

ROBERT E. HALL
Stanford University and the NBER

The Effect of the Brookings Panel on Economic Activity on Economic Activity

THE PERFORMANCE of the U.S. economy has been a disappointment over the past 25 years. Growth slowed, inflation soared in the 1970s and early 1980s, unemployment reached rates not seen since the Great Depression, and interest rates reached astronomical levels. Though macroeconomists have searched for explanations for these developments, none of their stories has held up. Prior to the research reported in this paper, the actual, unified cause of poor performance had escaped the profession's attention. Every aspect of poor performance is the direct effect of one malevolent influence, the Brookings Panel on Economic Activity. Certain members of the panel have caused particularly great harm to the nation.

Table 1 shows some basic data on the activities of the BPEA. At a rate of 2 or 3 numbers per year, the journal has published 58 numbers containing over 16 thousand pages. The single most active author (and cause of greatest social harm), Robert J. Gordon, has published 643 of those pages. The most active discussant, Robert E. Hall, has presented 32 discussions. Interestingly, there is no evidence of any harmful effects of Hall's discussions on the economy, and evidence of favorable effects of his papers, in sharp contrast to Gordon and to the BPEA as a whole.

Figure 1 shows the time series of pages in the BPEA. The explanatory power of the time series is immediately apparent to anyone familiar with postwar U.S. economic history. During the 1950s and 1960s, the economy grew rapidly, inflation, interest rates, and

I thank Charlotte Pace for excellent assistance.

Table 1. Activities of the Brookings Panel on Economic Activity

	<i>Total</i>	<i>Gordon</i>	<i>Perry</i>	<i>Hall</i>
Pages	16,412	643	403	386
Numbers	58	—	—	—
Discussions	—	17	—	32

Source: Author's tabulations

unemployment were low. Pages published in the BPEA were at low levels during those years. Pages soared in 1970, causing an immediate recession, a later burst of inflation, the cessation of productivity and real wage growth, and skyrocketing interest rates. As pages continued to grow, the devastating recession of 1973-75 occurred. Pages fell to a lower level in 1979, and the economy recovered slightly from the adverse influence of the BPEA, but a surge of pages in 1980 sent the economy into a further tailspin. And another burst of growth in pages in the late 1980s brought an end to the long expansion of the 1980s and the beginning of the troublesome period of low growth and high unemployment in the early 1990s. Although these influences stare out of Figure 1, as I will show, they are amply confirmed by econometric practices in widespread use among BPEA authors.

To measure the overall effects of the BPEA, I have developed a model of real GDP.¹ The model emphasizes the role of time and the BPEA in determining real output:

$$100 \log(GDPQ_t) = 4.13t - .0032 CUMPAGES_t$$

(20.2) (7.21)

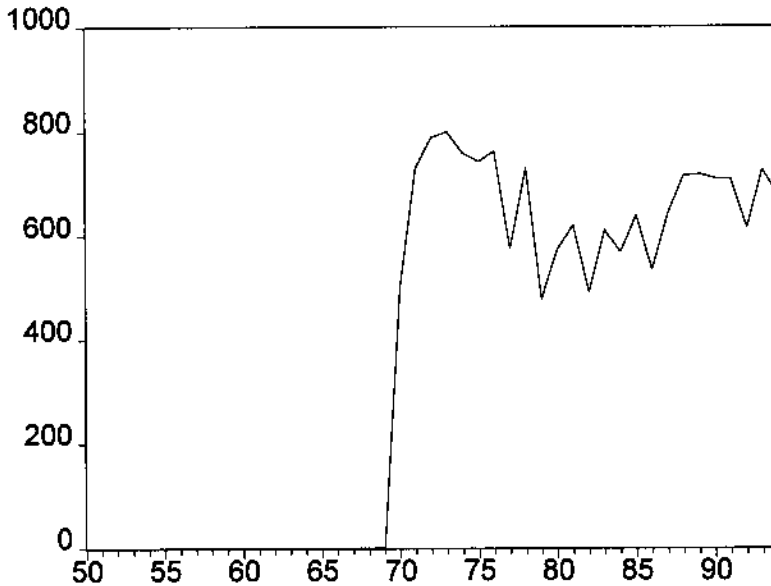
$$R^2 = .9942$$

CUMPAGES is the cumulative number of pages published in the BPEA. The adverse effect of the BPEA on real output is statistically highly significant. Its magnitude is staggering. Each 1000 pages published in the BPEA lowers real output by 3 percent permanently.

