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Farm Price Supports at Cost of Production

CLIFTON B. LUTTRELL

MANY people are concerned that the costs of production in a number of key industries, such as agriculture, will exceed the price of the product, thus destroying entire sectors of the nation's economy. This concern has been the basis for numerous public policy actions, including tariffs and import quotas to protect domestic producers from foreign competition and Government guaranteed minimum prices to producers of farm commodities.

Arguments for maintaining the prices for farm commodities at levels sufficient to cover production costs have been found among those who have had influence on farm legislation since the early 1920s. Such proponents include various Secretaries of Agriculture, major farm organizations, and a number of professional economists.¹

¹In 1922, Secretary of Agriculture, Henry C. Wallace, wrote, "There is overproduction, so far as the producer is concerned, whenever the quantity produced cannot be marketed at a price which will cover the production costs . . ." He contended that such overproduction will drive the less efficient producers out of business, and that both farmers and consumers would benefit from more stable farm prices. See U.S. Department of Agriculture, *Yearbook 1922*, p. 4. In 1934, his son, Secretary of Agriculture, Henry A. Wallace, stated, "Agriculture must be maintained; and to maintain it the prices paid for farm products must cover the costs." Like his father, he also argued that both producers and consumers would gain in the long run from such supports. See U.S. Department of Agriculture, *Yearbook 1935*, p. 4. In the 1920s, a bill was introduced in the Senate to create a Federal export corporation which was designed to keep farm commodity prices at least up to cost of production levels. See Dan F. Hadwiger, *Federal Wheat Commodity Programs* (Ames: The Iowa State University Press, 1970), p. 100. Additional arguments for supporting farm prices at or near costs of production are found in: Orville Merton Kile, *The Farm Bureau Through Three Decades* (Baltimore: The Waverly Press, 1948), p. 199; J. A. Baker, "Supply Control: Farmers Union View," *Journal of Farm Economics* (December 1960), p. 1180; Geoffrey Shepherd, "What Should Go Into the Parity Price Formula," *Journal of Farm Economics* (May 1953), p. 171; and Rainer Schickele, *Agricultural Policy* (New York: McGraw-Hill Book Company, Inc., 1954), p. 298. Numerous proponents of price supports contend that they are necessary in order to maintain a viable industry. Such arguments imply that the level of price supports should be determined by some measure of cost of production. See, for example, John C. White, Deputy Secretary of Agriculture, "A Gamble That Has to Be Encouraged," *New York Times*, September 13, 1977. He stated: ". . . If we continue all out production of commodities in large world oversupply, the odds are against success and survival for U.S. farmers . . ."

The voice of proponents of such price supports has not gone unheeded. The parity price concept established in the 1933 Agricultural Adjustment Act was in itself an attempt to relate the Government guaranteed support prices on farm commodities to average costs. It provided for a higher support base if farm production costs, including interest, taxes on real estate, and commodities bought by farmers, rose. The Act, as amended in 1949, included wages paid to farm labor in the parity index for agricultural price supports.

The artificially high prices resulting from these programs led to major surplus accumulation, which in turn created demands for new legislation to control production, enhance food consumption, and provide for surplus disposal through export (subsidy) schemes. Despite major efforts to reduce surpluses through international and domestic surplus disposal programs, and the massive efforts to prevent stock accumulations through production restrictions, the value of Government owned surplus commodities exceeded \$6 billion or about 20 percent of total farm product sales in the late 1950's. Furthermore, total carryover stocks, largely under CCC loan or owned outright by the CCC, of cotton, wheat and sorghum grain often exceed annual production. In the early 1970s the price for farm products rose sharply, but the support prices were not increased much. Consequently, Government stocks of farm commodities were largely liquidated and most farm production controls were removed.

More recently, however, the argument for farm price supports based on cost of production has been revised. The Food and Agriculture Act of 1977 provided for a support price (target price) for feed grains for the years 1979 through 1981 at the 1978 level of supports, adjusted for changes in costs of production. Costs of production for this purpose were defined as variable costs, machinery costs, and general overhead costs allotted to the crops involved on the basis of their proportion of the total value of production.²

²*Food and Agricultural Act of 1977*, Conference Report, 95th Congress, 1st Session, Report No. 95-418, p. 19.

Which Cost of Production?

Those who advocate a Government guaranteed farm commodity price support program based on costs of production are first faced with the problem of determining a cost of production measure that has meaning for any specific farm or commodity. There are a number of different concepts of costs: total, average, marginal, fixed, variable, short-run, long-run, and various combinations.

While none of the proposals for basing support price levels on costs of production state the specific concept to be used, average cost would apparently be applied, given the objective of raising farm income through price supports. The difference between the price per unit sold and the average cost measures the current profit (or loss) per unit of output for the farm. Profit (or loss) per unit multiplied by the number of units sold yields the total annual profit (or loss) for the farmer. Thus, price supports based on average cost could be related to the objectives of the policymakers of increasing current farm incomes. Nevertheless, Government guaranteed prices based on any cost of production concept lead to major problems in the longer run if guaranteed prices are maintained above free market prices.

Whose Cost of Production?

A second problem encountered in basing support prices on costs of production is the question of whose cost of production is appropriate. In 1976 there were about 2.8 million farms in the United States, each having a different cost structure. While income and cost data are not available for individual farms, average realized net income to farm operators in the various sales classes indicates the diversity of production cost. For example, in the largest size category, with sales of commodities of \$100,000 and over per farm, realized net income averaged \$55,700 per farm operator. But, for those farms having sales of \$2,500 to \$4,999, average realized net income per farm operator was only \$1,725.³ It is apparent that many farms in the latter category realize little or no net income once opportunity costs (highest valued alternative use for resources) are deducted for the operator's labor and use of capital.⁴ However, many farms in the larger size group apparently yield sizable returns to all re-

sources. Hence, cost of production per unit of output on larger farms is well below that of most farms in the smaller size group.

The short-run average cost of production on farms will no doubt decline as the size of farms in the smaller farm size groups increase. However, as the size of farms in the larger size groups increase, management is spread over wider areas, and the costs per unit of output will tend to level off and may even begin to increase.

The variation in the short-run average cost of production for farms results from a number of factors such as quantity and quality of various inputs, including land, labor, operating capital items, and the quality of management. For example, the quantity of land and/or equipment will vary among farms, and if there are major returns to scale, as is often the case in agriculture, the larger farm will have lower average costs than will the smaller farm.

Some Prices Profitable for Some Farms and Not Profitable for Others

Given the fact that some farms are more efficient than other farms and that the more efficient farms have lower average production costs than the less efficient, Government price supports sufficient to cover such costs on the more efficient farms might be set at relatively low levels. For example, some of the more efficient farms may be able to produce corn profitably at a price as low as \$1.25 per bushel, whereas other less efficient farms may require a price of \$2.50 or more to produce corn profitably. At these cost of production levels, price supports set at \$1.25 will be sufficient to guarantee the profitability of corn production only on the most efficient farms.

