For decades, Israeli academic economists ventured for limited periods of time out of the ivory tower and became economic advisers to top policymakers. Some of those economists were Eitan Berglas, Michael Bruno, Ezra Sadan, Pinhas Zusman, and one of the authors of the present essay (Plessner). How academic economists perform as advisers to policymakers should be a legitimate public choice question, at least as long as one believes that people act largely in their own best interests (the possibility of some degree of altruism should always be admitted). More concretely, suppose that the economy is in State A and that the problem of getting it to State B arises. The question then is, asked how to get the economy from A to B, would an academic economist respond to the challenge identically whether she is asked by a student or by a politician who employs her? Put differently, should one expect economic advisers who hail from academia to come up with different economic-policy options than they would have come up with in the classroom?

While Bruno Frey (1983, 260–86) did address the topic of economic advising within the context of the democratic process, he did not explicitly consider the possibility of a split personality. Moreover, while the possibility of “cognitive dissonance” among economists has recently been examined (Darity and Young 2000), the issue of incentive structure facing economists as economic advisers has not been dealt with nor have we been able to find it being discussed in the literature. The present essay aims to fill the gap by treating the issue of incentive structure facing economists as economic advisers.

We are grateful to Jürgen Backhaus, David Colander, and Warren Samuels for helpful comments. All remaining shortcomings are, of course, our own. Although not cited in the text, the following works were important in the composition of this article: Halevi 1969, Lerner 1954, Patinkin 1956, and Zilberfarb 1991.
any examples been presented up to now. We do not suggest, of course, in-
tellectual dishonesty. But there is no escaping the fact that the academic in a position of power faces different incentives from those faced in the academic environment. It may also be reasonable to expect that the sense of power, a huge novelty for academics, will cause them as advisers to consider possibilities that they would not consider in front of students. What we mean is that proximity to power could generate a different view of the world and of what can and cannot be done.

The incentive that is not present in academia is the desire, at least for a while, to stay on as adviser. Otherwise, the individual in question would not have assumed the post in the first place. This implies that when advice is provided, the adviser takes into account, to some extent, the impact of the advice on the prospects of staying on. It seems to us that where this might be particularly important is when the adviser has to confront the possibility that what the boss wants to achieve is unobtainable, or that trying to achieve the desired end could involve serious risks. It stands to reason that politicians do not hire an adviser to tell them what cannot be done. Telling the politician “I don’t know ways to achieve this” likely diminishes the economist’s stature in his or her own eyes.

We conclude that under this structure of incentives, different from the structure to which the adviser is used to in academia, he or she will likely respond differently in an advisory position than in the classroom. Israel’s economic history is, we think, rich in examples of this nature. In what follows, we focus mainly on one such example, albeit one that had momentous consequences, in that it turned into a recipe for triple-digit, actually almost hyper, inflation.

**Background**

**Historical**

The history of erroneous advice imparted by academic economists to the Israeli government and central bank is long and touches on many aspects of the economy. The period on which this essay focuses is 1974–85, starting with OPEC 1, the tripling of oil prices by the newly formed cartel of major oil countries. The reason for this choice is that the inflationary process that developed following the Yom Kippur War, at the end of 1973, reaching hyperinflation levels in 1984–85, brought the Israeli economy to the brink of collapse. Hence the role that academic economists played must be deemed crucial.
The main questions that economists faced were (1) what caused inflation, and (2) what policies should be chosen in order to stop or at least reduce it. Table 1 reveals the severity of the inflationary problem facing Israel at the time.

Three basic characteristics of the Israeli economy before the start of the period under consideration must be briefly described to put the evolving story in context. First, the exchange-rate regime was one of a fixed rate, as was the case worldwide under Bretton Woods. The last big discrete devaluation preceding the period on which we focus occurred in August 1971, when the Israeli lira was devalued by 20 percent, from 3.5 to 4.2 liras to the dollar.

Second, on the political front, the deep recession that Israel experienced in 1966–67, when unemployment reached an annual average rate of 10.4 percent of the labor force (and that came to an end in the aftermath of the Six-Day War), created a fear of unemployment that henceforth dominated economic policy priorities for a long time.

