

# The Jerome Levy Economics Institute of Bard College

# Summary

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The Jerome Levy Economics Institute of Bard College, founded in 1986, is a nonprofit, nonpartisan, independently funded research organization devoted to public service. Through scholarship and economic forecasting it generates viable, effective public policy responses to important economic problems that profoundly affect the quality of life in the United States and abroad.

S Jay Levy, *Chairman*  
Dimitri B. Papadimitriou, *President*

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## Letter from the President

*To our readers:*

*The upcoming year will bring changes to the Levy Institute. Leon Botstein was elected chairman of the newly formed executive committee of the Institute's Board of Governors. The Institute will soon open an office in New York City and will begin work in two new areas of research.*

*Research on the psychology of economic behavior will examine the assumptions behind the concept of "economic man." The notion that human beings rationally evaluate costs and benefits in making all economic decisions has been a common and convenient assumption, but one with questionable theoretical foundations. This area of research will explore the cultural factors that govern the behavior of institutions and psychological and social factors that affect the way individuals deal with things such as property, efficiency, work, profit, affluence, need, and economic ambition. A range of questions might be examined: How are expectations formed under conditions of uncertainty? What becomes of simple models of economic motivation in advanced, complex economies? How does credit change the way individuals calculate their purchasing power?*

*Research into the distribution of opportunity, income, and wealth will examine the causes and effects of the increase in inequality in the United States since the mid 1970s. The Institute will attempt to analyze important issues such as the relationship between changes in inequality across nations; the relationship between inequality, economic growth, and employment; and the impact of government on inequality.*

*This issue of the Summary includes summaries of activities in three research programs and other projects. The program on employment policy and labor market structure includes a symposium on employment policies to reduce poverty and five research papers. Thomas Ferguson and James K. Galbraith examine the determinants of the American wage structure during the turbulent years from 1920 to 1947. I evaluate policies that have been suggested to achieve higher employment. Marc-André Pigeon and L. Randall Wray investigate the effects of the Clinton expansion on employment opportunities. Oren M. Levin-Waldman and George W. McCarthy summarize some of the results of the Levy Institute's small business survey in two policy notes, one focusing on the minimum wage and the other on welfare reform.*

*Activity in the program on financial markets and monetary policy includes Wynne Godley's paper on the effects of money and credit in a Keynesian model of income determination, Jamee K. Moudud's presentation of a classical growth and cycles model of finance, and L. Randall Wray's and my case for further interest rate reductions.*

*Three papers in the federal budget policy program are summarized. George Argyrous investigates the*

*difficulty of balancing the budget by expenditure cuts. L. Randall Wray discusses the development of modern money from a Chartalist perspective. L. Randall Wray and I discuss the federal budget surplus in the context of the coming economic slowdown.*

*Other projects include Mathew Forstater's synthesis of Abba Lerner and Adolph Lowe's methodologies into a new macroeconomic approach, John F. Henry and L. Randall Wray's discussion of concepts of time in economic theory, and Sudhakar Rao's seminar on the effect of the Asian crisis on Indian economic growth.*

*As always, I invite your comments.*

*Dimitri B. Papadimitriou  
President*

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## Institute Research

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### Program: Employment Policy and Labor Market Structure

#### **The American Wage Structure, 1920-1947**

Thomas Ferguson and James K. Galbraith  
Working Paper No. 249, August 1998

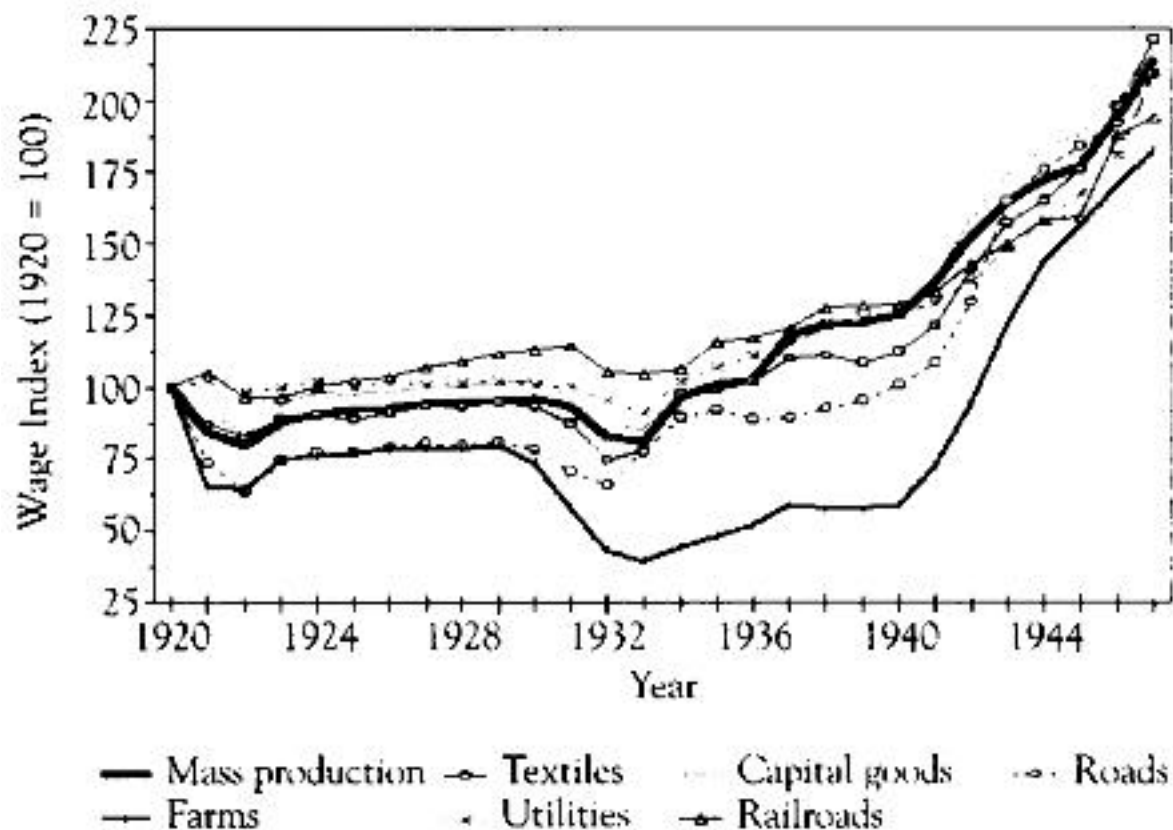
The post-World War I recession, the Roaring Twenties, the Great Depression, and World War II brought about enormous changes in the American wage structure between 1920 and 1947. Examining the causes of changes during this turbulent period can help determine the causes of the wage structure that prevailed during the more tranquil period that followed.

Thomas Ferguson, of the University of Massachusetts Boston, and Levy Institute Senior Scholar James K. Galbraith, of the Lyndon B. Johnson School of Public Affairs of the University of Texas at Austin, examine changes in the wage structure between 1920 and 1947 using data for 83 industries from a variety of sources, including the National Industrial Conference Board, the Census Bureau, and the Bureau of Labor Statistics. Their analysis focuses on differences in the pattern of wage change through time rather than on the level of wages, following the theory of industry-specific labor rents. This theory assumes that, when the capital market clears but the labor market does not, employees can capture part of the rent from an imperfectly competitive industry. If this theory holds, the patterns of wage change across industries through time reflect differences in economic performance of those industries rather than changes in labor productivity.

To examine the pattern of wage change, Ferguson and Galbraith employ a technique called cluster analysis, which is virtually unknown to economists but is well known in fields such as geology and evolutionary biology. The 83 industries are grouped by minimizing the ratio of within-group to between-group variation of wage change through time. This technique neatly divides the industries into eight distinct industrial groups: mass production, textiles, capital goods, roads, farms, utilities, and two classifications of railroads. The industry-specific labor rent hypothesis is consistent with the data, which show that differences in the rates of wage change between industries prove to be much more important than changes in the wage differential between skilled and unskilled workers within industries. Gender, in fact, proves to be a more important marker of intraindustry wage change than skill. The gender gap decreased during this period but did not disappear.

Exhibit 1 shows relative wage movements of the seven industrial groups (with the two railroad clusters combined into one) obtained from the cluster analysis. All industrial groups saw their wages decline in the early 1930s, with farm declining the most. Manufacturing wages began to increase toward the end of the 1930s, and wages for all of the industrial groups rose substantially during World War II, so that by 1947 wage differentials between industries were about where they were at the end of World War I.