Alternatively, price supports which guarantee a profit for the marginal producers (*no farm failures*) will guarantee above normal profits for the more efficient producers. For example, assume that the market price for corn is \$1.75 per bushel and the support price is set at \$2.50 per bushel, a level sufficient to cover production cost on the least efficient farm. Those farms which can produce corn profitably at \$1.25 per bushel will realize profits relative to free market levels (about \$1.25 per bushel), at the expense of the taxpayers and consumers. Production on these efficient farms will also tend to rise, since they now have an incentive to increase output until marginal cost rises to the new price level. Their marginal cost will increase as a result of their increased use of vari-

³U.S. Department of Agriculture, *Farm Income Statistics*, Statistical Bulletin No. 576, July 1977, p. 54.

⁴The U.S. Department of Agriculture net income data represent returns to the operator's labor and equity capital. Hence, the value of these resources in alternative uses must be deducted in order to determine the profitability of the farm.

able productive factors such as fertilizer. It will pay these farmers to increase the use of such resources until marginal cost (cost of producing an additional bushel) rises to the support price level of \$2.50 per bushel. Nevertheless, despite the increase in marginal costs, these farms will realize a major gain in total profits. The Government, in turn, would be faced with disposing of an even larger "surplus."

High Price Supports Lead to Greater Production, But Less Sales Than Market Prices

In addition to the fact that support prices based on cost of production can guarantee large profits to some farmers while others may still incur losses, the level of the support price has a major impact on the volume of farm production. Continuing adjustments in resources and production are made by farmers in response to price changes.

In the short run, the way in which such adjustments are made can be explained by the law of diminishing returns. This economic law states that as more units of a variable factor of production (fertilizer, for example) are applied to a fixed amount of other resources (for example, land), the *additional* production per unit of fertilizer added will eventually decline. This decline in the additional production for each additional unit of fertilizer means that the cost per *additional* unit of crop produced (i.e., marginal cost) rises.

The marginal cost and the expected price of a product determine the most profitable rate of production. For example, if the expected market price of corn is \$1.75 per bushel and a farmer can produce an additional bushel of corn by adding \$1.50 worth of fertilizer, he will add the additional fertilizer. He will continue to add fertilizer as long as he can increase his profit by doing so, i.e. until the cost of the fertilizer added equals the value of the additional corn produced. On the other hand, no additional fertilizer will be added once the point is reached where \$1.75 worth of additional fertilizer is required to produce an additional bushel of corn. The farm's most profitable short-run production occurs at that rate of output where the marginal cost of production equals the price received for the commodity. This maximizes the farmer's total profit, since before that point is reached any additional unit produced adds to profits, and after that point any additional output is produced at a loss. Consequently, when prices are increased as a result of price support

programs, marginal revenue rises above marginal cost and farmers always find it profitable to increase production.

In addition to the effect of increasing production, support prices set above current market prices tend to reduce the quantity of products demanded *from farmers*. In general, the result is an increase in the amount of farm products supplied to the market and a decrease in the amount demanded. This difference will emerge as a "surplus" of current farm products, which the Government must absorb and store or dispose of.

But of greater consideration is the longer-run impact of support prices on exports. Higher prices faced by agricultural producers in those nations which import from the United States, and by such producers in other nations, provide incentive for increased production and decreased importation of farm products from the United States.⁵ Hence, stocks of farm commodities, unwanted at the support price, will tend to build up. The United States Government can alleviate this situation by "dumping" farm products in the world market; that is, the Government can sell farm products in foreign markets at below domestic costs of production and prohibit the importing of these commodities through import quotas or tariff barriers. Some foreign governments allegedly follow such practices with respect to some nonfarm products. Several commodities, such as steel and textiles, are allegedly "dumped" on the United States market.

The market price is the only price which equates production and sales of all goods and services. While domestic production restraints, such as acreage controls, may tend to reduce the commodity accumulations which result from price supports, such controls have in the past had only limited effectiveness. Furthermore, in those cases where controls are relatively effective (for example, tobacco production), the incentive to produce larger quantities leads to overall inefficiencies in national resource use.

Higher Prices Increase Size of Farm Sector . . .

Prices which are artificially set above market prices have an important impact on national resource use.

⁵The new farm bill contains an escape clause, similar to those in most tariff laws, which authorizes the Secretary of Agriculture to lower the loan rates when United States farm products are being priced out of world markets. However, any price support level which is above the equilibrium market price will reduce exports, to some extent, and the higher the support price is maintained, the greater will be the reduction.

Average returns to all resources used for farm production will rise as farmers bid for additional resources. More of the variable cost items will be brought into agriculture. For example, it will be profitable for farmers (in the short run at least) to increase the use of chemical fertilizer, pest and weed control agents, and improved seeds, and intensify crop cultivation.

In the longer run, farmers make continuous adjustments of all resources in response to higher prices. There is neither a unique size of farm, a unique amount of labor or machinery on farms, nor a specific number of farms, nor a specific total acreage in farms. In other words, over a longer time period all resources are variable. If corn is selling below production cost for some farmers, they will make greater adjustments in the long run of five years than in the short run of a year or less. A farmer who is producing at a loss in the long run will attempt to sell his farm and go into another occupation, or he may develop his farm into a profitable one by purchasing land from another relatively inefficient farmer. Hence, without price supports, long-term adjustments in response to growth in farm technology result in fewer (but more efficient) farms, a smaller farm labor force, and lower food costs. In contrast, the artificially high prices resulting from farm price supports in the longer run will lead to a portion of the nation's scarce resources being employed, inefficiently, in agriculture. Higher prices, resulting from price supports, will tend to increase the farm labor force and other resources. Likewise, the number of farm consolidations will be slower among marginal farmers as such farmers will tend to remain in agriculture for a longer period rather than selling out. The more efficient farmers, however, will have the incentive to bid labor and other resources away from nonfarm uses and increase farm production capacity. *Excessive* resources will thus remain in agriculture. Acreage controls may be used to reduce the land allocated to crop production but they do not reduce the incentive for using land or other resources in the industry. The free market price is the only price which assures that no waste occurs in the use of scarce resources.

But Returns to Farm Workers Unchanged

Since labor and capital can move from one sector of the economy to another, higher returns to farm labor through price support programs cannot be maintained indefinitely. If price supports are set sufficiently high to cover labor cost (opportunity cost for farm labor) on the less efficient farms, the more efficient farms

will find returns from hiring extra labor increased and will employ additional workers until the value of the output produced by the last worker hired equals the cost of hiring the worker. However, once complete, this process insures that costs of farm labor (wages) will remain about the same as the cost of labor (wages) of the same quality employed elsewhere in the economy. Otherwise, further shifts in labor between the farm and nonfarm sectors would occur as workers search for those jobs which are expected to maximize their own income. Also new entries into the labor force will tend to select those occupations where their own well being is maximized, thereby tending to equalize returns to labor of equivalent quality in all sectors. Consequently, in a community where workers can move freely among the various occupations, there can be no permanent disparity in returns to workers having similar abilities.

