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Editors Note

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This is the first volume of the Southwestern Journal of Economic Abstracts. Its major purpose is to add a degree of permanency to the annual meetings of the Economics Sessions of the Southwestern Social Science Association by publishing the abstracts of the works of the scholars presenting papers or discussions. Such publication herein will increase the recognition of these works and facilitate the broader and more permanent distribution of the analysis contained within these works. Hopefully, the Journal will grow in the future and, perhaps, eventually include a keynote address in addition to the abstracts.

There are many journals in Economics. Some may argue that there are too many. It is my belief that such an argument is fallacious. The present Journal will bring together the contribution of many scholars, not just selected scholars or selected papers. Thus, a greater proliferation of ideas -- old and new -- is possible. At present, this greater proliferation of ideas is desirable. For too long, the Economics profession has been encased within the framework of stale paradigms that treat complex variables and movements as if they were precisely determinable. The result has been a misinterpretation of Economic analysis in general; and an inadequate use and mix of policy tools in particular. It is time that the Economics profession break out of these often inadequate paradigms and add other ideas to its list of analytical, conceptual tools.

It is one of the purposes of the Southwestern Journal of Economic Abstracts to aid in the proliferation of ideas. With your help, we can both enlarge upon the present Journal and make its function meaningful to ourselves and to the profession. Hopefully, this Journal of abstracts will make possible the continued recognition that "omnia mutantur, nos et mutamur in illis". Your continued cooperation is both welcome and necessary.

WORKSHARING AND ITS DURATION

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Worksharing arrangements--worksharers are defined in this study as employed persons whose workweeks have been reduced involuntarily because of slack workloads--are a practice as old as the industrial era. The percentage of the at work population on worksharing arrangements during the 1973-75 recession was the same as the 1960-61 recession but below that of the 1954-55 recession. However, the number of worksharers has yet to fall below its pre-recession low. A possible explanation is the evidence of an increased likelihood of persons on such schedules to remain there longer.

This study examines the incidence of worksharing, specifically how it takes a person whose hours have been cut back involuntarily because of slack workloads to secure a full-time job, and what factors facilitate this change. The data analyzed are primarily matched CPS micro observations from May-June-July-August 1976-May 1977. The impact of an individual's human capital stock, other income resources, and value of nonmarket activities on the probability of escaping from worksharing is estimated using a multinomial logit analysis. Generally, a person's stay in a worksharing situation was relatively short, averaging 6.0 weeks, depending upon such factors as age, race, and how long he/she has already been in such a state. To a lesser extent, duration was influenced by sex, marital status, and union membership. Looking for another job did not significantly influence duration, nor did the presence of other employed family members--a proxy measure for other income sources.

TOWARD NEW LEGAL AND ECONOMIC THEORIES OF
GOVERNMENT CONTROL

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Introduction. While the scope and frequency of government interventions in the private sector continue to increase almost daily, our leading legal and economic theories regarding the right and rationale for the government to take action fall further and further behind reality. But before we can address the problem of fashioning new theories, we must develop a new and comprehensive conceptual model of government interventions in the private sector.

The Definition of "Government Control." Traditionally, "government control" involved government action to effect a certain economic policy. But "government control" should connote something different and more inclusive, namely any policy deliberately adopted by government to cause private actions to differ materially from those that might otherwise be pursued. The reference to "any policy" makes it clear that the definition is not only applicable to economic-oriented actions, but can apply across the board to non-economic decisions as well. By adopting a "materiality" standard, the definition takes into account both direct and indirect effects. This expanded definition of "government control" also leads to a consideration of techniques of government intervention far beyond the usual borders of such a study. It liberates the analysis from too strong a focus on administrative control, and sensitizes the observer to the full range of tools available to government. Among these techniques of control are the common law; statutes and ordinances; administrative regulation; franchises, certificates, and licenses; taxation and subsidies; concealed subsidies; contractual provisions; industry self-government; investigations and publicity; emergency controls; and direct government ownership and operations.

A Model of Government Control. Any successful conceptual model of government control must ignore the traditional distinction between economic and non-economic purposes. The model should be organized in terms of the rationales for government intervention, in a way that explicates particular purposes of government action. The model proposed here establishes the following rationales for

government intervention to serve as the categories for grouping government activity: to establish efficient and fair rules for participants in the market system; to define and enforce standards of fairness and ethical behavior in both labor and product markets; to act where private-market participants fail to take into account the important consequences of their actions; to pay directly for public goods; to guarantee availability of certain goods and services; to set standards for common references; to eliminate risks of the marketplace for which no form of insurance is otherwise available; to coordinate domestic and foreign policies; and to encourage citizen activism and ability to intervene.

Each of the rationales would need appropriate sub-categories. The "establishment of efficient and fair rules for participants in the market system" could subdivide into several categories, including (i) protecting against collusive or uneconomic predatory actions to restrict competition, (ii) protecting against "unfair" or "unacceptable" restrictions of competition, (iii) recognizing and protecting property rights, (iv) enforcing contract rights, (v) establishing standards of societal performance, and (vi) maintaining adequate information for sellers and buyers.

Considering only one of these subdivisions--protecting against collusive or uneconomic predatory actions to restrict competition--the policies, laws, and agencies intended to achieve the goal might include, as to policies, antitrust and the regulation of financial markets, transport, and energy; as to laws, the Sherman Act, the Federal Reserve Act, and the National Gas Policy Act, as well as various state laws; and as to agencies, the Federal Trade Commission, the Antitrust Division of the Department of Justice, the Federal Reserve Board, the Securities and Exchange Commission, state insurance commissions, and the Interstate Commerce Commission. The next logical and necessary step would be a study of the system in vitro. But even as it stands, this model of government is far more comprehensive, and as a portrayal of the reality of government activity, far more accurate, than any other description in common use today.

