenomenon is one that may be used to facilitate the firms entry into markets that may have otherwise been considered too risky. The firm, even a very small firm, has specific fixed cost in that it is unable to changethese costs over the economic short run. Therefore, use of the micocomputer to develop pricing strategies that cover only variable costs will enable one firm to enter a market while other firms of similar sales volume and equity may feel that they are unable to successfully enter.

The risks of market entry are minimized through correct price strategies if information flows are timely and aggressive. Utilization of the microcomputer may enable the firm to proceed on the basis of what would ordinarily be unsound if adequate data were not available to facilitate the correct strategy. In conclusion, it has been shown that the microcomputer will enable the small firm to follow precisely the kind of pricing strategies that larger firms have followed successfully for a long time. Correct use of pricing as a management tool will facilitate both the enlargement of market share, total and net profit, and survival of the firm during periods of economic recession.

MICROCOMPUTERS AND ACCOUNTING APPLICATIONS

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Timothy J. Hayes

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Historically, accounting has been one of the first functions to be computerized in profit-oriented organizations. This trend held when the computer industry developed the microprocessor and brought hardware costs within the budget of small businesses. This unfamiliarity with the computer by the business when the accounting function is being computerized has created problems. Controls are overlooked. Information is assumed to be correct without proper verification.

The purpose of this paper is to present the typical accounting applications found on a microcomputer, to present the controls found in and lacking in most microcomputer hardware and software packages, and to suggest inexpensive options that can be used with typical accounting packages.

Since computers can be found in virtually any size, a definition of a microcomputer must be established. For purposes of this paper, a microcomputer is a computer having an 8 bit word. The authors have categorized any computer operating with a 16 bit word as a minicomputer and beyond the scope of this paper. Memory of a microcomputer usually has a 64K maximum. The price of hardware configurations covers a wide range up to $10,000. The most common languages found in accounting applications on a microcomputer are BASIC, MICRO-COBOL, PASCAL, and ASSEMBLER.

Typical Accounting Applications

Several different types of accounting application programs are currently on the market. These programs consist of the more general A/R, A/P, G/L, Payroll, and Inventory along with specialty programs such as Job Costing, Tax Applications, MRP, etc. These programs are designed to serve a wide range of users. To find the necessary controls and adaptability features, the businessman can expect to spend from $200 to $800 per package. The typical packages prices below this range do not contain necessary controls, integrated features, etc. However, there are obvious exceptions to these general comments on cost.

The language in which the application is written should be a major consideration when contemplating a purchase. If modifications will be necessary, it is essential that the program be written in some language other than ASSEMBLER. Very few individuals possess the expertise to modify an assembly language program.

The typical configuration for a small business entering into an automated accounting system would consist of a 48-64K CPU with keyboard, two or three disk drives, video monitor, and printer. A gneral requirement of one disk drive is necessary to house the program diskette and at least one disk drive for data storage.

Controls and Additional Functions

Lack of an operating system, lack of a console log, and simplicity of passwords significantly reduce the amount of control over programs and data on a microcomputer. Also, in the typical small business, the operator serves as programmer and analyst. This lack of segregation of duties allows for easy program tampering. In lieu of these security shortcomings, the best control over program and data is to closely guard the floppy disk.

Most program controls built into software used in large installations are available in packages designed for the microcomputer. Some of these accounting controls are: (1) not allowing posting of entries to general ledger unless debits equal credits; (2) not allowing deletion of a customer in the A/R file who has a balance; (3) requiring proper passwords before creating a customer or vendor account; (4) flagging subsidiary ledger records, i.e., accounts receivable, in posting to the general ledger so that the same records cannot be updated to the general ledger again.

Most microcomputers have additional control procedures that are not accounting oriented, but further the accounting process. When a program is run that requires data files, these files are checked for computer readiness. Common errors in these files result from trying to open files which are already open, problems with the pointers in files, and missing data files. The more sophisticated packages utilize control features to correct these errors or to instruct the user for proper disposition.

Report writers and data base management systems may be inexpensively added to increase the utility of the accounting package. Report writers can generate a multiplicity of reports without additional programming. A data base management system provides for easier data manipulation and storage.

INFLATION, REGULATION, AND RISK

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Since 1973, regulated firms have, in general, not performed well for stockholders when performance is measured by trends in the ratio of market value to tangible book value per share.

Recent prescriptions designed to improve regulated firm financial performance all reduce effective regulatory lag. These reforms in regulatory practice include rate-base inclusion of construction work in progress, automatic adjustment clauses to permit flow-through of costs without regulatory hearings, and use of future rather than historical test years. But does regulatory lag itself serve a useful purpose? Lag alters distributions of returns by flattening them out. Thus, third order stochastic dominance arguments imply risk averse investors prefer lag reductions. If we maintain external regulation, however, an agent-principal problem--between regulator and firm--emerges. Effective regulation requires regulators to judiciously acquire and use industry data in the context of an uncertain and risky environment. Lagged regulatory adjustment is one cost of information

Poor financial performance by a firm in the latest period may be sufficient grounds for regulatory changes if regulators knew that inferior performance signaled a change in the underlying stochastic process driving demand and costs. But firms may invest in subnormal performance now to extract concessions whose capitalized value exceeds foregone profits. Since the principal-agent issue exists, lag serves the useful function of attenuating management's willingness to deceive the commission by investing in subnormal performance.

Thus, regulatory lag (1) allows the commission to gather and evaluate information about economic conditions and (2) limits the willingness of firms to invest in subnormal performance. This is desirable. On the other hand, the cost of excessively long lag is the possibility outlined by Navarro (*Regulation*, 1981) and Carron and MacAvoy (*The Decline of Service in the Regulated Industries*, AEI, 1981) of taxing future generations--who would receive less or lower quality service--to maintain low rates today. This suggests there is an "optimal" lag from the point-of-view of effective regulation. The lag depends upon the regulated industry's discount rate (willingness to invest in subnormal performance today for a possible future payoff), the level of uncertainty about the process generating future costs and demand and the regulatory goals involved.

Optimal lag is formally modeled by assuming regulators are expected consumer surplus maximizers subject to an expected profit (return) constraint for the regulated form(s). Demand and cost are driven by random processes representable by parameters (u,v) with distributions g(u), h(v). Over time, the distribution functions g(·) and h(·) may change. Using Bayesian techniques and the regulators' estimates of the parameters (u,v) are derived from observable firm profit, sales and cost data.

If the problem of electric and gas utilities is fundamentally deep-seated, as the productivity data gathered by Gollop and Jorgenson show ("U. S. Productivity Growth by Industry, 1947-73," in J. W. Kendrick and B. Vaccara, eds., New Developments in Productivity Measurement and Analysis, Chicago, 1980), then reduced lag, in its various guises, should be viewed with healthy skepticism. Rate increases, when granted, would be larger--but that does not imply they should be more frequent, or that the process of regulatory investigation and review should be shortened. Inflation and relative cost shifts can be a cloak to cover regulatory changes designed to raise risk adjusted returns to supernormal levels.

Market to book value in the regulated sector, during the early to late 1960's considerably exceeded the same ratio for unregulated firms. The recent cries of anguish heard from the regulated sector may be reflective of the pain engendered by loss of excessively high risk adjusted returns and a wish to change regulation in order to reconstitute them. The decline in the market-to-book ratio for gas and electric utilities would seem to reflect declining productivity growth, which preceded the recent inflationary experience. But even there, recent Standard and Poor's data indicates profits for these industries grew nearly 17%, adjusting for General Public Utilities, owner of Three Mile Island, between 1979 and 1980, compared to a 3% profit growth for industry generally. The existence of inflation does not provide a prima facia case for reduced regulatory lag or perversion of the agent-principal relationship which is so crucial to the traditional regulatory process.

The Nature, Method, and Scope of Institutional Economics

Allan G. Gruchy
University of Maryland

There are four fields or areas of scientific interest which have been investigated by institutionalists, and which together constitute the very essence of institutionalism. According to this quadruplistic view of the nature and scope of institutional economics these four fields are (1)the philosophical foundations of institutional economics, (2)the theories of culture and human nature underlying this type of economics, (3)the institutionalist theory of the evolving economic system and its related theory of technological or real values, and (4)the institutionalist policy proposals for improving the performance of the evolving economic system.

(1)The philosophical foundations of institutional economics have been taken from the pragmatism of C.S. Peirce, W. James, and J. Dewey. The institutionalists have drawn from the philosophy of pragmatism their understanding of the nature of reality, human behavior, culture, and values. Like the pragmatists the institutionalists take the real world to be an evolving process, stream, or flow of events. They agree that the only permanent feature of this process is irreversible change, and they accept the pragmatists' dichotomous view of human nature according to which there is a tension or conflict between the individual's regard for his self and his regard for the society in which the self is embedded. Like the pragmatists the institutionalists are activists and humanitarians who believe that the world is getting better, and that human beings can contribute to this social betterment.

(2)What the institutionalists from Veblen on have taken from the cultural anthropologists includes an historical and empirical approach to economic analysis, a view of culture as an evolving complex of institutions some of which are serviceable while others are disserviceable, an awareness of human behavior as a cultural product, an understanding of the conflicts in personal behavior and social activities, and an appreciation of the roles of scientific advance and technological change in cultural evolution. Following the cultural anthropologists, the institutionalists take the economic system to be an evolving pattern or field of human relations whose various parts display coherence rather than mechanistic equilibrium.

(3)The institutionalists' theory of the evolving economic system is an interpretation of the structure and functioning of the real or actual economic system. Their theory of the current economic system is a triplistic theory that explains the interrelations among the economy's public, large-scale oligopolistic, and small-scale competitive sectors. The economic norm in this triplistic theory of the economic system is the large-scale industrial enterprise, which dominates the whole economy and exploits the small-scale competitive sector. The uncontrolled triplistic economy reveals no tendency to move towards an equilibrium or state of rest. On the contrary, the "normal" state of this economic system is one of disequilibrium and transition from one stage of evolution to the next stage. The economic system is both an allocating and a valuing system. It allocates scarce resources in accordance with the values or ends possessed by the individuals who participate in the nation's economic affairs. Institutional economics is concerned with the individual and social values that guide economic behavior, and in this connection it draws attention to the distinction between pseudo market or price values and technolggical or real values.

(4)Institutionalists are very much interested in the current state of the economic system and in the future state towards which the current economic system is moving. They reject the Friedmanian call for a return to the competitive system of a bygone era. Also they reject the uncoordinated interventionism of the Keynesians on the ground that it does not go far enough in its efforts to establish a compensated economy. It is the view of the institutionalists that the effort to create a programmed harmony of interests will be successful only when two conditions are met: (1) the creation of a national consensus among the nation's major interest groups and the government with regard to such matters as the rate of economic growth, the content of the nation's gross national product, and the sharing of the national income; and (2) the setting up of an indicative democratic national program that would demonstrate how this national consensus would work out. The basic problem is converting individual and social values into quantitative claims upon the nation's gross national output. All such values and their associated quantitative claims would be coordinated through a national consensus, so as to improve the quality of human experiences with the aid of a socially approved use of the nation's gross national product.

A basic unity runs through these four fields of scientific interest to institutionalists. The philosophical foundations and the cultural underpinning of institutional economics provide the analytical framework or paradigm within which the institutionalists construct their triplistic theory of the evolving economic system, and within which they make their policy proposals for the improvement of this system's performance. It is these four fields of scientific interest that reveal the fundamentals of institutional economics.