Only by limiting employment can labor income in agriculture be maintained for a long period of time at above equilibrium levels. However, such rigid controls lead to major inefficiencies in overall resource use throughout the economy and, in addition, are a massive infringement on freedom of choice in the selection of a vocation.

The Only Long-Run Gainers Are Current Landowners

As indicated earlier, over a longer-run period of perhaps five years or more, all resources in agriculture are variable. They can be increased or decreased depending on the expected rate of return in agriculture versus other industries. Labor can readily shift to or from farming. Capital invested in farm machinery, livestock, and other capital items can likewise shift between farm and nonfarm uses as the capital items are depreciated or marketed. Land, however, represents a somewhat different type of investment, being more of a fixed investment than either farm buildings, machinery, or livestock. Also, the quantity of land relative to other forms of capital in agriculture is greater than in most other industries. Returns to much of the nation's land (opportunity cost) is, thus, largely determined by its rental value for agricultural purposes. While the effective supply of land for agricultural purposes can be augmented somewhat through the use of fertilizer, irrigation, and limited changes in its use for other purposes, the quantity available for farming is still relatively inelastic (quantity changes only a small amount with relatively large changes in

land prices) even in the long run.⁶ Hence, increases in land prices which result from *permanently* higher farm profits tend to be more permanent than the higher returns on other farm resources.⁷ The higher returns to land as a result of price supports thus tend to remain permanent, whereas returns to other factors of production tend toward their previous levels, about equivalent to returns on similar resources used in the nonfarm sector of the economy.⁸

Price Supports Not Necessary to Prevent Massive Farm Failures

The observed adjustments to market forces made over the years by agriculture are not consistent with the view that all farmers will suddenly go bankrupt and domestic food production will cease unless costs of production are guaranteed by the Government on all existing farms. If there were only a few farmers with the same average cost of production, and farming in the nation was at a comparative disadvantage with that in the rest of the world, it would be possible for them to all fail at the same time. Then the nation would be forced to rely exclusively on imports for food. However, in this case, well-being would still be enhanced by importing food and exporting those goods in which the nation has a comparative advantage. Neither condition, however, is applicable to the United States. This nation has more than 2.7 million farms, each of which has a unique cost of production, and, as a whole, it has a comparative advantage over other nations in the production of farm commodities.

⁶See John E. Floyd, "The Effects of Farm Price Supports on the Returns to Land and Labor in Agriculture," *Journal of Political Economy* (February-December 1965), pp. 152-55.

⁷A reduction in crop acreage resulting from Government acreage control programs will have a similar impact on returns to land since any reduction in acreage cropped will result in higher returns to the remaining acres.

⁸For a detailed discussion of this subject, see D. Gale Johnson, *Farm Commodity Programs: An Opportunity for Change* (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1973), pp. 51-63. Johnson reports, "Since a very large fraction, if not all, of the net benefits from commodity programs go to land, the percentage of farm real estate that is owned by farm operators is of some interest . . . perhaps as much as 40 percent of net benefits accruing to land goes to landowners who do not farm the land they own."

Floyd found "that most of the benefits (from the price support and acreage control programs) will take the form of a windfall gain, either an increase in the value of land or the receipt of marketing certificates issued by the government and having a commercial value, and that the gain is once and for all." Floyd, p. 158.

Similar results were found in a study by Earl O. Heady, Edwin O. Haroldsen, Leo V. Mayer, and Luther G. Tweeten, in *Roots of the Farm Problem* (Ames, Iowa: The Iowa State University Press, 1965), p. 66.

Its relative advantage is indicated by the fact that about 30 percent of the nation's farm production is exported.

Since average cost of production per unit varies widely among the numerous farms in the nation, some farmers will be making profits in a free market setting, while others will take losses at all likely prices for farm products. Only the marginal (least profitable) ones will cease production in any year, however, and find other uses for their resources. As marginal producers leave the industry, the supply of farm products will tend to decline. The decline in supply will tend to increase the price and the profit level to the remaining producers. Consequently, the larger the number of failures in any given year the greater will be the profits in succeeding years for those producers remaining in agriculture. Hence, the system is self-adjusting *if left alone*. Consumers thus have no need to fear from the possibility of massive failure in farm production resulting from free market forces.

Some Failures — Expected in Growing Economy

Much of the support for Government farm programs no doubt reflects the benevolent concern of the American public for the relatively large number of low-income farm families. Failure in agriculture by such families is often envisioned as a catastrophe. No farm nor business failure is desirable for its own sake since it is associated with personal costs and losses. But, there is little that the commodity supply-control and price-support programs can do to prevent failures by the low-income farm group. They own little land and it is the existing landowners who receive the major benefits from farm price-support programs. Hence, the economic status of the low-income farm families is little improved.

Furthermore, there is a social cost in preventing failure that should be weighed against the losses from failure. As indicated earlier, farms, like other businesses, can misuse labor, land, capital, and other factor inputs. Unless some failures are permitted, such misuse will continue, and the resources will not be available to other sectors of the economy, where they could be used more efficiently.

The various sectors of the economy grow at different rates — some at a high rate, some more slowly and some not at all. If no failure is permitted by assuring market returns to all resources, growth in the faster growing sectors of the economy will be retarded because of lack of resources. Thus, programs which

tend to support farm prices at production cost and freeze the resources in farming at their current levels are not compatible with maximum economic growth or well-being. Hence, the cost to society of preventing failure may be much greater than the hardships of the relatively small number of failures which result from price competition in the market place; and if we wish to ameliorate the hardships, it can be done by more efficient means than by subsidies to all farms. Examples are Government grants and loans for retraining and relocation of farmers and farm workers.

SUMMARY

Arguments have been made for Government farm price supports based on cost of production. Some of the arguments are based on the alleged possibility of massive failure and loss of production in the industry. The arguments fail to specify which cost or whose cost of production should determine the level of supports.

There are several different concepts of cost of production. Possibly the most widely understood concept is average cost. But there are more than two million farms in the nation, each with a different average cost. Hence, any likely level of price support selected for a farm commodity will be above average cost for some farms and below average cost for all others.

Consequently, any farm price-support level which may be selected contains all the handicaps of all other

price-support schemes. Any level of price supports which is above market levels for a commodity will tend to increase output and raise marginal costs of production. Hence, the price supports themselves, if effective in raising prices, stimulate the production of "surplus" commodities, and result in higher food costs, reduced farm commodity exports, and higher taxes to cover the higher Government outlays.

In addition, the supports cause inefficiencies in both the farm and the nonfarm sectors of the economy and fail to achieve the objectives of the program. They lead to excessive resources in agriculture which reduces the quantity of resources available to the nonfarm sector of the economy. Consequently, there is less production of nonfarm goods. But of greater importance, the higher prices are of little benefit to farm labor and low-income farm families, major objectives of the program. Most of the gains accrue to existing landowners.