AN ESTIMATION OF THE DEADWEIGHT LOSS
IN THE MUNICIPAL ELECTRIC INDUSTRY

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This paper estimates the amount by which competition, through the lowering of costs, can reduce the welfare cost of monopolies. Many previous studies have found that the deadweight welfare loss of a monopolistic market structure was relatively small; however, these studies assumed that costs of production would be the same under competition as they were under monopoly. Professor Harvey Leibenstein and others have argued extensively that these deadweight welfare loss studies have ignored a major benefit of competition to society. This theory, which is usually referred to as X-efficiency, states that for a number of reasons businesses do not necessarily operate as efficiently as they possibly could; that is, they do not minimize costs. One factor which should affect efficiency is the competitive pressure within an industry. Competition affects the intensity with which people and businesses operate; therefore, this theory predicts that the existence of competition should result in lower costs.

This study investigated municipal electric utilities because they operate in well-defined markets, and because there are cities in which competition exists between municipal and private electric utilities. The study focused only upon residential customers.

A conventional, Harberger-type deadweight welfare loss model was used to estimate the welfare cost of monopoly. The study allowed the price elasticity of demand to vary across firms, with an overall average elasticity of one. Long run marginal cost was estimated based upon line losses, energy costs, non-production costs and capacity costs. It was found that the major effect of competition is through its impact on non-production costs, such as sales and administrative expenses. The effect upon production and capacity costs was statistically insignificant.

Based upon two different monopoly marginal cost

curves, it was estimated that total industry deadweight loss was either 5.49% or 6.74% of industry total revenue. Deadweight loss estimates based upon four different competitive marginal cost curves ranged from 7.44% to 8.84% of total revenue. Based upon comparable competitive and monopoly marginal cost models, the deadweight loss was 125% to 146% higher when competitive marginal cost was used.

The estimated deadweight loss per residential customer, based upon two different monopoly long run marginal cost models, was either \$14.96 or \$18.37. Based upon four different competitive long run marginal cost models, it was estimated that the welfare loss per customer was between \$20.27 and \$24.09. X-efficiency gain from competition ranged between \$4.55 and \$6.81 per customer.

Although the consumer surplus gain is not staggering, this paper indicates that - through X-efficiency - competition would have a significant impact on the welfare loss in the municipal electric industry. As a broader policy conclusion, the benefits of competition obviously depend upon the initial size of the industry loss. Where the welfare loss is high, X-efficiency could substantially reduce the loss.

THEOTETICAL DEVELOPMENTS RELATED TO
THE ZERO PRICING OF HEALTH CARE

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Advocates for eliminating money prices for health care emphasize the deterrent effect of money prices on health care consumption and the inherent inequity of money prices. Cairns and Snell cite empirical evidence on the deterrent effect of money prices. But Phelps and Newhouse present evidence indicating that published estimates of elasticities may be too high. Furthermore, the theoretical arguments of Nichols et. al., Becker and others indicate that showing that a money price system of provision results in inequity and inefficiency does not prove that time prices are equitable and efficient. They point out that consumers make decisions with respect to full prices which include both time and money price components. If planners solely rely on time prices to allocate health care, the price to individual consumers will vary with their rate of foregone earnings. Consumers with lower foregone earnings rates will consume too much health care while those with higher rates will consume too little. The theoretical arguments indicate that society as well as the consumer would benefit from a health care delivery system offering many alternative pairings of time inputs and money prices. Acton's and Sloan and Lorants' work support this recommendation. Both studies find that consumers seek health care with lower waiting times as their incomes increase. Sloan and Lorant also conclude that physicians will use waiting time as well as visit lengths and money price to maximize profits. If a zero pricing system is imposed and doctors are compensated on a fixed fee schedule, they may increase waiting time as rational profit maximizing behavior dictates. Thus, the zero-pricing-only system, like the money-price-only system of provision, will prevent both demanders and suppliers from making the desired substitutions between time and money spent on health care. The resulting over and under consumption of health care by different consumers is neither efficient nor equitable.

THEORETICAL DEVELOPMENTS RELATED TO
THE ZERO PRICING OF HEALTH CARE: A COMMENT

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Jackson's paper, "Theoretical Developments Related to the Zero Pricing of Health Care," clearly and succinctly outlines the importance of analyzing both the efficiency and equity effects of national health insurance programs that would reduce the role of money prices and increase the role of time prices for rationing health care resources. The theoretical arguments of Becker, Culyer, Lindsay, Nichols, et. al., Grossman and Holtmann are integrated and compared with the empirical evidence reported by Cairns and Snell, Phelps and Newhouse, Acton, and Sloan and Lorant. It is demonstrated that when health care is viewed as a merit good which generates positive externalities, complete reliance upon market provision is likely to be neither efficient nor equitable, but neither is the alternative extreme of complete reliance upon waiting times to ration health care services provided at zero prices. Market forces are likely to allocate too few resources to health care services and positive money prices will discriminate against the indigent. Time prices discriminate against demanders with higher wage rates, causing them to consume too little, and in favor of those with lower time opportunity costs, causing them to consume too much. The theoretical arguments and empirical evidence both suggest that a health care delivery system that allows individuals to choose some combination of money price and waiting time may improve both efficiency and equity.

MONEY, THE DEFICIT AND INCOME

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Despite the attention paid to the causative links between money and money income, complete inspection of the interior of the "black box" that connects the two has yet to be accomplished. The IS-LM transmission mechanism has been found to be credible whenever the expected inflation rate is negligible. Otherwise, that analysis becomes suspect. The strength of correlation, the direction of causation and the recent work of Cargill, Meyer and Tanner regarding varying coefficients in money demand functions may be partially explained by examination of the decomposition of money income variations between output and price changes.

Researchers, specifically Barro and Wogin, have analysed the accommodative interaction between the monetary authority and the Treasury, given the government budget constraint, in terms of the endogeneity of both the money supply and the deficit. Because of automatic stabilizers, one generally pictures an inverse relationship between money income, the budget deficit and the rate of monetary expansion. However, recent U.S. data present a situation where increased money income is largely the result of rising prices. Therefore, in the face of rising money income, one would expect the nominal deficit to rise rather than fall. Accelerating inflation would then result from a stable relationship wherein the deficit determines the rate of monetary expansion which in turn produces further increases in the rate of change of money income. The interaction between money and money income accordingly must involve positive effects running in both directions.