The third component concerns inflation. In the two years in which Israel came out of the recession, 1968 and 1969, inflation as measured by the CPI was 1.9 percent and 3.5 percent, respectively. But in 1970, inflation became a serious problem, when it hit 10.1 percent. To get a handle on the events that led up to the changes in economic policy that are the subject of this essay, one needs to recall the difference between

Table 1  CPI rate of inflation (annual percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate of inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>56.2</td>
</tr>
<tr>
<td>1975</td>
<td>38.0</td>
</tr>
<tr>
<td>1976</td>
<td>23.5</td>
</tr>
<tr>
<td>1977</td>
<td>42.5</td>
</tr>
<tr>
<td>1978</td>
<td>48.1</td>
</tr>
<tr>
<td>1979</td>
<td>111.4</td>
</tr>
<tr>
<td>1980</td>
<td>132.9</td>
</tr>
<tr>
<td>1981</td>
<td>101.5</td>
</tr>
<tr>
<td>1982</td>
<td>131.5</td>
</tr>
<tr>
<td>1983</td>
<td>190.7</td>
</tr>
<tr>
<td>1984</td>
<td>444.9</td>
</tr>
<tr>
<td>1985, first half</td>
<td>284.9</td>
</tr>
</tbody>
</table>

*Source: Central Bureau of Statistics, Jerusalem.*
cost-push and demand-pull inflations. Perhaps the best concise description of the initial phases of the inflationary period that followed the Yom Kippur War is by Martin Bronfenbrenner and Franklyn Holzman (1963, 613–14):

Although cost-push theories of inflation are not in fact new, their revival in the 1950’s has been called _The New Inflation_. . . . The title symbolizes reaction against the demand-pull orthodoxy of the prior decade but does not deny that cost-push may involve increases in money supply . . . particularly if decreases in output and employment are to be avoided. More important, the term “new inflation” embodies the opinion that the strength of economic pressure groups . . ., together with increased public concern with unemployment, had increased the likelihood (in many countries) of “disequilibrium” price and wage increases being validated by expansive monetary and fiscal policies.

Figure 1 illustrates the point. After inflation as measured by the CPI raced ahead of the wholesale price inflation in 1971 and 1972,¹ the two were almost identical over the first three quarters of 1973. But then came the surge in oil prices at the end of 1973, which meant that the average price Israel had to pay for imported oil in 1974 was 4.6 times the average for the first nine months of 1973 (Bank of Israel 1975, 59). Prices of other imported inputs increased as well: the price level of imports in the second half of 1973 was 26 percent higher than it had been in the first half of the year (Bank of Israel 1974, 63). These twin developments caused a huge surge in production costs: short-run aggregate supply moved violently up and to the left. The figure shows that in the last quarter of 1973 and throughout 1974, the wholesale price index surged ahead of the CPI. In the fifteen months from October 1973 to December 1974, the wholesale price index rose by 130.8 percent in annual terms, while the CPI rose by 121.3 percent. It is at this point that our story begins to unfold.

The Monetary System

To follow the argument below, it is also crucial to understand Israel’s monetary scene immediately preceding the change. Monetary policy may be carried out by targeting one of three nominal magnitudes, regardless of the objectives of the policy. These are the nominal interest rate,

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¹ Wholesale price is defined as the price of industrial output destined for domestic uses.
the nominal exchange rate, and some monetary aggregate, such as $M_1$. Our key observation is that Israel did not have a monetary policy, but at least the monetary system had been determined exogenously prior to the change.

Start with the fact that the Bank of Israel (henceforth BoI) had been completely under the thumb of the government. This meant that it had no independent control over any of the nominal instruments of monetary policy. In terms of a monetary aggregate, the government could freely borrow from BoI, thus forcing it to print money at the government’s pleasure. The amount of base money had essentially the status of an endogenous variable, whose value was largely determined by the budget deficit, on the one hand, and by foreign-exchange outflow, on the other.

The natural response to this assertion is, why couldn’t BoI intervene by using open market operations? The answer is to be found by reference to the saving regime extant that had been designed to channel the

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2. Legally, nothing has changed between then and now; in practice, BoI has become one of the most independent central banks in the world.