Furthermore, the supports are not necessary to prevent massive failures. The system of market prices is self-correcting, as failures tend to reduce the overall supply, increase the price of farm products, and improve the profitability of the remaining farms. Some failures and some temporarily high profits are to be expected in a competitive economy. They indicate that resources are moving toward their most efficient uses.



Do Foreigners Control the U.S. Money Supply?

GEOFFREY E. WOOD and DOUGLAS R. MUDD

THERE have recently appeared claims that developments in the Eurodollar market have contributed substantially to the current expansion of the U.S. money supply (M_1).¹ These claims imply that the Eurodollar system is a source of monetary disturbances which the Federal Reserve System cannot offset. On the basis of these claims, it is sometimes then asserted that the recent weakness of the dollar in foreign exchange markets has been due to an expansion of M_1 caused by transactions in the Eurodollar market.

In fact, the extent to which transactions in the Eurodollar market can affect M_1 , and thereby make more difficult the Federal Reserve's task of monetary control, is at most very small. Further, any effect on M_1 from Eurodollar transactions can be fully offset by Federal Reserve actions. Therefore, if Eurodollar transactions do affect M_1 , it must be with the concurrence of the Federal Reserve System.

Can Eurodollar Transactions Increase the U.S. Money Supply?

Eurodollar deposits are dollar-denominated deposit liabilities of banks, including branches of U.S. banks, located outside the U.S.² These dollar-denominated

claims are owned not only by foreign citizens and corporations but also by U.S. citizens and corporations, international organizations, and by national governments.

Funds can be transferred from a U.S. bank to a Eurodollar account for a variety of reasons. It may be that a U.S. citizen sees that a higher rate of interest can be earned at a Eurobank (any bank outside the U.S. which has dollar-denominated assets and liabilities), or that a foreign corporation receives a check from a U.S. corporation in payment for goods, and decides to keep those funds in dollars, although at a bank outside the U.S.

In any event, the Eurobank now owns a demand deposit at a U.S. bank. The effect on the U.S. banking system of establishing the Eurodollar deposit has been to *transfer ownership* of a demand deposit from a U.S. resident to a Eurobank. Thus, the "creation" of the Eurodollar deposit has no effect on the money stock of the U.S.

The Eurobank receiving the deposit can subsequently extend dollar loans based on the demand deposit which it holds at a U.S. bank, maintaining some portion of the demand deposit at the U.S. bank as "precautionary reserves."³

¹See, for example, "Economic Diary: Solving the Riddle of Monetary Growth," *Business Week*, November 7, 1977, p. 14 and "A Reader Writes: Euromarket Has Gained Control of U.S. Money Supply," *The Money Manager*, October 17, 1977, p. 8. M_1 is defined as demand deposits plus currency and includes holdings of these by foreign governments, financial institutions, and individuals, as well as those of U.S. residents.

²Eurodollar deposits are therefore *not* U.S. dollars owned exclusively by foreigners. It should also be noted that Euro-

dollars are dollar-denominated claims on banks outside the U.S., *not* bundles of U.S. currency. (Just as the bulk of the U.S. money stock comprises claims on banks in the U.S., and not actual currency in circulation.)

³There is no reason in principle why the loan should be a dollar loan; it could be in some other currency. We have dealt only with a dollar loan so as to focus on the particular point at issue.

The loan might take the form of a dollar loan to a European corporation, executed by transferring some portion of the deposit which the Eurobank holds in the U.S. to a demand deposit account held by the borrowing corporation at the same or another U.S. bank. The net effect on the U.S. banking system of this Eurodollar loan again would be a *transfer of ownership* of demand deposit accounts without changing the level of total U.S. demand deposits.

The foreign-based corporation receiving the Eurodollar loan in this example could use the demand deposit account which it now owns in the U.S. to make final payment for goods and services purchased in the U.S. Alternatively, it could decide to deposit part or all of the Eurodollar loan in another Eurobank. In this case, the Eurobank could extend further Eurodollar loans, pending the use of the funds by the corporation.

The "creation" of Eurodollar deposits is thus a process identical to the "creation" of bank deposits in the U.S. banking system. Eurobanks are, insofar as they deal in dollars, part of the U.S. banking system, just as Missouri banks are, in that all require U.S. dollar deposits before they can grant U.S. dollar loans.⁴

In the case of the Eurodollar market, the expansion of Eurodollar deposits is based, in effect, on the *transfer of ownership* of demand deposits held by Eurobanks at U.S. banks.⁵ The total level of demand deposit liabilities held by the U.S. banking system, however, is not changed by the multiple expansion of Eurodollar deposits.⁶ The process is identical to that which would follow if a deposit is withdrawn from one bank in the U.S. and transferred to another. The first bank would lose reserves and have to reduce its earning assets, for example its loans, while the second

bank would acquire reserves and thus be able to expand loans. In the absence of a change in the monetary base on which the loans are pyramided, the total of loans which could be extended will not change.

In summary, the reason why movements between M_1 and Eurodollars do not affect M_1 is that one acquires a Eurodollar asset by supplying U.S. dollars. This *transfers the ownership* of some U.S. dollars, but does not affect the total.

One qualification is in order. A U.S. bank may have the ability to affect demand deposits, and hence M_1 , by changing the composition of its liabilities between demand deposits and funds borrowed from the Eurodollar market. An example of this would be when a large bank in the U.S., which was holding a demand deposit due to a bank in London, has that deposit converted to a loan from that bank. The immediate effect of this is a fall in M_1 , but it does release reserves, since the reserve requirement on Eurodollar borrowings is 4 percent, while that on demand deposits is 16.25 percent at the largest banks. If the entire amount of reserves which have been freed is used to make loans which subsequently become demand deposits at banks with a smaller marginal reserve requirement, and these banks then extend loans which remain as demand deposits at banks with the same reserve requirement as themselves, an expansion of M_1 is possible.⁷ However, as Eurodollar transactions tend to be concentrated in the larger banks, such an effect is not likely. But even should such an effect occur, as is shown below it *can be fully offset* by Federal Reserve action.

So far we have examined the effect of an owner of a part of M_1 moving his deposit to a Eurobank. It is also necessary to consider a movement from an interest earning asset, such as a time deposit, to a Eurodollar deposit. In this case, the dollars held as time deposits would initially be shifted into demand deposits, and subsequently transferred to a Eurodollar deposit. The initial shift from a time to a demand deposit would increase M_1 , just as would a shift from a time deposit to a demand deposit made for any

⁴This was first pointed out by Milton Friedman, "The Euro-Dollar Market: Some First Principles," this *Review* (July 1971), pp. 16-24, and later re-emphasized by John Williamson, "Review of *The Economics of the Euro-Currency System* by George W. McKenzie," *The Manchester School* (March 1977), pp. 86-88, and by Michael J. Hamburger and Geoffrey E. Wood, "Interest Rates and Monetary Policy in Open Economies" (paper presented to Federal Reserve Committee on Financial Analysis, November 16-18, 1977).