Figure 2 shows the success of the equation in explaining real GDP during the sample period. All but tiny movements are well explained. Figure 2 also shows how real GDP would have grown if it had not been

¹ For an early discussion of the methods used to develop the models in this paper, see Darwin (1859).

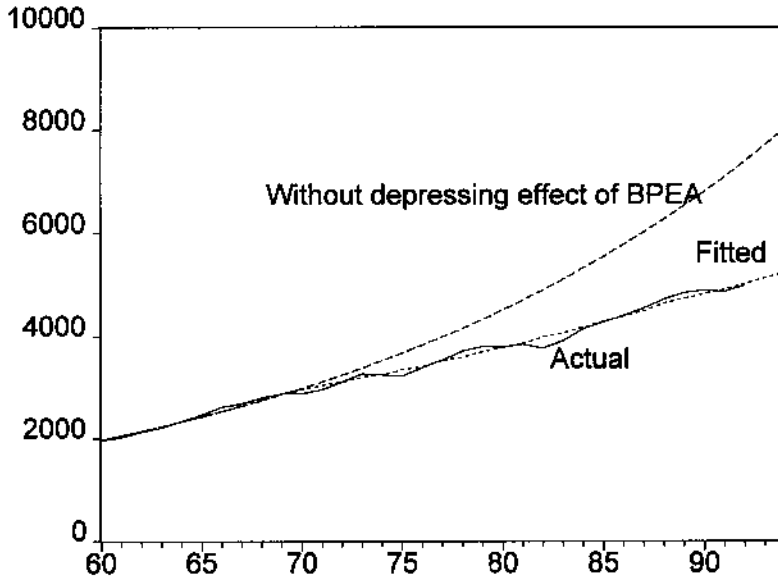
Figure 1. Pages per Year in the Brookings Papers on Economic Activity



held back by the BPEA. Whereas actual real GDP was only a little over \$5 trillion in 1987 dollars in 1994, it would have been over \$8 trillion if pages published in the BPEA had been held at its historical level of the 1950s and 1960s, instead of swelling as it actually did starting in 1970. The cumulative effect from 1970 through 1994 was to depress real output by a remarkable \$27.3 trillion. A much better policy, as of 1970, would have been to pay some fraction, say half, of this amount to the founders of the BPEA as an incentive not to engage in the harmful activities that ensued.

What are the mechanisms behind the BPEA's drag on real activity? One of the most important is the way that the panel has depressed productivity. Again, I have developed a model in which the fundamental determinants of productivity are time and BPEA influences:

Figure 2. Actual and Fitted Real GDP and Real GDP without Adverse Effect of BPEA



$$100 \log \left(\frac{GDPQ_t}{HOURS_t} \right) = 1.45t - .000705 CUMPAGES$$

(16.0)
(2.60)