3. Under a fixed exchange-rate regime, the central bank is obliged to sell foreign exchange at the official rate. Hence any purchase of foreign exchange by the public implies a reduction in base money.
public’s savings into the government’s hands. This, in turn, had been motivated by the desire to make the government the prime agent for allocation of capital in the economy. Briefly put, practically all of the public’s savings were deposited in saving instruments backed by government-indexed, nonnegotiable, CPI-indexed bonds. For example, an individual would deposit a sum in a bank’s saving scheme; the bank would turn around and use the money to purchase government bonds; the government would then redeposit the money in the bank, with instructions as to whom this money may be lent. The important thing to remember is that the bonds backing the saving scheme could not be traded—they had to be held by the bank to maturity. Consequently, BoI never had a large enough stock of negotiable government paper to conduct effective open market operations, and thus could not target a monetary aggregate.

Consider next the interest rate. First, BoI could not change any interest rate without the government’s approval. But perhaps more important, a sizable share of credit had been extended under myriad interest rates, fixed by the government for identifiable classes of borrowers. In 1975 there were thirteen “credit funds,” managed by BoI, designed to finance activities such as “imports used for producing exports,” “production of citrus and cotton,” “revolving finance for industry,” “revolving finance for agriculture.” At that point almost 53 percent of the average bank credit had been extended under these “directed credit” arrangements (Bank of Israel 1977, 291). This means that interest rates could not be used as an effective monetary instrument, since more than half of the credit outstanding was shielded from interest-rate changes.

Finally, let us consider the exchange rate. The fact that it had been fixed did at least provide an anchor for the monetary system, thus preventing it from becoming endogenous. But the choice of exchange rates had not been motivated by any monetary considerations. Rather, the exchange rate was considered to be a tool for correcting balance of payments problems. Thus, even though the monetary system was under control in the sense that it was governed exogenously, the country did not have a monetary policy to speak of. This, in itself, can prove to be a very interesting case study, because the academic (and nonacademic) economists of the time never pointed out this key attribute of Israel’s economy.

It is not generally possible to show what was not done, that is, to prove the nonexistence of facts (as opposed to theoretical constructs).

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4. All such schemes required government approval.
We believe, however, that some important examples will serve to support our assertion in the case of Israel.

The first comprehensive description of the Israeli economy by an academic economist was *The Israel Economy*, by Don Patinkin (1960). While Patinkin (1960, 104) did point out the difficulties faced by the central bank in conducting effective monetary policy, he never pointed out that monetary policy of any kind had been impossible in principle under the arrangements extant. The impression that one derives from reading his analysis is that what hindered the central bank had been primarily the credit that it provided to the government. And again, in summarizing the causes of the inflationary process during the fifties, Patinkin (1960, 109) identified the inflationary finance of the government budget deficit as the main culprit, without pointing out that the central bank simply had no instruments available to offset the impact of such finance (e.g., high interest rates).

The next major academic description of the Israeli economy was *The Economic Development of Israel*, by Nadav Halevi and Ruth Klinov-Malul (1968; for a review, see Gass 1969). Both Halevi and Klinov-Malul, were, as was Patinkin, members of the economics department of Hebrew University. Their discussion of monetary policy (1968, 6, 8, 10, 257–59) is quite similar to that of Patinkin, even though a decade separates the two studies. The impression one derives from their treatment is that the government-cum–central bank simply did not activate the sort of monetary policy required to curb inflation. They talk about “easing monetary policy” and “expansionary monetary policy” as though they were talking about a country that could make deliberate choices about which monetary policy it actually wanted to pursue.

The 1970s are dealt with in detail below and could be viewed as the continuation of the same failure to deal with the inability to conduct any monetary policy at all. So let us turn to the 1980s. The best example here is Stanley Fischer’s article “Monetary Policy in Israel” (1982). Fischer enumerates no less than six classes of monetary policy instruments that BoI had at its disposal, albeit recognizing that it faced significant constraints on its ability to use them. Finally, in a memorandum by Avi Ben-Bassat (1982) of the research department of BoI, he came close to admitting that the implementation of any monetary policy at all was impossible. This can be surmised from the fact that, even though he appeared to say that BoI’s monetary policy was aided by a number of interrelated instruments, its policy had concentrated on credit rationing—not
through a price or reserve mechanism but through the imposition of quantitative limits on lending.