⁵Only to the extent that Eurobanks hold "precautionary reserves" in the form of time deposits, rather than demand deposits, at U.S. banks will U.S. M_1 change. This change in M_1 could, however, be entirely offset by Federal Reserve open market operations, as described later in this paper.

⁶This abstracts, for expository simplicity, from the existence of different reserve requirements at different banks. For a discussion of the consequence of this, see Albert E. Burger and Robert H. Rasche, "Revision of the Monetary Base," this *Review* (July 1977), pp. 13-23.

⁷Currently, reserve requirements on net demand deposits which apply to member banks are: 7% for banks having less than \$2 million in demand deposits, 9.5% for \$2-\$10 million in demand deposits, 11.75% for \$10-\$100 million in demand deposits, 12.75% for \$100-\$400 million in demand deposits, and 16.25% for banks having demand deposit liabilities in excess of \$400 million. It can be seen that for the effect on M_1 of a deposit moving from one bank to another to be non-trivial, the deposit would have to move from a bank with deposits in excess of \$400 million to one with deposits of less than \$10 million.

other reason. However, this increase in M_1 could also be fully offset by Federal Reserve open market operations, that is, by the purchase or sale of U.S. Government securities by the Federal Reserve.

How the Fed Can Control the Money Supply

It is useful to set out the sequence of events through which Eurodollar transactions are viewed as affecting M_1 . Once that has been done, it can be seen how the Federal Reserve, should it choose to do so, can counteract these effects. The sequence of events through which Eurodollar market transactions are supposed to result in increases in the U.S. money supply can be set out as follows. The continued decline in the foreign exchange value of the U.S. dollar has, the argument runs, encouraged Eurodollar holders to convert their Eurodollars into Deutsche marks, Swiss francs, French francs, etc. Thus, as the value of the dollar in terms of most European currencies declines, foreigners holding dollar-denominated deposits in European banks "... have been selling dollars to buy German marks and the like. . . ."⁸

European central banks, it is further asserted, take part in these transactions by selling their domestic currencies for U.S. dollars. Some portion of the increased dollar balances held by European central banks is then used to purchase U.S. Treasury securities from U.S. residents. These U.S. residents subsequently deposit the proceeds from these sales in their checking accounts. As a result U.S. demand deposits, and consequently M_1 , have been increased.

Now, as was shown above, that analysis is incomplete. It neglects that the Eurodollars had as their base deposits within the U.S. banking system. When holders of Eurodollar deposits instruct the banks at which these deposits are held to convert the deposit from dollars to some other currency, the effect may indeed be to transfer the ownership of a U.S. demand deposit from the Eurobank to a foreign central bank. If it so desires the foreign central bank may then use this U.S. demand deposit to purchase U.S. Government securities. This transaction would transfer ownership of the U.S. demand deposit from the foreign central bank to the U.S. residents from which the securities were purchased.

Thus, Eurodollar deposit holders can convert these deposits into foreign currencies, ultimately resulting in foreign central bank purchases of U.S. Government

securities, with no substantial change in the level of U.S. demand deposits occurring. Insofar as it affects M_1 , the process in the end result is exactly like that of one U.S. resident buying U.S. Government securities from another; no matter how many intermediate steps there are, there is ultimately no effect on M_1 , except in the case where reserves are released by the transactions, and that effect is, as shown above, minor.

Even should that minor effect occur, the Federal Reserve can offset it in two ways.⁹

First, when the Eurodollar holders sell their dollars, they do not go along and offer them to foreign central banks; rather, they sell them on the foreign exchange market to whomever will buy them. There is nothing to stop the Federal Reserve System from using its foreign exchange reserves to buy the dollars at that point, thus bringing the process to a quick end, for there would be no increase in foreign central banks' holdings of dollars. Alternatively, the "reappearance" of Eurodollar deposits as U.S. demand deposits could be offset domestically. Changes in the U.S. money supply can be offset by Federal Reserve open market operations. In this present case, the Federal Reserve System would sell some of its holdings of Government securities. This action would reduce both bank reserves and M_1 .

Thus, any increase in the U.S. money supply which might conceivably result from investors converting Eurodollar deposits into foreign currency holdings can readily be offset by the U.S. monetary authorities. They can offset the increase in M_1 by operating either in the foreign exchange market or in the market for U.S. Government debt, or both. Far from being unable to offset this monetary impulse, the Federal Reserve actually has *two* instruments by which it can do so.

Has the Eurodollar Market Made the Dollar Weak?

It is sometimes claimed that the dollar's recent weakness has been due to self-fulfilling expectations

⁹It is useful to note that even if the Federal Reserve does not try to offset these effects on M_1 , they may be only transitory. Suppose the Federal Reserve is controlling an interest rate, such as the Federal funds rate. Suppose further that there is an increased desire to borrow dollars and sell them for some other currency. This increased demand for credit raises interest rates. In attempting to offset this rise the Federal Reserve increases bank reserves by buying Treasury bills. The money supply thereby expands. Suppose that those who sell foreign currency to dollar holders wish to buy U.S. Treasury bills.

⁸*Business Week*, p. 14.

operating in the Eurodollar market. The argument for this position is that the dollar has been weak only because M_1 has been growing unduly rapidly, and that M_1 has been growing because of Eurodollar transactions undertaken in the expectation of further weakness of the dollar.

Even if the argument that Eurodollar transactions could substantially affect M_1 were correct, it is easy to see that the Federal Reserve can offset such influences on the U.S. money stock. Eurodollar transactions cannot be blamed for the slide in the U.S. dollar's foreign exchange value.

This increased demand for Treasury bills lowers interest rates. The Federal Reserve now sees interest rates falling, and reacts by supplying Treasury bills, thus offsetting its original action.

Summary and Conclusions

The net effect of transactions in the Euromarket on the U.S. money supply is virtually negligible. Transactions in the Eurodollar market cannot have contributed significantly to the recent growth in M_1 . Further, the arguments in the second section of this paper show that the U.S. monetary authorities have the ability to offset whatever effects on M_1 Eurodollar transactions may have. The existence of that market has not reduced the ability of the Federal Reserve System to control the U.S. money stock. It therefore also follows that any claim that the foreign exchange value of the U.S. dollar is declining because of self-fulfilling expectations operating through the Eurodollar market is totally false.



The Tax Penalty on Married Workers

NANCY AMMON JIANAKOPLIS

JOHN Doe and Jane Smith *each* earned \$15,000 in 1976 and *each* paid \$2,403 in Federal personal income taxes.¹ The Internal Revenue Service collected \$4,806 from John and Jane. If John and Jane had been married during 1976, however, they would have jointly paid \$6,092 in Federal income taxes. Getting married would have cost John and Jane \$1,286 in additional 1976 Federal income taxes. This example points out one of the peculiarities of the present Federal income tax structure; under certain circumstances two working people would pay more taxes if they are married than if they are single.