A structural model employs maximum likelihood estimation in order to test the functional specifications between the growth of the money stock, income and inflation. The structural equations as well attend to the relationship between the deficit, accommodating monetary policy and automatic stabilizers. The paper draws heavily on, and extends, the work of Barro and McCallum and Whitaker.

UNEMPLOYMENT TAXONOMY

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and
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A fundamental issue of economic decision making is the nature and extent of unemployment. The origins of unemployment may be related to several causes: the business cycle, seasonal influences, mismatches between skills of the unemployed and requirements of existing job vacancies, and mobility and information imperfections in the labor market. For unemployment policy to be successful, a unique program strategy must be directed toward separate types of unemployment at the local level.

An unresolved dimension of the above problem relates to the identification and measurement of different categories of unemployment. Traditionally, the issues of unemployment classification have been more a matter of abstract economic analysis than they have been of actual measurement. This paper develops and tests a consistent empirical system for identifying phases of economic activity.

The Data File and Analytical Model. A unique aspect of this study is the development and analysis of a data base which blends administrative and program data from a state employment service agency--in this case, the Texas Employment Commission (TEC)--with survey data from a nationwide statistical program--the Current Population Survey (CPS).

The analytical model used here postulates four different, but not mutually exclusive, types of unemployment: cyclical, seasonal, applicant-job mismatch, and autonomous (a form of unemployment existing when unemployment due to other factors is zero). While the applicant-job mismatch and autonomous unemployment concepts are somewhat related to the general notions of structural and frictional unemployment, respectively, the alternative descriptions are adopted here because they are more consistent with the forms of measurement available. The model specifies that total unemployment is a linear aggregation of the above four measures of unemployment, plus their interaction, a linear trend,

the duration of insured employment, and a random error term.

The statistical method employed is univariate hierarchical multiple regression. A series of six variables were interacted in order to account for the association of the mismatch variables with the four stages of the business cycle.

Discussion and Interpretation of Findings. The model explains approximately 85 percent of the variance in Texas unemployment rates over the period 1973-78. By itself, the magnitude of this finding deserves attention, since much of the literature on the Employment Service contends that ES activities are narrowly isolated in relation to total labor market processes and events. Autonomous unemployment is estimated to be 1.72 percent. This figure lends itself to the interpretation that the minimum irreducible rate of Texas unemployment over the 1973-78 period was somewhere in the range of 1.5 - 2.0 percent. The incremental R-square value for the applicant-job mismatch component of unemployment is estimated to be 0.11, which means that approximately 11 percent of the difference between the observed Texas unemployment rate and its 1.7 percent threshold is explained by demand-supply mismatches.

Of the "main" effect variables, the cyclical category explains the majority of the variance in the unemployment rate--51.13 percent. Moreover, the interactions of cyclical and the two mismatch variables explain an additional 9.69 percent of the variance. This "interaction effect" measures the interdependence of cyclical and mismatch estimates of unemployment.

The results lend some credence to speculation that seasonal unemployment in Texas is not substantial. They also provide an interesting estimate that about 4.9 percent of the statewide unemployment rate--that is, 4.9 percent of that portion above the 1.7 percent threshold figure--represents unemployment associated with the presence of unemployment insurance claimants in their first four weeks of their claim.

Concluding Remarks. The results of this study are generalizable to other areas and different time periods only to the extent that relative economic conditions are similar to those in Texas during 1973-78. The most non-controversial conclusion that can be reached, and probably the most important, is that a definite relationship does exist between changing unemployment conditions and the characteristics of applicants and jobs registered at the public Employment Service.

CLEMENT JUGLAR AND THE THEORY AND
MEASUREMENT OF BUSINESS FLUCTUATIONS

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When perusing the literature regarding the early origins of business cycle theory and measurement, one invariably encounters the name of Clément Juglar, a French physician turned economist who wrote during the latter half of the nineteenth century. His work may be interpreted as pioneering in both the analytical and empirical domains. He collected and analyzed extensive sets of economic data for several countries and, in so doing, formed the basis for his theoretical observations. While all of Juglar's conclusions have not withstood the test of time and the standard textbooks of business cycle analysis now fail to even mention his name, he remains a seminal thinker in a most important literature and one whose ideas are again coming into vogue. The paper described herein seeks to review his contributions to the examination of fluctuations in economic activity and to assess their relevance to contemporary economic events. Initially, a brief biographical sketch of Clément Juglar is provided. This material forms the basis for an understanding of the context from which his cycle theory emerged. This section is followed by an overview and critical evaluation of his work relating to the business cycle. Finally, an assessment of his contributions in light of contemporary economic behavior is presented.

Against a background of natural law philosophy and classical political economy which emphasized long-run equilibrium and the smooth functioning of the economy, Juglar published Des Crises Commerciales et de Leur Retour Périodique en France, en Angleterre, et aux Etats-Unis in 1862. As a result, the course of economic activity was permanently altered. In his classic book, Juglar basically follows three courses of analysis. Initially, he collects and analyzes an extensive set of data on economic variables for France, Great Britain, and the United States. In so doing, he became the first researcher to gather long and extensive time series data with a definitive analytical purpose in mind. Consequently, he must rank as the forerunner of modern business cycle analysis, as well as all aspects of econometric analysis which proceed from a systematic time series framework. After accumulating the information on a number of variables, including commodity prices, gold

prices, central bank balances, and interest rates, he methodically and precisely examined the time series data in order to ascertain the minima and maxima of the various series. During this phase of his investigation, Juglar found the existence of cycles in business activity which occurred with a remarkable consistency and a virtually standard periodicity. Specifically, for the period examined in the second publication of his book, he demonstrated the occurrence of fourteen complete cycles with a mean duration of approximately six years. In the final stage of his analysis, Juglar sought to provide a simple theory of cyclical fluctuations based on his empirical observations. He divided his observed cycle into three distinct periods, known generically as prosperity, crisis, and liquidation. He viewed the imbalances which occur during the period of prosperity, primarily the over-extension of credit and the rapid expansion of consumption beyond sustainable levels, as the fundamental causes of the crisis. Hence, the crisis is endogenous to the operation of the economy and a necessary by-product of the prosperity. His analysis was the starting point for an entire new era of business cycle theory.