Wage Indexation

The supply shock clearly left Israel poorer than it had been, because export prices rose by much less than import prices. In the last quarter of 1973, export prices were only 31 percent higher than the 1972 average, while import prices rose over the same period by 51.9 percent (Bank of Israel 1974, 47). Thus, it now took a larger volume of exports than before to buy a given volume of imports.

But wage indexation in Israel never discriminated between the various sources of price increases. In particular, no mechanism had been set up to neutralize inflation caused by external supply shocks, from the basis for calculating wage indexation payments. As a consequence, workers got compensated for price rises that not only did not benefit employers but which actually hurt them. The upshot was that the external supply shock created a secondary supply shock caused by higher wages. That is, the system as it existed translated external supply shocks into a massive reallocation of value added. Labor's share increased at the expense of capital's share. The unavoidable consequence would have been a considerable rise in unemployment.

The evidence is unmistakable: the average real wage for the first nine months of 1974 was only 3.1 percent lower than for the comparable 1973 period. Since, as noted, the government abhorred increased unemployment, it devalued the currency by a whopping 42 percent in November 1974. That sent real wages plunging: the average real wage for the last quarter of 1974 was 4.4 percent lower than the average for the first three quarters, and it was 7.4 percent lower than it had been in the first three quarters of 1973. It went on to decline by another 1.5 percent over the following two quarters.

The medicine was effective, however, for only a short time. By the third quarter of 1975 the real wage already exceeded the 1974 average. Thus, the threat of increased unemployment was becoming a steady


6. Comparing anything to the last quarter of 1973 is meaningless, because so much of the labor force was mobilized for the war.
feature of the economy. A way had to be found to stop the process of the initial supply shock from turning into a vicious race between wages and exchange rates, with the concomitant upward spiral of prices.

The New Policy

The method devised by professional economists to deal with the country’s economic woes was aimed at averting a balance of payments crisis. This was to be achieved by enhancing export profitability and reducing the demand for imported consumption goods. These, in turn, were to be attained by eroding the real purchasing power of wages. The erosion would render a decline in unit labor costs, thus enhancing international competitiveness while reducing the real incomes of wage earners, in turn causing a reduction in consumption demand, including, in particular, demand for imported consumption goods. The method of wage erosion may be described as a pincer movement, consisting of changes to the management of the exchange rate, on the one hand, and a redesign of the wage indexation system, on the other.

The Exchange-Rate Regime

The exchange-rate regime was transformed from a fixed rate, with periodic devaluations, to a crawling peg. The rationale was formulated as follows: large, discrete devaluations instigate expectations, resulting in runs on foreign-exchange reserves (Gafni, Zuckerman, and Sussman 1975). This is adverse in itself, but in addition it creates liquidity shortages in banks, as the public borrows in order to speculate on foreign exchange. BoI then feels obliged to allow banks to borrow at the discount window, thus injecting more liquidity into the economy. Once the devaluation takes place, the process goes into reverse: having realized the devaluation profits on foreign-exchange holdings, the public sells foreign exchange. Since the banks that buy turn around and sell to BoI, a lot of liquidity is injected into the system, which the central bank finds difficult to soak up (recall BoI’s inability to engage in open market operations).

Devaluations also caused consumers to push forward purchases of big-ticket imported items, such as consumer durables and cars, for fear

7. Some of this material has been discussed in Plessner 1994. But the present is a much more comprehensive discussion.
that devaluation will render them dearer. There is also a political draw-
back to large discrete devaluations: the public considers these to signal
economic-policy failures. Hence politicians hesitate to implement deval-
uations, even when they are called for on economic grounds.

A crawling peg has none of these disadvantages, a fact that had been
recognized by other countries at the time. As we shall show, however,
the institution of a crawling peg under the circumstances that prevailed
at the time in Israel was a grave and potentially catastrophic mistake.

Two of the most prominent economists of the time, Michael Bruno
and Zvi Sussman (1978), laid out in great detail the philosophy behind
the transition to a crawling peg, in an article published in the wake of the
complete floating of the lira in 1977. The arguments advanced by them in
support of the change are the above mentioned. What is striking is what
they had to say about the monetary system. The section that deals with
the question is based entirely on the equilibrium equation
\[ r_d = r_f + e^* \]
where \( r_d \) and \( r_f \) are the domestic and world interest rates, respectively,
and \( e^* \) is the expected rate of devaluation of the domestic currency. In
other words, their entire attention was devoted to the impact on the mon-
etary system of foreign-currency movements into or out of the economy.