**Exhibit 1** Relative Wage Movements of Industrial Groups, 1920 to 1947

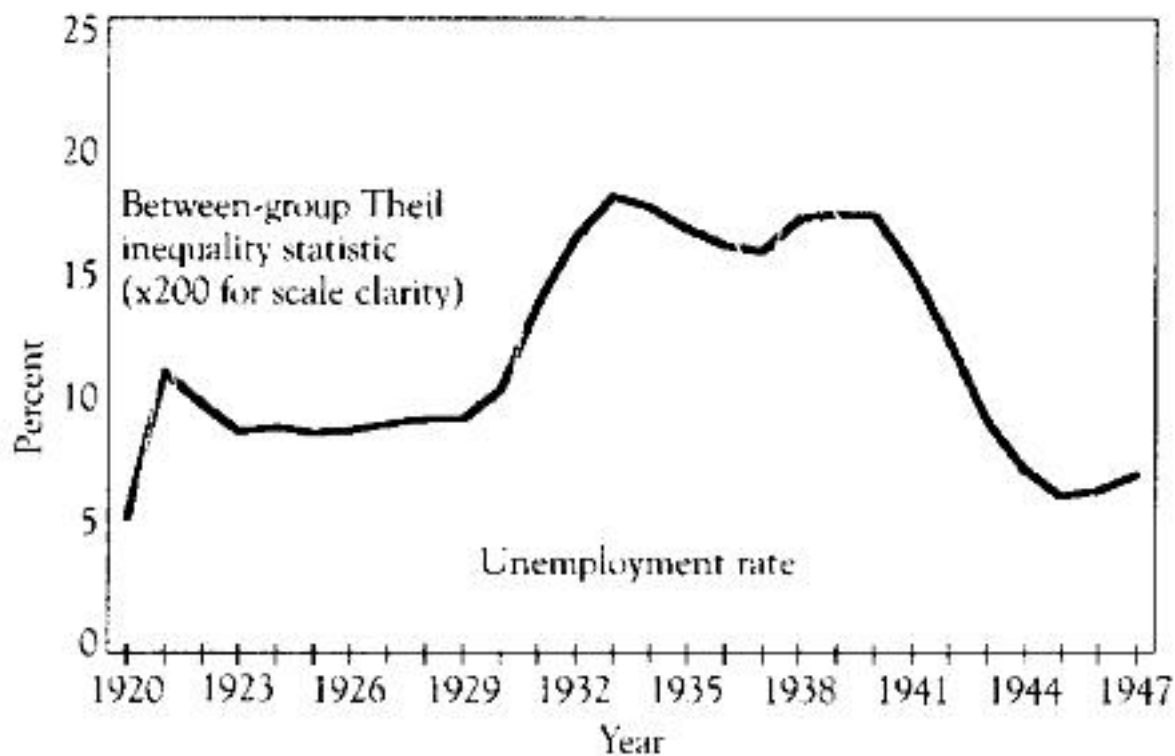


Ferguson and Galbraith present a systematic decomposition of the sources of wage variation across groups. This discriminant analysis identifies four forces that together explain almost all the variance in the wage change: changes in aggregate demand explain over 50 percent of the changes in wages, strikes account for 20 percent, the terms of trade account for 15 percent, and a mystery category accounts for another 7 percent. The authors then identify variables in the historical record that appear to correspond closely to these forces.

Ferguson and Galbraith's analysis brings up important questions about the conventional theory of wage determination. There is little evidence in this study to support the theory that workers are paid their marginal products and that wages increase when worker productivity improves due to increased skills or technology. Many authors have pointed to improved education as a source of increasing productivity to explain the rising wages experienced during most of the twentieth century. If education were the causal factor, intraindustry wage differentials between skilled and unskilled workers would have varied more than wage differentials between industries, but instead the opposite occurred. Also, there is no perceptible association across industries between increases in the proportion of skilled positions and changes in the skill premium, which would be the case if education were a primary factor. To the extent that the skill premium did move, it moved opposite to the direction predicted by marginal product theory. The skill premium increased slightly in the 1930s; then during World War II the wages of all workers, especially the unskilled, increased greatly. This pattern is more consistent with the theory that demand for labor is the primary cause of wage changes than it is with the theory that education drives wages. Furthermore, most of the rise in educational attainment, such as that made possible by the G.I. Bill, was just getting underway in 1947, after wage differentials had reached the stable position they would keep for most of the following decades.

To further test the hypothesis that aggregate demand drives wages, Ferguson and Galbraith calculated the Theil T statistic, a well-known measure of inequality, for the 83 industries in the sample by averaging them into 26 major groups. They then ran a one-variable regression with the Theil T statistic as the dependent variable and unemployment as the independent variable. The results attribute 83 percent of the variation in the Theil T statistic to unemployment. The results support the argument that the existence of unemployment has a great effect on inequality among the employed. Exhibit 2 plots the movements of unemployment and the Theil T statistic through the study period. Inequality rose shortly after unemployment jumped at the beginning of the depression and came down nearly as fast when unemployment dropped at the beginning of World War II.

**Exhibit 2** Movements of Unemployment and the Theil Inequality Statistic, 1920 to 1947



Ferguson and Galbraith's results reverse the usual notions of micro-to-macro causality. It appears that a small number of macroeconomic variables, especially aggregate demand, account for a large portion of microeconomic changes. Ferguson and Galbraith ask, "What changes in, say, the peacetime labor force or in civilian technology occurring strictly between 1940 and 1946 could possibly have accounted for both the emergence of the wartime wage structure and its enduring stability a quarter century after the war?" This analysis calls into question the view that the labor market is driven by the efficient operation of market forces. Instead, Ferguson and Galbraith believe that rising demand for labor at all skill levels during World War II established the wage pattern that prevailed in the postwar era. They conclude that no public policies work so reliably to reduce inequality as the combination of full employment, collective bargaining rights, and rising wage standards.

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## **(Full) Employment Policy: Theory and Practice**

Dimitri B. Papadimitriou

Working Paper No. 258, December 1998

Although the U.S. unemployment rate in 1998 was at its lowest level since the late 1960s, the employment

problem is still far from solved. Only 4.6 percent of people classified as in the labor force are unemployed, but many of those classified as "out of the labor force" would be willing to work if jobs were available and many of those classified as "employed" are involuntarily working part-time. Many economists assume that unemployment tends toward a natural rate below which it cannot go without creating inflation and so millions must remain idle to ensure price stability. Levy Institute president Dimitri B. Papadimitriou poses two important questions regarding employment: Is this the best we can do in times of prosperity and are we prepared to meet the challenges of the next downturn? The task is to craft employment policies that uphold the individual's basic right to a job and that are not inflationary. Papadimitriou evaluates the relative merits of three proposed strategies to improve the employment situation: a reduced workweek, employment subsidies, and a public service job opportunity program.

Some economists have proposed that, at times of high unemployment, a shorter workweek would spread the work around, giving jobs to the unemployed. This strategy has been introduced by governments and supported by unions in several foreign countries at various times since the 1950s. According to Papadimitriou, it has consistently failed to enlarge the pool of employed workers and has had a number of adverse side effects on output, inflation, the balance of trade, and individual choice regarding work-leisure allocation.

Edmund Phelps has suggested that subsidizing employment of low-wage, low-skilled workers can be an impetus for increased hiring from the ranks of the unemployed and those out of the labor force. Types of subsidies that have been proposed include wage subsidies to employers; subsidies to reward work, such as the earned income tax credit (EITC); and subsidies based on redistribution, such as the negative income tax. Papadimitriou points out that if a wage subsidy is successful in promoting higher levels of private sector employment, it may result in upward pressure on money wages, thereby leading to inflation. Also, subsidized low-wage labor schemes come with a high price tag and still may not guarantee full employment.

Hyman P. Minsky proposed an "employer of last resort" policy. A group of Levy Institute scholars have developed his proposal as the public service job opportunity program. The government would announce the wage at which it would offer employment and then provide jobs (either in the public sector or at designated nonprofit organizations) for all who want to work at that wage. The government would become a "market maker for labor" by establishing a buffer stock of employed but available workers. It would stand ready to "buy" all unemployed labor at a fixed wage or "sell" labor, that is, create a pool of workers from which the private sector may hire if firms are willing to pay a markup over the government wage. As in all buffer stock schemes, the commodity used as the buffer is always fully employed. Its price is always stable because, in this case, the government stands ready to purchase as much as is offered for sale at its announced price. Therefore, such a program can ensure full employment without creating tight labor markets and without causing price instability as Keynesian demand management programs and employment subsidy programs do.

A public service job opportunity program would not lead to demand-pull inflation because, unlike employment subsidies and aggregate demand management, it would stimulate demand just to the level at which full employment is reached and no further. Once there are no more workers willing to accept a program job, spending would stop automatically, so it could not become excessive, that is, it could not cause aggregate demand to increase beyond the full employment level. The program would not cause cost-push inflation because the wage would be exogenously set and stable and it would establish a benchmark price for labor. Some producer prices would experience a one-time increase when the program is introduced, but that is not inflation; because the wage would not increase with private sector wages, it could not cause a wage-price spiral.