AN ANALYSIS OF BANKS JOINING THE FEDERAL RESERVE SYSTEM DURING PERIODS OF DECLINING MEMBERSHIP

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The Federal Reserve "membership problem," the secular attrition of member banks, has been widely discussed in economic literature. The companion question of why banks join the Federal Reserve during periods of declining membership has not been adequately investigated. This paper examines the performance of banks joining the Federal Reserve and explores the motivations for joining.

During the period beginning in 1974 and ending in 1976, forty-seven commercial banks changed their status from nonmember state banks to either national banks or state member banks, thus becoming Federal Reserve members. This figure does not include de novo banks. During the same period eighty-three banks disaffiliated with the Federal Reserve to become nonmember state banks.

It is assumed initially that banks joining the Federal Reserve might do so to derive an advantage from a number of direct benefits provided to members. The list of services may include transit and wire transfer services, access to the Federal Reserve discount window, free currency shipments and a variety of other amenities not directly available to nonmember banks. The discounted benefits of these services would be expected to exceed the cost of membership (including any "earnings tax" from holding sterile non-interest earning assets) if membership is to be economically beneficial. The decision to join the Federal Reserve would therefore be expected to have a non-zero impact on a given joining bank's financial performance.

The measurement of financial performance in this study is based upon an examination of thirty ratios for each bank. These ratios cover a wide range of elements of commercial bank activity. The broad areas of asset composition, liability structure, profitability and capital adequacy are represented. These variables have been widely used in economic and financial literature. The ratios are based upon year-end data from the F.D.I.C. Reports of Condition and Income.

Each bank joining the Federal Reserve between January 1, 1974, and December 31, 1976, was paired with a control bank. The control bank was required to: (1) be a Federal Reserve member; (2) operate in the same banking market (SMSA) as the joining bank and (3) be of approximately the same size. Satisfaction of these conditions reduced the sample size to twenty-one pairs of banks.

Univariate analysis employing a simple t-test was applied to the sample banks. Mean values for each of the thirty performance variables were compared between joining and control banks in three separate time periods: (1) t-2, two years before joining; (2) t, the year of initial Federal Reserve membership and (3) t+2, two years after joining. These tests permit comparison between members and nonmembers before joining and the post membership performance of "new members" vs. "old members."

In general, the study found that banks becoming Federal Reserve members did not experience a significant change in profitability after joining, nor did they differ in profitability with control banks in any of the three time periods that were examined. The asset structure of joining banks was observed to shift toward riskier, higher yielding loans upon joining the Fed and away from U. S. government securities and municipal obligations. Additional results will be provided upon request from the authors.

A short questionnaire was sent to the comptroller of each bank that had joined the Federal Reserve during the 1974-1976 period. Bankers were asked to rank the perceived advantages of Federal Reserve membership. Access to the discount window was listed as the primary advantage by 33.3 percent of respondents, followed closely by funds transfer facilities with 30.3 percent.

Bankers were also asked to explain their banks' decision to join the Federal Reserve. A number of different explanations were given: (1) conflict with state regulatory authorities; (2) conflict with the F.D.I.C. regulatory functions; (3) access to the Federal Reserve transit facilities for clearing cash letters; (4) conversion to a national bank charter requiring membership; (5) provision of better service for correspondents; (6) access to the discount window; (7) to facilitate holding company and/or branching decisions and (8) to take advantage of the public confidence in the image of the Federal Reserve. As a follow-up, bankers were asked if affiliation with the Federal Reserve had been satisfactory given the reasons that their banks joined. Eighty-nine percent of those bankers responding answered affirmatively.

COMPETITION IN THE ELECTRIC INDUSTRY

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<u>Competition in the Electric Industry</u>

Recently policymakers have shown more willingness to accept the concept that the forces of competition in markets such as airlines and trucking are strong enough to provide a viable alternative to regulation. One industry in which direct competition currently exists between utilities is the electric industry. In 1966 there were 49 cities in which municipal electric utilities competed with private electric utilities for customers. However, there has been a sharp decline in the number of cities with competition; competition ceased in at least 14 cities from 1966 to 1980. The purpose of this paper is to investigate the reasons for the decline in competition within this industry.

As a first step hypotheses about the demise of competition were formulated. The hypotheses involved the influence of regulation, population, generating facilities, purchased power, and profits. Next, questionnaires were sent to those municipal utilities which lost competition between 1966 and 1980 in an attempt to investigate factors which influenced loss of competition. Finally, statistical tests were performed to analyze more rigorously characteristics of firms which lost competition and firms which still have competition.

An analysis of the questionnaire responses of the utilities does not provide any definite patterns although only two of the eight responses did not cite either PSC pressure or low profits as a reason to cease competition. In other words, at least one of these factors was important in 75% of the cases.

In all of the statiistical tests, firms were first divided into those which lost competition and those which still have competition. These groups were further divided according to characteristics required for each test. Chi-square tests were performed on the sampled firms.

Although statistical results are generally very weak, there is some support for the hypothesis that regulators are hostile toward competition. If this is true, possibly the most significant barrier to promoting competition in the electric industry is the attitude of regulators.

RECENT TRENDS IN DEVELOPMENT ASSISTANCE
COMMITTEE AID PROGRAMS: A COMPARISON

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Since 1969 when the Pearson Report was first published, the 1 percent of GNP and the .7 percent of GNP targets have been endorsed by recipients and donors of economic assistance.[1] Moreover, a consensus has emerged which favors more emphasis on grants, untied and multilateral aid.

This study briefly compares the aid performance of the Development Assistance Committee (DAC) countries and provides an explanation for this performance.

A review of available data[2] shows that the performance of the DAC countries in terms of the 1 percent of GNP target has improved since 1970. The total net flow of resources by the DAC countries to the Less Developed Countries (LDCs) amounted to .78 percent and 1.23 percent of their combined GNP in 1970 and 1978 respectively. Viewed individually, the DAC countries which met the 1 percent of GNP target in 1970 included only five, i.e., Australia, Belgium, France, Netherlands and United Kingdom, while twelve countries met the target in 1978, i.e., Belgium, Canada, Denmark, France, W. Germany, Italy, Japan, Netherlands, Norway, Sweden, Switzerland and United Kingdom. The U.S.A., although the largest donor in absolute terms, did not meet the target in 1970 or in 1978. The largest increase in total resource giving between 1970 and 1978 was experienced by Switzerland, Norway and Belgium and the smallest by the U.S.A.

With regard to the .7 percent of GNP target the data shows that the aggregate performance of the DAC countries deteriorated somewhat between 1970 and 1978. Official Development Assistance (ODA) was .34 percent and .32 percent of their combined GNP in 1970 and 1978 respectively. Viewed separately, no DAC country met the target in 1970, four met it in 1978, i.e., Denmark, Netherlands, Norway and Sweden. Eleven DAC countries improved their position toward meeting the target between 1970 and 1978. However, the U.S.A. position deteriorated substantially as ODA was .31 and .23 percent of GNP in 1970 and 1978 respectively. Large increases in the amount of ODA given were experienced by Denmark, Finland, Japan, Netherlands, Norway, Sweden and Switzerland between 1970 and 1978.

A review of the qualitative aid performance of the DAC countries shows that while the grant element of total ODA for most DAC countries remained high in both 1977 and 1978, this was not the case for the untied and multilateral component of ODA.[3]

The untied component of ODA disbursements for all DAC countries was 47.16 percent and 52.54 percent in 1977 and 1978 respectively. Viewed separately, Switzerland, Sweden, Norway, Italy, Germany, Austria and Australia gave three-fourths or more of ODA on an untied basis in 1977 and Sweden, Norway, New Zealand, Italy, Germany, Finland, Denmark and Australia matched this record in 1978. The U.S. untied component of ODA disbursements was the lowest among the DAC countries in 1977, i.e., 27.31 percent, and the third lowest in 1978.

Concerning the breakdown of ODA in bilateral and multilateral components, available data[4] show that aggregatively the DAC countries gave more than two-thirds of ODA on a bilateral basis in both 1977 and 1978. Viewed separately, Finland and Italy gave the majority of their ODA on a multilateral basis in 1977 and 1978 while Belgium and Norway gave in excess of 40 percent of their ODA on a multilateral basis in 1977 and 1978. France had the worst record with 13.13 percent and 15.03 percent on a multilateral basis in 1977 and 1978 respectively.

But what accounts for this rather mixed and not too encouraging record of aid performance? Although most DAC donors have proclaimed their support of the .7 percent of GNP target it has been shown that few have met it. In this connection, Denmark, Netherlands, Norway and Sweden have been the front-runners. On the other hand, the U.S.A. has fallen further behind in meeting the target. One of the most plausible explanations of this behavior is the extent to which the internal political climate in these countries is supportive of development assistance. Available evidence suggests that while the climate has been positive on development assistance among the front-runners, it has become increasingly negative in the U.S.A. This negative attitude in the U.S.A. is undoubtedly a function of many factors including tiredness, impatience and disillusionment with an involvement of long standing.

With regard to the qualitative aspects of aid performance of the DAC countries, again domestic economic and political considerations would tend to explain the disparities in the concessions made to the LDCs. Denmark, Netherland, Norway, Sweden and a few others have consistently been good performers of aid given on a grant, untied and multilateral basis. On the other hand, DAC countries with prior ties with LDCs and/or who have viewed economic assistance as an instrument of foreign policy have tended to give aid on a bilateral basis.

Conclusions

Given the Pearson Report criteria, the performance of the DAC countries in meeting the expanding needs of the LDCs for development assistance is discouraging. Moreover, there is no basis to hope that an improvement on this performance record is around the corner.

Notes

1. The Pearson Report recommended, among other things, that each developed country increase its total resource transfers to the LDCs to a minimum of 1 percent of its GNP and the official resource transfers to a minimum of .70 of its GNP. 2. Organization for Economic Cooperation and Development, Development Cooperation, Paris, OECD, November, 1978 and 1979. 3. Ibid. 4. Ibid

MICROCOMPUTERS AND FINANCIAL APPLICATIONS

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Recent technology extends the range of computer capability to the smallest firms. Effective utilization of microcomputers, as is the case with other computers, requires planning for both hardware and software needs. Steps in applications include defining needs including descriptions of applications, anticipated future applications and volume of transactions, and special requirements that are unique to the particular business. While standard software packages are available for many applications, selection of a vendor should include consideration of availability of assistance in developing programs for special purposes.

Applications, including payroll, accounts receivable, accounts payable, inventory control, production scheduling, forecasting, cost accounting and others, often are integrated into a management information system (MIS). The MIS incorporates a data base. Management of the data base is a significant corollary of the management information system. The data base subsystem provides the mechanism for joining the MIS together into a cohesive unit.

BARGE TRANSPORTATION AND THE DEMAND FOR RAILROAD SERVICES

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The increasing importance of safe, reliable, and efficient transportation to our economy and the escalating cost of energy necessitates a careful analysis of the issues and policies affecting transport modes. This essay focuses on the relative efficiencies of water and rail transportation and some of the issues related to each mode.

An analysis of the major factors influencing the modal choice revealed that the greater the length of haul, the less the time sensitivity, and the larger the annual point-to-point tonnage the more likely the shipment would be by water. Although barges can carry much larger quantities of material, railroads are faster and generally more flexible.

An attempt was made to compare the relative economies of shipment by water and rail. One method of making the comparison was BTU per ton mile, but this was difficult because of the factor of circuity and the dissimilarities of cargo and terrain. Also, additional BTU factors would be needed to cover harbor and fleeting activities for barges and railyard and switching activities for the railroads. A comparison of total costs was made difficult because of the subsidies to both water and rail transportation.