$$-0.37 CUMGORDONDISC$$

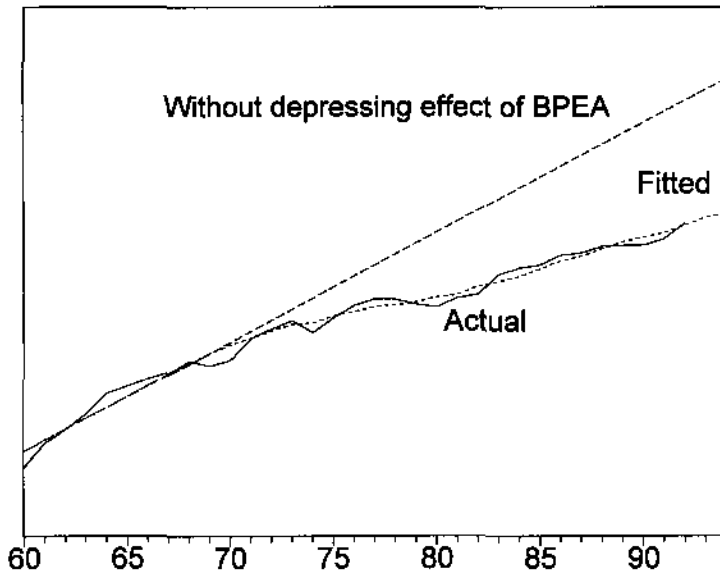
(2.57)

$$R^2 = 0.986$$

Here *CUMGORDONDISC* is the cumulative number of discussions published by the panel's leading scholar of productivity, Robert J. Gordon. Each thousand pages published in BPEA cost the U.S. economy a permanent reduction in productivity of 0.7 percent and each discussion by Robert Gordon (even those not dealing with productivity) cost a permanent reduction of 0.37 percent.

In the 1960s, before the hypertrophy of the BPEA, productivity grew reasonably rapidly. Under the combined weight of the discouraging effects of the entire panel and the extra effect of Gordon, productivity growth fell far below its normal rate. Without the unfortunate expansion of the panel's and Gordon's activities in 1970, U.S. productivity would have been 18 percent higher in 1994.

Figure 3. Output per Employee Hour: Actual and Fitted, and Fitted without Depressing Effect of BPEA



At the BPEA, one of the most stable and reliable structural relationships is Okun's Law. George Perry has been an important contributor to the BPEA, particularly in the area of unemployment and its relation to real activity. It is a sad fact that Perry's work has induced a pronounced adverse shift in Okun's Law. Remarkably, the U.S. would have been almost free of unemployment in the 1980s and 1990s but for Perry's publications. And, given that the panel has depressed real GDP, unemployment would have been even lower had the panel not expanded so much starting in 1970.

My results for Okun's Law are:

$$\begin{aligned}
 UNEMP_t = & -16.6 \log(GDPQ_t) + 0.28t \\
 & \quad (4.42) \quad \quad \quad (2.36) \\
 & + 0.018 CUMPERRY PAGES_t \\
 & \quad (5.99) \\
 R^2 = & 0.758
 \end{aligned}$$

*CUMPERRY*PAGES is the cumulative number of pages published by George Perry in the BPEA. The Perry effect is highly significant and very large. Every hundred pages of Perry's writings raises unemployment by 1.8 percentage points, given the level of real GDP. And, in view of the fact that Perry is one of the organizers of the panel and therefore responsible for the panel's adverse effect on real GDP, the malignant shift of Okun's Law is only part of the damage that Perry has done to the U.S. economy.

Figure 4 shows the successful fit of the equation to the sample data, both in the period before Perry began to raise unemployment and afterward. Had Perry avoided publishing his work in the BPEA, unemployment would have fallen to the salubrious level of 0.3 percent by 1989. The entire bulge of unemployment in the period 1970 to the present is George Perry's responsibility.

Throughout its existence, inflation has been a paramount topic at the BPEA. No wonder, since panel member Robert J. Gordon was responsible for the entire rise in inflation during the 1970s and early 1980s. Absent Gordon's influence, inflation would have been no more a national problem in those years than it was in the early 1960s or that it is today.