According to Papadimitriou, much social spending that is currently targeted to the unemployed can be reduced or eliminated if a public service job opportunity program is introduced, greatly reducing the program's net cost. This cost is likely to be offset by the increase in output produced by public workers, the decrease in the deterioration of human capital that occurs when workers experience long-term unemployment, and the reduction in the social and psychological costs of unemployment.

Critics may contend that a program of government employment might result in a large "make-work" program, like the WPA, that would be difficult to administer efficiently and would stigmatize participants. Papadimitriou notes that there are several government employment programs—such as Vista, the Peace Corps, and Americorps—that could serve as models for administering the new initiative. He also points to the many

productive accomplishments for society of the WPA and more recent programs and to the high regard accorded to people for their participation in them.

Critics also may argue that the current state-administered welfare-to-work programs reduce the need for public employment, but most states have indicated that they will not offer permanent work to welfare recipients and many are being left to "fend for themselves." The fact that the U.S. economy, even though it has been strong in recent years, is still far from a "workers' paradise" and that employment conditions will worsen in the next recession returns us to the questions "Is this the best we can do in times of prosperity?" and "Are we prepared to meet the challenges of the next downturn?" Papadimitriou quotes William Vickrey in his AEA presidential address in 1993: "There is no reason inherent in the real resources available to us why we cannot move rapidly within the next two or three years to a state of genuinely full employment and then continue indefinitely at the level. We should then enjoy a major reduction in the ills of poverty, homelessness, sickness, and crime that this would entail." These employment goals, says Papadimitriou, define "today's task for economists."

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## **Did the Clinton Rising Tide Raise All Boats?**

Marc-André Pigeon and L. Randall Wray  
Public Policy Brief No. 45, November 1998

By the middle of 1998 the U.S. economy was at the peak of one of the longest expansions in its history. Nearly 12 million new jobs had been created since 1992 and unemployment was at a 30-year low. Research Assistant Marc-André Pigeon and Senior Scholar L. Randall Wray find that, although aggregate employment statistics have been largely positive over the course of the Clinton-era expansion, job growth has not filtered down to the less educated and less skilled—the rising tide has not raised all boats.

Some labor market statistics seem to support the idea that the rising tide did raise all boats. Among workers age 25 and over the unemployment rate for those who have not completed high school fell from 11.5 percent in 1992 to 7.1 percent in 1998, the rate for high school graduates fell from 6.8 to 4.7 percent, the rate for those with some college fell from 5.7 to 3.1 percent, and the rate for college graduates fell from 3.2 to 1.8 percent. The employment rate, which to some extent is a better reflection of the true labor market situation, also improved for the least educated. The employment rate for high school dropouts rose by 3.0 percentage points to 39.6 percent in 1998, the rate for high school graduates rose by 1.1 percentage points to 62.7 percent, the rate for those with some college rose 1.3 percentage points to 72.3 percent, and the rate for college graduates was virtually unchanged at 79 percent throughout the expansion.

According to Pigeon and Wray, the larger absolute gains for the less educated are modest compared to the gap between those who attended college and high school dropouts. There is good reason to doubt the rosy scenario that if the expansion continues, job opportunities will "trickle down" so that eventually the employment rate of high school dropouts will approach that of college graduates. If the current expansion raised the employment rate of high school dropouts by only 3 percentage points in six years, by simple extrapolation the expansion would have to continue for another 78 years before the gap could be closed.

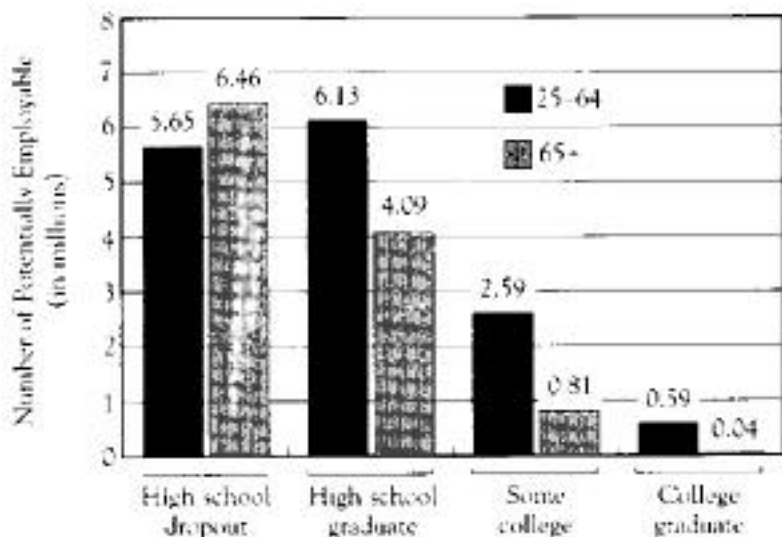
Pigeon and Wray show that even the modest 3 percentage point increase in the employment rate of high school dropouts overstates the effect of the expansion on the least educated. In fact, the increase can be entirely attributed to a decline in the population of high school dropouts, rather than to an increase in the number of dropouts employed. Demographically, a much larger portion of the elderly than of younger people are dropouts, and, therefore, the population of dropouts is declining while the population of those with at least some college is rising. The employment level for high school dropouts actually fell by about 100,000 jobs over the course of the expansion, and employment for high school graduates grew by only about 800,000, so that less than 700,000 of the 11.6 million jobs created went to the half of the population with no college education. The balance, 10.9 million new jobs, went to people with at least some college education.

The critical problem for the less educated is their relatively low labor force participation rate, rather than their

higher unemployment rate. An astounding 57 percent of the noninstitutionalized, over age 25, high school dropout population is currently out of the labor force. An argument could be made that people who are out of the labor force voluntarily choose not to work, but, according to Pigeon and Wray, research shows that many would be willing to work if opportunities were available.

Pigeon and Wray calculate an upper-bound estimate of the number of potentially employable workers, which includes those actively seeking work (now counted as unemployed) and those currently out of the labor force but who might be employed under certain conditions. They use the 80.4 percent participation rate of college graduates in mid 1998 as a target rate for all educational categories. Subtracting the number employed in each educational category from the target number of employed persons in that category yields an estimated total of 26.3 million potentially employable workers in all educational categories, age 25 and over. That number far exceeds the number of officially unemployed (less than 4 million) for that population. To take into account the fact that a much higher percentage of high school dropouts than of college graduates are of retirement age, Pigeon and Wray do an estimate removing the 65 and over population; they find that there are still about 15 million potentially employable workers age 25 to 64 in 1998 (see Exhibit 3).

**Exhibit 3** Potentially Employable Workers, by Age and Education, 1998



Note: Total potentially employable by age group: 14.95 for 25-64; 11.4 for 65+. Data for 1998 are for the first six months of the year.

Source: Bureau of Labor Statistics Internet site: [www.stats.bls.gov:80](http://www.stats.bls.gov:80).

Such a large number of potentially employable people suggests that a robust and sustained expansion is not enough to increase job opportunities for the less skilled. Pigeon and Wray believe that active labor market policies are required to solve this employment problem, which has large economic costs in terms of lost output and wasted human potential. Well-targeted job training and educational programs could help, but the authors stress that a more comprehensive program is required. They suggest a government "job opportunity program" that would offer minimum-wage jobs to anyone who is ready, willing, and able to work. By "hiring from the bottom" the program would be more effective at reducing the unemployment rate than simple "Keynesian" demand management policy, which tends to spark inflation before the benefits of increased economic activity trickle down to the least educated. The job opportunity program would be more effective than the current policy, which relies on maintaining unemployment to reduce inflationary pressures. Instead of a trade-off between inflation and unemployment, the job opportunity program can offer full employment and price stability as complements.

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## **Small Business and the Minimum Wage**

Oren M. Levin-Waldman and George W. McCarthy  
Policy Note 1998/3

## **Small Business and the New Welfare**

Oren M. Levin-Waldman and George W. McCarthy  
Policy Note 1998/4

The Levy Institute conducted a survey, under the direction of Resident Scholars Oren M. Levin-Waldman and George W. McCarthy, to obtain information about the hiring and employment practices of small businesses and how those practices are affected by increases in the minimum wage and the recent reform of the welfare system. Over the course of three weeks during the winter of 1998, a nationally representative, stratified random sample of 568 small businesses across industry types were contacted by phone.