Dealing equitably with households of different sizes, marital status, and number of working family members has been a problem for tax law writers. Even without referring to the economic theory of taxation, however, it is possible to examine the factors which contribute to a possible tax penalty on married workers. The consequences and possible remedies for this apparently inequitable treatment of households can also be considered.

FACTORS CONTRIBUTING TO THE TAX ON MARRIED WORKERS

The task of specifying all possible household situations where a marriage penalty (or benefit) occurs is very difficult, and is not a very rewarding exercise. However, the fundamental characteristics of the situation remain if a few simplifying assumptions are made:

- 1) the standard deduction is used by all taxpayers;
- 2) all income is derived from wages and/or salaries;
- 3) all married couples file joint returns;
- 4) household adjusted gross incomes are \$30,000 or less; and
- 5) household members have no children.

While these assumptions are limiting, all except the last assumption are fairly widespread. Even the exclusion of children from the example is not that unusual. In March 1976, 15 percent of all husband-wife households were childless and both spouses were employed.² With regard to the other assumptions, analy-

sis of 1973 tax returns indicates that 65 percent of all returns utilized the standard deduction.³ Wages and salaries represented 83 percent of adjusted gross incomes in 1973 and 95 percent of all married couples filed joint returns. The Internal Revenue Service reported that 96 percent of all taxpayers in 1976 had adjusted gross incomes below \$30,000.⁴

The basis for calculations of the tax penalty on married workers is the comparison of tax liabilities of a man and woman, holding constant everything except their marital status. This is not a frivolous exercise when consideration is given to the employment statistics dealing with married couples. According to March 1976 data, there were 47.3 million husband-wife families.⁵ In 22.3 million (47 percent) of these households both husband and wife worked outside the home. Full-time working wives contributed 39 percent of family income in 1976. Furthermore, the alternative of a man and woman living together without being legally married has been increasingly adopted. The number of households where unrelated adults of the opposite sex shared living quarters doubled between 1970 and 1976, although constituting only 1 percent of all households in 1976.⁶

The marital status of two hypothetical people, John and Jane, for the entire tax year of 1976 is based on their marital status on December 31, 1976. There is one technicality involved with this. The Internal Revenue Service states:

If you obtain a foreign divorce for the sole purpose of enabling you and your spouse to qualify as unmarried individuals eligible to file separate returns, and if you then remarry each other early in the next tax year, you and your spouse must file as married individuals.⁷

¹"The Tax Structure and Discrimination Against Working Wives," *National Tax Journal* (June 1972), pp. 183-191.

²1973 is the most recent year for which detailed analysis are published. Internal Revenue Service, *Statistics of Income — 1973, Individual Income Tax Returns* (Washington, D.C.: Government Printing Office, 1976), p. 41.

³Information obtained from the Internal Revenue Service in Washington, D.C.

⁴"Typical' Family Not So Typical."

⁵U.S. Bureau of the Census, "Marital Status and Living Arrangements: March 1976" *Current Population Reports*, Series P-20, No. 306 (Washington, D.C.: Government Printing Office, 1977), pp. 4-5.

⁶Internal Revenue Service, Publication 17, *Your Federal Income Tax — 1977 Edition* (Washington, D.C.: Government Printing Office, 1977), p. 13.

¹This assumes that they used the standard deduction, claimed no dependents, and all income was derived from wages or salaries.

²"Typical' Family Not So Typical," *St. Louis Post-Dispatch*, March 14, 1977. For a discussion of the effects of children on the tax penalty on married workers, see Joyce M. Nussbaum,

ECONOMIC CONCEPTS OF TAXATION

Among the characteristics of taxes, which are generally considered desirable, are two features of particular importance in evaluating the effect of taxes on households. Taxes should be *equitable* or fair among households and *neutral* towards most economic decisions.¹ Defining these terms, however, is no easy matter. In economic theory two types of equity are usually defined — vertical equity and horizontal equity. Vertical equity is defined to mean that tax-paying units, such as individuals or households, with greater incomes should pay more taxes than units with less income. By horizontal equity we mean, units of equal income should pay equal taxes.

These simple recipes, once again, contain terms which are not easily defined. What is the appropriate taxpaying unit? Is it the legal recipient of the income or the whole household which is supported by the income? For example, consider three possible households:

Household	Income
Mr. A	\$30,000
Mrs. A	0
Total Household A	\$30,000
Mr. B	\$15,000
Mrs. B	\$15,000
Total Household B	\$30,000
Mr. C	\$30,000
Total Household C	\$30,000

In household A, Mr. A makes \$30,000 a year, while Mrs. A stays at home (and maybe raises a family). In household B, Mr. B earns \$15,000 as does Mrs. B. In household C, there is only Mr. C, who earns \$30,000. How much tax should each household pay?

If the appropriate taxing unit is the individual income earner, Mr. A and Mr. C should pay the same

¹For a more complete discussion of the desirable aspects of taxes and actual characteristics of taxes, see Richard and Peggy Musgrave, *Public Finance in Theory and Practice*

taxes. Mr. and Mrs. B should each pay less tax, which together might not equal the taxes paid by Mr. A or Mr. C. If the appropriate taxing unit is the household, then it can be argued that all three households should pay the same amount of taxes. Under 1976 tax laws Mr. C pays the most taxes, Mr. and Mrs. B pay less taxes, and Mr. and Mrs. A pay the least taxes, assuming all other circumstances are equal.

The other term which presents difficulty in determining equitable tax treatment is the definition of income. The concept of income is frequently dealt with in terms of "ability to pay." Thus, households with the same dollar income, but of different sizes and different expenses incurred in earning the income, have different abilities to pay. Currently, households are allowed a certain amount of income exempt from taxation for each member of the household (personal exemptions), which can be justified as a measure of the differing abilities to pay of different sized households. Furthermore, the cost of earning income can vary from household to household. For example, the expenses incurred if only one member of the household is employed outside the home will usually be less than if two members of the same household work. For this reason the deduction of child care expenses can be rationalized as a measure of differing expenses incurred in earning income and, hence, differing abilities to pay among households.

The term neutrality, applied to the concept of taxes, means that tax provisions should be chosen to minimize interference in market decisions, such as whether to work or how to spend income. However, there are tax provisions which explicitly promote certain behavior. Tax preferences reduce income subject to taxation, for example, if the household contributes to charity, buys a house, or invests in new business equipment. Apparently, these are activities which society finds beneficial and promotes through tax preferences (deductions).

(New York: McGraw-Hill Company, 1973).

Even the Internal Revenue Service apparently recognizes the possible benefits of filing as single taxpayers.