As the above analysis indicates, Clément Juglar may clearly be credited with the systematic identification of crises in economic behavior as merely a reoccurring phase of a continuous cyclical process. In honor of this achievement, Professor Joseph Schumpeter has labeled the cycles of economic activity which correspond to the time domain considered within Des Crises Commerciales as "Juglar Cycles". Juglar's accomplishments, however, go even beyond the popularization of the notion of economic cycles. In addition to this achievement, he was also the first to observe the international character of major economic fluctuations. Moreover, Juglar may well be the first significant economic forecaster. He subscribed to the prevailing political attitudes of orthodox economics in his day, i.e., laissez-faire, and, thus, did not foresee a policy of government intervention to alleviate the crisis. He did, however, see a benefit to predicting a crisis in order to minimize the element of surprise in the functioning of the economy. Consequently, he accumulated evidence on the growth of bank portfolios and reserves and used deviations in these numbers from their normal course as a basis for forecasting crises. In so doing, he was probably the first to systematically employ economic indicators. Hence, Clément Juglar is clearly a major contributor to the current state of investigation of economic fluctuations at both the theoretical and empirical levels.

ON THE SPECIFICATION AND ESTIMATION OF MONETARY REACTION FUNCTIONS

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In recent years, Monetarism has surfaced as a significant strain of economic thought and, consequently, a substantial literature has developed regarding the nature and conduct of monetary policy in the United States. This analysis has taken many forms, including the targets and indicators issue, the measurement of the lag in federal reserve policy, and the impact of monetary policy on economic activity, i.e., the St. Louis equation controversy. An additional body of material which has developed in this area concerns the degree to which monetary policy responds to movements in key variables within the economy. Specifically, this literature surrounds the specification and estimation of a Federal Reserve "reaction function". Despite the attention received by this problem within the literature, there is a persistent problem which has not yet been systematically and effectively addressed. Specifically, because the dependent variable which is employed in the reaction function is a measure of the current stance of policy, it should be an indicator which measures only the stance of dynamic monetary actions, i.e., it should neither reflect contemporaneous movements in economic activity nor defensive Federal Reserve responses. In previous analyses, the dependent variable has typically been either a traditional monetary aggregate or a money market variable. Consequently, the measures have been endogenous to the economy and, hence, subject to the "reverse causation" problem. As is well known, equations suffering from reverse causation exhibit both biased and inconsistent coefficient estimates.

The purpose of the paper described herein is to provide an overview of an ongoing research effort which seeks to address the reverse causation problem as applied to the reaction function literature. The research efforts will, upon conclusion, have corrected for the presence of mutual causation processes by (1) specifying dependent variables which are theoretically exogenous to the economy and reflect only the stance of monetary policy and (2) pre-testing the specification of any reaction function by several recent advances in bivariate and multivariate causality techniques. Both time series and econometric procedures are employed in this aspect of the study. The analysis initially describes several monetary indicators which may be employed as dependent variables in a federal reserve reaction

function. These measures include the neutralized money stock and two noncyclical indicators, M_1^* and M_2^* , which were previously derived by the author within the context of a simultaneous equation model. Each of these measures seeks to eliminate the influence of the business cycle from traditional monetary variables, thus producing true or "unbiased" indicators of the stance of dynamic policy. Following this discussion, a brief analysis of the bivariate and multivariate causal techniques to be employed in the subsequent research is provided. Finally, some limited empirical results based on previous studies by the author are given. These findings, while not directly produced within the context of the reaction function problem, are designed to illustrate the potential advantages of the proposed work. The end result of this study will be a more thorough understanding of the nature of Federal Reserve policy and its relationship to endogenous economic activity.

SECTORAL SPECIFICATIONS IN THE STATE
OF TEXAS ECONOMETRIC MODEL

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The paper described within this summary provides a description of the specification and structure of major sectors within the State of Texas Econometric Model. The model, which will be the largest in existence upon completion, is a large-scale simultaneous equation system which is designed to reflect all major aspects of the Texas economy. Initially, a discussion of the nature of regional systems is provided, with emphasis being given to a number of contingencies which frequently inhibit model construction and application at the sub-national level. These problems include the proper delineation of an "export-import" or foreign sector and the lack of availability of several key data series. The material presented in this section is designed to provide a basis for the remainder of the exposition.

Following this preliminary discussion, an overall description of the Texas model is given. This section emphasizes the theoretical basis for the model and provides a brief summary of each major sector within the State of Texas system. The model of the Texas economy which is described within the paper is composed of six major sectors, each being comprised of a number of subsectors. Specifically, the model examines the Production Sector, the Private Expenditure Sector, the Employment Sector, the Income Sector, the Financial Sector, and the Public or Governmental Sector of the state. The Production Sector includes Gross State Product estimates, production and demand functions for more than one hundred manufacturing industries, nonmanufacturing industry specifications, and large energy and agricultural subsectors. The Private expenditure sector features a detailed examination of consumption by categories, investment, expenditures for retail sales, and the housing market. The Employment Sector provides a detailed examination of employment behavior by industrial classification, as well as an analysis of population trends and the nature of the labor force. The Income Sector includes estimates of wages, proprietor's income, transfer payments, and other sources of personal income. The Financial Sector examines the behavior of major deposit and loan categories of commercial banks, the functioning of non-bank financial institutions, interest

rate determination, and fund inflows from outside sources. The Government Sector explains the behavior of major state revenue sources and expenditure streams, as well as inter-governmental transfers. All of the sectors are, of course, linked together in a simultaneous structure.

Following these summary descriptions, the estimation and testing procedures employed within the model are discussed. Of particular interest are (1) a technique for the estimation of large systems of dynamic equations which exhibit first order serial correlation which was previously derived by the author and (2) a testing procedure involving autoregressive integrated moving average (ARIMA) models. Following this aspect of the analysis, an outline of potential applications of the Texas model and its accompanying data base is provided. Finally, a concluding section summarizes the major advances in regional modeling and econometrics which are embodied in the State of Texas Econometric Model.