Findings regarding the minimum wage, which are reported in Policy Note 3, raise questions about the conventional wisdom that increases in the minimum wage result in increases in the unemployment rate. The response to the question "Did the recent increase in the minimum wage affect your hiring or employment decisions?" was 89.4 percent no, 6.2 percent yes, and 4.4 percent don't know. The response to the question "If the minimum wage were raised to \$6.00 per hour, would it affect your overall hiring or employment decisions?" was 75.6 percent no, 20.7 percent yes, and 3.7 percent don't know. Only a small portion (3 percent) of all businesses surveyed said they would lay off employees if the minimum wage were raised to \$6.00. For estimates that a 10 percent increase in the minimum wage would result in a 1 percent reduction in employment to be correct, 3 percent of businesses would have to lay off nearly two-thirds of their employees. The fact that there is no evidence that small businesses have done so after past increases calls into question such estimates, at least as they apply to small business.

Levin-Waldman and McCarthy conclude that there may be a point at which the minimum wage begins to "bite" into employment, but the minimum can be raised to that point without serious disemployment effects. They suggest that the best mechanism for changing the wage is indexation. Indexation would prevent the erosion of the value of the minimum wage that results when a raise requires an act of Congress to adjust it for inflation. It would also free firms from the disruption caused by large jumps in the minimum wage that become necessary because Congress waits so long to make an inflation adjustment. Moreover, indexing the minimum wage to the median wage would allow the minimum to rise based on market-induced changes in wages.

Findings on the effect of welfare reform on employment policies are reported in Policy Note 4. Respondents were asked whether they had hired any new employees and whether any of them were former welfare recipients. Levin-Waldman and McCarthy found that many businesses had hired new workers in the last 12 months but, of those, 84 percent had not hired former recipients. Employers surveyed seemed to be more interested in a potential employee's experience than in his or her training. Those who had hired former recipients were more interested in general education than in technical training and the reverse was true for those who had hired other new workers.

Levin-Waldman and McCarthy interpret the results as implying that many small employers believe that former welfare recipients are lacking in general education. If former welfare recipients are entering the labor force, they are being hired either by big business or the public sector. This finding casts doubt on the belief that jobs are available for former welfare recipients if the recipients can be encouraged to look for those jobs by the threat of benefits time limits. The authors do find evidence, however, that businesses will hire former welfare recipients if the businesses are given a subsidy to do so: 74.9 percent of respondents said they would be willing to hire former welfare recipients if the government would pay all or part of their wages; 54.7 percent said they would be willing to hire former welfare recipients if the government offered subsidies for on-the-job training. The authors conclude that the current system of relying on state training programs, which vary considerably across the country, is insufficient and that a program of national subsidies tied to on-the-job training requirements would be valuable in achieving serious welfare reform.

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## **Symposium: Employment Policies to Reduce Poverty**

On September 24 the Levy Institute organized a symposium to discuss the persistence of poverty in the United States despite the success of the economy in recent years.

### **S Jay Levy**

The featured speaker was Chairman S Jay Levy of The Jerome Levy Economics Institute. In his speech, "Ethics and Markets," he addressed some of the problems that emerge when one views a market economy in relation to an ethical concept. For example, it is a principle of our capitalist system that markets ought to price equitably whatever is sold. However, many people today are bothered by the large and widening gap between the incomes of the most generously compensated and those who are paid less than the median wage. Are the richest among us overcompensated? Star professional athletes earn millions of dollars for playing games and additional millions for advertising sneakers and breakfast cereals. A star biochemist who is spending 60 hours a week in a laboratory developing a cure for brain tumors might be paid \$135,000 a year. Is the scientist worth as much to society and to future generations as an all-pro quarterback? The market says no. We could decide that no person is worth more than \$2 million a year and we could then impose a tax of 95 percent or more on incomes above that amount. But, if a quarterback is selling billions of dollars of foodstuffs and athletic shoes, the market may be right and equitable.

Some households have lost purchasing power in the past two decades. Part of the blame rests with the growing class of retirees, who take bigger and bigger bites of the economic pie, leaving less for those who actually produce goods and services. If the bite taken out of the 1994 pie by households 65 years old and over had been no larger than the one in 1980, the real income of households 64 years old and less would have been \$2,000 more than it actually was.

Part of a cure for these problems would be a higher rate of employment. But if the market has a role in providing high employment, it is not playing it well. To deny a job to a person who is willing and able to work is a gross inequity. It is tantamount to saying, "Society has no use for you. You have no reason to exist."

The problem of unemployment in a capitalist system results from inadequate profits or an unequal distribution of profits. Industrial economies such as that of the United States produce enough profits to support full employment. Businesses will hire everyone in sight if they can make a profit doing it. The American economic system is supposed to follow a strict ethic: Profits shall go to those who contribute to the production of goods and services. Each firm's profits should reflect its contribution to the gross domestic product. But profits are wasted. Powerful groups in society often siphon off a greater share of profits than they deserve, leaving too little for others. The result is a lack of incentive for the production that would reduce joblessness and raise the standard of living.

Wasted profits are also seen in real estate markets. Since 1990 in the European Union the cost of shelter has increased twice as fast as the consumer price index in every major economy except the United Kingdom. The beneficiaries of this increase are the owners of rental property and the holders of mortgage loans, who realize gains without making any additional contributions to the production of goods and services and therefore to more employment. Those who must spend more for their housing have less to spend in stores and so stores and their suppliers need fewer employees. The "market" economy is really a profit-motivated economy, or in other words, a profit system.

### **Session 1. The Effects of Structural and Institutional Factors on Poverty**

The first session was moderated by Levy Institute visiting scholar **Mathew Forstater**. Participants were **Vernon M. Briggs Jr.**, professor of labor economics, New York State School of Labor and Industrial Relations, Cornell University; **Edward N. Wolff**, professor of economics, New York University; and **Henry Farber**, Hughes-Rogers Professor of Economics, Princeton University.

Because of the big impact immigration has on the U.S. labor market, Briggs said, immigration policy should be viewed as a component of employment policy rather than as a political policy. Current U.S. immigration policy,

with its focus on family reunification, has allowed more low-skill workers into the country than the economy can absorb. As a result, these immigrants compete with native-born Americans for low-skill jobs and the poor suffer adverse effects. Briggs said that reform of immigration policy is essential if the United States hopes to solve its poverty problem. He supported this statement by presenting evidence that immigrants tend to be poorer and less educated than the native born. Briggs concluded that immigration should be used as a method to supplement the employment needs of the U.S. economy. Those immigrants possessing skills needed by the U.S. economy should be allowed to immigrate but not family members of immigrants who are already here.

A lively discussion followed Briggs's presentation. William Niskanen, chairman of the Cato Institute, criticized Briggs for making a hasty generalization. It is true that if immigrants tend to be poorer than the native born, their presence increases the average poverty rate in the United States, but this says nothing about whether their presence causes the native born to become poorer. Briggs responded that, if economic theory is to be believed, a large influx of unskilled laborers must have some negative influence on the wages of unskilled native-born Americans.

The U.S. unemployment rate, though still high by historical standards, recently reached its lowest level in nearly 30 years, but Wolff has found the picture is not so positive if one looks at the duration of unemployment. Wolff presented the results of an empirical investigation that he and Levy Institute Research Associate William J. Baumol conducted on the causes of increasing duration of unemployment. The length of time that unemployed workers are between jobs has risen dramatically since the late 1940s, when only about 5 percent of those who became unemployed were out of work for more than 27 weeks. That figure has now risen to about 20 percent. Wolff and Baumol found that two technology variables, the increase in total factor productivity and investments in office, computer, and accounting equipment, were highly correlated with the increase in the duration of unemployment. Wolff attributed this correlation to the fact that rapid advances in technology mean that employers must spend more for retraining because workers' skills become obsolete more quickly. As a result, employers are reluctant to hire less-skilled, less-educated, or older workers because the costs of retraining these workers are higher relative to their wages. Wolff suggested that this increase in the duration of unemployment means that government needs to consider extending the time limit on unemployment insurance benefits and implementing retraining programs that focus on new skills and technology.

The current economic expansion in the United States has resulted in job growth, but many scholars and policymakers complain that the jobs created are not quality jobs. They lament the passing of an era during which jobs both paid well and provided workers with lifetime employment. Farber's examination of data and surveys on job creation and job loss has led him to conclude that lifetime employment is as real now as it ever was. Benefits packages may not be as good as in the past, but starting salaries and working conditions are. Farber questioned the validity of the use of statistics on median job tenure to support the contention that workers do not remain in one job as long as they did in the past. He claimed that the recent decrease in median job tenure is mostly cyclical. In economic expansions firms hire new workers and that decreases median job tenure; when firms lay off workers during recessions, median job tenure increases. According to Farber, although job loss is slightly higher in the 1990s than in the 1980s, research indicates that workers' earnings actually recover more quickly from job loss today than in the 1980s, although there is variation in how well they recover. The most educated are least likely to lose their jobs and suffer the smallest losses in earnings. The less educated find it more difficult to recover from job loss.

