Windfall Income and Consumption: Comment

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The purpose of this comment is to suggest a reconciliation of the contradictory findings of Ronald Bodkin [1, pp. 602–14] and M. E. Kreinin [5, pp. 388–90] published earlier in this *Review*. Bodkin's findings, which were based on the 1950 Survey of Consumer Expenditures of the Bureau of Labor Statistics, revealed that the marginal propensity to consume out of windfall income (MPC^w) is of the same order of magnitude as the marginal propensity to consume out of current income (MPC^y). These findings are at variance with Friedman's permanent income hypothesis [3] [4] and were challenged by Kreinin who found that MPC^w, as computed from the 1957/58 Israeli Saving Survey, was about 0.17 or only about a quarter of the MPC^y estimate (0.80).

Bodkin attempted [2, pp. 445–47] to reconcile this contradiction by advancing some arguments which he thought explained the low MPC^w in Israel. First, during the period of the Savings Survey, various exchange rate restrictions were in force in Israel, but recipients of German restitution payments enjoyed a number of privileges as long as they held the money in special accounts. According to Bodkin this provided an incentive to save the restitution receipts. Second, expectations of devaluation induced the restitution recipients to hold their money in liquid assets linked to the foreign exchange rate. These are Bodkin's main arguments, but he noted two secondary factors.

First, he doubted whether it was correct to classify restitution receipts as windfall income, since there were prolonged negotiations before the money was received. The second factor was that the "restitution recipients had as a group experienced many hardships (and worse) during an earlier period of their lives. It seems quite likely that such experiences would make individuals cautious, alert to adverse possibilities, and hence less likely to spend a one-time receipt than would be likely for a group of young American veterans."

We shall attempt to refute these arguments in the light of some additional tests we have made. However, apart from the empirical evidence, we suggest that Bodkin did not interpret correctly the possible effect of the Israeli exchange rate restrictions on consumption out of restitution receipts as compared with the marginal propensity to consume out of current income.

We believe that the reason for the discrepancy between the results of Bodkin and Kreinin lies in the relatively small sums which served as windfall income in Bodkin's data—about 7 per cent of current income on the average—while in Kreinin's data the restitution receipts were of the same order of magnitude as current income of the recipients. This is an important difference, as our findings suggest that the marginal propensity to consume out of windfall income (MPC^w) decreases strongly as windfall income rises.

I. *Some Reflections on Bodkin's Explanation of Kreinin's Findings*

We shall start with Bodkin's last argument that the MPC^w of restitution recipients is especially low because these were people who had experienced an extremely hard life. In order to test this hypothesis we took out of the 1963/64 Family Expenditure Survey[1] all the families who had received any lump-sum income in 1963–64 and divided this group into two: restitution recipients and others. There were 82 families in the first group, and 170 in the second. In each group we ran a regression of the form:

$$(1) \qquad\qquad C = \alpha_0 + \alpha_1 Y + \alpha_2 N + \alpha_3 P + u,$$

where C is family consumption[2] expenditure; Y is family current income; N is family size; and P is restitution receipts or other[3] windfall income.

If Bodkin's argument holds, the estimate of α_3 obtained from the first group should be significantly lower than that obtained from the second group. But the results revealed that the estimates did not differ significantly. MPC^w for the first group was 0.2603 (± 0.0744) and for the second 0.2544 (± 0.050). We think that these results disprove Bodkin's hypothesis concerning different consumption behavior of restitutions recipients.

We shall turn now to Bodkin's argument[4] that it was not legitimate to classify the restitution receipts as windfall income because the typical restitution payment did not surprise the recipient, since it had been subject to prior negotiation. We think that his reservation on this point is reasonable on the grounds that if people look forward to a windfall for some time they may well increase their consumption on account of it (perhaps by taking loans); when they actually receive the windfall the net increase in their wealth is therefore less than the total windfall, and the estimate of MPC^w is downward-biased. If this is so, restitution payments received in period $t+1$ should affect consumption expenditure in period t.

