Online Appendix for "Fiscal Policy and Economic Recovery: The Case of the 1936 Veterans' Bonus"

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A Survey schedule

This example is from the codebook accompanying ICPSR study 8908.

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CONFIDENTIAL

The information requested in this schedule is strictly confidential. Giving it is voluntary. It will not be seen by any except sworn agents of the cooperating agencies and will not be available for taxation purposes.

U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
IN COOPERATION WITH
NATIONAL RESOURCES COMMITTEE
WORKS PROGRESS ADMINISTRATION
DEPARTMENT OF AGRICULTURE
WASHINGTON

STUDY OF
CONSUMER PURCHASES
A Federal Works Project
EXPENDITURE SCHEDULE—URBAN

Code No. 411X - 5035
Schedule No. 738
City Westbrook 3
C. T. or E. D. 3-103 03
Agent Whitehead 04
Date of interview June 9, 1936

I. YEAR COVERED BY SCHEDULE R

12 months beginning Jan 1, 1935
and ending Dec 31, 1935

II. COMPOSITION OF ECONOMIC FAMILY

A	B	C	D	E
MEMBERS OF FAMILY	Sex	Age	Number of weeks— At home	Number of weeks— Away
1. Husband	M	42	52	—
2. Wife	F	38	52	—
3. Daughter	F	17	27	0
4. Daughter	F	13	52	—
5. Daughter	F	4	52	—
6. Son	M	2	52	—
7.				
8.			1	3

III. RESIDENCE

In city during schedule year 12 months

IV. LIVING QUARTERS OCCUPIED
(at end of schedule year)

1. Type of living quarters 6 1 3 F 16
2. Total number of *rooms* (excluding bathrooms) 3
3. Total number of *persons* occupying these rooms (including family, roomers, paid help, and others) 6 3
1.00

4. If family is now renting, does rent include: 4

	Yes	No		Yes	No	
a.	☐	☑	Garage.	e. ☐	☑	Light.
b.	☐	☑	Furnishings.	f. ☐	☑	Refrigerator (mechanical).
c.	☐	☑	Heat.			
d.	☑	☐	Water.	g. ☐	☑	Refrigeration.

HOUSING FACILITIES

5. Water supply: 1
   a. ☑ In living quarters.
   b. ☐ Indoors, other.
   c. ☐ Outdoors.
6. Running water:
   a. ☑ Hot or cold. 1
   b. ☐ Cold only.
   c. ☐ None.
7. Location of toilets: 1
   a. ☑ In living quarters.
   b. ☐ Indoors, other.
   c. ☐ Outdoors.
8. Number of toilets:
   a. Flush 1 1
   b. Other
9. Heating (check principal method):
   a. ☐ Central, steam or water.
   b. ☐ Central, air. 3
   c. ☑ Stoves (not kitchen). 1
   d. ☐ Kitchen stove only.
   e. ☐ Fireplace.
   f. ☐ None.
10. Lighting:
   a. ☑ Electricity. 1
   b. ☐ Gas.
   c. ☐ Kerosene.
   d. ☐ Other.
11. Cooking fuel: 4
   a. ☐ Gas.
   b. ☐ Electricity.
   c. ☐ Wood or coal.
   d. ☑ Kerosene or gasoline.
   e. ☐ Other. 3

V. HOUSING EXPENSE (during schedule year) 6 1

1 A 3	B Present home	C Other home
RENTED HOME (excluding vacation home)		
1. Number of months occupied	12	
2. Monthly rental rate	$15.00	$
3. Rental concessions	—	
4. TOTAL rent	192.00	
5. Repairs paid for by family	—	
6. TOTAL expense (4+5)	192.00	
OWNED HOME (excluding vacation home)	Present home	Other home
Number of months:		
7. Owned		
8. Occupied as owner		
9. Structural additions to home during year	$	$
10. Paid on principal of mortgage during year		
EXPENSE FOR MONTHS OWNED		
11. Interest on mortgage	$	$
12. Refinancing charges		
13. Taxes payable in schedule year, except back taxes		
14. Special assessments		
15. Repairs and replacements		
16. Insurance, fire, tornado		
17. Other		
18. TOTAL for months owned (11–17)		
19. TOTAL for months occupied as owner		
20. TOTAL for family's home (6+19)	192.00	—
VACATION HOME		Expense for year
21. Vacation home owned: Net expense for months occupied		$
22. Vacation home rented: Rent and repairs for months occupied		
23. Lodging while traveling or on vacation		
24. TOTAL 21–23		
MONEY VALUE OF HOUSING RECEIVED (without direct money payment)		Value
25. Rental value of housing received as gift or pay		
26. Net money value of occupancy of family's owned home		
27. Net money value of occupancy of owned vacation home		

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(1)

6 1 3 6 4 4 1

VI. HOUSEHOLD OPERATION

A	B	C	Latest season		Earlier Seasons								Total expense for year (for office use)
FUEL, LIGHT, and REFRIGERATION	Unit	Price	Months Dec Jan Feb		Months Feb Apr May		Months June Jul Aug		Months Sept Oct Nov		Months		
			Quantity	Expense	Quantity	Expense	Quantity	Expense	Quantity	Expense	Quantity	Expense	
1. Coal: Bit. ☐ Anth. ☐				$		$		$		$		$	$
2. Coke ☐ Briqts. ☐													
3. Fuel oil													
4. Wood ☐ Kindling ☐													
R 5. Kerosene ☐ Gasoline ☐ Bergeal	GAL	.08½	1650										136.75
1 6. Electricity	X	X	xxx	15	xxx	10	xxx	9	xxx	10	xxx		42.00
7. Gas			xxx		xxx		xxx		xxx		xxx		
5 8. Ice	NR	NR					R	8					19.75
186 9. 10 TOTAL (1–8)			xxx	NR	xxx	NR	xxx	NR	xxx	NR	xxx	18	[illegible]

10. Value of fuel gathered by family or received free, $

A	B	C	D	E	F	G	H	J
PAID HOUSEHOLD HELP	Wks.	Lives In	Lives Out	Employed F.T.	Employed P.T.	Expense per week No. meals	Expense per week Dollars	Expense for year
11. Cook or general worker								$
12. Cleaning man or woman								
13. Laundress								
14.								
15.								
16. Aprons, uniforms, and gifts to paid help								
17. TOTAL (11–16)								

A	B
OTHER HOUSEHOLD EXPENSE	Expense for year
18. Water rent	$
19. Telephone: Number mos. ; per mo. $	
20. Laundry sent out: Number wks. ; amt. $	
21. Specify service	
22. Laundry soap and other cleaning supplies	5.00
23. Stationery, postage, telegrams	1.00
24. Moving, express, freight, etc.	
25. Other	6.00
26. TOTAL (18–25)	12.00
27. TOTAL household operation (9+17+26) 198	1963

VII. MEDICAL CARE

A	B	C
	Check if any free	Expense for year
1. Physician: ____ office visits at $		$
2. Physician: ____ home calls at $		
3. Dentist		
4. Oculist		
5. Other specialist (specify)		
6. Clinic visits: Number ____ at $		
7. Hospital room or bed: ____ days at $		
8. Private nurse: In hosp. ____ days at $		
9. Private nurse: At home ____ days at $		
10. Visiting nurse: ____ visits at $		
11. Examinations and tests (not included above)		
12. Medicines and drugs		3.00
13. Eye glasses		
14. Medical appliances and supplies		
15. Health and accident insurance		18.00
16. Other		
17. TOTAL (1–16)		21.00

VIII. RURAL—URBAN BACKGROUND

A	B	C	D	E
Lived—	Husband No. years	Husband State	Wife No. years	Wife State
1. On a farm or in open country				
2. In village of less than 2,500		NR		
3. In city of 2,500 to 10,000				
4. In city of 10,000 or more				

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IX. RECREATION

A	B	C	D	E	F
	Adults		Children		Expense for year
	Number	Price	Number	Price	
(1) Paid admissions to—					
1. Movies: Winter		$		$	$
2. Spring		N	P		
3. Summer					
4. Fall	(1)	~~X~~	(2)	~~X~~	7.00
5. Plays, pageants, concerts, lectures, forums					—
6. Ball games, other spectator sports					—
7. Dances, circuses, fairs					—

GAMES AND SPORTS

8. Equipment, supplies, fees, licenses (enter year's expense for each item):
Hunting, $_____; Fishing, $_____;
Camping, $_____; Trapping (sport), $_____;
Hiking, $_____; Riding, $_____;
Baseball, $_____; Tennis, $_____; Golf, $_____;
Bicycles, $_____; Skates, sleds, skis, $_____;
Billiards and bowling, $_____; Boats, $_____,
Cards, chess, other games, $_____; Other, $_____
9. Total (all items 8) _____

OTHER RECREATION

10. Radio: Purchase _____
11. Batteries, tubes, repairs _____
12. Musical instruments (specify) _____
13. Sheet music, phonograph records _____
14. Cameras, films, photo supplies _____
15. Children's toys, play equipment _____ (2) 00
16. Pets (purchase and care) _____
17. Entertaining in and out of home _____
18. Dues to social and recreational clubs _____
19. Other (specify) _____
20. (7) TOTAL (1–19) TOT OTH (21) 9.00

X. TOBACCO

		Expense for year
1. Cigarettes: Packages per week (4) @ .15 ¢		(31) 00
2. Cigars: Number per week (4) @ ____ ¢	(16)	5.00
3. Tobacco: All other		
4. Smokers' supplies		
5. TOTAL (1–4)	(47)	46.00

XI. READING

3	2	Expense for year
1. Newspapers: Daily 52 @ .15		(8) 7.80
2. Weekly 26 @ .10		(2) 60
3. Magazines (subscriptions and single copies)		—
4. Books (not school books) bought during year: Number	—	
5. Book rentals and library fees, public and rental libraries		
6. Books borrowed from public and rental libraries: Number	—	XXXX
7. TOTAL (1–6)		(10) 10.00