Two years later, Fischer (1982), while being aware of the various
classes of credit impervious to interest-rate targeting and of the govern-
ment’s ability to borrow directly from BoI, recommended that BoI target
credit as its monetary instrument.

How unrealistic this recommendation was is evidenced by the chronic
liquidity deficits that the commercial banking system exhibited. Table 2
reports the evolution of base money during the period under considera-
tion. It is important to realize that in Israel’s context, the actual equivalent
of \( M_1 \) is the sum of broad-base money and liquidity deficits, something
that drives home the assertion that BoI had no control over the mone-
tary system. The only thing that prevented the monetary system from
becoming endogenous was the fixed exchange rate.

Wage Indexation

The other part of the pincer movement concerned wage indexation. In-
dexation started before Israel gained independence. In earlier years, the
system could in some respects be considered as a protection of work-
ers against income redistribution at their expense. For example, price
changes in fruit and vegetables were figured annually, so as to avoid
Table 2  Base money (millions of lira)

<table>
<thead>
<tr>
<th>Year</th>
<th>End of period base money</th>
<th>Liquidity deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Narrow\textsuperscript{1}</td>
<td>Broad\textsuperscript{1}</td>
</tr>
<tr>
<td>1972</td>
<td>5,004</td>
<td>5,482</td>
</tr>
<tr>
<td>1973</td>
<td>6,303</td>
<td>6,942</td>
</tr>
<tr>
<td>1974</td>
<td>6,889</td>
<td>8,064</td>
</tr>
<tr>
<td>1975</td>
<td>7,224</td>
<td>8,569</td>
</tr>
<tr>
<td>1976</td>
<td>10,549</td>
<td>11,958</td>
</tr>
<tr>
<td>1977</td>
<td>15,897</td>
<td>17,474</td>
</tr>
<tr>
<td>1978</td>
<td>20,358</td>
<td>22,618</td>
</tr>
</tbody>
</table>

Source: BoI, *Annual Report*, various years

1. Narrow base money is $M_1$ as traditionally defined; broad base money is $M_1$ plus exemptions from liquidity requirements for the directed-credit funds.

instability because of seasonal variations. Since those result mainly from variations in supply, they cannot be viewed as favoring employers over employees. Similarly, housing prices were not included in the price index for purposes of indexation computations. The rationale here was that rents were controlled, and owner-occupiers should not be compensated for an appreciation of assets that they own.

But by the mid-1970s, all of this had atrophied. Indexation was at a rate of 100 percent of CPI, including everything. Even price rises that resulted from increased indirect taxes were included. It is still true, of course, that under a system where indexation was the only mode of wage increases, real wages could be eroded even under a steady-state rate of inflation—see figure 2. But indexation payments are never the only mode of nominal wage increases, especially in a heavily unionized environment, as was the case in Israel.

Enter the Sussman Commission, headed by Zvi Sussman, research director of the Bank of Israel. The commission comprised five members, three of whom had PhDs in economics. While its proposals contained many changes to the system of wage indexation that had existed in Israel, the one that concerns us here, and that the commission itself viewed as the most important proposal, dealt with the degree of inflationary compensation. Specifically, the commission proposed that wage indexation payments be made at a rate of 70 percent of the rate of inflation in the CPI. In the commission’s own words,
Such a rate will reduce the danger of over-compensation for price rises occasioned by the government’s exchange-rate and taxation measures; fully compensating for price increases that result from such measures is bound to accelerate the inflationary process and under certain circumstances, even cause an increase in unemployment. (Sussman Commission 1975, 2)

The purpose is clear: Israel’s balance of payments problem has been aggravated considerably in the wake of the oil crisis; and the commission, which submitted its recommendations in July 1975, had been aware of the change in the exchange-rate regime, designed to achieve real devaluation. In the absence of substantial economic growth, successful devaluation (i.e., a nominal devaluation that results in a real one), requires the diversion of resources from domestic to foreign uses. But to achieve such a diversion, the purchasing power of the domestic population must be reduced. If, then, the government can devalue without the workers being fully compensated for the price rises occasioned by devaluation, then their real wages will have been eroded, and so their purchasing power diminished. There is no doubt that erosion of real wages was the objective. Thus, the commission stated,
Table 3  Injections into the monetary base (millions of lira)