An evaluation of government subsidies to rail and water transportation proved difficult because of the vast and varied aid to each mode over a long period of time. Railroad aid spans from the original land grants to the current subsidies to capital funding and retirement programs for railroad employees. Aid to water transportation began with harbor improvements and canal construction and presently includes the construction of waterways and dams and the maintenance of existing waterways and locks.

The affect of federal aid to waterways on railroads was analyzed. While rail rates in the presence of barge competition were often found to be lower, data compiled by the ICC revealed that five river valley railroads in direct competition with barges had greater increases in total revenue and a higher return on investment than other Class I Railroads. Although the data was not conclusive, it does not appear that water transportation diminishes the demand for rail services or destroys the profitability of affected railroads.

Alternative methods of funding transportation systems were explored. A policy of laissez-faire assures that only those transportation services demanded would be provided and at a price agreeable to both buyer and seller. However, that approach was found inadequate in dealing with monopoly rates, price discrimination, "sharpshooting" and in providing the external benefits afforded by each mode.

The imposition of cost-recovery user charges, in the form of a fuel tax on inland waterways, was explored as a means of assuring more even competition. For this method to be efficient, a linkage would have to be established between the payment of navigation services consumed and the cost of those services. Short-run marginal cost pricing would provide a socially efficient allocation of navigation projects, but user charges so based would require year-to-year changes to match variations in government outlays. Such changes would be unpredictable and would inject an element of uncertainty into business planning, investment decisions and long-run contracts in which water transportation was a significant cost factor.

The essay concludes with a summary of the problems of comparing the relative efficiencies of water and rail transportation, the difficulties in ascertaining the value of public assistance to each mode and its impact on both the recipient and its competitors, the difficulty in assigning an appropriate discount for externalities and in estimating the true cost of shipment by each mode. Also summarized were the unresolved monopoly problems inherent with a policy of laissez-faire, the difficulties in administering a fair and effective cost-recovery user fee approach, and the merits of a policy designed to combine the best efficiencies of water and rail service.

THE MANY FACES OF INFLATION

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Many years of study of the relationship between economic growth and inflation by Geoffrey H. Moore have led him to the following conclusion:

> "...as far as U.S. experience is concerned, declines in the rate of inflation have been associated with virtually every slowdown or contraction in real economic growth and have not occurred at other times."1/

Moore's studies found upswings and downswings in the inflation rate related to growth cycles in economic activity. Growth cycles are made up of periods of growth in real output at a rate less than the long-term rate (including actual contractions), alternating with periods of rapid growth. Moore also found the rate of change in the general price level—as measured by the Consumer Price Index—lagged behind turns in the growth cycle, and that swings in measures of more sensitive prices (such as industrial materials prices) generally have preceded swings in the general price level.

This paper attempts to extend and broaden somewhat the framework of Moore's studies of the inflation cycle in the following ways: 1) using data that extend through 1980 and include the recent major GNP revisions, this paper repeats Moore's analysis for the period beginning with 1965; 2) Moore's analysis is also repeated using price series other than the CPI as measures of the general inflation rate, with some emphasis on measures of the so-called underlying inflation rate; and 3) within the same data framework, swings in the inflation rate are examined with reference to whether or not the level of actual real GNP is above or below the estimated trend level of real GNP—an approach very much like GNP gap analysis. This paper's approach differs somewhat from Moore's

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1/ "The Current State of the International Business Cycle: A New Measurement System," in Contemporary Economic Problems, 1978, William Fellner, ed., American Enterprise Institute, 1978, p. 65.

analysis in the areas of dating growth cycles and of estimating the trend in real output growth, and in using quarterly rather than monthly data.

The analysis reported in this paper shows that swings in the rate of price change are evident for both the CPI and the Industrial Materials Index, and both appear to be associated with swings in the growth cycle. The decline in the rate of CPI inflation regularly lags the downturn in the growth cycle. The decline in the rate of Industrial Materials price change generally also lags the growth cycle downturn, but not by as long as the CPI changes do. Thus the downturn in the rate of change of the more responsive Industrial Materials prices leads the downswing in the CPI. These results are in keeping with the general contours of Moore's results for the same period. Substituting an indicator of the underlying inflation rate—the CPI less food and energy—continues to give very similar results. Furthermore, the choice of a measure of price change from a number of other alternative measures does not very much affect the earlier conclusions about either the lags in inflation rate swings with regard to the growth cycle, or the sequences in the inflation cycle.

Finally, the same data framework was used to examine swings in the inflation rate with reference to whether or not the level of actual real GNP is above or below the estimated trend level of real GNP for the same periods. Since 1965 there have been two completed GNP trend gap periods (periods when actual GNP was below its estimated trend value). Very nearly all of the downswings in the general inflation rate during the 1970s came during the two GNP trend gap periods. The timing of the beginning of a decline in the rate of price change is closely related to the opening of a GNP trend gap (as designated by the initial quarter when actual GNP is below its trend level). Furthermore, the timing of the inflation rate downswing is more closely related to the opening of a trend gap than to a downturn in the growth cycle.

Moore concludes that downswings in the general inflation rate come when there is a downturn in the growth cycle, but with a substantial lag. This paper suggests that it requires the opening of a GNP trend gap for the appearance of a downswing in the general inflation rate, and that such a downswing begins almost in coincidence with the opening of the trend gap.

WOMEN IN HIGHER EDUCATION

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Women in higher education have been disadvantaged as individuals compared to the level of their personal abilities. No significant progress was made in the 1960s since the Equal Employment Opportunity Commission (EEOC) was first given its mandate by Congress in July 1965 to eliminate job discrimination based on color, national origin, race, religion, or sex. Faculty and administrators were specifically excluded from Title VII of the Civil Rights Act of 1964, which created the EEOC in 1965. However, President Nixon on March 24, 1972, signed the Equal Employment Opportunity Act of 1972 which amended Title VII to include the academic personnel of educational institutions. Thus, the 1970s provided the best chance for improvement of the faculty status of women. The 1980s might provide fewer opportunities for remedial action, since fewer new hires will take place; however, optimism is still in the air.

Education is one of the most important areas related to equity, upward mobility and elimination of undesirable sex differences. The professional persons who staff our schools and colleges frequently serve as role models for the students. Young children's first experience with formal education, nursery school and kindergarten, typically exposes them to women rather than men teachers. As pupils move up through the elementary grades, the proportion of male teachers increases, but these increases occur disproportionately in traditionally male oriented fields. In the secondary school years, additional increases in the proportion of male teachers and sex stereotyping by field remains as in the elementary grades. At the collegiate level, women instructors are a minority and they tend to occupy the lower professorial ranks. School and college administrators at all levels are predominantly male. Sex-role stereotyping among teachers and administrators at different levels of education represents a potentially serious problem. The vigorous affirmative action efforts have tended to expand career opportunities for women faculty. Women are still underrepresented in top administrative positions for various reasons. The major reason in my opinion is that most search committees give significant weight to previous administrative experience. Since many women lack administrative experience, they may never become candidates. In order to provide greater opportunity in the future, women should continue to seek graduate degrees and administrative experience.

The purpose of this paper is identifying some of the major issues concerning the education of women. The major points to be discussed are women's educational progress, specifically the college enrollment and higher education degrees obtained and the various academic disciplines. This paper will cover the educational experience of women over the past three decades. The years covered by this study are.1950, 1960, 1970, and 1978. The male oriented fields, semimale, semifemale, and female oriented fields are analyzed for the years un er study.

RURAL WATER IN THE UNDERDEVELOPED WORLD: THE AMERICAN SAMOA CASE

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American Samoa is only one of a large array of states exemplifying the underdeveloped world's needs for better rural water facilities. Even though a wide variety of water problems may be identified, each seems to suffer the malady of low water quality.

Today, in the underdeveloped world it is estimated that in excess of one billion people in rural areas do not have adequate water supply, and the rate at which access to safe water is being provided is too slow to keep pace with population growth. Here, waterborne or water-related disease is only of the major causes of sickness and death. Public health experts feel strongly that the provision of safe water is of prime importance to public health.

American Samoa is the southernmost possession of the United States and consists of seven islands located in the south Pacific. These islands have a combined area of about 76 square miles.

For the past two decades, the inadequacy of water supply systems in American Samoa has been a constant source of public and private concern. With its accelerated economic growth and population increases that occurred over this period, numerous water-related problems emerged. Of particular concern to public health officials are the high incidence rates of certain water-related diseases, especially infantile diarrhea and infectious hepatitis.

The rural population of Samoa utilizes a village system approach to settlement. Although individual ownership of land is common, almost everyone lives in and almost all activity centers around the village. Most decisions affecting the general population is made within the context of the village.

There are over 40 villages with water systems completely independent from the American Samoa Government water system. Generally, rural water systems are small, unplanned systems that have developed over time to supply water to a village or a portion of a village. Water supply is generally derived from surface water streams. With very few exceptions, these sources are inadequate during the dry season.

The situation in American Samoa is quickly being critical. With growing rural population and with an adequate water supply in case of drought and in many cases just to meet demands during the annual dry season, water shortages are eminent. Two different, but related programs need to be instituted simultaneously. First, a complete revamping of existing water supply systems must be undertaken. Second, a drinking water education program. Most rural inhabitants do not understand the basic concepts of disease and disease transmission.

MANUFACTURING IN THE TEXAS ECONOMETRIC MODEL: AN ANALYSIS OF INPUT-OUTPUT AND MARKET AREA SPECIFICATIONS

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The paper summarized herein describes the ongoing development of the manufacturing demand equations within the State of Texas Econometric Model Project. These structural relationships, which form an important part of the system, are specified according to both the geographical extent of the relevant market and the nature of the derived demands for the products being analyzed. With respect to the geographical limits of the market, efforts are directed at the identification of goods which are sold in local and regional areas as opposed to those which are sold primarily on a national and international scale. This information is obtained both by direct contact with principal producers in each sector and through the calculation of the simple location quotients which are utilized in traditional economic base studies. The two sources generally confirm one another.

The derived demand nature of several manufacturing industries is ascertained through an examination of national, state, and regional input-output tables. These tables, of course, provide information regarding the interrelationships among industries in the production process. Specifically, they may be employed to determine the extent to which the outputs of one manufacturing sector serve as inputs to another. In cases in which a significant linkage is exhibited, the demand for the "input" good may be partially derived from the demand for the "output" good. In addition to the final and intermediate demand variables, the equation specifications also generally include both the national output level within the relevant sector and a trend component. These explanatory factors are included to account for, respectively, the degree to which the local demand is "inherited" from national market conditions and the extent to which there is a temporal aspect to the industry. It is suspected <u>a priori</u> that several of the trend variables will exhibit negative coefficients, thus reflecting adverse productivity conditions.

In terms of organization, the paper initially provides a brief overview of the structure of the State of Texas Econometric Model. This model, which is currently being completed under the direction of the author, is an extremely large simultaneous equation system which seeks to characterize a broad range of economic activity within the state. Following this exposition, a full description of the conceptual development of the manufacturing demand relationships is given. The analysis emphasizes the precise procedures employed in the characterization of both the extent of the market and the nature of intermediate product demand. Several preliminary empirical expressions are then presented and examined. These initial estimates are derived via ordinary least squares regression with an associated maximum likelihood correction for the presence of serial correlation. The final equations will be determined by a methodology designed for large dynamic temporal systems exhibiting autoregressive disturbances, multicollinearity, and limited observations. Finally, a concluding section summarizes the paper and provides a prospectus on the remaining efforts within this sector of the Texas model.