THE EFFECT OF THE INSTABILITY IN THE COMMODITY
MARKETS, i.e. COPPER, ON THE DEBT-SERVICING
ABILITY OF ZAIRE

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and

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The purpose of this study is to identify the source of Zaire's debt-servicing problems. Historically, Zaire has increasingly had difficulty meeting debt-servicing obligations and rescheduling has been necessary repeatedly. The level of externally held public debt has increased from \$538 million in 1970 to \$3.3 billion in 1976, increasing from 17.1 % of Zaire's GNP in 1970 to 52.8 % in 1977. The increased participation by private creditors is reflected in an increase in total private debt outstanding from \$391 million in 1970 to \$2 billion in 1976. The percentage of export earnings absorbed in servicing external debt increased from 4.4 % in 1970 to 15.8 % in 1975. The value of export earnings from copper (which accounts for 74 % of Zaire's total exports) has decreased from 81 in 1970 to 53 in 1979 based on 1975 = 100.

An understanding of and solution to Zaire's debt servicing problems are of concern to all institutions involved in international finance and development. Creditors need better methods of determining debt-servicing capacity of countries and factors which force countries into default. This is of special concern to commercial banks because of the nature of the bank and the increased participation.

It has long been accepted doctrine that instability in foreign exchange earnings is the primary source of debt-servicing difficulty for the developing countries depending on primary commodities and lacking diversification. This is the hypothesis for this study.

This hypothesis was tested by two sets of data: (1) the debt level as a function of copper prices and copper exports, and (2) the level of foreign exchange as a function of copper price, value of copper exports, and use of fund credit. Contrary to conventional reasoning, the statistical results did not support the hypothesis. The conclusion is made that fluctuations in export earnings combined with budget deficits and an increase in money supply created inflation which Zaire was unable to contain due to lack of experience and a stable government.

More research is needed to quantify the specific mechanism for transferring the instability in export earnings to the debt-servicing problem.

A NEW APPROACH TO INFLATION:
TAX INCENTIVES FOR WAGE AND PRICE STABILITY

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In the four decades of Keynesian revolution and devolution, many economists and government policymakers were more or less content to rely solely on monetary and fiscal policy instruments of demand management to produce an economic stability. However, events of the 1960s and 1970s shattered much of this complacency and provided an environment within which many governments found it necessary to resort to a wide range of incomes policy.

Our limited experience with the conventional incomes policy was far from unqualified success. Government's direct attempts to alter the behavior of economic units in a market economy by jawboning, suasion, guidelines, controls, and freezes are not a real substitute for the restructuring of economic incentives.

This led us to the necessity of finding the new and innovative idea to fight inflation -- Tax-Based Incomes Policy (TIP), tax incentives designed to restrain the wage-price spiral. First proposed by Henry Wallich and Sidney Weintraub, a TIP has recently begun to receive serious attention from economists. My paper examines the concept and economic justification of this new approach with an emphasis on the Wallich-Weintraub proposal, compares the original TIP and its variants, and deals with major criticisms of TIP.

The pioneer Wallich-Weintraub TIP proposal would impose a surcharge on the corporate profits tax for firms granting wage increases in excess of some guidepost figure. Each year the government would announce a wage guidepost and a TIP tax schedule. At the end of the year firms would pay a tax according to the schedule if the wage increases they granted exceeded the guidepost. The added tax burden may be expected to stiffen the company's back in wage negotiations. The result would be a lower rate of wage increases, and a slowing of the rate of inflation.

Unlike the traditional incomes policies which address themselves to both wage and price, the TIP proposes restraint on wage increases. Since the average markup of prices over unit labor costs has been historically constant, which means that prices have been closely tied to wages, restraint of wage increases implies restraint of price

increases. It follows, therefore, that a measure slowing the rate of increase in wages will also slow the rate of increases in prices.

Evolving from the original TIP proposal there is a wide variety of plans and variants: Laurence Seidman's penalty-reward approach; Arthur Okun's reward TIP on both wages and prices; Abba Lerner's Wage Increase Permit Plan (WIPP); and David Colander's Market-Based Incomes Policy. Seidman proposes to impose a penalty tax on employers who grant excess wage increase. In addition, if firm's wage increases were below target rate, it would be rewarded in terms of reduced tax rate on corporate profits. It is argued that a continued, penalty-reward employer TIP, implemented through the income tax of the firm, is most efficient because it encourages all firms to alter behavior. But emphasis is placed on the penalty that is essential to assure a higher probability of effectiveness. A reward-only employer TIP is likely to be weaker and less reliable. The penalty TIP on employers differs sharply from wage or price controls, for it would not prohibit any wage increases. It would permit employers and workers to respond to market forces and adjust relative wages when an industry faced a labor shortage.

TIP proposals have been criticized on a variety of grounds. First, opponents argue that wage and price increases are not the cause of inflation but just the symptom. TIP would merely attack symptoms. This line of argument regards the expansion of money supply and government deficit spending as main causes of inflation. Accordingly, it is viewed that an appropriate anti-inflation policy should be dealing with monetary and budgetary factors. Second, it is argued that it would be really difficult in enlisting the support of organized labor for TIP because it would directly restrain wages but not prices. Unless it is applied to prices as well as to wages, it would not politically saleable or fully effective as an anti-inflation strategy. Third, Another objection to TIP is based on the difficulties in implementation and administration. Many reject the direct application of TIP to price increases as unworkable.

Our preference of TIP to any other alternative incomes policy is based on the conviction that the free market system can work. While a wide variety of plans and variants of the original TIP have been developed, there is a consensus that a penalty TIP imposed on relatively large companies for excess wage increases is the best form most likely to work in practice.

WHAT IS THE KEYNESIAN - MONETARIST DEBATE ABOUT NOW?