XII. EDUCATION

A	B	C	D	E
	Members attending		Expense for year	
School attended during schedule year	Public	Private	Tuition and fees	Books and supplies
1. Nursery school, kindergarten			$	$
2. Elementary school	1	—	-	—
3. High or preparatory school				
4. Business or technical school				
5. College, graduate, or professional school				

A	B	C
	Expense for year	Previous education
6. Total, tuition (1–5D)	$	Highest grade completed by:
7. Total, books and supplies (1–5E)		13. Husband 3
8. Special lessons		14. Wife 2
9. Other (excluding board and rent)		15. Son or daughter over 16 years with most schooling: 10
10. TOTAL (6–9)		a. Sex F
11. Board at school or college		b. Age 17
12. Room rent at school or college		c. Member of economic family? Yes ☑ No ☐

XIII. OCCUPATIONAL EXPENSE
(not reported as business expense or as deduction from gross income)

	Expense for year
1. Union dues, fees	$
2. Business and professional association dues	
3. Technical books and journals	
4. Supplies and equipment	
5. Other	
6. TOTAL (1–5)	

XIV. PREVIOUS OCCUPATION OF HUSBAND

1. Was husband's occupation same during schedule year as in 1929? Yes ☑ No ☐
2. If not, his occupation in 1929 was same

XV. GIFTS, COMMUNITY WELFARE, AND TAXES

	Expense for year
1. Gifts (Christmas, birthday, other) to persons not members of economic family (not charity)	(2) 00
2. Contributions to support relatives not members of economic family	
3. Donations to other individuals	
4. Community chest and other welfare agencies	
5. Church, Sunday school, missions	
6. Taxes: Poll, income, personal property (payable in schedule year, except back taxes)	(68) 00
7. Other	
8. TOTAL (1–7)	(5) 00

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XVI. USUAL FOOD EXPENSE DURING EACH SEASON OF SCHEDULE YEAR

A	Latest season of year		Earlier seasons							
FOOD AT HOME	Months Dec Jan Feb		Months Mar Apr May		Months June July Aug		Months Sept Oct Nov		Months	
	Per week	Per month	Per week	Per month	Per week	Per month	Per week	Per month	Per week	Per month
Food expense at— 1. Grocery or general store (excluding soap, matches, etc.)	$10.50	$	$10.50	$	$9.50	$	$9.50	$	$	$
2. Meat and fish market										
3. Dairy		3.60		3.60		3.60		3.60		
4. Vegetable and fruit market or wagon										
5. Bakery										
Additional expense for food at home— 6. Ice cream, candy										
7. Soft drinks, beer, etc.										
8. Other food at home										
9. TOTAL for week or month (1–8)	10.50	3.60	10.50	3.60	9.50	3.60	9.50	3.60		
10. TOTAL for season	147.30		147.30		134.30		134.30			
FOOD AWAY FROM HOME (Excluding meals while away at school, and meals carried from home)	Per week	Per month	Per week	Per month	Per week	Per month	Per week	Per month	Per week	Per month
Expense for— 11. Meals at work										
12. Lunches at school										
13. Meals while traveling or on vacation										
OTHER MEALS AWAY— 14. Breakfasts										
15. Lunches										
16. Dinners										
17. Ice cream, candy										
18. Soft drinks, beer, etc.										
19. TOTAL for week or month										
20. TOTAL for season										

TOTAL FOOD EXPENSE DURING SCHEDULE YEAR		FOOD RAISED AT HOME OR RECEIVED AS GIFT OR PAY DURING SCHEDULE YEAR
21. Food at home (item 10)	563.20	[illegible]
22. Food away from home (item 20)		[illegible]
23. TOTAL	563.20	[illegible]

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X

XVII. AUTOMOBILES
(owned at any time during year)

1. How many months during year did you own:
   a 1 automobile, — mos.; b 2 automobiles, — mos.;
   c 3 automobiles, — mos.; no automobiles, 12 mos.

AUTOMOBILES OWNED AT END OF SCHEDULE YEAR

A	B	C	D	E
Year bought	New	Used	Make	Price
2. 19				$
3. 19				
4. 19				
5. Gross price of car bought during year $				x x x x
6. Trade-in allowance for used car, $				x x x x
7. Net price of car bought (5 minus 6)				

8. Month purchased ____ Terms: Cash ☐ Installment ☐
9. Total number of miles driven during year (all owned cars) ____ miles.
10. Average miles per gallon of gasoline, ____ miles.

GASOLINE

A	B	C
Season	Number of gallons	Expense
11. Latest		$
12.		
13.		
14.		
15.		
16. TOTAL FOR YEAR (11–15)		

A	B
	Expense for year
17. Oil: Number of quarts	$
18. Tires, tubes: Purchase	
19. Repairs, replacements, service	
20. Garage rent, parking	
21. Licenses, including registration fee	
22. Fines, damages paid to others	
23. Automobile insurance (all types)	
24. Tolls (bridge, ferry, tunnel)	
25. Accessories (including automobile radio)	
26. Other (including association dues)	
27. TOTAL (7, 16, and 17–26)	
28. Proportion of automobile expense chargeable to business	x x x x

XVIII. CLOTHING EXPENSE

(Make no entry if check list is used)

	Expense for year
1. Wife	$ 2.00
2. Husband	4.00
3. Daughter	
4. Daughter	5.00
5. Daughter	
6. Son	
7.	
8.	
9. TOTAL	17.00

XIX. OTHER TRAVEL AND TRANSPORTATION

	Expense for year
LOCAL—TO WORK, SCHOOL, STORES, ETC.	
1. Bus, trolley, taxi, train, ferry boat, rent of automobile	$
OTHER TRAVEL (Excluding business travel)	
2. Railroad (including Pullman)	
3. Interurban bus Trolley	1.00
4. Other (specify vehicle)	
PURCHASE AND UPKEEP DURING YEAR	
5. Of motorcycle	
6. Of boat, airplane, other vehicle	
7. TOTAL (1–6)	1.00
8. Proportion of motorcycle ☐ or other vehicle ☐ expense chargeable to business	x x x x

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XX. PERSONAL CARE

A	B
SERVICES	Expense for year
1. Wife: Haircut (usual price, ____), shampoo, waves, manicures, facials, other	$
2. Husband: Haircut (usual price, ____), shaves, shampoos, other	
3. Children under 16: Haircuts (usual price, ____), other	
4. Other members of family: Haircut (usual price, ____), other	
TOILET ARTICLES AND PREPARATIONS	
5. Toilet soaps: 52 cakes at .10	5.20
6. Tooth paste and powder, mouth wash, etc.	
7. Shaving soap and cream	1.50
8. Cold cream, powder, rouge, nail polish, perfume	1.00
9. Brushes, etc., combs, razors, files BLADES	1.20
10. Other toilet articles and preparations	.05
11. TOTAL (1–10) (10)	9.70

XXI. EQUIPMENT OWNED BY FAMILY

A	B	C	D	E
KIND OF EQUIPMENT	Owned at end of schedule year		If purchased in schedule year	
	Yes	No	Price	Season purchased
1. Piano X		✓	x x x x	
2. Phonograph X		✓	x x x x	
3. Radio		✓	x x x x	
4. Refrigerator, electric		✓	$	
5. Other mechanical refrigerator		✓		
6. Ice box	✓		X	
7. Pressure cooker		✓		
8. Washing machine, power		✓		
9. Washing machine, other		✓		
10. Ironing machine		✓		
11. Vacuum cleaner	✓		X	
12. Sewing machine, electric		✓		
13. Other sewing machine	✓		X	

XXII. FURNISHINGS AND EQUIPMENT

(Make no entry if check list is used)

Purchased in schedule year not included in items 4–13, section XXI. Total expense for year, $ —

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XXIII. OTHER FAMILY EXPENSE

	Expense for year
1. Interest on debts incurred for family living other than mortgage on owned home	$ 9.00
2. Did family have checking account at any time during schedule year? Yes ☐ No ☒	
3. Bank service charges, safe deposit box	
4. Legal expense (not business)	
5. Loss, other than business loss	$
6. Funeral, cemetery	
7. Other	
8. TOTAL (1-7)	9.00

XXIV. CHANGES IN FAMILY ASSETS AND LIABILITIES DURING SCHEDULE YEAR Jan 1 1935 to Dec 31 1935

(Excluding changes due to increases or decreases in the value of property which has not changed hands)

CHANGES IN PROPERTY OWNED BY FAMILY AND AMOUNTS DUE FAMILY

A	B	C
Money, stocks, real estate, other assets	Changes in assets during schedule year: Net amount of increase	Changes in assets during schedule year: Net amount of decrease
1. Money in savings accounts	$	$
2. In checking accounts		
3. On hand		
4. Investments in business		
5. Real estate: Purchased		x x x x x x x x
6. Sold	x x x x x x x x	
7. Stocks and bonds: Purchased		x x x x x x x x
8. Sold	x x x x x x x x	
9. Other property: Purchased		x x x x x x x x
10. Sold	x x x x x x x x	
11. Improvements on owned home		x x x x x x x x
12. Improvements on other real estate		x x x x x x x x
13. Insurance premiums paid (life, endowment, annuity)	39.00	x x x x x x x x
14. Frequency of payment Wkly	1	
15. Insurance policies surrendered	x x x x x x x x	
16. Insurance policies settled	x x x x x x x x	
17. Loans made by family to others during schedule year (balance not repaid)		x x x x x x x x
18. Repayments to family on loans made before schedule year	x x x x x x x x	
19. All other (specify)		
20. TOTAL (1-19)	39.00	—

CHANGES IN DEBTS OWED BY FAMILY

D	E	F
Liabilities	Changes in liabilities during schedule year: Net amount of increase	Changes in liabilities during schedule year: Net amount of decrease
21. Mortgages on owned home	$	$
22. Mortgages on other real estate		
23. Notes due to banks, insurance companies, small loan companies	150.00	
24. Notes due to individuals		
25. Back rents (due before schedule year)	x x x x x x x x	
26. Rents due in schedule year, unpaid	48.00	x x x x x x x x
27. Back taxes (due before schedule year)	x x x x x x x x	
28. Taxes due in schedule year, unpaid Poll	3.00	x x x x x x x x
29. Charge accounts due		
30. Other bills due Grocery	75.00	
31. Payments on installment purchases made prior to schedule year (specify goods purchased):		
(a)	x x x x x x x x	
(b)	x x x x x x x x	
(c)	x x x x x x x x	
32. Balance due on installment purchases made in schedule year (specify goods purchased):		
(a)		x x x x x x x x
(b)		x x x x x x x x
(c)		x x x x x x x x
33. All other (specify)		
34. TOTAL (21-33)	276.00	—

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B Measures of consumption calculated from the 1935-36 Study of Consumer Purchases and summary statistics

Unfortunately, the schedules for the expenditure survey did not include a measure of total expenditure; this measure must be built-up from spending on subcategories of consumption. Sometimes the schedule provides a total for a subcategory (like recreation spending). Other times, the totals provided on the schedule must be adjusted because they intermingle consumption expenditures with non-consumption expenditures. For instance, the total provided for housing expenditure includes spending on taxes. Below I describe the construction of 16 categories of consumption, the sum of which equals total consumer expenditure. Given the structure of the survey, and the purposes for which I use it, these categories inevitably do not correspond exactly to their NIPA definitions. For example, I exclude the imputed rental value of owner-occupied housing from my measure of consumption.