SHERLOCK HOLMES, ALFRED MARSHALL, AND KARL MARX

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During the past century, Sherlock Holmes has been the subject of extensive analysis and interpretation. In particular, he has been credited with significant knowled e and ability in a number of disciplines of scientific inquiry. Despite the proliferation of writings about Holmes, his cases, his methods, and his talents, however, there has been one critical area in his arsenal of expertise and experience which has been sorely neglected. Specifically, it may be conclusively illustrated that Sherlock Holmes was quite competent in the field of Economics (or Political Economy as it was generally termed at the time) and that he made extensive use of this knowledge in achieving solutions to several cases. In fact, it may even be shown that he was associated with both Alfred Marshall and Karl Marx during critical periods in the development of their ideas. Hence, it may be plausibly asserted that he formed a major link between British and German economic thought during the last half of the nineteenth century. The "Canon", i.e., the original chornicles of Holmes' cases, contains numerous references to Victorian coinage as well as several references to the fees, life style, and income of the detective. These remarks have led, respectively, to numerous articles on numismatics and on living conditions and prices during this era. There have been no efforts to date, however, to demonstrate the extent to which economics as an academic discipline played a pivotal role in the career of Sherlock Holmes. Moreover, his important role within the history of economic thought as a source of interrelationship between Marx and Marshall has been entirely ignored.

The paper which is summarized herein seeks to eliminate these voids in the literature through a comprehensive examination of the origins of Sherlock Holmes' education in economics, his familiarity with the subject and its leading protagonists, and his application of its basic principles in his occupation as the world's first consulting detective. Specifically, the paper demonstrates that, with respect to Holmes and the "dismal science", (1) he studied the discipline at Cambridge under the tutelage of Marshall between 1874 and 1877, (2) he discussed the Marshallian system with Karl Marx at the British Museum in London, (3) he exhibited an excellent working knowledge of practical economics, economic history, and contemporaneous economic issues, and (4) he applied the basic tenets of economics in his professional activities as an author and consulting detecitve. Moreover, he possessed the basic knowledge in collateral disciplines (e.g., mathematics and history) which would be required to fully comprehend and utilize neo-classical economic concepts. Finally, it should be noted that, in several of his critically important cases (e.g., "The Red Headed League"), his expertise in economics was essential to the ultimate resolution of highly perplexing situations. Consequently, it is justifiable to rank Sherlock Holmes as one of the first important applied practitioners of the science of Political Economy and as a critical linkage in the development of major strains in German and English economic thought.

CETA TITLE II : AN ANALYSIS OF PARTICIPANT IMPACT

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Recent interest in U.S. manpower policy has focused on the extent to which a variety of programs (funded principally under the Comprehensive Employment and Training Act - CETA) have served to improve the competitive labor market position of unemployed and under-employed workers. For the most part, these programs concentrate on improving the productivity of the disadvantaged worker by providing greater access to the labor market through the breaking down of a wide range of social and institutional barriers to entry.

Not unexpectedly, economists have recently begun to explore and evaluate the extent to which these many manpower programs have improved the status of the participants. For the most part these efforts have taken the form of a comparison of the pre - and post - program differences in the earnings of CETA participants.

In a similar, though significantly broadened frame, data from a representative sample of six CETA prime sponsors in the State of Florida were obtained and analyzed. Data collected for the study included a wide range of socio-economic information on the individual participants, characteristics of the local area including labor market conditions, and prime sponsor characteristics, as well. Specific information on the individual participants' pre-CETA status was obtained from CETA intake files, while post-CETA information was obtained through telephone interviews. Adjusting for local economic conditions and the goals and operating procedures of prime sponsors, individual participant data permitted an analysis of both the economic and non-economic impact of a variety of programs funded by CETA. The economic impact was determined on the basis of the net income change for participants as a result of the CETA experience together with an assessment of the employment status, job satisfaction, and job stability of the participants. The non-economic evaluation concentrated on the participants' assessment of the program's supportive services (child care, basic education, etc.) and the post-training benefits derived including those based largely on economic gains (job satisfaction, better housing, etc.) or on socio-psychological factors (self esteem, etc.)

The results are quite positive, reflecting a net improvement in participant earnings of 49.32 per week; a decrease in the receipt of public assistance from 25.08% to 14.56%; with the majority (54.63%) of the participants employed full time, post-training. In general, participants rated the training provided by their CETA experience (especially on-the-job training) as quite good, with most criticisms directed at the programs inability to deal with special problems (child care, transporation, etc.) and the lack of placement assistance following completion of the training program.

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PROBLEMS OF ENERGY TRANSITION IN TRANSPORTATION

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In the decade of the 80's one of the greatest uncertainties for society is the availability of an uninterrupted supply of affordable oil. Particularly vulnerable is the transportation sector which is at the same time the largest single user of oil and which possesses virtually no possibilities for substitution to other sources of energy. Thus, from the point of view of the transportation sector, a transition to a new state whereby there is reduced dependence on imported oil is crucial.

Using a systems approach this study evaluates the technological, economic social and political feasibility of the implementation of five technology paths which could substantially or totally remove dependence upon foreign oil. Broadly assessed are auto fuel economy, electric vehicles, oil shale, coal liquids, biomass all of which have varying potentials for displacing oil imports.

Based upon research completed for the Department of Transportation, the vehicle related technologies (auto fuel economy, electric vehicles) could save by 1990 and 2000 2.3 and 4.5 million barrels of oil per day respectively. Fuel related technologies (oil shale, coal liquids, biomass) could produce 1.0 million barrels per day by 1990 and 4.5 by 2000. The projected investment costs to the year 2000 are 250 billion. As a whole the average operating cost for all technologies will be somewhere between $45-70 per barrel.

The essay concludes that independence from oil imports is not constrained by technology but this goal cannot be achieved without incurring high internal costs economic, social and environmental. It is further concluded that the transition process will necessitate difficult policy decisions since a market solution is unlikely, and even if this strategy were to be successful, it will be characterized by significant externalities. There is, in brief, no easy way out of this dilemma and each attempt at a solution contains its own unique set of costs. Success in this mission will depend upon a willingness on behalf of society to knowingly incur the extra costs involved in implementing large, expensive and complex technologies.

THE GROWTH AND GEOGRAPHICAL DISPERSION OF HEALTH MAINTENANCE ORGANIZATIONS

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The two overriding health care issues facing the country are rapidly escalating health care costs and the maldistribution of health resources among specific socioeconomic groups and between geographic areas. Our solutions to health care problems have centered on three alternative policy approaches: increased regulation of health care delivery, possibly including mandatory cost ceilings; national health insurance, toward which Medicaid and Medicare are a first step; and the promotion and dissemination of health maintenance organizations (HMO's). Incrased regulation and widespread national health insurance would decrease market allocation of health resources, while the thrust of HMO development is to increase market incentives in health care. The objective of this paper is to describe and analyze the growth and geographical dispersion of HMO's, as a tool in evaluating the role of HMO's in health care delivery and financing.

An HMO is a comprehensive health care plan that provides coordinated health care services to voluntarily enrolled members on a prepaid basis. The concept of HMO's has evolved as a mechanism to reintroduce cost-consciousness and competitive market elements into the health care industry. The objective is to restructure the incentive system to physicians to give them a vested interest in the savings which result from efforts to control costs and to maximize efficiency in the health delivery system. A major way that HMO's reduce health care costs is by reducing the number of episodes of hospitalization and, sometimes, the average length of stay per hospitalization. HMO's bring additional cost consciousness to an area through increased competition and providing greater consumer choice.

During the past decade, the number of HMO's increased over nine-fold, while their enrollment tripled. Much of the recent growth in the number of HMO's, from 26 in 1970 to 236 at the latest HMO census in June 1980, is attributable to the investment of Federal funds in HMO development. The HMO Act of 1973, and its Amendments of 1976 and 1978 enact the Congressional mandate to demonstrate "the extent to which the HMO approach to health care can be 'transplanted' to new environments, with new participants putting it into operation." This legislation commits the federal government to a time-limited demonstration effort to support HMO development. Grant and loan assistance is provided to help establish operational HMO's that meet federal standards.

Growth of membership in HMO's has been considerably slower than growth in the number of operational HMO's, indicating that most of the newer HMO's are still relatively small. Currently, 9.1 million enrollees are served by HMO's, or approximately 4 percent of the total population. A penetration rate of 20 percent of a local population is viewed as extremely good by

HMO managers. An economically viable HMO needs to serve at least 20,000 enrollees. This means that access by a total population of at least 100,000 is needed for a self-sufficient and viable HMO. Thus, HMO development has been largely an urban phenomenon and occurs most effectively in areas with fairly distinct population characteristics.

The geographic distribution, or spread, of HMO's is becoming broader, although they continue to be concentrated in the Middle Atlantic states, Midwest, and West. The 236 current HMO's are located in thirty-eight states, the District of Columbia, and Guam; thirty-two states have two or more HMO's, and ten states have ten or more HMO's. The membership of HMO's is also becoming more widely dispersed across the country with the rapid development of new plans, but it remains most heavily concentrated in California and the Pacific Northwest; currently, 40 percent of total HMO membership is in California. There are several reasons why HMO development and growth has been unevenly distributed between states. HMO development has responded to consumer market factors. They tend to be established in areas characterized by higher incomes, larger and more urban populations, greater public and private insurance expenditures, and more physicians per capita. HMO growth is also facilitated where there is significant population growth, as new in-migrants do not have previously established physician relationships and are amenable to enrolling in an HMO. In addition, unionization and employer attitudes can increase HMO response. Excess hospital capacity and physician supply in the community are also related to HMO development.

The future pattern of HMO development and growth will be significantly influenced by a new HMO strategy - the targeted community development strategy. This is in contrast to the earlier passive-reactive posture of funding projects on a first-come, first-served basis. Self-initiated projects will continue to be funded throughout the country, but the Office of Health Maintenance Organizations of HHS will concentrate its efforts and resources on 61 target communities that are perceived as optimizing three criteria: to maximize increases in numbers of HMO's, to expand enrollment in existing HMO's, and to maximize cost savings. There is also a high priority in HMO policy to encourage private investment in HMO's. The Department of HHS estimates that a total of 45 privately funded HMO's will be launched between 1979 and 1983, and an additional 45 initiated in the period 1983 to 1988.

HMO's are not a panacea to the country's health care delivery system, but they are a viable step in the development of a rationally organized delivery system. They have been clearly demonstrated to reduce health care costs and to stimulate competition in those communities having one or more HMO's. The concept is spreading, though unevenly so far, and is expanding in numbers and diversity of HMO's and of their enrollees. It is expected that this growth and increased dispersion will continue through the 1980's, spurred by the national targeted community HMO development strategy.

STRATEGIES FOR COAL TRANSPORT IMPROVEMENT

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Although the response of the United States to uncertainities relevant to fossil fuel supply constraints and rising energy costs has been painfully slow, new patterns of energy supply and demand are expected to emerge during the ensuing decade. The search for domestic energy sources capable of meeting current and expected energy demand has led to a re-examination of the potential of U.S. coal resources. Because coal is relatively bulkly, transportation costs represent a significant percentage of the delivered price. This essay examines the expected changes in coal production and coal transport patterns during the decade of the 80's, identifies existing and expected highway and rail related coal transport constraints and advances criteria for the development of taxing and allocative mechanisms to mitigate coal transport related externalities.