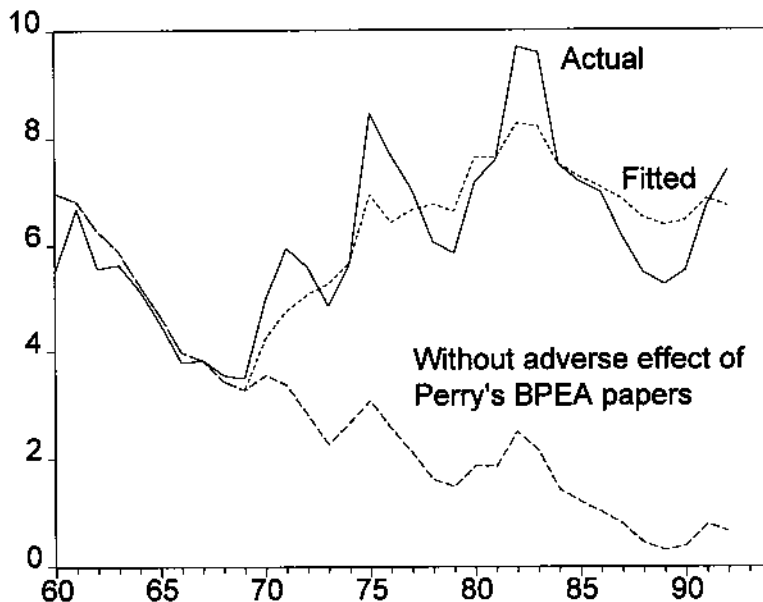
Gordon has been responsible for a series of shifts of the Phillips curve over the past 25 years. In fact, each of his papers and each of his discussions has shifted the Phillips curve upward. Part of the general adverse effect of the panel as a whole on real activity has been the need to run extremely contractionary monetary policy to try to offset the Gordon Phillips curve shift.

The Phillips curve with the Gordon shift is:

$$\begin{aligned} INFLATION_t = & 0.98 UNEMP_t - 1.36 UNEMP_{t-1} \\ & \quad (3.06) \quad \quad (4.13) \\ & + 0.030 GORDONPAGES_t + 3.51 GORDONDISCS_t \\ & \quad (2.92) \quad \quad (7.45) \\ R^2 = & 0.711 \end{aligned}$$

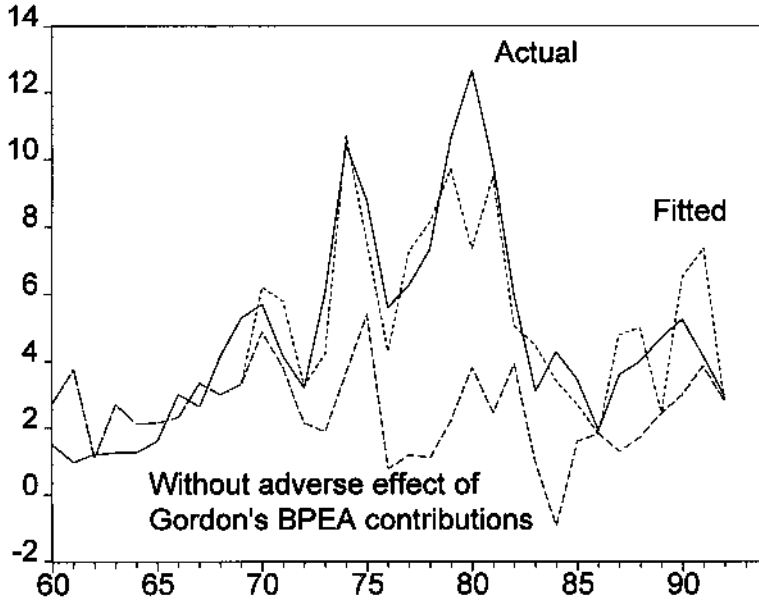
Each 100 pages published by Gordon in a year raised inflation by just over 3 percentage points in that year, and each discussion raised inflation by just over 3.5 percentage points. Figure 5 shows the success

Figure 4. Unemployment: Actual and Fitted, and Projected without Adverse Effects of Perry's Papers



of the equation during the sample period. Gordon's two discussions during 1974 were a major contributor to the burst of inflation in that year, and his 5 discussions during 1979-81 were the major factor in the extreme burst of inflation during that period. Most remarkably, Gordon was paid only \$300 for each of these discussions. Because the compensation of discussants at the BPEA has been fixed in nominal terms throughout the panel's history, Gordon inflicted a major loss in real income on the panel's more frequent discussants, such as Robert E. Hall.