B.1 Housing

Housing expenses are detailed in section V of the urban expenditure schedule. I measure consumer spending on housing as the sum of rent paid (if renting), spending on repairs to the house, and spending on home insurance. Also included are expenses for housing while on vacation.

Specifically, housing is the sum of the following lines in section V of the schedule: line 4 + 5 + 15 + 16 + 17 + 21 + 22 + 23. In terms of the variables in the ICPSR dataset, housing equals V359+ V360+ V361+ V362+ V381+ V382+ V383+ V384+ V389+ V390+ V385+ V386+ V387.

B.2 Household operation

Household operation expenses are detailed in section VI of the schedule. This category includes spending on utilities, paid household help, and postage.

For this variable, I use the total provided on the schedule in section VI, line 27. This corresponds to ICPSR variable V639.

B.3 Medical Care

Medical expenses are detailed in section VII of the schedule. This category includes out-of-pocket spending on medical costs as well as spending on health and accident insurance.

For this variable, I use the total provided on the schedule in section VII, line 17. This corresponds to ICPSR variable V686.

B.4 Recreation

Spending on recreation is detailed in section IX of the schedule. This category includes spending on movies, games and sports, activities such as camping and skiing, and purchases of radios, musical instruments, children's toys and other recreational items.

For this variable, I use the total provided on the schedule in section IX, line 20. This corresponds to ICPSR variable V788.

B.5 Tobacco

Spending on tobacco is detailed in section X of the schedule. This category includes spending on cigarettes, cigars, and "smokers' supplies."

For this variable, I use the total provided on the schedule in section X, line 5. This corresponds to ICPSR variable V798.

B.6 Reading

Spending on reading materials is detailed in section XI of the schedule. This category includes spending on newspapers, magazines, and non-school books.

For this variable, I use the total provided on the schedule in section XI, line 7. This corresponds to ICPSR variable V812.

B.7 Education

Spending on education is detailed in section XII of the schedule. This category includes spending on elementary, secondary, and post-secondary education.

For this variable, I use the total provided on the schedule for tuition and supply expenses (section XII, line 10) plus spending on board and room rent at school (lines 11 and 12). This corresponds to ICPSR variables V837 + V838 + V839.

B.8 Occupational Expenses ("not reported as business expenses or as deduction from gross income")

Spending on occupational expenses is detailed in section XIII on the schedule. It includes spending on union and professional association dues, technical books, and miscellaneous supplies and equipment.

For this variable, I use the total provided on the schedule in section XIII, line 6. This corresponds to ICPSR variable V850.

B.9 Gifts

Spending on gifts "to persons not members of economic family (not charity)" are reported in section XV, line 1. This corresponds to ICPSR variable V853.

B.10 Food

Spending on food is detailed in section XVI of the schedule. This category includes spending on food and drink (including alcohol) both at home and away from home.

For this variable, I use the total provided on the schedule in section XVI, line 23, which corresponds to ICPSR variable V1077.

B.11 Autos

Spending on auto related expenses is detailed in section XVII of the schedule. This category includes spending on auto purchases (new or used), repairs and accessories, as well as costs of auto operation like gasoline, parking, and tolls.

For this variable, I use the total provided on the schedule, in section XVII, line 27 minus the amount of auto expenses chargeable to business, line 28. The amount chargeable to business is sometimes reported as a dollar amount and sometimes reported as a proportion. I assume the latter if the variable is less than 1. This corresponds to ICPSR variable V1147 - V1148 or V1147*(1-V1148). Note that this measures the value of a car purchased as the net price, i.e. the gross price less the trade-in allowance for a used car, if any.

I measure the amount spent on auto purchases as the net price of any car purchased (section XVII, line 7, V1114). Spending on vehicle operations is defined as total autos spending minus spending on purchases. Finally, to create a dummy variable for whether or not a household purchased a car, I create a variable equal to one if the household spent a positive amount on auto purchases and equal to zero otherwise.

B.12 Clothing

Spending on clothing is in section XVIII of the schedule. For this variable, I use the total provided on the schedule in line 9, which corresponds to ICPSR variable V1254.

B.13 Other travel and transportation

This is section XIX of the schedule. It includes spending on local public transit, long-distance rail and bus, and purchases and maintenance of motorcycles and boats.

For this variable, I use the total provided on the schedule in section XIX, line 7, which corresponds to ICPSR variable V1262. (Unfortunately, there are no usable answers to the question asking what proportion of these expenses were chargeable to business.)

B.14 Personal Care

Spending on personal care is detailed in section XX of the schedule. This category includes spending on services such as haircuts and products like soap and toothpaste.

For this variable, I use the total provided on the schedule in section XX, line 11, which corresponds to ICPSR variable V1290.

B.15 Equipment

This corresponds to section XXI on the expenditure schedule and to the total from a separate furniture and equipment checklist. Nearly all furniture and appliances are included in this category, for instance, refrigerators, washing machines, and lawn mowers. This category also includes spending on household linens and kitchen supplies (silverware, pots, china, and so on).

For this variable I use the total from the check list, if available. This is line 98, column D, ICPSR V2868. If the total from the checklist is missing, as is true in 570 cases, I use the total of all the lines in section XXI (lines 4-13). This corresponds to the ICPSR variables V1298 + V1301 + V1304 + V1307 + V1310 + V1313 + V1315 + V1318 + V1321 + V1324.

B.16 Other

This corresponds to section XXIII on the schedule. In my measure of consumption I include bank service charges (line 3, V1336), non-business legal expenses (line 4, V1337), funeral and cemetery costs (line 6, V1339), and miscellaneous other expenses (line 7, V1340).

Table 1: Household survey summary statistics I

City	1930 pop.	Consump. survey obs.	Consump. survey obs. w/ veteran
Aberdeen, WA and Hoquiam, WA	34,400	34	7
Albany, GA	14,500	16	2
Atlanta, GA	270,300	239	30
Beaver Falls, PA	17,100	34	3
Bellingham, WA	30,800	36	7
Butte, MT	39,500	57	8
Chicago, IL	3,376,400	300	64
Columbia, SC	51,500	64	9
Columbus, OH	290,500	225	33
Connellsville, PA	13,200	32	4
Council Bluffs, IA and Omaha, NE	256,000	101	17
Denver, CO	287,800	150	29
Dubuque, IA	41,600	68	12
Everett, WA	30,500	34	6
Gastonia, NC	17,000	19	2
Greenfield, MA	15,420	46	9
Haverhill, MA	48,700	59	9
Logansport, IN	18,500	42	5
Mattoon, IL	14,600	48	9
Mobile, AL	68,200	126	15
Muncie, IN	46,500	74	10
New Britain, CT	68,100	39	6
New Castle, PA	48,600	48	4
New York, NY	6,930,400	171	29
Peru, IN	12,700	1	0
Portland, OR	301,800	196	39
Providence, RI	252,900	140	24
Pueblo, CO	50,000	77	13
Springfield, IL	71,800	122	21
Springfield, MO	57,500	73	9
Wallingford, CT	14,270	11	1
Westbrook, ME	10,800	45	7
Willimantic, CT	12,100	18	2
Total	12,813,990	2745	446

Note: The last column, "consump. survey obs. w/ veteran" is the number of observations in the household survey including a World War I veteran as imputed from the first stage regression. Sources: See text.

Table 2: Household survey summary statistics II

Survey year ends	Consump. survey obs.	Consump. survey obs. w/ veteran
Dec. 35	905	152
Jan. 36	21	4
Feb. 36	132	22
Mar. 36	273	42
Apr. 36	334	54
May 36	314	50
Jun. 36	188	26
Jul. 36	247	42
Aug. 36	211	33
Sep. 36	62	12
Oct. 36	30	3
Nov. 36	15	4
Dec. 36	13	3
Pre-bonus	1979	324
Post-bonus	766	122
Total	2745	446

Note: The last column, "consump. survey obs. w/ veteran" is the number of observations in the household survey including a World War I veteran as imputed from the first stage regression. Sources: See text.

C Consistency of the household survey two-step estimator

Define variables as in the text:[1]

C_i: Consumption of household i.

P_i: Dummy variable equal to 1 if a household reported on consumption for a period including time after the bonus was paid.

V_i: Dummy variable equal to 1 if the household includes a World War I veteran.

Z_i: A k x 1 vector of predictors of veteran status (age, geography, and race).

n_1: The size of the household survey sample.

n_2: The size of the 1930 Census sample.

The causal equation is

$$C_i = Z_i'\beta_1 + \beta_2 V_i + \beta_3 P_i + \beta_4 V_i P_i + \varepsilon_i. \tag{1}$$

β_4 is the coefficient of interest.