In order to test this we took out from the Israeli 1958/59 reinterview Savings Survey[5] all families[6] who received windfall income in 1958–59 and

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[1] See Appendix.

[2] Throughout this paper durables are included in consumption expenditure otherwise cited. The exclusion of durables did not affect the conclusions, the results in this case being $\alpha_3 = 0.2050$ for restitution recipients and 0.1695 for recipients of other kinds of windfall income.

[3] Other windfall incomes consisted of severance pay by employers, lottery prizes, local legacies in cash, cash gifts from abroad, domestic cash gifts, and lump-sum National Insurance gratituties.

[4] Bodkin has another objection to the classification of restitution receipts as windfall income: "the restitution payments might be considered analogous to insurance receipts, as they were intended to be partial compensation for losses sustained by the individual in the past. Thus, some individuals might have regarded their receipts as similar to a return of capital and hence might have been less prone to consume out of such a receipt." As the restitution receipts were intended to be a partial compensation for loss of families and wealth during the Second World War we do not think Bodkin's argument sound in this case.

[5] See Appendix.

[6] To be exact those were investigation units the number of which differed by about 5 per cent. We had no information on which of them received restitution payments, but as these account for about two-thirds of total windfall income, the possible error probably can be neglected.

TABLE 1—INCOME AND CONSUMPTION OF FAMILIES 1957–58
(Yearly averages in I£)

	(1) Number of Families	(2) Current Income	(3) Windfall Income in 1957–58	(4) Consumption Expenditure	(5)* Adjusted Consumption Expenditure
Received windfall income in 1958–59	161	3,764	798	3,602	3,602
Did not receive windfall income in 1958–59	799	3,233	388	3,040	3,564

* The estimates for adjusted consumption expenditure excluding durables were 3,336 and 3,290, respectively.

computed their consumption expenditure in 1957–58. We made the same calculation for families who did not receive windfall income in 1958–59.

But as these two groups received different amounts of current and windfall income in 1957–58 we made a computation which allowed[7] for these differences. As column (5) in Table 1 shows, future windfall income did not affect current consumption.[8] In order to test this result in a different way we ran a regression of the form:

$$(2) \qquad C_t = \beta_0 + \beta_1 Y_t + \beta_2 W_t + \beta_3 W_{t+1} + v_t,$$

where C_t is consumption expenditure in 1957–58; Y_t is current income in 1957–58; W_t is windfall income in 1957–58; and W_{t+1} is windfall income in 1958–59.

The results presented in Table 2 reveal that the value of the MPC out of future windfall income is extremely low, not different significantly from zero. These findings confirm our conclusion that consumers behaved as if they did not expect[9] any lump sum; these receipts in our data can therefore

TABLE 2—MARGINAL PROPENSITIES TO CONSUME OUT OF CURRENT AND WINDFALL INCOME

	MPC out of Current Income	MPC out of Windfall Income	MPC out of Future Windfall Income
Consumption-expenditure	0.7609 (±0.0173)	0.1881 (±0.0245)	−0.0038 (±0.0224)

[7] We multiplied the differences between these two groups in current and windfall income by their respective MPC and added this to 3040 thus receiving 3564.

[8] The same results were obtained for real estate purchases.

[9] We can interpret these results in another way: one could argue that although receipts were expected, consumers were not able to realize them. This interpretation, however, does not contradict our conclusion. What is important for us is the fact that these receipts did not affect consumption until the recipients got them.

be classified as windfall income not causing any bias in the estimate of MPC^w.

We now come to Bodkin's two principal suggestions about the low MPC^w in Kreinin's paper: "the restricted portion (80 per cent) of the restitution receipts might have been saved, by at least some recipients, in anticipation of a devaluation of the Israeli pound, as it was well known that the official exchange rates overvalued the currency." Concerning the second part of the receipts, Bodkin says that "there were economic pressures to defer consumption out of the unrestricted (1/5) portion of the restitution pay-ments. With foreign exchange restrictions, an individual receipient would not have been able to obtain in the future unlimited foreign exchange for personal use. Consequently, he might have deferred consumption out of at least a fraction of this portion also."