<table>
<thead>
<tr>
<th>Year</th>
<th>Positive injections</th>
<th>Foreign exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Government</td>
<td>BoI</td>
</tr>
<tr>
<td>1975</td>
<td>4,255</td>
<td>1,351</td>
</tr>
<tr>
<td>1976</td>
<td>6,009</td>
<td>1,616</td>
</tr>
<tr>
<td>1977</td>
<td>8,857</td>
<td>6,746</td>
</tr>
<tr>
<td>1978</td>
<td>10,684</td>
<td>13,712</td>
</tr>
</tbody>
</table>

Source: BoI, Annual Report, various years

from the standpoint of the government, indexation based on the CPI reduces the effectiveness of changes in the exchange rate and of indirect taxation. Price rises occasioned by devaluations are designed to boost exports and reduce the demand for imports. Indexation payments under these circumstances will not only push producers to further price increases, but will hurt the efficiency of exchange-rate policy as an instrument of solving the balance-of-payments problem. (Sussman Commission 1975, 5; see also Herschkowitz 1975)

The policy objective of the twin changes was thus clearly enunciated. Was this a good policy prescription?

The Failure

The Exchange-Rate Regime

What happened in fact is that the conversion to a crawling peg exchange-rate regime rendered the monetary system anchorless. This was particularly true because the amount of periodic devaluation was calibrated on the rate of inflation. And so, the exchange rate became a function of the monetary system, which itself was a function of the exchange rate. It is no wonder, then, that the nominal system roared out of control, as is evident from table 1. Another vantage point from which to view the loss of control is provided by table 3, which reports the sources of injection into the monetary base.

From the table it follows that there has been a dramatic change as of 1977: whereas in 1975 and 1976 BoI’s share of injections to the monetary base was between one-fifth and one-fourth, in 1977 the share jumped to 43 percent, and by 1978 BoI became the main source for injections,
at 56 percent. What drove the process is clear from the last column—foreign-exchange hoarding. In effect, BoI was accommodating the public’s hunger for foreign exchange.

The weapon of choice to combat the effects of inflation on the balance of payments was, at the time, the “crawling peg.” After its inception in the mid-1960s (Meade 1964, 1966; Williamson 1965), the crawling peg was applied in many countries, albeit for the most part without much success. In theory, the crawling peg was more desirable than large discrete devaluations. But this is only if it were limited, according to James Meade, at least, to a maximum of 2 percent per annum (Meade 1964; McKenzie 1969). However, even though advocated by eminent theoreticians, such as Meade and John Williamson, early on it was shown that the crawling peg could be problematic in practice, especially as a result of speculation and constraints on interest-rate policy (Furth 1969; Willlett, Katz, and Branson 1970).

For example, Mervyn King (2004) noted the importance of interest-rate policy to the failure of the recent Brazilian crawling peg exchange-rate regime. The Brazilian case was not the only time the crawling peg approach was utilized in Latin America. In the late 1970s, Argentina and Chile, among other countries, attempted to control inflation by applying the “tablita” (preannounced) crawling peg approach, that is, a decreasing rate of devaluation that was supposed to be less than the inflation rate. This was supposed to act as a mechanism for adjusting inflationary expectations. Had all gone according to what the economic advisers who advocated the approach thought would happen, the rate of inflation in these countries should have rapidly converged to the world rate plus the preannounced devaluation rate. In Argentina, the tablita was introduced at the end of 1978, and the inflation rate indeed went down, from about 335 percent in 1975 to about 88 percent in 1980. However, while inflation in Argentina, for example, decreased, its convergence to the preannounced devaluation rate was much slower than it should have been. A real appreciation of the Argentine peso occurred, deteriorating the current account balance. This, in turn, fueled expectations of devaluation and also brought about capital flight and a balance of payments crisis. In 1981 the tablita was abandoned (Ruge-Murcia 1997, 13). The pattern of what can be called asynchronous inflation and devaluation rate, with a subsequent deterioration in the current account and ensuing abandonment of the crawling peg, also occurred in Chile in 1982, after which Chile experienced a 15 percent drop in GDP (1982–83), accompanied
by an increase in external debt and an inflationary upsurge (Morande 2001, 2).