I do not observe V_i in the household survey, but I have a first stage

$$V_j = Z_j'\gamma + \eta_j \tag{2}$$

that I can estimate with data from the 1930 Census. The subscript i denotes observations from the household consumption survey, and the subscript j denotes observations from the 1930 Census. Although unobserved, the same relationship between V and Z is assumed to hold in the household survey sample with the same γ: $V_i = Z_i'\gamma + \eta_i$.

I will show that the following assumptions are sufficient for two-stage least squares to produce a consistent estimate of β_4 in (1).

1. $\{[C_i, Z_i, P_i]\}_{i=1}^{n_1}$ and $\{[V_j, Z_j]\}_{j=1}^{n_2}$ are independent random vectors. Both are i.i.d. with finite fourth moments.
2. Let $\mu_i' = [Z_i', P_i, P_i Z_i'\gamma]$. Then $E[\mu_i \mu_i']$ is invertible (has rank $k+2$).
3. $E[\mu_i \varepsilon_i] = 0$.
4. $E[\mu_i \eta_i] = 0$.
5. $E[Z_j \eta_j] = 0$.
6. $E[P_i | Z_i, \eta_i] = E[P_i]$.
7. γ is the same in the two samples.
8. $\lim_{\substack{n_1 \to \infty \\ n_2 \to \infty}} \frac{n_1}{n_2} = k$, where k is a positive constant.

Assumptions (1) to (5) are standard. Assumption (6) says that whether or not a household was surveyed after the bonus payment is independent of the predictors of veteran status and of unobserved factors determining veteran status (see further discusion in the text). Assumptions (7)

[1] I am grateful to Alexandre Poirier for help with this proof.

and (8) allow the two samples to be combined. Assumption (7) says that the true relationship between Z and V is the same in the two samples. Assumption (8) allows the asymptotics to be well-defined.[2]

Proof

Substituting the first stage into the second yields

$$C_i = Z_i'\beta_1 + \beta_2(Z_i'\gamma + \eta_i) + \beta_3 P_i + \beta_4(Z_i'\gamma + \eta_i)P_i + \varepsilon_i \tag{3}$$
$$= Z_i'(\beta_1 + \beta_2\gamma) + \beta_3 P_i + \beta_4 P_i Z_i'\gamma + \zeta_i, \tag{4}$$

where $\zeta_i = \beta_2\eta_i + \beta_4\eta_i P_i + \varepsilon_i$.
As above, define $\mu_i' = [Z_i', P_i, P_i Z_i'\gamma]$. Define $\alpha' = [(\beta_1 + \beta_2\gamma)', \beta_3, \beta_4)]$. Then

$$C_i = \mu_i'\alpha + \zeta_i. \tag{5}$$

Define $\hat{\mu}_i'$ to be equal to the observed right-hand side variables, so that $\hat{\mu}_i' = [Z_i', P_i, P_i Z_i'\hat{\gamma}]$, where $\hat{\gamma}$ is the OLS estimate of γ, $[\sum_{j=1}^{n_2} Z_j Z_j']^{-1} \sum_{j=1}^{n_2} Z_j V_j$ in the census sample. Rewriting C_i in terms of $\hat{\mu}_i'$:

$$\begin{aligned} C_i &= \mu_i'\alpha + \hat{\mu}_i'\alpha - \hat{\mu}_i'\alpha + \zeta_i \\ &= \hat{\mu}_i'\alpha + (\mu_i' - \hat{\mu}_i')\alpha + \zeta_i \\ &= \hat{\mu}_i'\alpha + (\beta_2 + \beta_4 P_i)\eta_i + \beta_4 P_i Z_i'(\gamma - \hat{\gamma}) + \varepsilon_i. \end{aligned} \tag{6}$$

Let $\hat{\alpha}$ be the two-stage least squares estimate that comes from estimating (6) with OLS.

$$\begin{aligned} \hat{\alpha} &= [\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}']^{-1} \sum_{i=1}^{n_1} \hat{\mu}_i C_i \\ &= \alpha + \underbrace{[\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}']^{-1} \sum_{i=1}^{n_1} \hat{\mu}_i(\beta_2 + \beta_4 P_i)\eta_i}_{\text{A}} + \underbrace{[\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}']^{-1} \sum_{i=1}^{n_1} \hat{\mu}_i \beta_4 P_i Z_i'(\gamma - \hat{\gamma})}_{\text{B}} + \underbrace{[\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}']^{-1} \sum_{i=1}^{n_1} \hat{\mu}_i \varepsilon_i}_{\text{C}} \end{aligned} \tag{7}$$

To show that $\hat{\alpha}$ is a consistent estimator of α, it is sufficient to show that the probability limits of A, B, and C are zero. This will be a direct consequence of assumptions (1) to (8).

Start by considering plim $\frac{1}{n_1}\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}'$. Here and throughout "plim" means the probability limit

[2]For further discussion of similar assumptions, see Murphy and Topel (1985), Card and McCall (1996), and Inoue and Solon (2010).

as $n_1 \to \infty$ and $n_2 \to \infty$. We can write plim $\frac{1}{n_1}\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}'$ as

$$\text{plim } \frac{1}{n_1}\sum_{i=1}^{n_1} \begin{bmatrix} Z_i Z_i' & P_i Z_i & P_i Z_i Z_i' \hat{\gamma} \\ P_i Z_i & P_i & P_i Z_i' \hat{\gamma} \\ P_i \hat{\gamma}' Z_i Z_i' & P_i \hat{\gamma}' Z_i & P_i \hat{\gamma}' Z_i Z_i' \hat{\gamma} \end{bmatrix}, \tag{8}$$

where I use the fact that $P_i^2 = P_i$.

Assumption (1) (i.i.d. data and finite fourth moments) allows for a straightforward application of the weak law of large numbers to all the terms without $\hat{\gamma}$. All these terms will converge in probability to their expectation.

We can obtain the same result for the terms with $\hat{\gamma}$. Consider, for instance, the last term in the first row: plim $\frac{1}{n_1}\sum_{i=1}^{n_1} P_i Z_i Z_i' \hat{\gamma}$. Let $\hat{K} = \frac{1}{n_1}\sum_{i=1}^{n_1} P_i Z_i Z_i'$, and $K = E[P_i Z_i Z_i']$. Then the weak law of large numbers and the above assumptions mean that

$$\hat{K} \xrightarrow{p} K$$
$$\hat{\gamma} \xrightarrow{p} \gamma.$$

Define $g(K, \gamma) = K\gamma$. Since g is continuous, by the continuity theorem $g(\hat{K}, \hat{\gamma}) \xrightarrow{p} g(K, \gamma)$. So plim $\frac{1}{n_1}\sum_{i=1}^{n_1} P_i Z_i Z_i' \hat{\gamma} = E[P_i Z_i Z_i']\gamma$.

Analogous arguments show that all the other terms of (8) involving $\hat{\gamma}$ converge in probability to the corresponding expectation with γ replacing $\hat{\gamma}$. Thus

$$\text{plim } \frac{1}{n_1}\sum_{i=1}^{n_1} \begin{bmatrix} Z_i Z_i' & P_i Z_i & P_i Z_i Z_i' \hat{\gamma} \\ P_i Z_i & P_i & P_i Z_i' \hat{\gamma} \\ P_i \hat{\gamma}' Z_i Z_i' & P_i \hat{\gamma}' Z_i & P_i \hat{\gamma}' Z_i Z_i' \hat{\gamma} \end{bmatrix} = \begin{bmatrix} E[Z_i Z_i'] & E[P_i Z_i] & E[P_i Z_i']\gamma \\ E[P_i Z_i] & E[P_i] & E[P_i Z_i Z_i']\gamma \\ \gamma' E[P_i Z_i Z_i'] & \gamma' E[P_i Z_i] & \gamma' E[P_i Z_i Z_i']\gamma \end{bmatrix} = E[\mu_i \mu_i']. \tag{9}$$

Define $M_{\mu\mu} \equiv E[\mu_i \mu_i']$. By assumption (2), $M_{\mu\mu}$ is invertible.

A similar argument demonstrates that

$$\text{plim } \frac{1}{n_1}\sum_{i=1}^{n_1} \hat{\mu}_i \eta_i = E[\mu_i \eta_i] \equiv M_{\mu\eta}.$$

By assumption (4), $M_{\mu\eta}$ is zero. Returning to (7), by the continuity theorem and the independence of P_i (assumption 6),

$$\text{plim } A = \text{plim } [\frac{1}{n_1}\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}']^{-1} \frac{1}{n_1}\sum_{i=1}^{n_1} \hat{\mu}_i (\beta_2 + \beta_4 P_i)\eta_i = M_{\mu\mu}^{-1}(\beta_2 + \beta_4 E[P_i]) M_{\mu\eta} = 0.$$

Now consider B: $[\sum_{i=1}^{n_1} \hat{\mu}_i \hat{\mu}_i{}']^{-1} \sum_{i=1}^{n_1} \hat{\mu}_i \beta_4 P_i Z_i'(\gamma - \hat{\gamma})$. Applying the weak law of large numbers,

$$\text{plim } \frac{1}{n_1}\sum_{i=1}^{n_1} \hat{\mu}_i \beta_4 P_i Z_i'(\gamma - \hat{\gamma}) = \beta_4 E[\hat{\mu}_i P_i Z_i'(\gamma - \hat{\gamma})] \equiv M_B.$$

M_B equals 0 since $\hat{\gamma}$ is a consistent estimator of γ. Thus, by the continuity theorem

$$B = \text{plim}\ [\frac{1}{n_1}\sum_{i=1}^{n_1}\hat{\mu}_i\hat{\mu}_i{}']^{-1}\frac{1}{n_1}\sum_{i=1}^{n_1}\hat{\mu}_i\beta_4 P_i Z_i'(\gamma - \hat{\gamma}) = M_{\mu\mu}^{-1}M_B = 0.$$

Finally, consider C: $[\sum_{i=1}^{n_1}\hat{\mu}_i\hat{\mu}_i{}']^{-1}\sum_{i=1}^{n_1}\hat{\mu}_i\varepsilon_i$. An argument analogous to that for A shows that plim $\frac{1}{n_1}\sum_{i=1}^{n_1}\hat{\mu}_i\varepsilon_i = E[\mu_i\varepsilon_i] \equiv M_{\mu\varepsilon}$. $M_{\mu\varepsilon}$ equals zero by assumption (3). Thus as above we can apply the continuity theorem to show that plim C is zero.