The BPEA's adverse effects permeated financial markets as well as real activity and inflation. Although the rise in inflation during the panel's middle period was an important factor in rising interest rates, the panel actually shifted the Fisher equation relating interest rates and inflation. The equation relating the AAA bond rate to panel variables and the rate of inflation is:

Figure 5. Inflation: Actual and Fitted, and Projected without Adverse Effect of Gordon's Contributions

$$\begin{aligned}
 \text{BONDRATE}_t &= 0.49 \text{ INFLATION}_{t-1} \\
 &\quad (4.31) \\
 &+ .0042 \text{ PAGES}_t - .043 \text{ HALLPAGES}_t \\
 &\quad (3.70) \quad (0.017) \\
 R^2 &= 0.700
 \end{aligned}$$

HALLPAGES is the number of pages published in the year by Robert E. Hall. Each 100 pages of the *Brookings Papers* raises the bond rate by 42 basis points, but each 10 pages published by Hall lowers the rate by almost exactly the same amount. In no year, however, have the editors been wise enough to let Hall occupy as much as 10 percent of the pages of the BPEA. Hall's high point was in 1977, when his work accounted for 43 of the 575 published pages. Not surprisingly, that was a year of relatively low interest rates. In years such as 1981, when the BPEA was fat but Hall was denied a place, interest rates reached astronomical levels.

Figure 6. AAA Corporate Bond Interest Rate: Actual and Fitted, and Projected Absent the Adverse Effect of the BPEA

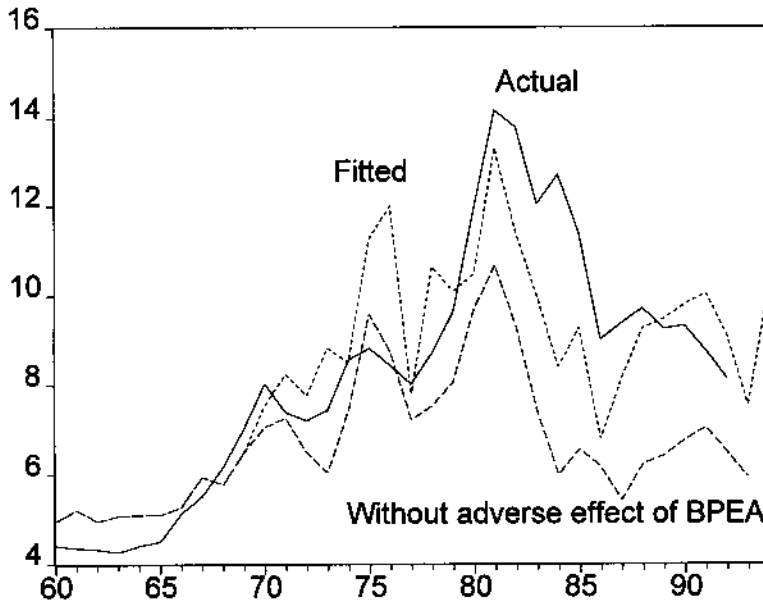


Figure 6 shows that the equation tracks actual interest rates remarkably well. Had the BPEA not had its adverse effect (net of Hall's favorable contribution), interest rates would have been substantially lower after 1970, even at historical inflation rates. The total effect of the BPEA in raising interest rates is even higher, because the Gordon shift caused much higher inflation than would have occurred under normal conditions, without the malignancy of the BPEA.

References

Darwin, Charles. 1859. *The Origin of Species*.