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The Keynesian-monetarist debate has raged for some 25 years now without any clear resolution. In many respects it has been going on for about 45 years, since the Keynesian-monetarist debate is largely a successor to the Keynesian-classical debate. The monetarist position resembles the classical in its frequent incorporation of the quantity theory of money as a central element and in its relatively high faith in the stability of the private market economy. Indeed, one can almost translate classical economics into monetarist economics by observing that where a classical economist would say, "Such and so is true," a monetarist will say, "Such and so is approximately true in the long run."

One of the most notable aspects of the Keynesian-monetarist debate is the inability of the participants to agree as to just what it is that they are disagreeing about, a feature very apparent in the Friedman-Tobin exchange of the early seventies. Four reasons may be adduced for this confusion. First, the debate deals with issues that are in fact very complex. Second, the scope of the debate is broad and unclear. Is it about macroeconomic policy? Or macroeconomic theory? Or empirical measurement? Indeed in one form or another it is probably about all of these, and also about political philosophy and economic methodology. Third, the ground of the debate has often shifted through time. And, fourth, the Keynesians and the monetarists represent two clusters of opinion, not two unitary positions. At one time the monetarist position could fairly reasonably be taken to be whatever Milton Friedman said it was, but with the rise to prominence of Brunner and Meltzer, the St. Louis Fed brand of monetarism, and others, this is no longer the case.

After a brief discussion of methodology, this paper catalogs a collection of issues that have played an important role in the debate and considers their current significance. These include the shape of the IS and LM curves, Friedman's "missing equation," the shape of the aggregate supply curve, the Phillips curve and the

natural rate hypothesis, the macroeconomic version of the rational expectations hypothesis, the relative efficacy of fiscal and monetary policy, the length of the "short run," the direction of causation between policy variables and income, the stability of the private economy, and the macroeconomic policy mix.

One conclusion is that at least three theoretical-empirical issues are still outstanding:

(a) Is the effect of the accumulation of government bonds expansionary or contractionary?

(b) Is the macro rational expectations hypothesis valid?

(c) What is the direction of causation between policy variables and aggregate economic activity?

In addition it should be noted that there are probably still disagreements over the relative importance of monetary policy in determining aggregate economic variables and that there may still be open questions concerning the shape of the aggregate supply and demand curves.

With respect to whether there is convergence between the Keynesian and monetarist positions, it is suggested that there is some theoretical convergence, but that there does not seem to be any with respect to macroeconomic policy. A novel summary of the debate in terms of the proportion of income change due to various factors is proposed.

WAGE DIFFERENTIALS AND UNITED STATES FOREIGN TRADE

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This study attempted to determine if wage differentials still exist between leading export industries and leading import-competing industries in the United States. It further attempted to determine the source of the differentials.

The study drew its sample from U.S. manufacturing industries in 1960 and 1970. Leading export industries and leading import-competing industries were identified for both years.

In both 1960 and 1970, the leading export industry group had higher average hourly earnings. The primary source of the differential was the higher average human educational capital per worker in the leading export industry group. Some evidence of discrimination caused wage differentials was also found.

The study corroborated earlier empirical findings that U.S. exports are relatively human capital intensive and U.S. imports are relatively physical capital intensive.

A REVIEW OF THE EXCESS CAPACITY CONTROVERSY

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The main controversies associated with the concept of excess capacity can usefully be divided into five categories: (1) the monopolistic competition debates, (2) the search and value of time approaches, (3) the peak-load debates, (4) the Averch-Johnson literature, and (5) the inventory and investment approach.

The names most prominent in the monopolistic competition debates have been Demsetz, Stigler, Archibald, and lately Ohta. Although Chamberlin's original theory has suffered much at their hands, the debates have led to a fuller exposition and development of the theory of competition wherein firms compete in aspects of product quality as well as price and quantity.

The pioneering work by Stigler in search theory and Becker in value of time theory have laid the groundwork for a demand side rationale of the value of "excess" capacity. The most sophisticated development and application along this line has been the work by DeVany and Saving.

The peak-load concept of capacity, originally a novel sidelight to price theory, has now become an integral part of most discussions of excess capacity. The original solution for the peak problem had the peak customers paying all the capacity costs. In a stochastic setting, however, even the off-peak customers pay a part of capacity costs since they too benefit from such capacity.

Likewise, the Averch-Johnson literature, though originally concerned with the effect of price regulation on a monopoly's choice of input ratios and output levels, has further developed the effects of such regulation on quality aspects of production not only for regulated monopolies but also for regulated competitive industries. In general, price regulation is generally seen to be harmful in that even when it has the desired effects on price and output, it leads to a non-optimal level of product quality (viz., too much or too little "excess" capacity).

The investment and inventory literature has become increasingly oriented toward stochastic models and has become more aware of the optimality of "excess" capacity in an environment of demand and production uncertainties. A major subclass in this category is the rhythmic input pricing theory which holds that excess capacity is the result of the firm using capital only in those periods when labor input prices are lower.

The controversies do not appear as isolated as they once were, and their convergence may yet lead to a more general and complete theory of the firm as it competes in both price and quality dimensions in a world of uncertainty.

THE DISUNITY OF ECONOMIC AND POLITICAL SCIENCE

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Modern political economy is generally regarded as the application of "economic reasoning in political analysis." It has been argued that political economy is "the shape of political theory to come" and that there is a fundamental "unity of political and economic science." In Black's view, "Reasoning throughout both sciences ... seems ... to be nothing short of identical in kind ..."

This paper reviews some fundamental problems in modern political economy which focus around what I call the aggregation issue. The paper suggests that the widely used term "political economy" should not be applied to the analysis of political behavior or public choice. Rather, the term should be restricted to the usage common among economists to indicate the intersection of the economic and political systems, particularly in the design of micro and macro policies. I suggest this restriction because the aggregation issue is unresolved in both collective decision making and cost-benefit analysis.

Economic reasoning is as applicable to the political, as to the economic, decisions of an actor. All choices imply scarcity conditions and a requirement for achieving efficiency in resource allocation. A political entrepreneur faces many of the same decision problems as an economic entrepreneur. In this sense, economic reasoning, however, is simply a logical method of choice. Economic analysis can be a deceptive guide to political phenomena because it does not automatically solve the aggregation issue. Economic analysis as the study of resource allocation under scarcity has no institutional context. Nevertheless, economics evolved as the study of markets as an institutional process for making collective decisions about resource allocation. The market system drives aggregation of individual preferences through demand and supply forces.