We believe that Bodkin's second argument might be valid, but as it is relevant to only 20 per cent of the receipts it cannot explain the very large discrepancy between his and Kreinin's findings. But as regards to devalua-tion expectations, which affected the predominent share of the receipts, Bodkin ignored the fact that any Israeli could acquire various liquid assets linked to the foreign exchange rate, and thus hedge against devaluation. Consequently, we see no reason for such expectations to affect the ratio MPC^w/MPC^y.

We shall now attempt to refute Bodkin's conclusion about the magnitude of MPC^w, with the help of data from the 1963/64 Family Expenditure Survey and the 1958/59 reinterview Savings Survey.

Since the devaluation of February 1962, there has hardly been any ad-vantage in holding restitution money in the form of liquid assets, so that there is no longer any reason for restitution recipients to defer final alloca-tion of their lump-sum receipts[10] as far as concerns speculation about pos-sible devaluation. If we are right in rejecting Bodkin's interpretation, we should thus obtain results similar to those in Kreinin's paper. In order to test this, we used the data of the 1963/64 Family Expenditure Survey and computed a regression of the form:

$$(3) \qquad C = \gamma_0 + \gamma_1 Y + \gamma_2 N + \gamma_3 W + e,$$

where C is current consumption expenditure; Y is current income; N is family size; and W is restitution receipts.

The results were $\gamma_1 = 0.8397$ (± 0.0712) and $\gamma_3 = 0.2603$ (± 0.0744), con-firming Kreinin's findings.

Table 3 presents additional evidence. It shows that in 1958–59 there was a time lag in the final allocation of restitution receipts, but the final alloca-tion is not as indicated by Bodkin. In fact the time lag hardly affects the allocation of the restitution payments between consumption and savings. The time lag is important in final allocation of restitution receipts as regards the structure, but not the amount of savings. Of the 45 per cent of restitu-

[10] After the devaluation the price level continued to rise moderately by 5–6 per cent each year, but as far as we know there is no evidence that this has anything to do with the marginal propensity to consume out of any income.

Use of Funds	Restitution Payments Received in 1957–58		Restitution Payments Received in 1958–59
	Expenditure in 1957–58	Expenditure in 1958–59	Expenditure in 1958–59
Current consumption	17	4	18
Durable consumer goods	9	4	18
Real estate	20	25	40
Financial assets	45	−33†	22

* Percentage figures do not add up to 100 as not all uses were included in this table.
† Excluding accumulated interest.
Source: Quoted from Bank of Israel, *Annual Report 1959*, Jerusalem 1960, page 326, Table XVIII-4.

tion receipts used in the first year to acquire financial assets, 25 per cent was spent a year later for real estate, and 4 per cent each on durables and current consumption.

We believe that these results are such as to refute Bodkin's attempted reconciliation of the contradictory findings, and we shall now endeavor to show that the differences between Kreinin's and Bodkin's results stem from the disparity in the amounts of average windfall incomes in their data.

II. Marginal Propensity to Consume out of Windfall Income (MPC^w)

From the 1958/59 Saving Survey, which was a reinterview survey, we chose all families who received lump sums in at least one of the years. We then combined the data for both years and adjusted them for the rise in prices. In this way we got about 300 families.

These 300 recipients of lump sums were classified into five groups of w/y, in ascending[11] order.

As may be seen from Table 4, by using this classification we got approximately five equal current income (y) groups, which differed as regards the average windfall income (w). For each group we computed a regression of the form:

$$(4) \qquad C = \delta_0 + \delta_1 Y + \delta_2 N + \delta_3 W + w.$$

The notation is as before. The result was a strongly decreasing coefficient of w, which means a decreasing marginal propensity to consume out of windfall income. This, we believe, accounts for the differences between Bodkin's and Kreinin's findings.

An unexpected result in this connection is the high value of MPC^w in Group I. We can offer no convincing explanation for this as yet and are

[11] Each group contains also the families of the lower groups, so that the groups are cumulative.