Household Characteristics

Table I shows the tax penalties and benefits of marriage in 1976 for John and Jane, given the simplifying assumptions. To use this table, select any combination of the two adjusted gross incomes which equals \$30,000 or less. Follow the horizontal line representing Jane's income to the right until it intersects with the vertical column corresponding to John's income. If the number at the intersection is negative, John and Jane must pay that amount in additional

Federal taxes if they are married, rather than single. If the number is positive, John and Jane would benefit from a tax saving of that amount if they are married, rather than single. For example, if Jane makes \$10,000 and John makes \$12,000, they pay \$483 more taxes if they are married than if they are single. In contrast, if Jane makes \$15,000 and John makes \$1,000, they save \$339 in taxes by getting married.⁸

The outlined area of the table indicates those combinations of incomes which are associated with a tax

⁸This neglects the loss of any welfare payments or earned income tax credits John would lose by marrying Jane.

Table I

TAX PENALTIES AND BENEFITS FOR MARRIED WORKERS

Table with Jane's Adjusted Gross Income (Dollars) on the vertical axis and John's Adjusted Gross Income (Dollars) on the horizontal axis. The table shows tax penalties and benefits for married workers at various income levels.

NOTE: The figures represent the tax liability of the combined income of two single workers minus the tax liability of two married workers with the same joint income. Calculations assume two workers with no dependents. All income is derived from wages or salaries. Taxpayers claim the standard deduction and 1976 individual tax credit.

(Positive figures indicate tax savings John and Jane receive if they are married rather than single. Negative figures indicate extra taxes John and Jane pay if they are married rather than single.)

Continuation of the tax penalties and benefits table, showing values for income levels from 15,000 to 30,000.

SOURCE: Computed from 1976 Federal income tax schedules.

penalty on marriage, under the assumptions used here. As the numbers indicate, the penalty is a function of the size of combined income and the degree of equality between the two incomes. This means that the closer Jane's income is to John's income and/or the more John and Jane earn, the larger is the tax penalty on marriage. Since the tax penalty increases with the size of combined income, increases in income which merely represent increases due to inflation increase the tax penalty on married workers.⁹

⁹Nancy Jianakoplos, "Paying More Taxes and Affording It Less," this Review (July 1975), pp. 9-13.

Tax Provisions

Aware of the family characteristics which contribute to the marriage penalty, one can examine the specific provisions of the tax structure which produce this result. Table II compares and contrasts how John's and Jane's taxes are calculated when each is single and when they are married. In both cases, their adjusted gross incomes (AGI) are \$15,000 each. If they are married, their joint income equals \$30,000. A first step in tax computation is to deduct their personal exemption allowances. As single taxpayers, John and Jane are each entitled to a \$750 personal exemption.

This reduces each of their AGIs to \$14,250, for a combined total of \$28,500. As married taxpayers, they can also deduct \$750 apiece as personal exemptions, leaving a household AGI of \$28,500. Thus, the personal exemption has not contributed directly to either a tax benefit or penalty on marriage.

Next, each single taxpayer can subtract the standard deduction equal to 16 percent of AGI, but not less than \$1,700 or greater than \$2,400. As a single taxpayer, 16 percent of John's AGI is \$2,400, the maximum allowable standard deduction. Jane can also

deduct \$2,400 as a single taxpayer. If single, John and Jane each take standard deductions which total \$4,800, leaving taxable incomes of \$11,850 each (\$23,700 combined). In contrast, as married taxpayers, their maximum allowable standard deduction is \$2,800 leaving taxable income of \$25,700. Thus, the standard deduction benefits the two taxpayers more when they are single than when they are married.

Next, the tax rates are applied to taxable income in order to determine the tax liability. It is important to note that there are four different tax rate schedules.

Single taxpayers with dependents use the "head of household" tax schedule. Single people who do not qualify as a head of household must use the tax rates for single taxpayers. Married taxpayers may either file a joint or separate return. The tax schedule for married taxpayers filing separately differs from the rates applied to single taxpayers. The "married separate" schedule applies "married joint" rates to half the income that would be taxed at each level on the "married joint" schedule. Consequently, the tax rate progression is much steeper on the "married separate" schedule. Unless one spouse has a large amount of tax preferred income, such as capital gains or medical expenses, a married couple usually minimizes their tax liability by filing a joint return.

John and Jane, as single taxpayers must pay taxes on \$11,850 of income each. This puts them in the 27 percent marginal bracket of the tax rate schedule for single taxpayers. Consequently, John and Jane each have tax liabilities of \$2,583 for a total of \$5,166.¹⁰ As married taxpayers, John and Jane have \$25,700 of joint taxable income, which puts them in the 36 percent marginal tax bracket for married taxpayers filing joint returns. Their joint tax liability is \$6,272 or \$1,106 more than their combined tax liabilities as single taxpayers. Thus, tax rates benefit two single taxpayers more than two married taxpayers.¹¹

Finally, as single taxpayers John and Jane can each claim an individual tax credit equal to the greater of \$35 each or 2 percent of taxable income (\$11,850 apiece) limited to \$180. Thus, John and Jane are each entitled to reduce their tax liabilities by \$180, for a final tax of \$2,403 each or \$4,806 total. If John and Jane are married, their *joint* tax credit is limited to \$180, as opposed to \$180 *each* when single. Their final joint tax liability is \$6,092, which is \$1,286 greater than the combination of their single tax liabilities.

In summary, given the simplifying assumptions made above, the standard deduction, the tax rate schedules, and 1976 tax credits contribute to the additional Federal income taxes paid by married working taxpayers simply because of their marital status.

¹⁰These figures are taken from the 1976 Tax Table, which the IRS prepares. Since 1976 taxes are calculated over \$50 income intervals for incomes less than \$20,000, the liability is slightly lower, than if calculated from the tax rate schedules.

¹¹The fact that single taxpayers have less taxable income as a result of larger combined standard deductions does bias downward the applicable tax bracket. However, because the tax rate schedules differ between married and single taxpayers, tax rates still contribute to the generally lower tax liability for two single taxpayers, whose combined incomes equal a married couple's joint income.

Table II

COMPARISON OF 1976 TAX CALCULATIONS BETWEEN SINGLE AND MARRIED STATUS*

	Single		Combined	Married
	John	Jane		Joint
Adjusted Gross Income	\$15,000	\$15,000	\$30,000	\$30,000
Personal Exemption	750	750	1,500	1,500
	\$14,250	\$14,250	\$28,500	\$28,500
Standard Deduction	2,400	2,400	4,800	2,800
Taxable Income	\$11,850	\$11,850	\$23,700	\$25,700
Marginal Tax Bracket		27%		36%
Tax Liability	\$ 2,583	\$ 2,583	\$ 5,166	\$ 6,272
Tax Credit	180	180	360	180
Tax	\$ 2,403	\$ 2,403	\$ 4,806	\$ 6,092

*Assumes no dependents and all income is from wages or salaries.

CONSEQUENCES

There are several important consequences of the tax penalty imposed on two married workers. One readily apparent effect of this differential tax treatment is that 1976 tax laws made it more expensive for two married people to work. The disincentive to work provided by tax laws affects the money standard of living which a household will achieve. If the tax laws make it more expensive to work, other things held constant, households will achieve a lower money income than would be otherwise possible.