Using data derived from research by the U. S. Departments of Transportation and Energy, coal is forecast to increase from 21 percent to 30 percent of total BTU's of energy consumed between 1975 and 1990. While increase coal production is forecast for both the eastern and western regions of the U.S., the greatest production increases and movement are forecast for the West; consequently, increased coal traffic is expected to create negative externalities for communities along the Western and Midwestern rail corridors. Expanded coal production in the East is also expected to generate further deterioration of the coal haul roads of the region. Coal road deterioration will produce regional externalities and result in declines of coal production and/or increases in coal prices.

Coal transportation related problems do not appear to be difficult to remedy since they do not involve insurmountable physical, technological, environmental or economic obstacles. However, closer scrutiny reveals that the coal transport issue consists of several essentially unique societal problem sets which are without a single policy solution which does not generate additional problems. Consequently, anticipated private or public solutions are quickly transformed into a search for policy resolutions which will effect a balance of production and energy efficiency, financial and allocative "equity" and political feasibility.

To date, neither market nor state financial and allocative mechanisms have provided a satisfactory remedy of the politically charged issue of: Who pays and who benefits from increased coal production and movement? Thus federal intervention seemingly holds the most promising potential to respond to the public "needs" created by the highway and rail transport of coal.

The essay concludes that: allocative mechanisms can and should be tailored to the scope and character of each particular public coal transport "need"; the realization of national policy objectives of increased coal production and energy efficiency is more likely to be achieved over time if the total cost of producing, transporting and conversion of coal is passed through to the ultimate consumer; and the political acceptability of separate highway and rail allocative mechanisms will tend to be re-enforced by the separation of modal-related taxes even if the same tax mechanism is used for each unique coal transport related problem.

PUBLIC UTILITIES: THE SOUTHEASTERN U.S. EXPERIENCE

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This paper dealt with a more challenging area of research in recent public service, namely the participation in recommending the overhaul of existing Public Utility Commissions.

Particular emphasis was placed upon those States with commissions which are elected, rather than appointed. At the present time only eleven States still retain elected commissions.

Problems which exist in these States and have yet to be solved are Regulatory Lag, Allowance for Funds used During Construction (AFUDC), Construction Work in Progress (CWIP), Need for Adequate Commission Staff, absence of an Administrative Law Judge, and the Need for Utility Price to Reflect Total Cost of Providing Service.

Recommendations for correcting Regulatory Lag were the use of one of the following: the use of the Future Test Period to establish utility rates; to Place Rates into Effect Subject to Refund; provision for an Attrition Allowance.

Inclusion of CWIP in the rate base and the adding of AFUDC credits to income for rate making purposes requires more in depth treatment. It is recommended that the utility be allowed to cease capitalization of AFUDC and include CWIP in a rate base.

With respect to adequate commission staff, there is not only the need for more staff members but also an increase in pay scales which would attract competent and qualified personnel.

By adding an Administrative Law Judge who would preside at all evidentiary hearings, rule on the admissibility of evidence and on legal motions and other pleadings, and prepare initial decisions based upon knowledge of the laws and evidence presented should lessen the likelihood of legal error in the commission's decisions.

This judge would not replace the commission as the final authority in utility ratemaking.

A utility price which reflects total current costs of providing service would lessen the effect of misallocation of energy and capital resources by decreasing the occurence of false patterns of price signals to both utility companies and the consumer sector.

Particular emphasis was placed upon the two States which national rankings have placed as the second worst commission, that of the State of Georgia, and the worst commission in the nation, that of the State of Alabama.

The Inter-Industry Wage Structure in U.S. Manufacturing Industries, 1958-1976

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Murray State University

Studies of the stability and/or dispersion of the inter-industrial wage structure have a long history in labor economics. Both of these dimensions have been examined for a variety of industries, for different time periods, and for different lengths of time.

Researchers have been interested in the long-run stability and dispersion of the wage structure for several reasons. First, it has been argued that if the inter-industrial wage structure is stable this has certain implications for the competitive hypothesis. However, as Perlman argues, it appears to be as easy to argue that a high degree of stability is supportive of that hypothesis as it is destructive of it.[1]

Second, it has been argued that a stable structure says something about the process of wage determination. Thus, for example, Turner and Jackson argue that stability of the wage structure in advanced capitalist economies is a result of the high degree of centralization in the wage decision process in these economies.[2] They contrast these economies with underdeveloped countries where labor markets are fragmented, wage information localized, and wage change highly decentralized.

Rees and Hamilton examine the dispersion of relative wages for evidence whether the dispersion narrowed or widened over various periods between 1925 and 1969. They argue that a widening of wage dispersion among industries would suggest that divergent economic forces in particular labor and product markets were not prevented by bargaining institutions from affecting wage levels, or that the impact of unionism on wages was becoming greater in high-wage than in low-wage industries. They attributed the increase in wage dispersion in the years after 1946 to 1950 to a decrease in pattern bargaining

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[1] Richard Perlman, Labor Theory (New York: John Wiley and Sons, 1973), pp. 106-110.

[2] H. A. Turner and D. A. S. Jackson, "On Stability of Wage Differences and Productivity-Based Wage Policies: An International Analysis," British Journal of Industrial Relations, 7 (March 1969), 1-18.

and a reassertion of advantage by some high-wage union sectors.[3]

This study is unique because for the first time a large cross-section of U.S. manufacturing industries is used to test stability in inter-industry wage structure. Also, we believe we have shed new light on some important issues. The primary objective of this study was to study inter-industry wage structure. However, several other observations were made while pursuing this goal.

1. The coefficient of rank correlation of inter-industrial wage rates was a high value, but this value has been declining steadily since the mid-60's. The coefficient of variation has been increasing steadily since 1968 and is at the highest level of the period under study here.

2. We have seen how the wage structure appears to have a high degree of stability over a fairly long period of time when measured by rank correlation. However, this coefficient is not adequate measure of stability. When measured by average wage change, the wage structure shows surprising amounts of pliability.

3. On the basis of rank correlation, coefficient of variation, third moment measure of skewness, and multiple regression, we claim that higher than average wage workers in unionized industries pulled away from the rest during the 1968-1976 period. However, larger gains were made by moderately paid workers in industries with medium levels of unionization. It seems that the relative position of workers in least unionized industries did not change very much.

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[3] Albert Rees and Mary Hamilton, "Postwar Movements of Wage Levels and Unit Labor Costs," reprinted from The Journal of Law and Economics (October 1963), pp. 50-56.

Stockpile Optimization for Critical Commodities

Michael M. Tansey

University of Texas at Arlington

The stockpile policy for a nation is analogous to the stockpile policy for a firm. If it is possible to identify a national output goal which the government has the responsibility to maximize, then the government may use stockpiles as an instrument to attain that goal. The national output is viewed as a function of a certain critical commodity for which there is inelastic demand and supply in the short run. The excess demand or supply of a commodity determines if the national output maximum can be reached. By counteracting sudden shifts of demand and supply in world trade, a stockpile policy aids in reaching the national output objective.

The variance in excess demand or supply of a commodity in world trade is shown to be a crucial measure of the need for a stockpile policy in stabilizing national output. When the variance rises, the need for stockpiles rises. The variance is shown to rise as:

(a) the number of selling or the number of buying nations become smaller;
(b) the dispersion in sizes of sellers or the dispersion in sizes of buyers increases (a Herfindahl measure is used);
(c) nations tend to group themselves in economic blocs instead of offsetting each others' actions;
(d) nations are unable to obtain special preferences; and,
(e) nations cannot manage their own demand and supply.

The variance in excess demand and supply becomes an important measure of the vulnerability of national output to trade disruptions.

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ECONOMETRIC MODELING AND TIME SERIES ANALYSIS:

POST-SAMPLE PERIOD FORECASTING

Yien-I Tu

University of Arkansas

This paper demonstrates a unified application of the econometric modeling and the time series analysis for forecasting beyond the sample period. The forecasts are then evaluated by three criteria: root mean square errors, mean absolute percentage errors and Theil's "U" statistics.

To achieve this purpose, a dynamic model of three equations, describing the interrelationships between the tax revenues, the total expenditures and the tax rate are specified on the basis of the excess demand for public services in Arkansas. The structural equations have been estimated by three stage least squares with the data of 1958-74. The residuals calculated from the estimated structural equations are then analyzed by the method of the time series analysis. A second order autoregressive process has been estimated for the second order differences of each series of the residuals. In addition, this method is also used to estimate a second order autoregressive process for the second order differences of each series of the exogenous variables. The exogenous variables consist of the personal income and the population of Arkansas, the federal transfer payments to Arkansas and the money supply of the United States. These are the ingredients for generating the forecasts.

To prepare the forecasts, both the reduced form equations and the autoregressive processes for the residuals in the reduced-form equations are first derived. The forecasts are then experimented by four different procedures: one-period, one-period plus residuals, multi-periods and multi-periods plus residuals.

The one-period forecasting is that the reduced form equation is used to project an endogenous variable one-period ahead by using the available data of the exogenous variables at the time when the forecast is made. The multi-periods forecasting is that the forecasts of an endogenous variable for 1975-78 are all computed by using the available series up to 1974. The projections of the exogenous variables for 1975-78 are computed from the estimated autoregressive processes.

The forecasting with the residuals is that the forecast for an endogenous variable from the reduced form equation is added by a projected residual from the estimated autoregressive process.

Furthermore, the forecasts of the endogenous variables for 1975-78 are also experimented by using the second order autoregressive processes estimated for the second order differences of these variables for 1958-74. Both one-period and multi-periods forecasts have been performed.

The root mean square errors, mean absolute percentage errors and Theil's "U" statistics have been prepared. They all indicate a similar pattern in evaluating the forecasting performance of the various models and methods.

Forecasting beyond the sample period by the infusion of the econometric modeling and the time series analysis has not demonstrated clearly, by this study, the advantage of this approach over using the econometric modeling or the time series analysis separately.

Of course, this single evidence does not imply that the infusion approach should be discarded. On the contrary, it suggests that further research in this area is needed. The econometric modeling has the content of economic theory; while the time series modeling has the theory of stochastic processes for data analysis. Since current practice of the econometric modeling does not say much about the analysis of the exogenous variables and random disturbances, this deficiency in the methodology can be strengthened by the infusion of the time series analysis with the econometric modeling.

UNITED STATES QUOTAS, 1958-1978: DETERMINATION OF THEIR TARIFF EQUIVALENTS

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The price effects or tariff equivalents of the major U.S. Quotas in effect for all or part of the 1958-1978 period are estimated. The estimates assume perfect competition among suppliers and assignment of import rights so that the tariff equivalent revenue is captured by the importer.

The relationship between import prices and domestic prices during non-quota periods are estimated using four alternative equations. These equations are then fitted using domestic prices and import shares observed during the quota period. This yields an import price that would make the estimated equation exactly fit the observed data. This import price is called the predicted import price (PPM). The tariff equivalent (PTE) of the quota is derived from the difference between the predicted import price and the observed import price (PM).

$$PTE = (PPM-PM)/PM$$

Tariff equivalents of quotas are calculated for meat, milk products, petroleum products, and sugar. The tariff equivalents are found to vary considerably from year to year and over different commodities. The revenue equivalents of the quotas examined range from a low of 181 million dollars in 1978 to a high of 2.1 billion dollars in 1974.

CREAM-SKIMMING IN THE LONG-TERM HEALTH CARE INDUSTRY

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Society, in recent years, has witnessed a transfer of responsibility for financial support of those in need from the private non-profit sector to the public sector. Initially, non-profit firms were an outgrowth of social concern for the plight of those in the population who were "less fortunate." The competitive profit orientation of the American economy was thought to preclude the provision of life sustaining services (food, shelter, basic health care) to those with insufficient financial means to compete effectively. The non-profit sector of the economy was seen as providing a needed, charitable service by the general community. With the public sector now absorbing a substantial portion of the financial burden, there has been a phasing out of the basic underlying reason for the initial establishment of the non-profit form of business organization.