In the transition economies of Eastern Europe, some success, in Hungary for example, was achieved in the short run by applying a crawling peg system, but this did not occur in the Czech Republic and Poland (Kutan and Brada 1999, 5–9). More recently, Turkey also abandoned the crawling peg after its failure (Akyuz and Boratov 2001). Thus, it is not surprising that after over a decade of increasing disappointment, the consensus among most economists has shifted from the crawling peg to advocating credible fixed and fully flexible exchange-rate systems (see, e.g., Mussa et al. 2000; Summers 2000; Edwards and Savartano 2000), or toward advocating exchange-rate bands (Williamson 1996; Frankel 1999).

But let us leave the last word to one of BoI’s most senior economists. In a recent paper titled “Dollarization and Indexation in Israel’s Inflation and Disinflation,” Edward Offenbacher (2002, 5–6), acting director of BoI’s Monetary Department, wrote, “In 1975, Israel introduced a pre-announced crawling peg exchange rate regime (a type of tablita). This was one among a number of signals of willingness to accommodate inflation, rather than taking serious steps to fight it, another being indexation of tax brackets, also implemented in 1975.”

It is important to point out in this context that in October 1977 the crawling peg was extended to its logical conclusion: Israel floated its exchange rate.

Wage Indexation

One of the more puzzling aspects of the wage indexation reform is that its architects had recognized the role of inflationary expectations in the formation of wage agreements. The Sussman Commission stated that

Another phenomenon, also with negative consequences for the economy, is the attempt to predict the rise in prices during the term of [the wage] contract, and base on the prediction the terms of the contract. If the predicted rise in prices turns out to be higher than the actual rise, cost-push inflationary pressures will intensify, and it is possible that this will even cause a contraction in output and in employment, and an increase in unemployment. . . . Wage indexation—being a mechanism for automatic linking of wage changes to price changes—is designed to obviate demands for wage increases during the term of
wage agreements, and prevent, during the negotiation for such agree-
ments, wage demands that are designed to compensate for expected
price changes. (Sussman Commission 1975, 4)

The commission members thus clearly understood the dangers asso-
ciated with workers trying to insure themselves against anticipated in-
flation. It should also be remembered that the commission’s deliber-
tions took place after the revolution in macroeconomics because of the
advent of rational expectations had already occurred. And yet the com-
mission did not apply this understanding when it came to leaving part
of the wage open to inflationary erosion. In other words, it appears as if
in the minds of the commission members, the danger existed only in the
total absence of indexation, not when indexation was only partial. The
commission did, however, explain why it resorted to this tactic. It opined
that the ideal method would be to construct a special consumer price in-
dex with a dual purpose. The normal CPI would still serve to measure
overall price increases. But for purposes of wage indexation, the effects
of changes in prices of imported goods, resulting from both world price
changes and domestic changes in exchange rates, could be neutralized.
Similarly, the effects of changes in indirect taxes could also be neutral-
ized. The commission went on to assert, however, that the difficulties
involved in calculating such an index were insurmountable. Hence the
chosen alternative.

Figure 3 clearly indicates that the intent to erode the real wage failed.
The figure portrays the evolution of the exchange rate—*the main tool
for wage erosion*—the price level, and real wage, where the deflator
is the CPI. At first, after the big devaluation of November 1974, the
wage rate did indeed decline somewhat. Then came a period of rela-
tively steady devaluation, and the real wage caught up. But probably
because of increased inflationary expectations, the real wage reached a
local maximum in the second quarter of 1977. The pace of devaluation
then accelerated from the third quarter of 1977, and real wages declined
again—but never below their level at the beginning of the period cov-
ered. At the end of the period covered by the graphs, the average real
wage was 19 percent higher than it had been at the beginning of the
period. And if one continues to follow the evolution into 1979 and on,
the picture becomes even more pronounced: the real wage reached the
highest point for a decade in 1983.