The work disincentive of the tax laws is of particular importance in the decision of married women to enter the labor force. Since it is traditionally (but not always correctly) assumed that the husband is the primary breadwinner, the wife is typically considered to have greater latitude in deciding to enter the labor force. In making a rational decision to go to work, a wife would balance (either explicitly or implicitly) the added costs of going back to work, such as child care expenses, transportation costs, appropriate clothes, etc., against the additional income she will earn. The additional income will be her salary after taxes and other deductions. The tax penalty on married workers reduces her salary more than if she were single.

For example, if her husband makes \$10,000, the last dollar of his income is taxed at 19 percent.¹² When

¹²This figure assumes that the standard deduction is used, all income is derived from wages or salaries, and the married couple has no dependents and files a joint return.

the wife goes to work, since her husband is already working and paying taxes, the *first* dollar of her income is taxed at 19 percent. That is, her income does not benefit from exemptions, deductions, or lower marginal tax rates applicable on initial amounts of income. Consequently, the tax structure has a negative influence on the labor force participation of married women. Of course, other factors can and have offset this influence, as evident from the increase in the labor force participation rate of married women in recent years.

Another effect of the disparity between the tax treatment of workers who are married and those who are single is an increase in Government revenue. The Government collects more taxes, under the circumstances outlined above, when two workers marry rather than remain single. In addition, when married workers receive cost-of-living adjustments, the Government also benefits, as mentioned earlier, since the extra tax liability on married workers increases as their incomes increase. Thus, the tax penalty on married workers makes the Government's deficit less than it would be otherwise.

A final consideration is that the differentiation of tax liability based only on marital status tends to undermine the equity which many people expect to find in the tax system. The less "just" a tax, the more incentive there is to find ways to avoid paying the tax, and this in turn reduces tax revenues or increases the cost of enforcing tax laws.

POSSIBLE REMEDIES

Considering the traditionally high value placed on marriage, family, and work in American society, it is likely that steps will eventually be taken to reduce the tax penalty imposed on married workers. The existence of this penalty is itself the result of previous Congressional actions which attempted to correct apparent inequities in the tax structure. Prior to 1948, husbands and wives in community property states could each claim half of their household income for tax purposes, even if only one of the spouses actually earned all of the income. For example, if one spouse earned \$20,000 and the other was not employed outside the home, each claimed \$10,000 of income. Given the progressively higher marginal tax rates, two incomes of \$10,000 were taxed less than one \$20,000 income. In noncommunity property states, this benefit was not available. A provision referred to as income-splitting was added to the Federal income tax struc-

ture in 1948 to make this benefit available to all married taxpayers. This was done by doubling the income ranges for married taxpayers associated with each tax rate. For example, if the first \$500 of income were taxed at 14 percent for a single person, the first \$1,000 of income for married couples would be taxed at 14 percent.

While the income-splitting provision extended tax benefits to married couples in all of the states, single taxpayers were now subject to much higher marginal tax rates than a married person making the same income, but able to benefit from the income-splitting provision. Perceiving the harsher tax treatment of single people, lawmakers lowered the tax rates for singles in 1971. As Table III shows, prior to 1971, single taxpayers with the same taxable income (income after subtracting personal exemptions and deductions) as married taxpayers filing jointly could pay as much as 42 percent more taxes than a married couple. The 1971 rate changes for single taxpayers reduced this differential to 20 percent. In reducing rates for single taxpayers, however, a tax penalty for households in which both spouses are employed resulted.

Measures already enacted to change 1977 tax laws alter the standard deductions allowed single and married taxpayers, thereby partially reducing the tax penalty on married workers. In 1976 the maximum

Table III

SINGLE TAXPAYER LIABILITIES AS A PERCENTAGE OF MARRIED TAXPAYER LIABILITIES¹

Taxable Income ²	1970	1976
\$ 1,000	3.6%	3.6%
5,000	12.3	11.2
10,000	20.3	14.8
15,000	30.9	16.9
20,000	38.6	19.4
22,000	40.0	19.3
24,000	41.9	20.0
26,000	41.5	19.0
28,000	42.1	19.6
30,000	41.5	19.2
40,000	37.3	18.5
60,000	29.1	18.3
80,000	25.3	18.1
100,000	22.8	17.5
1,000,000	2.2	1.8

¹Maximum tax on earned income, 1970 tax surcharge, and 1976 tax credit are ignored. Assumes married couple files joint return.

²Taxable income is that income, after exemptions and deductions, on which tax liability is computed.

Source: Calculated from statutory tax rates.

standard deduction was \$2,800 for a married couple and \$4,800 for two single workers, a \$2,000 difference. The 1977 law provides a \$3,200 standard deduction for joint returns and \$2,200 (\$4,400 combined) for singles. This reduces the difference to \$1,200.¹³

Recent proposals by the Treasury Department call for a special tax deduction to be granted to families where both spouses work outside the home, to deal explicitly with the tax penalty on married workers.¹⁴ Under this proposal, the spouse with the lower income would be allowed to deduct 10 percent of the first \$6,000 of earnings. This proposal would benefit lower income couples relatively more than couples with higher incomes.

An alternative method, not included in the Treasury proposals, would completely eliminate the tax penalty on married workers. Married individuals who both work could be given the option of using the single tax rate schedule. Couples could compute their taxes using the "married joint," "married separate," and "single" schedules and use the status which minimizes their joint tax liability, with the provision that both spouses must use the same schedule.

¹³Handbook for Tax Reduction and Simplification Act of 1977, *Federal Taxes*, Report Bulletin 25, Section 2 (Englewood Cliffs, New Jersey: Prentice Hall, 1977), p. 5.

¹⁴David E. Rosenblum, "Most Families Would Pay Less Under Tax Plan," *New York Times*, September 30, 1977.

CONCLUSION

Two individuals, who both work, can be taxed more if they are married than if they are single. The more equal their incomes and the larger their incomes, the greater the tax penalty on married workers. The standard deduction, tax rate schedule, and individual tax credit provisions contributed to the greater tax liability for married couples in 1976. The tax penalty can be viewed as either a disincentive for working, single people to marry, or as a disincentive for married people to work. While Congressional intent has never shown an active interest in influencing such decisions, the tax structure imposes a tax penalty or benefit on households depending on the marital and employment status of the household members.

In a broader context, the tax penalty on married workers is illustrative of the complex and sometimes unintended consequences of tax provisions. Tax credits and reductions have been prescribed from time to time to "stimulate" the economy, reduce energy consumption, promote capital formation, and aid various other social and economic causes. While the intended objectives of these tax provisions may be worthwhile and laudable, the unintended consequences may be unacceptable and contrary to social values. The tax penalty on married workers illustrates the necessity of careful consideration of all of the possible consequences of tax proposals.



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