The growing role of the government sector is exemplified in the long-term health care industry, where 48 percent of nursing home expenditures are currently provided by Medicaid and, in some states, as much as 90 percent of expenditures are so provided. The generally significant higher costs of providing care in non-profit health care facilities causes one to question whether these facilities are providing services which could not be provided as well by proprietary facilities. Given the high rate of cost and price increases in the health care sector and, specifically, the long-term health care sector, this issue is of crucial importance.

Non-profit providers maintain that the higher costs of care exhibited by non-profit facilities may be explained by higher quality care. It is further maintained that proprietary facilities take on low-cost, low-dependency patient mixes, leaving more dependent patient mixes to non-profit facilities. This is referred to as cream-skimming. The rebuttal argument is that the higher costs of non-profit facility care are merely the result of inefficiencies on the part of non-profit facilities, a result of the absence of a profit incentive.

This study reviews models underlying non-profit firm decision making in the health care sector. Incentive structures current in the long-term health care sector are examined as they effect cost and patient care performance by non-profit and for-profit facilities. 1976 data on 455 New York State long-term care facilities are used in order to examine non-profit and proprietary facility performance. The data includes a numerical rating of patient dependency, the DMS-1 index, based on a 1409 point scale. The data also includes a multi-dimensional structure-process-outcome measure of various aspects of facility quality.

Empirical results indicate that proprietary facilities operate at significantly lower patient day costs than non-profit facilities. Most of this difference is attributable to differences in operating costs. Various aspects of facility performance are examined. Proprietary facilities are found to exhibit no tendency to take on lower level, lower cost patient mixes. Non-profit facilities exhibited slightly higher levels of overall quality, as well as nursing quality and building feature quality, however the differences are all marginally significant. No significant relationship was found between facility ownership and rehabilitation quality.

Regression analysis was run on 368 of 494 skilled nursing facilities in New York State in order to control for various factors, including facility billing procedures, size, location, proportion of Medicare-Medicaid patients, quality, and patient mix differences. The regression analysis confirms the findings that differences in facility costs due to ownership cannot be fully explained by differences in quality or patient mix. The evidence implies that differences in costs may be attributable to greater concern for efficiency on the part of proprietary facilities.

With the higher costs of care in non-profit facilities generally unrelated to patient mix, quality of care, or other aspects of provision of care, the results imply that Medicare and Medicaid authorities, as well as third-party payers should seriously question the unrestricted reimbursement of the higher costs associated with care in non-profit facilities.

WOMEN, GOVERNMENT, AND LABOR FORCE REDISTRIBUTION: WORLD WAR II

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World War II had a major influence on the relationship of women and government policy. Government policies attempted to reinforce the short run conditions of the market by accelerating the labor redistribution from the home to the market sector. In the government's attempt to facilitate short term labor redistribution, it confronted many long term problems that were inherent in the structure of the labor market and in American traditions and culture itself. Analgous to the Peacock and Wiseman Model of public sector growth an "inspection effect" emerged as the government was compelled to seek solutions to these problems. The problems were primarily concerned with women's employment and included recruitment, training, job placement, child care and equal pay for equal work.

This analysis shows that government "manpower" policies during World War II were primarily designated to be of short term duration and targeted to wartime labor allocation problems; secondly, the policies were not instituted to permanently assure equality in recruitment, training, mobility, or wages. The "displacement effect" in female labor force participation that did occur was effecive in revealing a duality in America that had never before been so self evident. The consequent "inspection effect" of the pending problems did bring about the government's first, if somewhat impotent, involvement in the concerns and problems of women workers.

AIRLINE DEREGULATION: PROGRESS AND PROSPECTS

by Joe Walker*

The Airline Deregulation Act (ADA) of 1978 represents a significant turning point in the history of U.S. governmental regulatory policy. For the first time ever, a unique coalition of consumers, producers, unions, academics, and politicians having diverse ideologies and otherwise conflicting interests banded together to abolish a U.S. regulatory agency, the Civil Aeronautics Board (CAB). Their argument was that it had not only outlived but also betrayed the purpose for which it had originally been created. And also for the first time, a wealth of economic evidence with a tight theoretical structure and buttressed liberally with empirical studies played the major part in testimony not only before the CAB itself but in Congressional hearings.

The ADA has now officially been in effect for a little over two years although unofficially many parts of it have been in effect since before 1978 itself. The results are still not all in and, indeed, the CAB is not scheduled to go out of existence until 1984. But even in this short time span the results have been clear in spite of the tremendous distortions in nominal observations caused by inflation and more importantly by the unprecendented rise in jet fuel prices. Air fares adjusted for these variables are below trend; capacity is more fully utilized than ever before; volume is above trend; entry and exit are freer; route schedules are more efficient; and the variety of equipment and flight services are more suited to consumers than ever before. Yet, it hardly ends there. Analogous to the broader political implications of the current crises in Poland, airline deregulation is now seen as only part of a much more widespread conviction that U.S. regulatory policy <u>in general</u> has gone too far. As a result, regulatory reforms have and continue to spread into other areas of federal, state, and local jurisdictions. Indeed, no sooner was the ink dry on the ADA than Senator Kennedy began deregulation hearings on the trucking industry. Deregulation is being solidly pursued as an international policy, especially as evidenced in the case of the airlines with the so-called "bilateral agreements," with many of the same benefits noticed in domestic airlines. Since ADA, in fact, Congress has passed two other highly important pieces of similar legislation--the Motor Carrier Reform Act of 1980 and the Monetary Control Act of 1980. And now, with the election of Ronald Reagan as President, deregulation occupies a central place in the new set of administration policies.

But the airline deregulation movement, although only a part, played the major role in the development of the deregulation philosophy as we know it in practice today. As such, it forms an important and instructive episode in the history of regulatory thought and aggressive economic policy-making. Perhaps the most important outcome has been the realization that regulation is not the panacea for market imperfections it was once seen to be. As Senator Howard Cannon (D.- NEV) concisely remarked, "the choice is really between imperfect competition and imperfect regulation."

The purpose of this paper will be to survey the intellectual, economic, and political developments that gave rise to regulation of the airline industry, the rising tide of restrictions that led to the recurrent financial crises in that (by then) competitive industry in the early '70's, the backlash this engendered, and the history of the industry since the ADA. In addition, brief mention will be made of parallel developments in other industries which have since undergone similar transformations.

*University of Montevallo. I wish to thank the University of Montevallo for supporting this research with a sabbatical grant. I also wish to acknowledge the assistance of the Office of Policy Analysis at the Department of Transportation, Washington, D.C., and in particular economists James Gansle and Frank Bohan. The opinions contained herein do not necessarily represent either the University of Montevallo or DOT. All errors are my own.

THE PREDICTIVE VALUE OF ACT SCORES FOR PERFORMANCES IN ECONOMICS CLASSES AT NORTHWESTERN STATE UNIVERSITY

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Currently the validity of test scores and their use as screening devices are being questioned. It is argued that a score on one test may not be indicative of a person's ability and that some people do not perform well in testing situations. One purpose of this study is to determine whether or not a significant relationship exists between the ACT scores and the final grade point average of students who graduated with a Bachelor's Degree from Northwestern State University of Louisiana in the December, 1979 graduating class. A second purpose is to determine whether or not a significant relationship exists between ACT scores and semester grades of students taking Principles of Economics at Northwestern State University during 1980.

The subjects for the first phase of the study were all persons who received their Bachelors' Degree in December, 1979 with ACT scores recorded in the Department of Counseling and Testing. A total of 199 persons graduated. Of this number, 101 had ACT scores on file.

The scope of this phase of the study was limited to the relationship between the ACT scores and the final cumulative grade point average. The ACT scores came from records maintained in the Department of Counseling and Testing and the grade point average from the grade point average printout for the Fall Semester, 1979.

The r values for the various colleges ranged from .90 to .03. Specifically, the English test r ranged from .75 to .10, the math test r from .66 to .23, the social studies from .87 to .04, the natural sciences r from .90 to .03, the composite r from .84 to .10, and the English/math combination r from .77 to .19.

The tests reflected a relationship between the ACT scores and GPA in the Colleges of Business, Education, and Liberal Arts and for the University as a whole. However, a lack of relationship is evident in the College of Nursing, College of Science and Technology, and the College of General Studies.

University wide there was a relationship between the ACT scores and the final overall grade point average. The combination of all subtest scores and the composite scores provided the highest correlation; however, for a single ACT score prediction the composite provided the best estimate.

The observations for the second part of the study were those students who took Principles of Economics in the Spring of 1980 and in the Fall of 1980 and had ACT score recorded in the Department of Testing at Northwestern State University. From Economics 201 (Microeconomics), there were 72 students in the Spring of 1980 and 99 student in the Fall of 1980. From Economics 202 (Macroeconomics), there were 57 students in the Spring of 1980 and 64 students in the Fall of 1980. The total number of observations was 292.

Grades in economics were correlated with composite ACT scores and various combination of English, Math, Natural Sciences and Scoial Science. When grades in economics classes were regressed agaiinist the composite ACT, the amount of correlation ranged from .28 to .59. This suggests that for some classes there is probably a good relationship between ACT scores and grades in economics; however, for most classes there tends to be almost no relationship. Other variables (the professor, hours of study by student, etc) are also important in determing grades in economics.

For all 292 student who took Economics 201 and 202, the amount of correlation between composite ACT scores and semester grades was .38. This means that less than 15 percent of the variations in semester grades could be associated with variations in composite ACT scores. In contrast, for the College of Business about 44 percent of the variations in grade point averages at graduation were associated with composite ACT scores. This indicates that in the College of Business at Northwestern State University ACT scores tend to be better predictors of overall grade point averages than grades in economic classes.

THE ECONOMIC FOUNDATIONS OF BUSINESS STRATEGY

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This paper addresses the question of to what degree the strategic management of large corporations can be rested on economic analysis, defined in terms of managerial economics and industrial organization as applied price theory. The question is important because of a major development in management theory and practice, in which "business policy" (defined as including general management strategy, planning, integration of functional activities, and direction of organizational processes) has begun to emerge as an established research field rather than a capstone course for the typical MBA curriculum. The new field of business policy has begun to focus on the central notion of strategic management of the enterprise. Both Caves and Porter of Harvard University have argued that business strategy can and should be grounded in the economics of industrial organization. That issue is investigated here.

Schendel and Hofer identify four levels of strategy formulation which are arranged in a hierarchical relationship from bottom to top: functional, business, corporate, enterprise. Functional strategy is developed within each functional area of a specific business unit. Managerial economics (in the sense of optimal resource allocation) is most useful here. Business strategy involves the selection of competitive goals and tactics within an industry. Porter has developed a model of strategy formulation at this level based on the economics of industrial organization. Corporate strategy is concerned with selecting the portfolio of businesses, or industries, in which to compete for the firm. Enterprise strategy is concerned with the overall social, political, and legal environment of the firm.

The typical procedure in economic theorizing is to regard non-profit considerations as constraints on the basic profit-maximization assumptions, so that we are dealing with some form of preference-maximization assumption which preserves the asset-portfolio or investment approach to strategic management. Thus Cyert and March's A Behavioral Theory of the Firm adds certain behavioral assumptions, of a psychological and organizational nature, to the neoclassical theory of the firm. A variety of other constraints have been considered. Bower has criticized the investment model of the firm -- treated here as a paradigm of strategic management -- at two levels. At the first level, he contrasts the prescriptive model of resource allocation to the actual process of capital budgeting in a complex enterprise: "... in large, complex organizations we cannot talk about the process of strategy formulation except in social and political terms." At the second level, Bower criticizes the prescriptive model of investment itself. Strategic management with multiple levels of formulation implies that there are immeasurable qualitative considerations affecting each investment project; moreover, such uncertainty means that the measurable cash flows from different projects are not comparable. Uncertainty is bound up with the kind of project, the type of business, and the managers involved.