"A theory of political exchange" means literally that political conflict is resolved by mutual exchange. However, political resource markets determine the distribution of power or influence and other political resources, and hence the terms of political exchange.

Power or influence is as crucial a concept as exchange in the economic model of politics. Curry and Wade state that, "... we regard power as the singularly most important characteristic of non-market structures. Power is the ability to eliminate (or reduce) the number of alternatives from which others are free to choose and/or to prevent their free choice from among alternatives. The result of power is the ability of the powerful to force an exchange, at their own terms, on the powerless or less powerful."

The political economy approach to political phenomena and collective choice may be termed the tabulation of preferences. In this approach, the central issue is seen as one of designing political exchange models which will duplicate the function of exchange markets. In other words, the problem is to design voting systems which will tabulate or aggregate individual preferences. Power, institutions, and processes, however, determine the terms of political exchange. Economic analysis does not solve the central problem for us. Voting or preference tabulation is only one possible approach to collective decision making and presumes the existence of an accepted voting rule. Economic analysis has not been successfully applied to political -- rather than voting -- processes where conflict, bargaining, and negotiation are the key features. Where group consensus cannot be achieved, economic analysis will fail to handle the aggregation issue, even though, as a logical theory of choice under scarcity, it can be used to analyze the allocation choices of individual decision units.

The voluntary exchange model must realistically include the possibilities of unequal bargaining power and non-electoral politics. That model becomes indeterminate when it does so. In my view, the conceptual mistake has been to treat modern political economy as a model of "policy markets," when it is really more applicable to "political resource markets," which concern the distribution of power or influence. Political economy relates to the distribution of political resources. There are two important themes in modern political economy, so defined. The first theme is the relationship between the distribution of economic resources and political power. The second theme concerns the consequences of institutions and processes for economic policy making (both micro and macro), which in turn affects the distribution of economic resources.

LEGAL RESISTANCES TO THE DEVELOPMENT OF SOLAR ENERGY

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As the political problems of the Middle East become more acute, and the balance of payment problem of the United States increases in magnitude, need for a secure and adequate energy source demands the attention of policy makers.

Solar energy, one of mankind's ancient resources could provide a possible solution. According to Denis Hayes, 40 percent of our energy could come from the sun by the year 2000. Certain institutional barriers or resistances, however, will have to be overcome if this goal is to be achieved. The legal resistances constitute one of the major roadblocks to the development of solar energy.

Thorstein Veblen stressed the adversary relationship between institutions and technology in The Theory of the Leisure Class (p. 190).

This research examines some of the legal resistances, such as property rights, judicial decisions, zoning order, building codes and restrictive covenants, to the development of solar energy. Since solar energy use is dependent upon access to sunlight, the central issue is right to "sunlight". Although the concept of 'property' has undergone profound modifications over the last century, the changes have not provided accommodation to those who wish to invest in solar energy technology.

Not only are some of the legal doctrines such as the Doctrine of Ancient Rights analyzed, but the major devices that are available to policy makers such as impact statements, building codes, zoning ordinances, easements, restrictive covenants, transferable development rights and comprehensive state plans, are evaluated.

The rate of progress in the development of solar energy in the United States depends on the rapidity with which institutional resistances which inhibit the installation and use of solar technology can be adjusted. Investors in solar devices must be assured access to the sun. Veblen's insight into the process of social change suggests the nature of the institutional problems of legal resistances to change. If the capacity of the institution of private property to adapt can be judged by its past record, a spirit of optimism should prevail concerning the future of solar energy.

Absorptive Capacity Reconsidered: The Case of Iran

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The traditional concept of absorptive capacity views foreign aid as helpful infusion of capital in so far as there are sufficient supplies of skilled labor, managerial talent, governmental ability, "social overhead capital," etc., to utilize it efficiently. In short, the productivity of capital is seen to be limited by the adequacy of co-operant economic factors. The latter is not only inclusive of conventional inputs such as land, labor, etc., but a number of social factors constituting the cultural-political milieu within which capital is to function.

In this paper the concept of absorptive capacity is reexamined. It is pointed out that the concept need not necessarily arise in situations involving foreign aid. It is argued that the traditional concept of absorptive capacity, wherein it refers to a situation where a marginal increment in investment results in waste, is inappropriate. Instead, it is argued, that absorptive capacity should be defined as a rate of investment such that marginal social costs of investment is equal to the marginal social benefits. Waste refers to that level of investment which yields an excess of social costs over social benefits. The social costs of investment include not only the opportunity cost of capital (as measured by the appropriate rate of discount) but also the social strain that such overinvestment entails. Net investment expenditures are desirable in so far as they are growth promoting and lead to a higher rate of growth of per capita output. However, if the net social strain (as measured by such indicators as worsening of income distribution or the speed of inflation) is greater than the net social benefits, additional investment is unwarranted.

Drawing upon the Iranian data for the past two decades, particularly the 1970's, it is contended that

investment in Iran exceeded the absorptive capacity, i.e., the social costs exceeded the social benefits. An attempt has been made in this paper to demonstrate that the ensuing social strain of excessive investment was evidenced by the rapid rate of growth of inflation, manpower shortages, sectoral imbalance, and a deterioration in the distribution of income. While it is not suggested that overinvestment was the sole cause of recent social upheavals, it is argued that the increased strain engendered by overinvestment was a major contributor.

DISCUSSION OF CHARLES BEGLEY'S PAPER

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University of Arkansas for Medical Sciences

Most criticisms of previous CON studies emphasize the time periods used and the inappropriate indicators of CON. Also of importance, however, are the lack of sanctions and discovery mechanisms in most models. Sanctions and discovery mechanisms are of particular significance in relation to Section 1122 certificate of need programs.

Several issues for consideration arise from Dr. Begley's paper.