8. The exchange rate here is relative to a basket of five currencies, representing the compo-
sition of Israel’s foreign trade. These were, at the time, the dollar, the deutsche mark, the French
franc, the sterling, and the florin.
One possible explanation for why the commission did not anticipate what would happen in the wake of the implementation of its own policy recommendations is its failure to take into account the moral hazard that the devaluation policy created for employers. To prevent unions from taking out insurance policies, as it were, against expected inflation, employers would have had to bargain hard, risking strikes. But the cost of doing so was not worth the gains, because there was a less costly alternative. Since the governments at the time were very concerned about the balance of payments situation, the employers could harp on that fear. So it was easy to grant pay demands and then turn around and besiege the government to devalue, lest exports be hurt because of loss of competitiveness. The upshot was a race between exchange rates and prices on one side, and nominal wages on the other. And in the end the unions won: the policy prescription was a total disaster.

The Failure to Learn the Lesson

No honest economist can criticize policy mistakes with hindsight. But economists are clearly entitled to a critical attitude when they detect a
failure to change a policy prescription, after it has become evident that the policy is a mistake. Unfortunately, in the case under consideration, the policy continued for at least six years after it had become clear to some economists that it did not work.

In BoI’s 1978 report, published in May 1979, one finds the following passage:

Wage increases in the private sector in 1978 are a consequence of demands for large wage increases, that were based on expectations of a continued fast pace of price increases, coupled with uncertainty regarding the rate of inflation; and the realization that the new indexation arrangements provided only partial compensation. In the circumstances the employers granted the workers’ demands without serious resistance. The number of strikes [in 1978] was lower than it had been in 1977, and the private sector concluded an early wage agreement that was out of line with government policy. (Bank of Israel 1979, 183)

The paragraph quoted already includes all of the indications of the failure mentioned above. Particularly important is the allusion to the small number of strikes. The absence of strikes is usually a sign of conciliatory positions taken by employers. The argument is as follows: wage negotiations are conducted under uncertainty. Neither side has an exact knowledge of where the other side’s “red line” is. As a consequence, if negotiations are tough, both sides risk crossing that line inadvertently. When employers do, a strike will ensue. Hence the absence of strikes indicates that employers did not engage in very tough bargaining.

In 1978 Israel the reason for the absence of tough bargaining is clear: employers could always appeal to the government to undo the excessive (from the point of view of productivity) wage agreements by accelerated devaluation, with its attendant inflation.

As noted, the failed policy persisted, causing ever-increasing inflation. Because the Israeli currency became so debased, the dollar was becoming more and more the preferred unit of account. Ultimately, even the prices in stores’ windows were posted in dollars.

“Cold Turkey”

In July 1984 a general election took place, which resulted in a draw between the two main parties. As a consequence, a national unity government came into power in September. At that point it had become
Figure 4  The impact of stopping inflation on the real wage

completely clear that inflation could actually cause the economy to collapse. But it still took until July 1985 to change the failed policies.

The key feature of the “cold turkey” medicine was a return to the exchange-rate regime that had been abandoned a decade earlier. This was accompanied by an agreement with the labor unions whose main component was a temporary suspension of indexation. The importance of this feature is demonstrated in figure 4, which is an extension of figure 2.

Suppose that unions, having realized that because of inflation their average real wage has declined from the preinflation $w_0$ to $w_1$, manage to secure wage hikes that restore the average to the preinflation rate. This implies that immediately preceding the indexation payment, the real wage is now $w_1$, and immediately after the payment it is $w_2$. Now suppose that inflation is suddenly stopped. Then the last indexation payment will bring the wage rate to $w_3$, higher than the preinflation rate. Note that this happens even under a steady-state rate of inflation and even when no inflationary expectations play any role.

The stabilization plan of 1985 is remarkable in that it exactly reversed the policy that had persisted for the preceding decade. While it managed
to pull Israel from the brink of hyperinflation, it had design flaws of its own. In consequence, Israel suffered double-digit inflation for nine of the following eleven years.

This was followed by another policy prescription set out by the then governor of BoI, a well-known economist in his own right, Jacob Frenkel, that managed to eradicate the double-digit inflation. But its obvious flaws brought Israel to its current bout with deflation.

We may conclude by saying that in its fifty-six years of existence, Israel has, regrettably, never enjoyed good professional economic advising. Sometimes this was by commission, as in our story, and sometimes by omission, as academic economists failed to speak up against faulty policies adopted by politicians. While, of course, we cannot prove that the cause was incentives that distorted good judgment, the story is clearly consistent with this possibility.

References