We have shown that plim $A + B + C$ equals zero. Therefore $\hat{\alpha} \xrightarrow{p} \alpha$: given assumptions (1) to (8), two-stage least squares delivers consistent estimates of the coefficient of interest, β_4.

Of course, this two-step procedure means that the standard OLS standard errors will be incorrect. Because of this, I compute bootstrap standard errors; see section II.B.

D Strata

According to the Bureau of Labor Statistics (1941, p. 372)

> The cities included in the Consumer Purchases Study were chosen to represent the metropolis, the large city with a population from 250,000 to 300,000, the middle-sized city with a population from 35,000 to 70,000, and the small city with a population of from 10,000 to 20,000.

Large and middle sized cities were selected from each of 6 regions: Northeast, Southeast, East Central, West Central, Rocky Mountain, and Pacific Northwest. In addition, the two 'metropolises' New York, and Chicago were included, as were several small cities in the northeast and east central regions.

To avoid problems with strata of 1 sampling unit, I collapse these 15 region-city-size strata into 9. This is conservative, since having more strata reduces standard errors (Deaton 1997). Table 3 shows this classification.

Table 3: Strata classification

City	Region	Size classification	Strata assignment
Aberdeen-Hoquiam, WA	Pacific Northwest	Middle-sized	Pacific Northwest - large
Albany, GA	Southeast	Small	Southeast - small
Atlanta, GA	Southeast	Large	Southeast - large
Beaver Falls, PA	East Central	Small	East Central - small
Bellingham, WA	Pacific Northwest	Middle-sized	Pacific Northwest - large
Butte, MT	Rocky Mountain	Middle-sized	Rocky Mountain - large
Chicago, IL	East Central	Large (metropolis)	East Central - large
Columbia, SC	Southeast	Middle-sized	Southeast - large
Columbus, OH	East Central	Large	East Central - large
Connellsville, PA	East Central	Small	East Central - small
Council Bluffs, IA/Omaha, NE	West Central	Large	West Central - large
Denver, CO	Rocky Mountain	Large	Rocky Mountain - large
Dubuque, IA	West Central	Middle-sized	West Central - large
Everett, WA	Pacific Northwest	Middle-sized	Pacific Northwest - large
Gastonia, NC	Southeast	Small	Southeast - small
Greenfield, MA	Northeast	Small	Northeast - small
Haverhill, MA	Northeast	Middle-sized	Northeast - large
Logansport, IN	East Central	Small	East Central - small
Mattoon, IL	East Central	Small	East Central - small
Mobile, AL	Southeast	Middle-sized	Southeast - large
Muncie, IN	East Central	Middle-sized	East Central - large
New Britain, CT	Northeast	Middle-sized	Northeast - large
New Castle, PA	East Central	Middle-sized	East Central - large
New York, NY	Northeast	Large (metropolis)	Northeast - large
Peru, IN	East Central	Small	East Central - small
Portland, OR	Pacific Northwest	Large	Pacific Northwest - large
Providence, RI	Northeast	Large	Northeast - large
Pueblo, CO	Rocky Mountain	Middle-sized	Rocky Mountain - large
Springfield, IL	East Central	Middle-sized	East Central - large
Springfield, MO	West Central	Middle-sized	West Central - large
Wallingford, CT	Northeast	Small	Northeast - small
Westbrook, ME	Northeast	Small	Northeast - small
Willimantic, CT	Northeast	Small	Northeast - small

E First-stage estimates and alternative specifications

Table 4 reports estimates from the linear regression of the veteran status dummy on control variables (equation 5 in the text):

$$V_j = \sum_{h=1}^{3} \beta_h \mathbf{1}(g_j = g_h) + \sum_{k=1}^{17} \gamma_k \mathbf{1}(s_j = s_k) + \sum_{l=1}^{17} \alpha_l \mathbf{1}(g_j = 2)\mathbf{1}(s_j = s_l)$$
$$+ \sum_{m=1}^{3} \theta_m a_j^m + \sum_{n=1}^{3} \lambda_n \mathbf{1}(g_j = 2) a_j^n + \zeta r_j + \eta \mathbf{1}(g_j = 2) \cdot r_j + \mu_j. \tag{10}$$

V is World war I veteran status; g is a generation indicator variable for whether a man was younger than 28, between 28 and 45 or older than 45 in 1930 (men younger than 28 or older than 45 had less than a 4 percent chance of being a veteran); s is an indicator variable for state;[3] a equals age, and r is an indicator variable for race. $\mathbf{1}$ denotes the indicator function.

A natural robustness check is to consider alternative first stage specifications. Two alternatives are explored in the paper in table 6 (columns 3 and 5). Here, I consider a fuller set of alternatives, in order from simple to more complex.

1. A single dummy variable for whether or not the husband in a household was between 28 and 45 years old in 1930 (men younger than 28 or older than 45 had less than a 4% chance of being a veteran).

2. Age and age^2.

3. The dummy variable for age in specification 10 interacted with a dummy variable for race.

4. Age bins for whether the husband in a household was under 28, between 28 and 45 or older than 45 with the middle age bin interacted with age, age^2, and age^3 and a race dummy. This is the same specification used in column 3 of table 6 in the paper.

5. The baseline specification used in the paper with the addition of an age^4 and age^5 term.

6. Age, age^2, and age^3 interacted with race and state fixed effects.

7. 4 age bins: (1) a bin for whether the husband in a household was under 27 in 1930; (2) a bin for whether the husband in a household was between 27 and 36; (3) a bin for whether the husband in a household was between 37 and 46; and (4) a bin for whether the husband was over 46. The middle two bins are interacted with race and state fixed effects.

Table 5 shows the first stage R^2 and second stage results for these alternative specifications.

For reference, column 0 shows the baseline results reported in the paper. Column 1 shows results when the first stage specification contains only a dummy for whether or not the household included

[3] In three cases I combine states for the purposes of this regression: (1) Since the household consumption survey considers Omaha, Nebraska and Council Bluffs, Iowa as one city, I use one fixed effect for Iowa and Nebraska. (2) Since the only city in the sample in North Carolina, Gastonia, had a 1930 population of just 17,000, I combine North Carolina with South Carolina. For the same reason, I combine Maine with Massachusetts, since the only city in the sample in Maine, Westbrook, had a population of just 10,800. This avoids problems in calculating veteran probability when the 5% Census sample has only a tiny number of veterans in the city.

Table 4: Predicting veteran probability

	Veteran dummy	
Under 28 in 1930	31.43***	(0.962)
Over 45 in 1930	31.45***	(0.957)
Age 28-45 in 1930=0 × White	Omitted	(.)
Age 28-45 in 1930=0 × Black/Negro	-0.00212	(0.00127)
Age 28-45 in 1930=1 × White	0.0934***	(0.00480)
Age 28-45 in 1930=1 × Black/Negro	Omitted	(.)
Age 28-45 in 1930=0 × Connecticut	Omitted	(.)
Age 28-45 in 1930=0 × Massachusetts	0.0116	(0.0123)
Age 28-45 in 1930=0 × Rhode Island	0.0109***	(0.00178)
Age 28-45 in 1930=0 × New York	0.0186***	(0.00180)
Age 28-45 in 1930=0 × Pennsylvania	0.00448	(0.00599)
Age 28-45 in 1930=0 × Illinois	0.0165***	(0.00194)
Age 28-45 in 1930=0 × Indiana	0.000178	(0.00354)
Age 28-45 in 1930=0 × Ohio	0.00537***	(0.00178)
Age 28-45 in 1930=0 × Missouri	0.00345*	(0.00178)
Age 28-45 in 1930=0 × Nebraska	0.0135***	(0.00256)
Age 28-45 in 1930=0 × Alabama	0.0233***	(0.00182)
Age 28-45 in 1930=0 × Georgia	0.0123***	(0.00226)
Age 28-45 in 1930=0 × South Carolina	0.0146***	(0.00246)
Age 28-45 in 1930=0 × Colorado	0.0144***	(0.00289)
Age 28-45 in 1930=0 × Montana	-0.00843***	(0.00180)
Age 28-45 in 1930=0 × Oregon	0.0117***	(0.00178)
Age 28-45 in 1930=0 × Washington	0.0110*	(0.00545)
Age 28-45 in 1930=1 × Connecticut	-0.0392	(0.0555)
Age 28-45 in 1930=1 × Massachusetts	-0.0487	(0.0371)
Age 28-45 in 1930=1 × Rhode Island	-0.00484	(0.0299)
Age 28-45 in 1930=1 × New York	-0.0418	(0.0299)
Age 28-45 in 1930=1 × Pennsylvania	-0.114**	(0.0548)
Age 28-45 in 1930=1 × Illinois	-0.0259	(0.0299)
Age 28-45 in 1930=1 × Indiana	-0.0730*	(0.0393)
Age 28-45 in 1930=1 × Ohio	-0.0551*	(0.0299)
Age 28-45 in 1930=1 × Missouri	-0.0557*	(0.0299)
Age 28-45 in 1930=1 × Nebraska	-0.00622	(0.0364)
Age 28-45 in 1930=1 × Alabama	-0.0532*	(0.0300)
Age 28-45 in 1930=1 × Georgia	-0.0708**	(0.0301)
Age 28-45 in 1930=1 × South Carolina	-0.0455	(0.0373)
Age 28-45 in 1930=1 × Colorado	-0.0185	(0.0305)
Age 28-45 in 1930=1 × Montana	-0.00463	(0.0299)
Age 28-45 in 1930=1 × Oregon	0.00210	(0.0299)
Age 28-45 in 1930=1 × Washington	Omitted	(.)
Age 28-45 in 1930=0 × Age	0.0193***	(0.00177)
Age 28-45 in 1930=1 × Age	2.511***	(0.0795)
Age 28-45 in 1930=0 × Age^2	-0.000418***	(0.0000395)
Age 28-45 in 1930=1 × Age^2	-0.0645***	(0.00217)
Age 28-45 in 1930=0 × Age^3	0.00000267***	(0.000000270)
Age 28-45 in 1930=1 × Age^3	0.000540***	(0.0000194)
Constant	-31.69***	(0.951)
Observations	64148	
R^2	0.213	