1. Is the consensus model appropriate to describe planning? The possibility of industry domination of the planning process should be examined.
2. Are current facilities planning activities really doing much more than adopting a revised Hill Burton approach? When ceilings are set on bed expansions, how firm are those ceilings?
3. It is questionable whether population based planning is easier and less controversial than utilization based planning. With hospitals beds, in particular, there is now much argument between planners and industry representatives over appropriate definitions of service areas. In determining which services are emphasized by planners, a key distinction should be made between services that are subject to national standards and those that are not.
4. Hospital production functions need a more meaningful breakdown of capital inputs than just beds and ancillary services. Beds themselves are frequently specialized, and ancillaries differ in the degree of discretionary use to which they can be put.
5. When analyzing the effectiveness of planning, one needs to take into account whether it is institution specific or not. Much planning is area specific and, as such, is not designed to keep individual institutions on their expansion paths.
6. Finally, one should not examine the effectiveness of CON programs, without considering the expansionary incentives of the third party reimbursement system.

JAPAN'S APPROACHES TO DEALING WITH ENVIRONMENTAL
POLLUTION: A COMMENT

Ralph O. Gunderson

University of Central Arkansas

Professor McKinney's paper on Japanese approaches to deal with environmental pollution should be commended for pointing out the similarities and contrasts which exist between the Japanese and American experience with pollution. It is especially helpful to understand the unique atmosphere which exists between Japanese business interests and the government. The close cooperation between these two sectors is central to understanding the implementation of Japanese environmental legislation. The paper refers to the consultations which take place between the two parties, but the author would be well advised to analyze this process in much greater detail. It would be helpful to contrast the Japanese implementation experience with that in the United States where a greater degree of "antagonism" seems to have developed in implementing environmental policy.

The author spoke of the effectiveness of pollution control measures in Japan. As a measure of effectiveness it was pointed out that the "...loss from environmental pollution is estimated to have peaked for Japan in Fiscal Year 1970 at 9.4% of GNP..." It was then implied that because the loss from pollution, expressed as a % of GNP, is declining then pollution control measures are effective in Japan. This is quite misleading. An expanding economy will see increasing levels of GNP. If pollution costs rise less than the rate of growth in GNP then the costs of pollution will be declining, as a % of GNP. This is not an appropriate indicator of policy effectiveness.

The last section of the paper was concerned with an evaluation of environmental policy measures in Japan. The paper was incomplete in two areas. First, it was pointed out "...that Japan has perhaps the most extensive pollution control legislation of any country." It would have been very helpful to the reader to elaborate on that point. Second, "the close consultation between the central government and local governments" was alluded to but not given sufficient explanation.

Finally, the "polluter pays principle" was cited as a philosophy which underlies much of Japanese pollution control policy. However, in the discussion of the implementation of policy, the author cited numerous tax breaks which were given to businesses to induce them to invest in pollution control programs. This is a contradiction which was not explained.

A COMMENT ON "MISSISSIPPI'S MINERAL RESOURCE:
AN ECONOMETRIC ASSESSMENT"

Yien-I Tu

University of Arkansas

In the economic theory, the concept of production function is a technical relationship. The function may be estimated by the method of ordinary least squares, if the data of inputs and outputs is generated from a controlled experimentation of production. This may be referred to as the direct approach of estimating the production function. Unfortunately, this kind of data is rarely available to the economist.

The data of inputs and outputs which is usually available to the economist is the result of the interactions between economic and technical considerations. This means that the data is generated by a process of the firm's evaluations of the market prices of inputs and outputs, the productivities of the inputs and the general market conditions. Therefore, when such data is used for estimating the production function, the economic and technical considerations should be built together as a production model for its estimation. This model consists of the production function and the derived demand functions for the inputs; the method of simultaneous equations appears to be appropriate for estimating the model. This approach of emphasizing the joint determination of the inputs and outputs by considering their prices may be referred to as the indirect approach.

Professor O'Neill should be commended for his persistent effort of estimating a number of alternative forms of the production function for Mississippi's mineral resources. However, he had not tried the indirect approach at the time when his paper was read. The fact that the negative and statistically significant labour coefficients have been obtained for the various functions estimated is, of course, a disturbing one. There may be other reasons for these. Nevertheless, it seems worthwhile to consider the indirect approach as an alternative.

Finally, the familiar problems of estimation: multicollinearity, autocorrelation and heteroscedasticity need to be examined. These problems may have contributed to the disturbing results obtained.

COMMENT

Lawrence F. Ziegler

The University of Texas at Arlington

This paper is concerned with an aspect of the long term plight of the nation's large cities. The authors attempt in a general way to examine the hypothesis that the major cities in the U.S. are being "revitalized." However, they do not provide an operational definition of the phenomenon called "revitalization." It appears that the process of "revitalization" can take place in healthy cities as well as sick cities since those used in the analysis include, on the one hand, growth-oriented SMSAs such as Houston and Oklahoma City and, on the other, declining SMSAs such as Cleveland and Detroit. "Revitalization" apparently means that housing is being remodeled, torn down and rebuilt, etc. At any rate those occupying new or remodeled central city units appear to have different economic characteristics (e.g. higher income) than those who left the central city.

The main concern of the paper turns out to be "the determination of the factors that are inducing households to choose the central city as a place of residence." This analysis was undertaken on a "gross" rather than "net" basis, when the latter approach seems more appropriate. Future work on the topic should begin by answering three basic questions. First, how many of the central cities for which data are available, actually grew in absolute number from 1970 to 1976? Second, how many of the SMSA's involved actually lost population from 1970 to 1976? Third, in how many cases did the central city grow relatively faster than the suburbs in that SMSA. Classifying the cities in this fashion will allow the authors to focus on the central cities which were really candidates for revitalization and focus on those SMSA's and central cities which grew on a "net" basis. There does not seem to be any good reason for saying a central city is being revitalized when it is losing population.

Approaching the analysis in this way will allow the authors to sharpen the reasoning behind their hypotheses and, hopefully, will improve their statistical results in the process. In some cases the predictive power of the model is good, but the authors are properly perplexed by signs which do not support their hypotheses.

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