## **Session 2. The Effects of Current Policy and Business Conditions on Poverty**

**Frances M. Spring**, Levy Institute assistant director, moderated the second session. Participants were **William A. Niskanen**, chairman of the Cato Institute; **Robert I. Lerman**, professor of economics, American University, and director of the Human Resources Policy Center, Urban Institute; and **Oren M. Levin-Waldman**, Levy Institute resident scholar.

According to Niskanen, living in poverty is only a temporary situation for most Americans. Many of these people—the young who are just starting careers or better-off Americans experiencing a temporary drop in income—can usually work their way out of poverty. Government policy should focus on those in chronic poverty. Most in this group lack the skills or work attitudes needed to rise out of poverty. What the chronically poor need is better work incentives and education. Niskanen said the minimum wage is not a solution because

most who earn it are not the main income earners in the home. The earned income tax credit (EITC) is a far better method because it tends to help the heads of households and, since it can be earned only if one works, it encourages people to work. Government should also get rid of any regulations, such as the minimum wage or requirements to provide certain benefits, that discourage employers from hiring. The chronically poor's need for better education requires serious reform of the American educational system. Public funds should be used to support a voucher program that would allow parents to send their children to private schools, including religious schools, which often provide a better education than public schools.

The amount of money the United States spends on programs for the poor has been growing and now stands at about 5 percent of gross domestic product. According to Lerman, although this increased spending may have done some good, little progress has been made in solving the problem of poverty. Recent welfare reforms might improve the situation. Unlike in the past, when welfare policy penalized people for working by reducing their benefits and thereby cutting their total income, policy is now moving in the direction of encouraging people to work as much as possible and then supplementing what they earn. There is, however, room for more reform in the welfare system. Welfare policies need to focus more on welfare-to-work programs, even at the school level. Schools could get more involved in programs to provide students with work skills and the opportunity to see what the work world is like. Such programs might encourage students to follow the work road rather than the welfare road.

Levin-Waldman presented findings from a Levy Institute survey of small businesses that sought to learn more about their hiring and employment practices, such as their willingness to hire welfare recipients, what they look for in prospective employees, and how an increase in the minimum wage and government subsidies would affect their hiring practices. Survey responses indicate that previous work experience, a general education, and vocational education are important to many small businesses, which suggests a better education and more job training would help welfare recipients find work. According to Levin-Waldman, the survey results imply that welfare recipients are assumed to be lacking in general education. But firms did express a willingness to provide them with on-the-job training if the government provided wage and training subsidies, even if training were tied to requirements to hire former welfare recipients. Another important finding was that 89.4 percent of surveyed businesses said that the most recent increase in the minimum wage did not affect their hiring decisions and 75.6 percent said that a further increase, to \$6.00 an hour, still would not affect their hiring decisions.

### **Session 3. Where Do We Go from Here?**

**Dimitri B. Papadimitriou**, Levy Institute president, moderated this session. Four Levy Institute scholars participated: Senior Scholar **L. Randall Wray**, Research Assistant **Marc-André Pigeon**, Resident Scholar **Oren M. Levin-Waldman**, and Resident Research Associate **Karl Widerquist**.

With the strong growth of the American economy new jobs have been created and the unemployment rate has dropped, but Wray and Pigeon's research indicates that the benefits of this employment growth are not shared across the labor force. The economic expansion, while creating opportunities for workers with at least some college education, is not creating opportunities for less-educated workers. Hardest hit are high school dropouts. Employment data appear to indicate that the employment gap has narrowed between those without a high school diploma and those with at least some college, but Wray and Pigeon argue that what has actually happened is that there has been a decline in the number of high school dropouts (due to a population decline of people in that educational category) rather than an increase in their employment level. They estimate that there are about 15 million people between the ages of 25 and 64 who are potentially available for work. They argue that active labor market policies are needed to bring these people into the labor force. Such policies should include programs to reduce the high school dropout rate, programs to provide alternative paths to employment (such as apprenticeships), wage subsidies to encourage employers to hire, and day care and other services that will make it possible for many to work. The authors stressed that the most effective labor market policy would be a government employment program that provides job opportunities for all those willing and able to work.

One important purpose of the minimum wage is to ensure that low-wage workers earn enough to support their families, but inflation tends to erode the value of the wage. According to Levin-Waldman, automatic adjustment of the minimum wage would eliminate this erosion and remove the enactment of wage increases from the political battlefield. Some researchers and policymakers have suggested that the minimum wage should be

indexed to the consumer price index. Levin-Waldman argued that the CPI is not a good measure because it can overstate inflation. A better method would be to link the minimum wage to the median hourly wage of the lowest-wage sector in the economy; the minimum wage would increase by the same percentage as wages in this sector. Under this method, the private sector determines the rate of increase in the minimum wage and it is more likely that increases will be tied to increases in productivity.

Widerquist argued that the most efficient way to reduce poverty is to provide everyone with a guaranteed income. The government would guarantee, without imposing a work requirement, that no one's income will fall below a certain level. An incentive system would be set up so that those who earn more private income would have a higher after-tax- after-transfer income than those who earn less. Policies aimed at reducing poverty often get caught up in the debate over the causes of poverty; many proposed policies work for one possible cause of poverty and not for others. For example, the recent welfare reforms will work only if the cause of poverty is that people have insufficient work incentives, but it will fail if there are not enough above-poverty-wage jobs available. If there are not sufficient job opportunities, forcing welfare recipients into the labor market will reduce wages or increase unemployment or both. A guaranteed income would work whatever the cause of poverty. Such a system would provide two distinct benefits to the working poor. By ensuring that the after-tax incomes of those who work more are greater than those who work less, it would provide what amounts to a work subsidy for low-paid workers, and by providing benefits without a work requirement, it would give workers the security to leave a job with bad working conditions and low pay or to bargain for better conditions.

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## Program: Financial Markets and Monetary Policy

### Money and Credit in a Keynesian Model of Income Determination

Wynne Godley

Working Paper No. 242, July 1998

Distinguished Scholar Wynne Godley presents the first of a series of theoretical studies that build on the pioneering work of Kenneth Boulding and James Tobin. The purpose is to establish a framework within which monetary institutions can be studied as necessary and fully interdependent components of all realistic macroeconomic models. Each model in the forthcoming series will be rooted in a double-entry system of stock and flow accounts in which sectoral balances have identical counterparts in changes in stock variables, subject to capital gains and losses. Real time and uncertainty provide financial institutions with an indispensable role, as production and investment have to be financed in advance of the realization of uncertain sales. A further major function of financial institutions is that they mediate asset allocation decisions.

When life is breathed into the system of identities and behavioral relationships come to be considered, each variable is given a different role according to the place in which it occurs on the accounting map. A behavioral model will then enforce consideration of the mechanisms that bring pairs of variables into equivalence with one another.

The systematic approach, even using Godley's preliminary model, leads to some interesting conclusions which, though not all of the same importance, differ from those that commonly appear in macroeconomic texts. For instance:

1. As soon as a macroeconomic model has a financial sector, there have to be at least three rates of interest (on loans, money, and bonds) that must follow a set hierarchy if the system as a whole is to be appropriately motivated. And these rates have to be capable of movement relative to one another if all requirements are to be satisfied.
2. It is impossible to articulate a financial system into a macroeconomic model unless specific account is taken of interest payments as well as interest rates. Bank profits, like industrial profits, are determined by the gap between their total inflows and outflows. Whether or not banks will make profits cannot be inferred from the hierarchy of interest rates on its own.
3. The price of goods must be determined in a way that makes sense in terms of profits. The systematic

- approach forces attention to be paid to such questions as: Who pays the additional cost of financing trade when interest rates go up? Does it get passed on into prices? Does it get deducted from profits?
4. Stock-flow coherence imposes decisive constraints on the dynamics of the system as a whole. Stock-flow norms are commonly so low that they enforce quite rapid responses to exogenous shocks.

Godley's model, although rudimentary, is rather large by the standard of most theoretical models, having about 60 equations. It is essentially a dynamic model in which flows generate stocks, which in turn form the "history" with which each period begins and which largely influence what happens in it. While it is easy to solve this model analytically for its hypothetical steady state, there is a limit to the extent to which analytic methods can be used to determine the model's system properties. So the paper relies on numerical simulation to explore the consequences of alternative assumptions. Repeated simulation makes it possible to gain a good intuitive understanding as to why the results come out as they do.

One result to emerge starkly from the simulation experiments is that it is not possible for a macroeconomic system to function reliably unless the government (the central bank) stands ready as lender of last resort whenever the banking system runs short of reserves; it may have to fulfil this function even if the banks have no bad debts, just because of unusual strains that arise in patterns of borrowing and asset holding. The "money supply" cannot be exogenous while the theory of the money multiplier is vacuous.

In future papers, Godley will extend the method first to fill some egregious gaps in the present analysis and then to represent a whole world economy, with international trade, international bank lending, and asset demand and supply functions that determine exchange rates. It is hoped that simulations using a fairly comprehensive representation of the whole world as an interrelated system will yield important insights into the causes of and possible systemic remedies for the current world financial crisis.