Notes: See the text (section II.C) for further description of this specification. Standard errors in parentheses.
Source: IPUMS 5% sample of the 1930 Census (Ruggles et al. 2010).
* $p < .10$, ** $p < .05$, *** $p < .01$

Table 5: Implications of alternative first stage specifications

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post bonus dummy	198.2***	181.8***	-31.88	177.8***	189.4***	199.2***	179.8***	204.7***
	(43.17)	(53.92)	(78.95)	(51.64)	(44.62)	(43.61)	(37.73)	(45.15)
Interaction	403.1**	484.9***	1625.1***	502.9***	446.3**	398.4**	552.0***	369.5**
	(169.7)	(184.4)	(458.4)	(176.0)	(178.4)	(171.7)	(166.1)	(174.1)
1st stage N	64,148	64,148	64,148	64,148	64,148	64,148	64,148	64,148
2nd stage N	2681	2681	2681	2681	2681	2681	2681	2681
1st stage R^2	0.213	0.124	0.052	0.128	0.212	0.214	0.128	0.219
2nd stage R^2	0.186	0.185	0.187	0.186	0.186	0.186	0.187	0.186

Bootstrap standard errors clustered at the city level in parentheses
Notes: See the text for a description of the controls. Households with total expenditure $>$ \$5000 are excluded.
* $p < .10$, ** $p < .05$, *** $p < .01$

someone in the age range likely to be a veteran. Estimated spending is somewhat higher, though qualitatively similar.

Column 2 shows results for the first stage speciation with an age quadratic. This does quite a poor job of predicting veteran status, the R^2 is 5%, a quarter of that in the baseline specification in the paper. Unsurprisingly, it implies a quantitatively unreasonable MPC. This shows that a reasonably specified first stage is an important part of my estimation strategy.

Columns 3 to 7 show that results for more complicated (and accurate) specifications provide second stage estimates qualitatively similar to the baseline. The partial exception is (6), which while complex, does a poor job of predicting veteran status; it also suggests spending from the bonus of \$552, much above the \$403 implied by the baseline specification.

Table 6: First stage predictive power

Specification	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
R^2 for vet. status	.213	.124	.052	.128	.212	.214	.128	.219
Age of wife (years old in 1930)								
R^2 wife age	.832	.124	.830	.132	.832	.832	.833	.832
Corr. wife age	.919	.044	.917	.052	.918	.919	.920	.919
MSE wife age	19.795	151.211	19.992	152.211	19.874	19.704	19.468	19.790
Wife age, hh survey mean	32.774	32.774	32.774	32.774	32.774	32.774	32.774	32.774
Wife age, predicted mean	33.438	36.582	33.206	36.665	33.337	33.445	33.379	33.429
Age of eldest child (years old in 1930)								
R^2 eldest age	.297	.114	.281	.118	.294	.298	.296	.300
Corr. eldest age	.594	.330	.584	.327	.596	.595	.587	.602
MSE eldest age	7.932	10.989	8.118	11.031	7.953	7.93	8.048	7.844
Eldest age, hh survey mean	5.485	5.485	5.485	5.485	5.485	5.485	5.485	5.485
Eldest age, predicted mean	5.459	5.163	5.291	5.146	5.276	5.462	5.429	5.461
Radio ownership (0/1 dummy)								
R^2 radio	.131	.003	.008	.055	.062	.131	.131	.132
Corr. radio	.246	.051	.064	.267	.248	.247	.244	.247
MSE radio	.214	.147	.150	.135	.143	.215	.211	.214
Radio, hh survey mean	.878	.878	.878	.878	.878	.878	.878	.878
Radio, predicted mean	.565	.679	.671	.691	.675	.564	.567	.564
Home ownership (0/1 dummy)								
R^2 owned home	.120	.006	.073	.018	.083	.120	.122	.121
Corr. owned home	.299	-.056	.309	-.062	.283	.297	.315	.298
MSE owned home	.205	.229	.209	.231	.211	.205	.203	.205
Owned home, hh survey mean	.339	.339	.339	.339	.339	.339	.339	.339
Owned home, predicted mean	.355	.303	.261	.308	.273	.356	.344	.354
Monthly rent ($s)								
R^2 rent	.018	0	.005	.002	.007	.018	.019	.018
Corr. rent	.308	-.078	.145	.129	.208	.306	.362	.293
MSE rent	742.805	1172.256	966.331	1218.145	991.15	741.641	577.123	804.063
Rent, hh survey mean	28.469	28.469	28.469	28.469	28.469	28.469	28.469	28.469
Rent, predicted mean	37.152	55.662	50.869	56.702	51.574	37.373	39.32	37.374

Note: Column 0 shows results for the baseline first stage specification in the paper (equation 5). Columns 1 to 7 correspond to the alternative first stage specifications described above. 'R^2' is the R^2 from the first stage regression using 1930 Census data. 'Corr.' is the correlation between the predicted values from the first stage and the actual values in the household consumption survey. 'MSE' is the mean squared error of the predicted values relative to the actual values in the household survey. 'hh survey mean' is the mean in the household survey. 'predicted value' is the mean of the predicted values. In all columns, households with total expenditure $>$ \$5000 are excluded.

Table 6 shows the ability of these 7 specifications to predict 5 variables observed in both the 1930 Census and the 1936 household consumption survey. The first row of the table gives the first stage R^2 for veteran status. Column 0 shows results for the baseline first stage specification used in the paper. Columns 1-7 show results for the alternative first stage specifications discussed above.

The table first shows results for age of wife and age of eldest child. These are likely to be the best analogs to veteran status. Like veteran status, they are demographic variables well forecast by age, and they are likely to have been largely invariant to the economic tumult of the Great Depression.

As noted in the text, the baseline specification does a good job of predicting wife age. The correlation between the predicted and actual values is 0.92 and the predicted mean is 33.4 compared to an actual mean of 32.8. Performance for age of eldest child is slightly worse, but still quite good. The correlation is 0.59. Both the predicted and actual means are 5.5. The mean age is low, since for this comparison I exclude children 18 or over in 1936 (12 or over in 1930).

Table 6 next shows results for three economic variables observed in both samples. As one would expect, forecasting performance is worse. Given the events of the Great Depression, it is unsurprising that a forecasting model estimated on 1930 data does a relatively poor job of predicting economic outcomes in 1936.

For radio ownership, the correlation is 0.25. The mean of predicted values is 0.56 versus an actual mean in the household survey of 0.88 (e.g. in the household survey, 88% of households owned a radio). This difference in mean likely reflects the diffusion of radios between 1930 and 1936.

For home ownership and rent, the correlation is roughly 0.3. The mean of actual and predicted home ownership is similar. For rent, the mean in the household survey is significantly below the mean of predicted rent. This difference roughly aligns with the average decline in nominal rents in the economy as a whole. (The CPI for rent fell 29% from 1930 to 1936.[4])

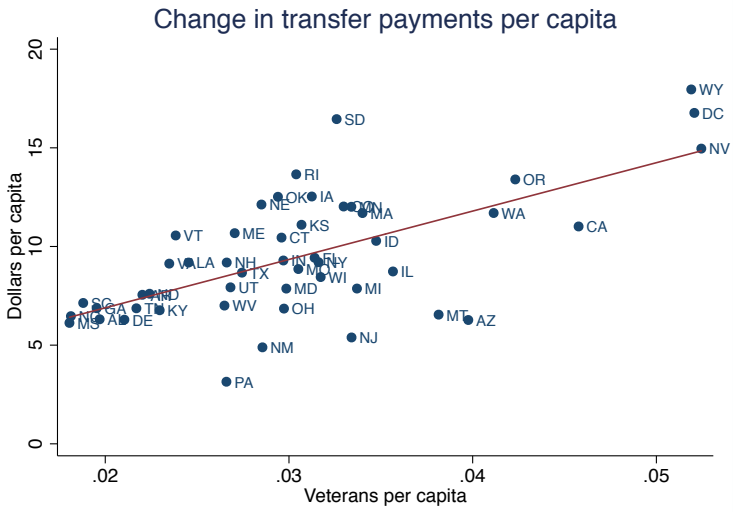
F Cross-state results for income and employment

Income: The Bureau of Economic Analysis publishes annual personal income data broken down into several categories by state beginning in 1929 (table SA04). I begin my analysis of these data with transfer income, the component of personal income in which the bonus appears. Importantly, transfer income measures only the value of the veterans' bonus that was cashed in 1936. The bonds issued to veterans but not cashed ought not to show up in this measure. Thus cross-state variation in transfer payments yields an estimate of how much of his cashable bonds each veteran cashed. This will overestimate spending from the bonus insofar as some veterans used their bonus to pay off debt; it will underestimate spending from the bonus insofar as some veterans used the bonus as an opportunity to take on debt, for instance, to buy a house or a car, or insofar as veterans' receiving the bonus stopped receiving other transfers (e.g. work relief payments).

The above figure shows a scatter plot with the change in transfer income per capita from 1935 to 1936 on the y-axis and veterans per capita on the x-axis. As expected, there is a strong positive relationship. Table 7 quantifies this relationship with cross-state regressions of transfers per capita on veterans per capita and control variables. Column 1 shows the simple regression corresponding to the scatter plot. Column 2 adds a control for the change in wages per capita in a state. Unsurprisingly, ceteris paribus, states with falling wages saw higher transfers. More surprising, the change in wages is correlated with veterans per capita in a state, so that adding this variable to the regression

[4] FRED series CUUR0000SEHA.

Figure 1



changes the coefficient on veterans per capita.[5] Column 3 adds a control for the lagged change in transfers per capita in the state. Column 4 instead controls for region fixed effects. Across the specifications including wages (2-6), the coefficient on veterans per capita is precisely estimated and is in the range of $325 to $400. Given that the average bonus amount (e.g. the amount of cashable bonds) given to veterans was $547, this implies that veterans cashed 60 to 75 percent of their bonus, the same range as that found for the MPC using the household survey.