The field of industrial organization is built around the market structure, conduct, and performance paradigm. Joskow argues, however, that conduct (which we may think of as strategic management) is the "sick sister" of this paradigm. Joskow concludes that "... it appears that the important characteristics of oligopoly behavior are not captured by conventional models ...." There is no unified analytical theory of oligopoly along the lines of those for monopoly and pure competition. The existing models are not seriously used for the study of actual markets; rather an "oral tradition" of industrial organization research is used. This oral tradition closely resembles the type of empirical research conducted in the field of business policy. Papandreou distinguished between profit maximization and efficiency. Without the continuous pressure of atomistic competition, it is difficult to predict the actual behavior of oligopolistic firms. The preference-function maximization extension can be stretched to incorporate so many considerations or become so vague as to be meaningless for guiding empirical research.

The final argument of the paper is that strategic management is complicated by the increasingly important political and legal environment of the corporate sector. Cyert and March's behavioral theory of the firm is defective to the degree that it neglects the external political and legal environment. Strategy formulation is both political and economic in character. The further we go up the strategy formulation hierarchy or up the organizational hierarchy in the capital budgeting process, the more political-legal and organizational considerations become predominant. The business firm is a form of political economy in which economic and political-legal elements are mixed in an organizational context. The strategic decisions of the firm concern the planning horizon and the dynamics of change, whereas economic analysis is more attuned to marginal analysis and the comparative statics of short-run equilibrium.

ENERGY, ENTROPY AND ECONOMICS

John L. Wortham
Texas Christian University

The traditional model of the economy ignores the entropic nature of the environment. The entropy law is the tap root of economic scarcity. For any model of the economic process to be of value in policy making it must include the second law of thermodynamics.

This paper is an introduction and an overview to a more extensive research analysis of the interaction of energy and economics. The basic elements of a physical economic model are identified and contrasted with the elements of the contemporary economic model. The controlling principles and criteria for both systems are evaluated.

Although the analysis is not all inclusive nor complete as to detail, it identifies the role of the physic of energy as well as the behavior of man as the corner stone of economic science. The concepts of energy, entropy and work are keys to what man can and cannot accomplish with resources on Spaceship Earth.

To illustrate the nature of the two models (physical and conventional) the impact of energy scarcity on the general price level is accessed. The economic effects of the quadrupling of oil prices on costs, investment, productivity, unemployment, pollution, and entropy are considered.

The tentative conclusions presented stress the need for a holistic approach combining both economic and ecology in economic analysis. Policy makers need to employ second law efficiency accounting in the evaluation of technology and resources. Concern for the development of a sustainable life support system in the continuum should receive top priority. If man will continue to develop his premiere resource--knowledge--and if he can find a cure for his addiction for creature comforts, he can reduce the impact of the law of entropy on the economic process.

Economic Development and Tax Structure Revisited

Mahmood Yousefi
University of Nebraska at Omaha

The public finance literature has traditionally focused on the economic impact of taxes and government expenditures on a region or a country. In recent years, interest has grown, both on theoretical and empirical grounds, in construction of tax systems and tax structure changes.

Certain observers, namely, Hinrichs, Musgrave, and others have noted that the more developed economies (DCs) are characterized by a higher ratio of tax revenues to national income than the less developed countries (LDCs). Time series analysis as well as cross-section analysis corroborate the hypothesis of a direct relationship between the total tax ratio and the degree of economic development. Mann being skeptical of cross-section analysis has focused on time series analysis of a specific country, namely Mexico. His results show that there is a statiscally significant relationship between tax/GDP ratio and per capita income. Also Mann's findings show a statistically significant association between tax/GDP ratio and openness where the latter means a large foreign sector vis-a-vis GDP.

In this paper a time series analysis of tax structure changes for a particular country; namely, Iran, is undertaken. The analysis covers the period 1960-76. The underlying hypotheses are:

a. there is direct relationship tax/GDP ratio and economic development.
b. the relative emphasis on direct taxes as a source government revenue grows with economic development.

A multiple regression analysis using tax ratio as the dependent variable and per capita income, openness, agricutlural ratio (the share in income produced in agriculture), and health ratio (the fraction of GDP allocated to health measures) as the independent variables shows a statistically significant association between the dependent variable and the independent variables. To examine the occurance of tax structure changes a Chow test is conducted. The result shows the absence of any tax structure changes having taken place. Finally, a multiple regression relating direct tax ratio multiplicatively to per capita income, openness, agricultural ratio, and health ratio is run. The result shows a statistically significant association between the dependent variable and the independent variables. The findings of this study more or less corroborate the hypothesis of a direct relationship between the total ratio and the degree of economic development.

CLASSICAL ECONOMISTS AND THE CORPORATION

- A COMMENT -

David E. R. Gay

University of Arkansas and University of Miami

Professor Dugger has written a thoroughly entertaining and occasionally plausible paper, if even a thoroughly flawed paper. I am surprised that neither one of us screams when we appear together on still another panel. Part of our background and method are distinctly opposing on interpretation but we share some common interests and are personally charitable.

Several statements in this paper are untenable, I will contend. First, the nature and role of _laissez-faire_ is questioned. It is argued that mercantilism is "the repugnant commercial result of the divine right of kings" whereas it can be interpreted as the result of rent-seeking behavior and other factors. The paper argues that Adam Smith "wanted to build the strongest case possible for replacing mercantilism with _laissez-faire_" (p. 4) however Smith did not advocate _laissez-faire_. The term is attributed to Lengendre who replied to Colbert's question about what the state should do for business, and said "_laissez-nous faire_." Smith advocated a substantial role for governmental action. Jacob Viner's essay in the 175th anniversary essay volume commemorating the _Wealth of Nations_ elaborates that interpretation. While admitting that "profit maximizers are not real" (p. 14) he fails to cite Tintner's critique 40 years ago or Alchian's 30 year old critique.

The paper would be strengthened with two major changes. Instead of characterizing early corporations as frauds or "anarchic, individual appetite and money-lust, of ruinous competition" (p. 12) one should reread the new economic history. Also one should seek an explanation for why firms emerge in their particular form and why that form survives or fails, as Alchian, Demsetz, and others are doing today. But more fundamentally this paper seems to presume the neoclassicist approach should be jetisoned for some unnamed etherial ethic to be provided by ayresian institutionalists. We should recognize our limitations and compare the positive and the normative with the normative and be clear about the alternative vision before abandoning mainstream economics. Methodological individualism provides keen insights into many issues.

PROPERTY RIGHTS ANALYSIS IN THE NINETEENTH CENTURY

- A COMMENT -

David E. R. Gay

University of Arkansas

Professor Price's paper is a masterful chronicle of seven substantive achievements of Edwin Chadwick (1800-1890). Chadwick's keen insights into franchise bidding, altering criminal activity, the cost minimizing evolution of common law, and other areas deserve a better fate than generally his work receives. Price's meticulous documentation and scholarly presentation will undoubtedly mark this paper as a significant contribution in several areas.

There are several minor suggestions to improve the paper presented in Houston. Retitling the paper so that it does not imply the entire nineteenth century and exclusively property rights would immediately inform the reader of its content. Perhaps "Chadwick's Contributions to 19th Century Property Rights Analysis" would be sufficient. Secondly, omitting the first seventeen pages would focus on the suggested alternative title without weakening the paper. Thirdly the organizational structure needs to clarify the direction and timing of the arguments.

There are several substantive points of clarification or breadth. Adam Smith made incisive comments on many of the same points a century earlier, not only in The Wealth of Nations but also The Theory of Moral Sentiments. In retrospect we have access to notes on Smith's Lectures on Jurisprudence. Since Chadwick was a well read person how did he relate to Smith's idea or acknowledge Smith's writings? On page 19 discussing crime and economics Chadwick acknowledges the cost and benefit valuations. However even Smith, in the Lectures, recognized that if the punishment is too severe that it will not be enforced and few people can be found as witnesses.

PROPERTY RIGHTS ON THE FRONTIER: THE CASE OF THE BUFFALO

- A COMMENT -

David E. R. Gay

University of Arkansas

Professor Richard C. Schiming's paper is a masterful description of the fateful demise of freely roaming buffalo herds in 19th century United States of America. He does not blame the harvesting of buffalo upon greed, avarice, capitalism, environmental insensitivity, or other spurious or purported causes. Instead the paper focusses, correctly I believe, upon the difficulties of harvesting a resource that is available on a first-come-first-serve basis when the costs of specifying and enforcing a different set of rights are high enough to eliminate the potential gains from husbanding buffalo. In summary, as with the Coase Theorem, if the enforcement costs are zero the external benefits could be internalized. But if they are high enough costs, along with the free rider problem, then the benefits of private husbanding cannot be realized even with the presence of a potential net gain. Thus, as correctly noted, the system of communal claims did not change with the increasing value of buffalo. There was no one, in authority, who could appropriate enough of the potential gains to rearrange the legal right of use.

There is usually room for improvement (and certainly for change) and I would suggest the following things. (1) The author laments the "sad story" (p. 2) and the "sad plight" (p. 15) of the buffalo when all of the paper supports the idea that the harvesting was economically feasible and justified given all of the constraints. (2) The author is ambivalent about the fate of the buffalo. They are extinct (p. 2) but protected (p. 15) and saved (p. 18) from extinction. (3) Even if the government uses a lower discount rate than the reproductive rate of buffalo (18%) and could assert effective control then it does not follow that "Since the buffalo did survive, the conclusion is that these two survival conditions were met." (4) The rights at issue were not that "the private rights of the Indians and hunters were in conflict," since the Indians asserted a communal right. It was a conflict, instead, between communal rights not private rights as contended in the conclusion (p. 26).

A COMMENT ON A SELECTED REVIEW OF POST-KEYNESIAN ECONOMICS

Charles E. Hegji

Lafayette College

Robert Brazelton's "A Selected Review of Post-Keynesian Economics" is a critique of the standard neoclassical interpretation of Keynes' General Theory. Brazelton attacks the neoclassical approach from the perspective of some alternative post-Keynesian interpretations of the General Theory, both at the theoretical and policy level.

Brazelton suggests that the neoclassical approach is centered around three theoretical misgivings. First, the neoclassical synthesis has overemphasized the use of equilibrium analysis and the concept of "precise determinability" of economic states. As Brazelton suggests, the neglect of the effect of price expectations and other potentially destabilizing disturbances on equilibrium states has led neoclassicists to believe in "fine-tuning" as a viable policy approach.

A second theoretical misgiving, according to Brazelton, is the neoclassicists' assumption of endogenous money wages, with prices determining wages. The author suggests that alternative post-Keynesian interpretations more correctly allow for the assumption of exogenous money wages, determined by the historical bargaining process. Use of this alternative assumption would allow for the often-neglected cost-push elements in the neoclassicists interpretation of the inflationary process.

The first point is well taken. On the other hand, it is here that I have my main theoretical contention with the author. For I believe that the assumption of exogenous money wages is subject to a serious fault neglected by Mr. Brazelton and the alternative post-Keynesians. This assumption neglects the fact that the wage bargaining process is itself endogenous, and subject to the same price expectational effects that, as suggested by the non-neoclassicists, render equilibrium analysis a meaningless approach. This clearly, is an inconsistency overlooked by the author.