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## **Finance and the Macroeconomic Process in a Classical Growth and Cycles Model**

Jamee K. Moudud

Working Paper No. 253, October 1998

Resident Scholar Jamee K. Moudud has developed a nonlinear dynamic model that he will use in a series of forthcoming articles to examine the impact of fiscal policy and foreign trade on economic activity. His aim is to integrate finance, government spending, and the banking sector into a classical growth and cycles (CGC) model that extends both the social accounting matrix (SAM) framework developed by Wynne Godley and the growth and cycles framework developed by Anwar Shaikh into an alternative macroeconomic model rooted in the tradition of classical political economy. Its dynamic disequilibrium properties, which distinguish it from neoclassical macroeconomic models, are rooted in an ex ante version of the SAM with endogenous bank credit.

The central role of the rate of profit is the feature that puts Moudud's CGC framework in the tradition of classical political economy. The rate of profit is the regulator of aggregate investment and therefore of aggregate demand and growth over the long run or slow-adjustment process. The central role of the rate of profit distinguishes the CGC framework from the Keynesian-Kaleckian tradition, which places monopoly power or exogenous demand injections in the central position, and from the neoclassical tradition, which places intertemporal utility maximization in the central role.

The basic dynamic properties of the model can be identified by partitioning it into the short-run business cycle or fast-adjustment process and the medium-run cycle or slow-adjustment process, in which fixed capital investment ensures that capacity utilization gravitates around the normal level. Investment in circulating capital (raw materials and labor), endogenous bank credit to finance accumulation, and the negative feedback effect of debt on investment are at the core of its cyclical dynamics. As in Harrod, this short run is described by a growth path of output. Its medium-run warranted growth path is regulated by the normal rate of profit, which in the classical tradition is determined by technology and income distribution. Thus, in the final instance, the macro model generates two cycles. The short-run cycle is the 3-to-5-year inventory cycle in which aggregate

demand and supply chase each other ceaselessly to reach equilibrium. The slower fixed capital cycle entails the adjustment process between actual and normal capacity utilization. As in Goodwin, this normal capacity is consistent with structural unemployment.

The CGC model is similar in spirit to much of the heterodox economic literature with a few important distinctions. Like much of the heterodox literature, Moudud does not use standard neoclassical tools such as intertemporal optimization, production functions, utility functions, and full employment assumptions. Following Godley, Moudud relates sectoral expenditures to their respective finance requirements along with the corresponding changes in stocks and flows. However, he does not incorporate the banking sector into the SAM by assuming that bank net worth equals zero. Unlike Harrod and much of the heterodox literature, growth is a persistent feature of the system at every point in time. The dynamics of the CGC model rely on the distinction between fixed and circulating capital in the classical tradition, and the laws of motion of the CGC model rest on its distinction between ex ante plans and expectations and ex post outcomes. As in Leontief and Ricardo, investment in circulating capital expands output via the input-output coefficient. Unlike much of the heterodox literature, both market disequilibria and growth arise from these discrepancies and their feedback signals.

Moudud's macro dynamic model is thus a synthesis of the "circular flow" approach of the Physiocrats and the stock-flow accounting system of Godley. Furthermore, its emphasis on endogenous growth places it in the tradition of some classical economics, such as the work of von Neumann and Harrod. Finally, the endogenous cyclical dynamics are very much in the spirit of Kalecki and Minsky.

In upcoming papers, Moudud will use the CGC model to study fiscal policy and foreign trade. Moreover, he will be linking it to a longer-term empirical study of growth cycles and the various real and financial variables used to investigate them to detect "early warning" indicators of business cycles and to discover policies that can stabilize cyclical fluctuations.

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## **The Fed Should Lower Interest Rates *More***

Dimitri B. Papadimitriou and L. Randall Wray  
Policy Note 1998/5

Dimitri B. Papadimitriou and L. Randall Wray believe that further interest rate reductions by the Federal Reserve Board are necessary as part of a strategy to avert a global recession that is being caused by deflationary pressures around the world. Federal Reserve Board chairman Alan Greenspan recognized the worldwide deflationary forces as the Fed lowered U.S. interest rates slightly, but he refused to endorse a concerted effort by the major central banks to lower interest rates around the world.

Papadimitriou and Wray point to the international economic slowdown as evidence of global deflationary pressure. Output in most East Asian nations and in Russia is likely to decline next year, and China, Latin America, and Europe will probably face significant slowdowns. World wholesale and retail prices have already been falling for some time. Prices are falling in the United States as well. The producer price index, crude goods index, and the prices of various industrial commodities, intermediate goods, and consumer goods have all fallen recently. The consumer price index (CPI) rose in August by only 0.1 percent, or at an annual rate of 1.2 percent, and estimates that the CPI overstates inflation by about 1.1 percentage points mean that inflation is essentially zero in the United States. Stagnant and declining stock prices have discouraged investment and consumer spending and so could trigger an economic slowdown.

The Federal Reserve Board has focused almost exclusively on the dangers of inflation for most of the past two decades, yet, according to Papadimitriou and Wray, the costs of inflation are low compared to the dangers of deflation. They cite one estimate that inflation rates below 40 percent have no discernible effect on economic growth. Deflation, however, increases real interest rates and the burden of debt and mortgage payments. Deflation reduces the accumulation of equity in homes, making it more difficult for homeowners to obtain

home equity loans. Although the negative impact on debtors is offset by high returns to creditors, creditors benefit only so long as their debtors are able to make payments. However, as prices fall, firms find it increasingly difficult to meet their obligations. Bankruptcies can easily wipe out all the creditors' expected gains. Deflation discourages investment because firms cannot be sure that their expenditures will be recovered in an environment of falling prices.

According to Papadimitriou and Wray, there is much room to lower interest rates further. Real interest rates are quite high. The real rate (the nominal rate adjusted for inflation as measured by the CPI) on 3-month Treasury bills (3.39 percent) is more than double the average since 1970. Such high rates may be justified in a regime of high inflation, such as that which existed in the early 1980s, but not in the present environment of low-inflation or even deflation. The recent troubles in the U.S. stock market have laid to rest the fears of some analysts that monetary ease might fuel a speculative stock market boom.

Papadimitriou and Wray assert that current high U.S. interest rates are contributing to the world crisis by keeping the dollar high, hurting the U.S. trade deficit, and encouraging capital flows out of weak currencies into the U.S. dollar. Lower interest rates and depreciation of the dollar would be good for the world economy, improve the outlook for U.S. exports, increase disposable income for indebted American families, reduce pressure on Wall Street, and reduce government finance costs on outstanding debt. This strategy, they believe, will improve the U.S. trade balance and stimulate the world economy, possibly helping avert a deep global recession.

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## Program: Federal Budget Policy

### **Can Expenditure Cuts Eliminate a Budget Deficit? The Australian Experience**

George Argyrous  
Working Paper No. 248, August 1998

George Argyrous, of the School of Social Science and Policy, University of New South Wales, examines the use of expenditure cuts to balance a nation's budget. In the last few decades many governments around the world have sought to maintain a balanced budget over the course of the business cycle by accumulating surpluses in the growth phase to offset deficits in the recession phase. When expenditure exceeds revenue, as has been the case in Australia since the mid 1970s, the policy strategy has been to eliminate the deficit through expenditure reductions rather than tax increases.

The rationale for this strategy comes from the neoclassical model in which deficit spending "crowds out" private sector activity. Central to this view is the belief that there is a positive correlation between budget deficits and interest rates and a negative correlation between interest rates and private investment. However, both of these correlations have been challenged on empirical and theoretical grounds. According to Argyrous, there has been little evidence linking budget deficits to the interest rate or the interest rate to investment. There is another view in which the budget balance cannot be looked at in isolation. Although the conventional literature treats the business cycle as exogenous, not only does the business cycle have a significant impact on expenditure and revenue, but also the policies that are pursued in the budget are a key determinant of the business cycle. Thus, according to Argyrous, for a complete picture one must look at the feedback between these two key variables.

L. Randall Wray has argued that monetary responses to budget deficits can be self-defeating because high interest rates will directly worsen the deficit by increasing the government's interest payments and indirectly worsen the deficit by lowering the growth of national income, reducing tax revenues, and increasing government outlays. Argyrous makes a similar argument for fiscal policy. Theory identifies three channels through which fiscal consolidation can adversely affect national income: the well-known Keynesian multiplier, the Minskian argument that a large government acts as an automatic stabilizer, and David Aschauer's theory that private investment spending requires some level of government investment in infrastructure.