Also of interest is whether the transfer received by veterans in 1936 was correlated with economic conditions in 1931, when veterans were first allowed to take large loans against the value of the bonus. Since the 1931 loan payments were primarily issued early in 1931 (in March and April), column 5 controls for the level of per capita income in a state in 1930, and column 6 controls for the percent change in per capita income between 1929 and 1930. Per capita income in 1930 is borderline significant, but with the opposite sign of that expected: the positive coefficient suggests that in richer states, veterans took more loans in 1931 and thus received a smaller bonus in 1936. In any case, imprecise coefficients makes it difficult to draw strong conclusions.

The transfer data also allow for a natural placebo test. The figure below reproduces specification (4) from table 7 with controls for wages and region fixed effects for each year from 1930 to 1940. As expected, there are four years in which veterans per capita has an economically and statistically significant effect on the change in transfers: in 1931, when veterans were allowed to take large loans, in 1932 (the backside of the loans), in 1936, and in 1937 (the backside of the bonus). The lack of a large or statistically significant coefficient in other years is reassuring.

An alternative placebo test is to see how components of income that ought not to have been affected by the veterans' bonus (e.g. farm income) were related to veterans per capita in 1936. This is done in the table below. I regress each major component of state income on veterans per capita and lagged wages per capita. I control for lagged wages, since–as discussed above–wages

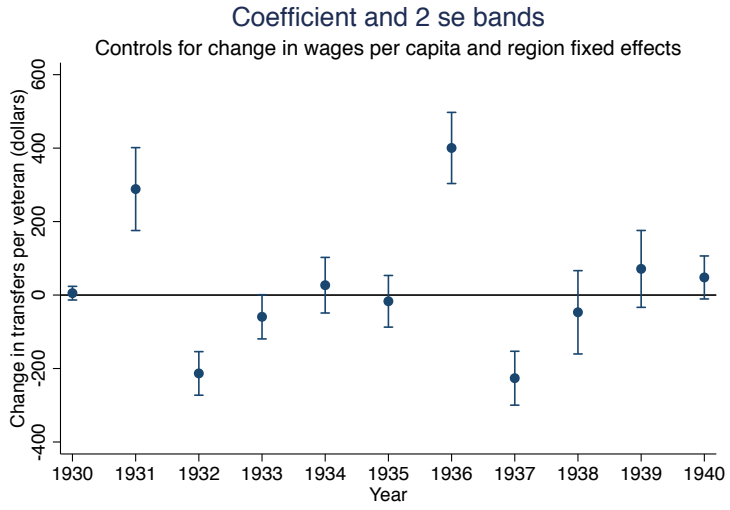
[5]This cross-state relationship between veterans per capita and the changes in wages appears not to be causal. In a regression of the change in wages per capita on veteran share and the lagged change in wages per capita, the coefficient on veteran share is small and insignificant. Results are available upon request.

Table 7: Regression results for the change in 1936 transfers per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Veterans per capita	245.1***	327.3***	338.7***	400.4***	304.1***	381.7***
	(42.20)	(40.88)	(40.05)	(48.41)	(69.21)	(53.29)
Change in wages per capita		-0.0998***	-0.0814***	-0.110***	-0.156***	-0.110***
		(0.0233)	(0.0245)	(0.0225)	(0.0324)	(0.0226)
Δ 1935 transfers per capita			-0.442*			
			(0.223)			
Midwest				-0.336	0.967	0.0150
				(0.884)	(1.099)	(0.977)
South				-0.628	0.418	-0.340
				(0.851)	(0.994)	(0.919)
West				-2.781***	-0.701	-2.436**
				(1.015)	(1.475)	(1.096)
1930 per capita income					0.00582*	
					(0.00307)	
% Δ per capita income 1929-30						0.0589
						(0.0691)
Observations	49	49	49	49	49	49
R^2	0.418	0.584	0.617	0.658	0.685	0.663

The dependent variable is the change from 1935 to 1936 in the dollar value of transfer income per capita.
Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

Figure 2



were correlated with veterans across states (and controlling for contemporaneous wages in some specifications is problematic when wages are part of the dependent variable).

Table 8: Regression results for 1936 change in income components

	(1) Transfers	(2) Non-farm	(3) Wages	(4) Farm	(5) Proprietors'	(6) Dividends / rents
Veterans per capita	288.5***	383.1	-45.38	-271.1	-106.0	21.68
	(56.39)	(484.9)	(237.7)	(610.6)	(607.2)	(297.7)
Lagged change in wages per capita	-0.0485	1.453***	0.971***	0.612	0.718	0.423*
	(0.0420)	(0.361)	(0.177)	(0.455)	(0.452)	(0.222)
Observations	49	49	49	49	49	49
R^2	0.434	0.451	0.529	0.045	0.078	0.130

Standard errors in parentheses
* $p < .10$, ** $p < .05$, *** $p < .01$

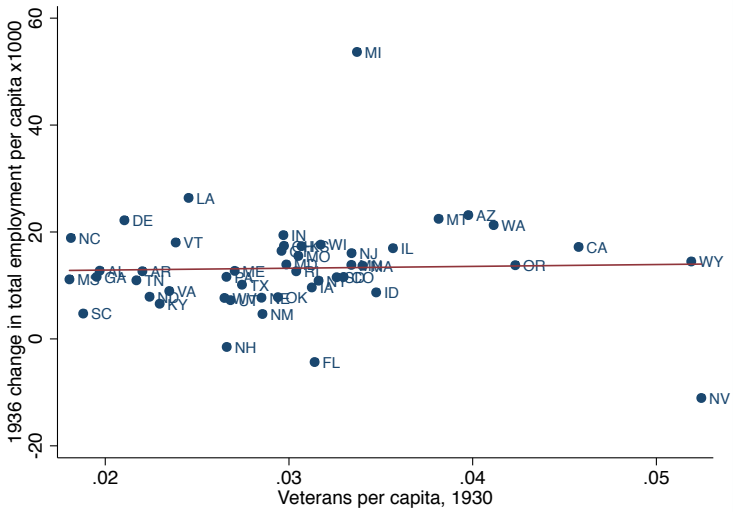
For comparison, column 1 shows the results for transfers. Consistent with some multiplier effect, the coefficient in column 2, in which the dependent variable is total non-farm income, is larger. But it is quite imprecisely estimated. Reassuringly, there is no correlation between veteran share and wages, farm income, proprietors' income, or dividends and rents.

Employment: One of the best aggregate indicators of state-level economic activity in the 1930s is employment. One advantage of these data over the income data is that they measure real rather than nominal economic activity. And unlike the income data, their construction is reasonably transparent. The Bureau of Labor Statistics (BLS) measured employment using an establishment survey like that conducted by the BLS today. The establishment survey in the 1930s covered between 4 and 7.5 million workers or 12 to 20 percent of total non-farm employment (Wallis 1989). Importantly, however, construction employment was excluded from the state figures (Monthly Labor Review, 8/1936, p. 496). Thus the effect of veterans using their bonus to build or remodel homes would not be captured.

The above figure shows the per capita change in private nonfarm employment (multiplied by 1000) on the vertical axis and veterans per capita on the horizontal axis. The figure suggests that there was no relationship between the two variables. Regressions show the same result.[6] Across a variety of specifications, there is no robust relationship between veterans per capita in a state and the change in employment in 1936. Michigan is a notable outlier: according to Wallis (1989), employment in Michigan rose by an astonishing 23 percent (275,000) in 1936, more than in any other state in that year. That Michigan is such an outlier is a clue that the lack of a relationship between veterans per capita and employment outcomes in 1936 may reflect what veterans bought with their bonus rather than a small multiplier. Suppose in the extreme case that every veteran bought a new car with his bonus check and nothing else. In this case, the aggregate effect of the bonus would have been very large: 3.2 million more new cars would have been sold. And this effect would show up in a cross-state regression of auto sales on veterans' share. But the employment effects would be concentrated in Michigan and other heavily industrialized states. Hence there might be no relationship between state level employment changes in 1936 and veterans per capita. Of course, veterans did not only buy cars. But my results suggest that they primarily bought tradable goods (and housing).

[6]Results are available upon request.

Figure 3



G Local spillovers and cross-state and cross-city measures of spending from the veterans' bonus

What follows is a simple algebraic description of how spillovers affect the cross-state and cross-city estimates of spending from the veterans' bonus.

Define notation as follows:

- C_{Vs}: Consumption of veterans in state (or city) s. This could be aggregate consumption or it could be a component of consumption such as auto sales.
- C_{NVs}: Consumption of nonveterans in state s.
- Y_s: Aggregate income in state s excluding the dollar amount of the veterans' bonus.
- $\bar{Y}$: Exogenous component of income in each state.
- π_s: Share of nonbonus income received by veterans (can also be thought of as the share of veterans in the population) in state s.
- T_b: The total veterans' bonus in the economy.
- b: The true MPC.
- γ: The amount by which income rises in a state when consumption rises by a dollar. $0 \leq \gamma \leq 1$.

To focus narrowly on how in-state spillovers from veterans' consumption affect cross-state regression estimates, I make the following assumptions. All could be relaxed at the cost of more involved and less transparent algebra:

1. I assume that the MPC of veterans and nonveterans is the same, and that the MPC does not vary across states. (More generally, states are identical except for their share of veterans.)

2. I assume that the consumption of veterans or nonveterans in a state equals the MPC, b, times their income. This could be because a fraction b of veterans and nonveterans are hand-to-mouth consumers.