TABLE 4—MPC OUT OF CURRENT (y) AND WINDFALL (w) INCOME BY w/y GROUP

Group	Number of Families Cumulated	Annual Current Income per Family (I£)	Windfall Income per Family (I£)	$\dfrac{w}{y}$ %	MPC out of:		
					Current Income	Family Size	Windfall Income
I	103	4,312	300	7	0.710 (±0.061)	127.4 (±124.0)	1.972 (±0.772)
II	151	4,449	617	14	0.746 (±0.050)	194.9 (±109.1)	0.583 (±0.276)
III	184	4,429	894	20	0.720 (±0.043)	193.2 (±104.6)	0.450 (±0.177)
IV	247	4,383	1,696	39	0.745 (±0.034)	174.1 (± 85.9)	0.244 (0.070)
V	297	4,243	2,830	66	0.751 (±0.034)	197.4 (± 95.9)	0.233 (±0.035)

trying to analyze the behavior of this group by using additional variables. It is possible that those who receive very small sums as windfall income spend them with little thought, thus behaving in a manner different from that which economic theory generally considers to be rational consumer behavior. However this is only conjecture. In any event the extremely high MPC^w (1.972)[12] in Group I does not invalidate our conclusions about the reconciliation of Bodkin's and Kreinin's results.

As current income per family and family size are almost the same in all five of the groups of Table 4, we can regard these groups as similar with respect to their permanent income, except for the lump-sum effect. If this is the case, the decreasing MPC^w implies a decreasing marginal propensity to consume out of permanent income, where permanent income Y_p is defined as: $Y_p = rT$ (r is interest rate, and T is total wealth). In our case, the windfall can be regarded as an increase in $T (w = \Delta T)$, and therefore a decreasing MPC out of W implies a decreasing MPC out of Y_p.

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[12] This high value of MPC^w is not significantly different from unity.

APPENDIX

The 1958/59 Saving Survey was a reinterview survey and covered about 1000 Jewish urban families. The original Saving Survey covered the period 1957–58 and embraces 3000 Jewish urban families.

The methods and definitions used in the Survey[13] are very similar to those in the Oxford Saving Surveys and in the U.S. Surveys of Consumer Finances.

The 1959/60 and 1963/64 Family Expenditure Surveys were carried out by the Central Bureau of Statistics[14] and covered each about 1600 urban wage and salary earning families.

The 1963/64 survey included also information about saving items.

[13] The surveys were carried out jointly by the Bank of Israel, Central Bureau of Statistics, Department of Economics of the Hebrew University, Falk Project for Economic Research in Israel, and Israel Institute of Applied and Social Research. The most important findings and definitions are presented in Bank of Israel *Bulletin No. 10* and Bank of Israel, *Annual Report 1959*, pp. 319–27.

[14] See "Family Expenditure Surveys (1950/51–1956/57–1959/60), Special Series No. 148 Central Bureau of Statistics, Jerusalem 1963. Results of the 1963/64 Survey will be published by the Central Bureau of Statistics.

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Windfall Income and Consumption: Reply

Michael Landsberger is to be congratulated on a stimulating, insightful comment. Although I am not completely convinced that differences in the magnitude of the average one-time receipt (relative to average "regular" income) is the full explanation of the divergent results obtained by Kreinin [6] and me [2], nevertheless I believe that Landsberger's discussion throws some new light on these issues.

Landsberger's explanation of the different results found in the studies of Israeli restitution payments and American National Service Life Insurance (herein abbreviated NSLI) dividend receipts is based on the hypothesis that the marginal propensity to consume windfalls is not constant, but instead decreases as the size of the windfall increases. Hence one could argue that the same consumption relationship characterizes both groups of recipients of windfall income, the differences in the observed MPC's merely reflecting the position (in the two separate cases) of the typical receipient of windfall income on the common curvilinear relationship. Landsberger attempts to test this hypothesis, using Kreinin's and some addi-