Argyrous creates a model that feeds back the impact of outlay reductions on economic activity into the government's budget outcome so that a self-reinforcing spiral emerges. A key element of this "vicious circle" is the distinction between capital expenditures, which are largely autonomous, and current expenditures, over which the government has less discretion. Thus, governments tend to cut capital expenditures when attempting to balance the budget, but the resulting feedback effects increase the demand for the endogenous components of outlays. For example, suppose the government seeks to balance the budget by decreasing upkeep of transportation. Commerce contracts because transportation is more difficult and costly. As a result, income tax revenues decline and unemployment insurance claims increase as these firms lay off workers. The deficit, therefore, falls by less than the decrease in public capital expenditure, while the composition of the budget shifts toward more current and less capital spending.

Argyrous tests this theory by examining the Australian economy over the last few decades. In Australia before 1975 the budget was in continuous surplus. Since then the reverse has been true despite the fact that the Australian government has been committed to eliminating the deficit by expenditure reduction for most or all of this period. This reduction in total outlays has been achieved almost completely through reductions in capital spending, but current spending keeps bouncing back with every economic downturn, just as Argyrous's theory predicts. Furthermore, by 1996 public investment in Australia had declined to 4 percent of GDP, less than half of its postwar peak of 9.9 percent.

Argyrous concludes that the annual focus on fiscal outcomes, without attention to feedback effects, masks important compositional changes to government outlays induced by the very act of targeting fiscal outcomes. Argyrous recommends that, rather than attempting to achieve any particular budget outcome, the government should assess individual spending programs on their merits and let the overall budget outcome emerge as a residual. Thus, by not intentionally aiming for a balanced budget, the government may actually achieve it.

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### **Modern Money**

L. Randall Wray

Working Paper No. 252, September 1998

The conventional view of money is that it is simply a method of "greasing the wheels" of commerce. Many economics textbooks speak of the development of money as something that began when traders realized that coins made of precious metals would simplify the transactions of a barter economy. Coins, it is said, eventually gave way to the use of paper money to further simplify transactions. Most economists agree that money today continues to function primarily as a medium of exchange to ease the transactions of the underlying barter economy.

Senior Scholar L. Randall Wray presents a very different interpretation of the history of money and of the role of money in a modern society. According to Wray, there is little evidence that barter ever existed and the primary function of money has always been not as medium of exchange for transactions, but as a unit of account for debts. Evidence for this view includes the fact that debt tallies predate the earliest known coins by at least 2000 years, and coins when they were introduced were too large in denomination to be used in everyday transactions. According to Wray, the use of coins as a medium of exchange was an accidental by-product of their introduction, which was originally intended to provide state finance. The government created a credit system by obliging citizens to pay taxes in the form of coins, thereby assuring that the government could spend coins that would be otherwise worthless.

The idea that money is a creature of the state is known as Chartalism. Wray traces the development of Chartalist ideas through Adam Smith, George Friedrich Knapp, John Maynard Keynes, and Abba Lerner. The basic idea is that money gains value not from the metal content of coins, not from the metallic backing of paper currency, and not from legal tender laws, but from the fact that government will accept only its own money in payment of taxes. Government spends by creating credit in the form of currency and it assures people will accept government currency by obliging them to become debtors to the government. This is accomplished by

imposing taxes that can be paid only in government currency. Thus, the function of taxes is not to finance government spending but to create a demand for currency.

According to Wray, four policy implications follow immediately from the Chartalist viewpoint. First, the government does not need to finance spending by taxation. The function of taxes is only to maintain demand for the government's money, not to obtain a given amount of money for the government to spend. Because people will normally want to hold some extra money, the government will normally have to spend more than it taxes, that is, the government will normally need to run a deficit. Second, it is fiscal policy, the excess of government spending over revenues, that determines the money supply, not monetary policy. The function of monetary policy is merely to drain excess reserves. Tight monetary policy therefore should be undertaken only when it is desirable that the public hold less cash and more government bonds, that is, when interest rates need to be raised. Third, attempts to control the money supply by use of monetary policy result in interest rates that are higher than necessary, which contribute to economic inequality and create a drag on the economy as a whole. In other words, the deficit can not only be too big, which is inflationary, it can also be too small, which is deflationary. Fourth, the existence of unemployment is evidence that the deficit is too small. This problem can be solved by an employer of last resort policy financed by deficit spending. Such a policy must be preferable to allowing unemployment to exist because it is not sensible for any nation to let human resources go to waste.

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## **What to Do with the Surplus: Fiscal Policy and the Coming Recession**

Dimitri B. Papadimitriou and L. Randall Wray  
Policy Note 1998/6

After much debate and an unexpected revenue windfall brought on by the stock market boom, the federal government balanced its budget for fiscal year 1998 for the first time in nearly 30 years. Predictably, a debate over "what to do with the surplus" has emerged. Some members of Congress have proposed to use the surplus to finance a tax cut. President Clinton has proposed to use the surplus to "protect" Social Security. Dimitri B. Papadimitriou and L. Randall Wray believe that neither of these policies is correct. Rather than looking at what the surplus can finance, the government should consider what the economy needs, which right now they believe is a strong fiscal stimulus to avert the looming recession.

According to Papadimitriou and Wray, surpluses have historically tended to be short lived because they unleash deflationary pressures that hurt private sector profits and generally send the economy into recession. In six periods in U.S. history (1819, 1837, 1857, 1873, 1893, and 1929) the government ran surpluses in an effort to reduce the national debt; each case was followed by a depression. Roosevelt's surplus of 1937 drove the economy back into depression just when it looked as though the economy was on the way to recovery. Since World War II most efforts at deficit reduction have been followed by an economic slowdown. Why is this, and why has the latest effort to reduce the deficit been an exception so far?

To find the answer, Papadimitriou and Wray look at the sources of profits in the economy. The gross profits equation they use is derived from the national income accounts equation: Gross profits equal investment plus the government deficit (or minus the surplus) plus the trade surplus (or minus the trade deficit) minus private sector savings. The authors note that the trade balance has been in deficit for some time and so has been a negative source of profits. The recent deficit reduction and now the new surplus have further increased the drag on profits. Fortunately for U.S. economic activity, the recent reductions in the government's budget deficit have been accompanied by decreased private sector saving (i.e., increased private sector indebtedness). That is, consumption spending stepped in to stimulate profits just as government fiscal policy was putting a drag on profits. As soon as the consumption boom comes to an end, a recession will follow, unless the federal government responds with a fiscal stimulus in the form of a budget deficit.

Tax cuts, as some members of Congress have proposed, could be one method to do this. However, according to Papadimitriou and Wray, any tax cut would need to be well targeted to be of much use. It would be better to

increase the earned income tax credit, which would put more money into the hands of those most likely to spend it and it would also reward those who are struggling to work their way out of poverty. Just as in World War II, when we spent our way both to victory and out of the depression by running a large budget deficit, our economy again needs deficit spending to stimulate the economy.

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## Other Projects

### **Toward a New Instrumental Macroeconomics: Abba Lerner and Adolph Lowe on Economic Method, Theory, History, and Policy**

Mathew Forstater

Working Paper No. 254, October 1998

Visiting Scholar Mathew Forstater argues that the ideas of Abba Lerner and Adolph Lowe contain complementary insights that may contribute to the development of a new approach to macroeconomics. Lerner's functional finance deals with aggregate proportionality and balance, while much of Lowe's instrumental analysis emphasizes sectoral relations. Lerner focused more on monetary factors and Lowe emphasized issues of structural change. A synthesis, therefore, offers a powerful macroeconomic theory with careful attention to historically changing social, institutional, and technological structures.

Lerner and Lowe had some similarities in their methodology. Both reject the conventional method of first examining a completely laissez-faire system and then introducing government in favor of a method in which the government is an inherent part of the system and must be included in the analysis from the beginning. Similarly, both reject the static view of the economic system. Instead, they believe that attention must be paid to the dynamics of constant institutional and technological change.

Lowe's instrumental analysis begins at a different point than most economists. Rather than taking initial conditions as given and employing deductive analysis to predict and explain, Lowe proposed also taking as given a vision of desired outcomes or goals determined not by economic analysis but by the democratic process. Analysis would then "work backwards" from the desired end-state to the economic means for its attainment. A similar means-ends relationship is also found in Lerner's functional finance. A balanced budget is not taken to be an end in itself, but what matters is the effect of the government budget on economic goals such as full employment and stable prices. The budget and the national debt are simply means to economic prosperity.

Lerner did not believe that borrowing is necessary to finance public spending; rather it is a means of managing bank reserves and controlling the interest rate. In fact, borrowing naturally follows spending rather than preceding it because before anyone can purchase government bonds, he or she must first obtain government currency, which enters the economy through government spending. There is no problem "financing" full employment. One needs to adjust the budget deficit to the level that is consistent with full employment rather than allowing employment to adjust to a balanced budget. But, Lerner believed this cannot be achieved by primary interventions alone because simple demand stimulus can cause inflation before full employment is reached. Instead full employment with price stability requires a look at the structural rigidities that create unemployment. The more elastic the production system, the better the system is able to respond to structural and technical change. Working backwards, then, the government must find a way to create full employment while keeping the production system elastic. This can be achieved by direct job creation. Recently, a number of proposals have appeared building on that idea. These proposals maintain price stability because government-employed labor is always available to the private sector if the demand arises.