3. I assume that there are no tradable goods, so that all consumption of goods in a state is by residents of the state.

4. There are two states.

With these assumptions, consumption behaves as follows:

$$\begin{aligned}
C_{V1} &= b[\pi_1 Y_1 + \frac{\pi_1}{\pi_1+\pi_2} T_b]; \\
C_{NV1} &= b(1-\pi_1)Y_1; \\
C_{V2} &= b[\pi_2 Y_2 + \frac{\pi_2}{\pi_1+\pi_2} T_b]; \\
C_{NV2} &= b(1-\pi_2)Y_2; \\
Y_1 &= \gamma(C_{V1} + C_{NV1}) + \bar{Y}; \\
Y_2 &= \gamma(C_{V2} + C_{NV2}) + \bar{Y}.
\end{aligned}$$

A little algebra yields expressions for veteran and non-veteran consumption in state s as a function of exogenous variables:

$$\begin{aligned}
C_{Vs} &= \frac{\pi_s b}{1-\gamma b}[\bar{Y} + \frac{1+\gamma b \pi_s - \gamma b}{\pi_1+\pi_2} T_b]; \\
C_{NVs} &= \frac{b(1-\pi_s)}{1-\gamma b}[\bar{Y} + \frac{\gamma b \pi_s}{\pi_1+\pi_2} T_b].
\end{aligned}$$

For convenience in what follows, I set the population of each state equal to 1, so that there is no distinction between per capita and aggregate, and so that the total bonus paid out, T_b, is $(\pi_1 + \pi_2)$ times the per veteran bonus. I set the per-veteran bonus to be \$1, so that measured spending from the bonus is the same as the MPC from the bonus.

These simplifications imply that $T_b = \pi_1 + \pi_2$. So consumption in state s post-bonus is

$$C_{bonus,s} = C_{Vs} + C_{NVs} = \frac{b}{1-\gamma b}(\pi_s + \bar{Y}). \tag{11}$$

Pre-bonus consumption is consumption when $T_b = 0$. So

$$C_{nobonus,s} = C_{V(T_b=0,s)} + C_{NV(T_b=0,s)} = \frac{b\bar{Y}}{1-\gamma b}. \tag{12}$$

The pre to post bonus change in consumption in a state, the dependent variable in the regressions in section III, is

$$\Delta C_s = C_{bonus,s} - C_{nobonus,s} = \frac{b\pi_s}{1-\gamma b}. \tag{13}$$

Now consider the following regression equation:

$$\Delta C_s = \alpha + \beta \pi_s + \varepsilon_s.$$

How will the estimated $\hat{\beta}$ be related to the true MPC, b? In the two state case, $\hat{\beta}$ will be

$$\hat{\beta} = \frac{(\Delta C_1 - \Delta \bar{C}_s)(\pi_1 - \bar{\pi}_s) + (\Delta C_2 - \Delta \bar{C}_s)(\pi_2 - \bar{\pi}_s)}{(\pi_1 - \bar{\pi}_s)^2 + (\pi_2 - \bar{\pi}_s)^2},$$

where $\bar{x}$ is the mean of x. Terms conveniently cancel, and this expression simplifies to

$$\hat{\beta} = \frac{b}{1 - \gamma b}. \tag{14}$$

This expression is intuitive. Note that $\frac{b}{1-\gamma b} \geq b$: the measured MPC from the cross-state regression is always greater than the actual MPC. The degree to which the cross-state estimate overestimates the true MPC depends on γ, the extent to which first-round consumption spending raises local income. This makes sense: if γ were zero, so that spending by veterans had no effect on local income, than the cross-state estimates would be equal to the actual MPC of veterans.

The framework here is simple, but that local income spillovers push up the cross-state estimate relative to the actual MPC is a result likely to hold in more general settings. And even apart from local income spillovers, there could be other factors increasing the measured MPC from a cross-state regression relative to the actual MPC. For instance, if saving by veterans in banks led to a large increase in bank lending and thus more spending, then a low first round MPC would be consistent with a high cross-state estimate. Of course, one could imagine factors pushing in the other direction, lowering the measured cross-state MPC relative to the actual MPC. For instance, if spending by veterans raised local prices, there could be a negative effect on non-veteran spending.

The bottom line of this example is to illustrate that there is no reason to expect the estimate from a cross-state regression to be equal to the true MPC. It will be influenced by general equilibrium effects of veterans' spending on the local economy. The increase in income generated by higher consumption is, perhaps, the most obvious channel for spillovers, and this channel will tend to push up the cross-state estimate relative to the true MPC.

H American Legion Survey form and detailed tabulations

PLEASE CO-OPERATE
BY
FILLING OUT AND HANDING TO POST ADJUTANT AT ONCE

DEAR LEGIONNAIRE:

Members of The American Legion are asked to lend their co-operation to National Headquarters to determine as accurately as possible in advance how money derived from payment of the Adjusted Service Certificates will be spent. You can do this by filling out this questionnaire and handing it to your Post Adjutant.

To fill out, put a check mark in the square in front of the product listed which you now think you will purchase, if and when you receive payment on your adjusted compensation certificate, and after the name of the product indicate approximately how much you think you will spend for that particular item. It is important that the amount of the estimated expenditure for each particular item be shown on the questionnaire.

On the blank lines at the bottom, list any other articles, items or ways in which you contemplate the expenditure of your adjusted compensation not contained in the printed list.

It is also important that the total amount of adjusted compensation to be received should be shown by you at the bottom of the questionnaire in the space provided.

Percentages will be obtained from all the questionnaires filled out which will be projected against the total payments to be made. *Each individual questionnaire is confidential; no names or identification marks of any sort should be placed on it.*

ARTICLES TO BE BOUGHT	Approximate Amount to Be Expended Therefor
☐ Agricultural Implements	$
☐ Automobile Do you own car to trade in? Yes No	$
☐ Auto Truck	$
☐ Battery for Auto or Truck	$
☐ Tires for Auto or Truck	$
☐ Build New House	$
☐ Clothes for Children	$
☐ Suit or Overcoat for Self	$
☐ Clothes for wife	$
☐ Education, Home Study Course	$
☐ Electric or Gas Refrigerator	$
☐ Farm	$
☐ Furniture	$
☐ House Furnishings	$
☐ Insurance (Life, Health or Accident)	$
☐ Invest in Own Business	$
☐ Invest in Stocks or Bonds	$
☐ Lot for Home Site	$
☐ Men's Shirts	$
☐ Men's Furnishings (Ties, Socks, Underwear)	$
☐ Men's Hats	$
☐ Men's Shoes	$
☐ Oil or Gas Furnace	$
☐ Paint House	$
☐ Pay Notes, Mortgages, Loans or Old Bills	$
☐ Purchase Home	$
☐ Radio	$
☐ Repair House	$
☐ Rugs	$
☐ Start or Increase Savings Accounts	$

OTHER ARTICLES TO BE BOUGHT

	$
	$
	$
	$
	$
Total Amount of Adjusted Compensation Due	$

Table 9: American Legion survey complete tabulations

Item	Amount per veteran ($)	Percent of bonus (%)
Repair present house	37.90	6.71
Paint house	9.72	1.72
Housing consumption total	47.62	8.43
Furniture	17.37	3.07
Rugs and carpets	2.83	0.50
Other house furnishings	12.93	2.29
Electric or gas refrigerator	6.04	1.07
Oil or gas furnace	2.57	0.45
Radio	2.49	0.44
Other durable gds total	44.22	7.82
Suit or overcoats	9.84	1.74
Shirts	0.87	0.15
Shoes	0.99	0.18
Hats	0.48	0.08
Other men's furnishings	2.48	0.44
Clothing for children	12.01	2.13
Clothing for wife	13.10	2.32
Clothing total	39.76	7.04
Passenger automobiles	30.86	5.46
Trucks	4.02	0.71
Automobile tires	1.52	0.27
Automobile batteries	0.15	0.03
Autos total	36.55	6.47
Purchase farm	18.97	3.36
Farm implements	12.46	2.20
Invest in own business	37.90	6.71
Build new house	26.28	4.65
Purchase home	36.80	6.51
Purchase lot for homesite	9.03	1.60
Investment total	141.43	25.03
Purchase insurance	19.11	3.38
Education	5.08	0.90
Miscellaneous	22.72	4.02
Other total	46.91	8.30
Pay old bills and debts	177.26	31.36
Savings accounts	25.26	4.47
Purchase stocks or bonds	6.15	1.09
Savings total	208.68	36.92

I Narrative Evidence

This appendix presents some additional narrative evidence on the effects of the bonus payment.

The *Wall Street Journal* reported on July 3, 1936 (p. 1):

> Unusual gains in retail sales of new passenger cars the latter part of last month lifted the June retail sales totals of the largest automobile units to new peaks for the year. . . . No doubt the bonus had something to do with pushing sales into new high ground, but generally strong business throughout most of the country played an equal part in providing support.

Of course, the "generally strong business" referred to by the *Wall Street Journal* may itself reflect the effect of the bonus.

Dun and Bradstreet Monthly Review noted the effects of the veterans' bonus in its July 1936 report on business conditions around the country during June (pp. 45-47). Some cities reported little effect, at least in the first two weeks of bonus distribution. In others, however, effects were evidently visible and large. For example, the report from the Minneapolis region said (p. 46):

> The depressing results of severe drought conditions which have developed in North Dakota, Montana, and portions of South Dakota have been more than offset by the exhilarating effect of the spending of bonus money.

The negative effects of drought and heatwave come up frequently in contemporary narrative reports. In 1936, drought afflicted much of the country and was particularly severe in the Dakotas and Kansas.[7] And July was extraordinarily hot in much of the midwest. Temperatures reached 110 degrees in Iowa and Wisconsin.[8] As the above quote notes, this makes it all the more remarkable that large effects of the bonus are detectable both in the data and in narrative evidence.

The front page of the *Chicago Tribune* on June 14, 1936 – the day before the bonus was distributed – printed a cartoon showing the businesses hoping for a share of the bonus money (figure 4). The cartoon suggests that contemporaries expected the money to be used to purchase a wide variety of consumer goods. Note in particular the prominent position of the auto dealer (and Ye Olde Tappe Room). The savings bank is far in the rear.

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[7] See `http://www.ncdc.noaa.gov/paleo/pdsiyear.html`.

[8] See `http://www.crh.noaa.gov/arx/events/heatwave36.php`.

Figure 4: From the *Chicago Tribune*, 6/14/36, p. 1

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