Brazelton's third critique of the neoclassical synthesis is that it neglects Keynes' business cycle theory in its analysis. I agree with Mr. Brazelton on this point. On the other hand, I also feel that his own interpretation of Keynes' business cycle theory fails in its deemphasis of the monetary aspects of this theory. My own belief is that a more correct interpretation of Keynes' theory of the business cycle would not stress shifts in business confidence due to the declining marginal efficiency of investment opportunities as the primary cause of cycle crises. Rather, as Keynes suggested, the cycle crisis would be attributed primarily to shortages of short-term cash flows necessary to meet previous financing commitments for long-term investment projects. So, more correctly interpreted, a Keynesian business cycle crisis should be viewed as a liquidity crisis, rather than a crisis due to declining investment opportunities per se.

The policy implications of the correct post-Keynesian interpretations, as suggested by Brazelton, are twofold. First, the recognition of the exogenous wage-setting process and the cost-push nature of the inflationary process should lead to the use of incomes policies as primary anti-inflationary measures. Second, due to the possible existence of sectorially caused recessions, policies aimed at stimulating specific sectors of the economy may be warranted. Such policies would be preferred to a fine-tuning macro policy approach.

Although I tend to agree with Mr. Brazelton on these two points, I feel that his consideration of alternatives to fine tuning in an unstable economy is incomplete. For in an economy as unstable as that suggested by the alternative post-Keynesians, not only fine tuning, but any attempts at discretionary policy may themselves be destabilizing. A rational policy in such an environment would be to do no more than provide as stable background as possible for private sector economic decision-making. So, consistent with the non-neoclassical post-Keynesian view of the macroeconomy would be a monetarist type of fixed monetary growth rule. The author fails to consider such nondescretionary policy as a viable alternative to fine tuning in an unstable economy.

Reply

W. Robert Brazelton
University of Missouri-Kansas City

Some of Professor Hegji's comments are well-taken. However, I have some quite brief criticisms of his Comment on my paper.

First, I cannot see that saying that the wage bargaining process is endogeneous because of expectations restraints is too meaningful. Such restraints appear to be somewhat unreliable, especially in non-competitive markets. Second, I agree that part of the cycle theory of Keynes does depend upon monetary factors -- as I indicated and as Minsky and Davidson have also indicated. Lastly, I disagree with Hegji's contention that some monetary "rule of thumb" would be better than discretionary policy in the unstable world of the post Keynesians. Such a "rule of thumb" would, among other things suggest an agnostic attitude towards interest rates. Wide variations in interest rates may in and of themselves distort and bring about adverse economic, political and social consequences. Also, if cycles are, as Hegji contends, subject to "shortages of short-term cash flows" (to which comment, I agree), a "rule of thumb" monetary policy nevertheless appears to this author as a contradiction if shortages of cash flows are a significant problem of the business cycle.

Indeed, Professor Hegji has raised some interesting points. One may conclude from this exchange that neither is neo-classical theory sacrosanct nor is post Keynesian analysis yet complete.

COMMENTS ON AN ANALYSIS OF INTEREST RATE RELATIONSHIPS: THE EVIDENCE FROM THE LAST DECADE

Charles E. Hegji

Lafayette College

Theodor Kohers' "An Analysis of Interest Rate Relationships: The Evidence from the Last Decade", is an attempt to explain the consistency of yield differentials among various maturity securities over the period 1970-80. In determining this consistency both average differential and dispersion measures of ten different securities are compared over the period. The paper's principle conclusions are as follows.

First, it was found that there exists a difference in the degree of substitution between financial assets, with short-term assets generally being better substitutes for risk-free Treasury bills than long-term assets. Second, yield spreads among the various financial assets were found to vary widely over the period.

I agree with the author's conclusions that the data support the existence of a high degree of interest rate variability and differing consistencies among yield spreads over the last decade. My only objection to the approach is that he did not carry it far enough. Though listing factors which might account for the observed differences in yield spreads--for example, security supply, and taxability differences--the author makes no attempt at statistically determining which of these factors dominates.

In testing for these factors, a breakdown of the analysis into periods over the 1970-80 decade might prove useful. For my own interest I would like to have seen the author examine interest rate behavior both before and after the Federal Reserve's declaration to formally target monetary aggregate variables. For it is likely that a high degree of the variance in both rates and yield spreads observed by the author over the entire sample period, in particular with respect to short-term rates, would be observed in the past-1974 period. If this is the case, then a high degree of interest rate variance over the decade could be attributed to the Federal Reserve's loosening of interest rate control since 1974.

Comments on

"Energy and International Trade" by Steven S. Chang

Stephen P. Magee
University of Texas at Austin

This paper explores the relationship between energy prices and world trade. The results show no significant relationship between the growth of world trade and either the rate of increase in oil prices or the OPEC oil surpluses over the period 1965-1979. I have a few minor comments on the paper.

First, the author correctly specifies the stock/flow/rate of change relationships in his model. Equilibrium consumption and wealth variables would be characterized by trade flows being related to price levels and desired stocks of wealth being related to rates of return. Thus, changes in the above would yield Chang's specification, which relates the change in world trade to changes in oil prices and changes in OPEC wealth. On page 11 of the draft that I read, it appears that Chang's oil price variable was a rate of change variable from 1965-1972 (zero percent each year) and a price level variable from 1973 on (an index number with 1973 = 100), though he labeled this variable a rate of change variable throughout. Hopefully, this was just a typographical error which did not affect his calculations.

Second, the author suggests in the text that before 1973, world exports grew at 8% per annum while world imports grew at an annual rate of 15.5% per annum. These types of discrepancies would be possible if we were considering a single year's data in the presence of rapid growth plus lags in the reporting of imports relative to exports. However, for a longer time period, such as that considered by this author, the level of world exports must approximate that of world imports and such growth disparities would not occur.

Third, it is not theoretically compelling that an intercountry transfer of wealth (of the OPEC variety) would lower the growth of world trade. The most straightforward argument supporting the iron law of energy hypothesis would be that OPEC slowed world trade by reducing petroleum exports to raise the price. However, this could be more than offset if there were a higher marginal propensity to import in OPEC than in the oil consuming countries. Such a pattern is possible if the stereotyped Western view is true that Arabs drive income elastic vehicles and consume income elastic wines.

Finally, if the OPEC behavior was in response to an increased demand for energy in the 1970's, we have another reason to doubt the iron law of energy (which the author mentions but describes in inadequate detail). In fact, demand shifts and relative price changes for important raw materials generate more complicated economic adjustments (see Magee and Robins, 1978)).

Stephen P. Magee and Norman Robins, "The Raw Material Product Cycle," in Lawrence B. Krause and Hugh Patrick, eds., Mineral Resources in the Pacific Area. Federal Reserve Bank of San Francisco, 1978.

Comments on

"United States Quotas 1958-1978: Determination of

their Tariff Equivalents" by Charlie G. Turner

Stephen P. Magee

University of Texas at Austin

This paper is an econometric study of United States import quotas over the period 1958 through 1978. It provides estimates of the tariff rates which would have provided the volume of imports equal to that yielded by the actual U.S. quotas. The result that struck me the most in the study was the amount of year to year variation in the tariff equivalents. For example, for dry milk quotas, the tariff equivalents ranged from 32% to 94% over a 10 year period. Overall, the author did a careful job in both the economic specifications and the calculations. I have three minor quibbles with his calculations.

First, the author realized that a certain amount of statistical error will be generated because of changing commodity composition from year to year in the market basket of imports. Analysis at a seven-digit product classification is still insufficient to solve some aggregation problems (the author used five-digit sic codes). For example, all new automobiles imported into the U.S. are entered in the seven-digit TSUSA code, 732.1020. Thus, compositional changes from year to year in the ratio of Rolls Royces to Datsuns will cause spurious variations in the unit value for this import category. While automobiles was not one of the commodities studied by Turner, they illustrate the problem. Second, my own studies of deviations from purchasing power parity indicate that even in relatively homogeneous product categories, U.S. dollar prices can vary as much as 20% above or 20% below Japanese dollar prices for equivalent products. Furthermore, these deviations from purchasing power parity have a great deal of serial correlation. For example, U.S. prices were systematically lower than Japanese prices in the early 1960s and systematically higher than Japanese prices in the late 1960s. Such deviations will affect the calculations of the tariff equivalents of U.S. quotas. Third, political pressures to restrict imports will vary through the business cycle (for a formal model, see Brock and Magee (1979)). Over the period form 1933 through 1978, I have found that dumping cases filed with the U.S. government are positively related to the U.S. inflation rate. While I suspect that most of Turner's results are unrelated to political business cycles (but rather by individual commodity supply and demand here and abroad there may be indirect political pressures applied through the administrative channels of the U.S. government.

William A. Brock & Stephen P. Magee, "Tariff Formation in a Democracy," in John Black & Brian Hindley, eds., Current Issues in International Commercial Policy and Diplomacy. London: Macmillan Press, 1979, pp. 1-9.

NON-PROFIT FIRMS AND MANAGERIAL SYNDICATES: COMMENT

M. Ray Perryman
Center for the Advancement of Economic Analysis
Baylor University

In "The 'Not-For-Profit' Firm as a Managerial Syndicate: The Case of Academia," Professor Thomas M. Carroll advances the thesis that non-profit firms, especially universities, may be meaningfully characterized in accordance with the theory of economic clubs. The case is well presented and seems a reasonable analytical interpretation in many instances. The evidence in favor of this proposition is, however, admittedly in the form of causal empiricism. Consequently, it may be expected that plausible counterexamples may be produced. For example, consider the case of, say, a school of business which maintains financial autonomy from the remainder of the university. Assume further that the school is active in seeking endowment in a market situation and receives only an occasional (i.e., once or twice a century) "unearned" windfall of significant proportions. Finally, assume that the "surplus" is divided in accordance with entrepreneurial effort, e.g., establishment of research or professional development centers, rather than on an equal or administratively prescribed basis. This scenario, which is indicative of a number of situations around the country, may be effectively characterized within the context of the Marshallian firm with neo-classical entrepreneurs and, perhaps, a lottery attached to determine the timing of unexpected windfalls. It may not, however, be reasonably described by the theory of clubs. Consequently, it may be argued that while Professor Carroll offers a useful framework for analyzing many non-profit situations, he has failed to provide a universally valid context for the case of academia.

ECONOMIC DEVELOPMENT AND TAX

STRUCTURE CHANGES REVISITED (a comment)

Eugene Williams

At the Southwestern Social Science Association meeting the following comments were made concerning the paper by professor mahmood Yousefi, University of Nebraska, Omaha.

1. In the bibliography, the latest reference was an unpublished dissertation date 1976. Perhaps there have been some more recent studies that could have been cited.

2. As stated on page five, the objective of the paper is to determine the impact of economic development of Iran's tax structure. The author seems to assume a cause-effect relationship which reality may or may not exist. Perhaps the real objective is to determine the extent and direction of the relationship between Iran's economic development and Iran's tax structure from 1960 to 1975. Probably some of the same variables that affect economic development also affect a nation's tax structure.

3. The term "openness" is used on page one and defined in a footnote as Imports divided by Exports; on page five, the term is used again and the paper says it was defined earlier; "openness" is not defined in the body of the paper until page seven and then it is defined as Exports divided by Gross Domestic Product.

In general, the paper was well-written and informative. The author is to be commended for an excellent paper, and I would like to see regression analysis used in studying other countries.

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