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## **Economic Time**

John F. Henry and L. Randall Wray  
Working Paper No. 255, October 1998

John F. Henry, of California State University at Sacramento, and Senior Scholar L. Randall Wray discuss the relevance of time for economic analysis. According to them, neoclassical economics has little use for a concept of time. Variables are assumed to be either at static equilibrium values or tending toward those values. Theorists assume variables move along static functions with no worry about whether those functions are stable over time. Neoclassical assumptions of perfect knowledge of the past, present, and future water down the concepts of time and uncertainty to a point of meaninglessness.

Henry and Wray, however, propose that a specific concept of time should be explicitly incorporated into economic models. The appropriate concept of time depends on the institutional structure of the economy. Agricultural economies rely on a concept of time corresponding to planting and harvesting. Modern capitalist economies, however, require a different concept of time, not because of the technical aspects of production, but because of the overriding financial aspect of time in a capitalist economy-the interest rate.

According to Henry and Wray, production in a capitalist economy relies almost entirely on the debt cycle. Firms face an uncertain world and so must accumulate assets-not physical assets but credits on the future output of others. To accumulate financial assets, firms must incur debt before they can undertake production. To survive, firms must have more money when production and sales are complete than they started with so that they can pay off their debt and accumulate a profit.

Given the nature of capitalist production, the "debt cycle" (or, the time it takes a firm to retire its bank loans), then, is the crucial concept of time in capitalist economics. The debt cycle is of arbitrary length depending on the interest rate. If the interest rate increases, the time needed for an asset to pay for itself increases, and the intensity of production must therefore increase. Production must speed up just as if time were moving faster. Thus, the view of what projects are worth doing and what projects are not is entirely dependent on the arbitrary level of the interest rate. Only the government, which can oblige individuals to become its debtors by imposing taxes on them, is free from including the interest rate in its cost-benefit calculations. Henry and Wray conclude that anyone who wishes to seriously study the firm in a capitalist economy must think seriously about time.

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## **The Asian Financial Turmoil: Can India Remain Unaffected?**

Sudhakar Rao  
Seminar, December 1

On December 1 Sudhakar Rao, senior economic policy official of the government of India and economic minister at the Embassy of India in Washington, D.C., led a seminar on the effect of the East Asian crisis on India. According to Rao, had the crisis occurred ten years ago, it would have left India untouched, but economic reforms since then have made India vulnerable to international economic shocks. However, this vulnerability may be a necessary side effect of bringing economic growth to India, and India has certain strengths that may allow it to be spared a crisis of its own.

It took a long time for India to build a consensus in favor of an open economy with a growth-oriented economic strategy. From independence in 1947 until the 1980s the official economic strategy was based on central planning and self-sufficiency; economic growth was not considered a priority. There were successes during this period: India became self-sufficient in food production, industrial growth was good, poverty declined, life expectancy increased, and infant mortality decreased. But, by 1980 the weakness of a centrally planned economic system had become apparent. Radical reforms began in 1991 in response to the Indian economic crisis that year; a strong consensus in favor of market reforms developed and has continued since then despite changes in the national government. Reforms have included decreases in tariff rates, liberalization

of foreign investment, privatization of major industries, decreases in tax rates, and a more open banking system.

The reforms proved to be quite successful by the mid 1990s. Economic growth, at 7.5 percent, was among the highest in the world. The public sector's role had declined. Foreign direct investment, which had been as low as \$100 million in the 1980s, grew to over \$11 billion, and international trade increased. India became a world leader in the software industry. Since the East Asian crisis began in 1997, Indian economic growth has slowed, exports have fallen, and the agricultural sector has declined. However, these effects have been small compared to the problems faced by East Asian nations in the same period.

The question remains whether India will eventually catch the Asian flu. According to Rao, three of the most important features that make an economy vulnerable to a financial crisis are not present in India. First, a large current account deficit is an important source of vulnerability, but India's current account deficit remains small. Second, a high percentage of short-term lending is a weakness, but short-term lending makes up only 6.3 percent of India's debt. Third, countries have typically experienced a currency crisis after introducing trade liberalization without accompanying regulations, but India coupled its reforms with prudent regulations such as debt control and prohibitions against speculation by banks in real estate and equities. Thus, Rao believes that although India will feel some of the effects of the East Asian crisis, there is good reason to hope that it will not experience a crisis of its own.

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## Institute News

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### Changes in the Board of Governors

Bard president Leon Botstein was elected chairman of the executive committee of the Levy Institute's Board of Governors. His role will be to help build the institution as it moves into new areas of research: the psychology of economic behavior; the distribution of opportunity, income, and wealth; and economic history. Dimitri B. Papadimitriou, formerly executive director, becomes president of the Institute. Leon Levy, who was president, becomes vice chairman. A search is underway to fill the newly created position of research director.

### New Member of the Board of Advisors

The Levy Institute extends its welcome to Max Palevsky, the newest member of its Board of Advisors. Mr. Palevsky is a self-employed industrialist whose career has been in the high-technology arena. After working for the Bendix Corporation and Packard-Bell Electronics, he founded Scientific Data Systems, which later was acquired by the Xerox Corporation. He currently serves on the board of directors of Komag, Incorporated. After a 29-year term on the board of directors of Intel Corporation, in 1997 he became an emeritus member of the board. He also has been chairman of the Executive Committee of the board of the Xerox Corporation and a trustee of the Center for Advanced Study. Mr. Palevsky received B.S. and Ph.B. degrees from the University of Chicago and did postgraduate work at the University of California at Berkeley and the University of California at Los Angeles.

### Upcoming Conferences on Financial Markets and Monetary Policy

A conference on the work of Hyman P. Minsky will be held on April 21 and 22, 1999. It will be followed by

the Ninth Annual Hyman P. Minsky Conference on Financial Structure on April 22 and 23. See [What's New/Events](#) for program and registration information.

## Presentations and Publications by Levy Institute Scholars

### Distinguished Scholar Wynne Godley

*Publications* : "Motor Starts to Sputter," *Financial Times*, July 10, 1998; "Don't Let Gordon Off-He Is Not God," *The Observer*, August 23, 1998.

*Presentations*: with Resident Scholar **Jamee K. Moudud**, "Strategic Prospects for the U.S. and World Economies," Levy Institute, November 24, and Center for Economic Policy Analysis, New School University, December 9.

### Senior Fellow Walter M. Cadette

*Publication*: "Privatizing Not the Answer for U.S. Social Security," *Bridge News*, July 22, 1998.

*Presentation*: "Social Security: The Challenge of Financing the Baby Boom's Retirement," Columbia University School of International and Public Affairs, September 21.

### Senior Scholar L. Randall Wray

*Publication*: (new title for forthcoming book) *Understanding Modern Money: The Key to Full Employment and Price Stability* (Elgar, 1999).

*Presentations*: "Theories of Value Appropriate to the Modern Economy," European Association of Evolutionary Political Economy, Lisbon, November 5-8; "Modern Money," Conference on Full Employment, University of Newcastle, Australia, December 2-3.

### Visiting Scholar Mathew Forstater

*Publications*: "Lowe's Instrumental Method" and "Heilbroner's Worldly Philosophy" in *Encyclopedia of Political Economy*, edited by Phillip O'Hara (Routledge, forthcoming); "Functional Finance and Full Employment for the 21st Century," *Thinking Economics at the Close of the Twentieth Century: Reflections, Current Trends, and New Directions*, edited by Eiman Zein-Elabdin (Routledge, forthcoming).

*Presentations*: "Robert Heilbroner on Orthodoxy, Dissent, and Economic Policy," The Commitment to Full Employment: Conference in Memory of William Vickrey, Columbia University, November 5-6; "Full Employment without Structural Rigidity," Conference on Full Employment, University of Newcastle, Australia, December 2-3.

### Resident Research Associate Karl Widerquist

*Presentation*: "The Public Commodities Problem: The Median Voter in a Polarized Electorate," Atlantic Economic Association, Boston, October 8-11.

### Resident Research Associate Ajit Zacharias

*Presentation*: "Political Economy of Globalization," 97th Annual Meeting of the American Anthropological Association, Philadelphia, December 2-6.

### Research Assistant Marc-André Pigeon

*Presentation*: "Did the Clinton Rising Tide Raise All Boats?" Third Post-Graduate Economics Conference, Leeds, England, November 13.

Discussant: Atlantic Economic Association, Boston, October 8-11.

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