Online Appendix

The Economic Consequences of Being Widowed by War: A Life-cycle Perspective

Sebastian T. Braun* Jan Stuhler†

*University of Bayreuth, CReAM, and IZA (sebastian.braun@uni-bayreuth.de)
†Universidad Carlos III de Madrid, CReAM, and IZA (jan.stuhler@uc3m.es)

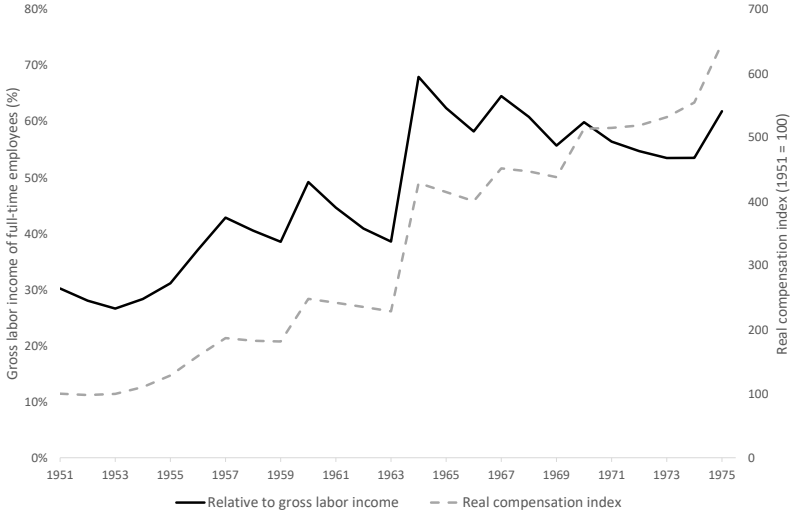
A Compensation for War Widows, 1951-1975

Figure A1 documents the evolution of the maximum attainable war widow's pension from 1951 to 1975. Panel A1(a) shows the increase in maximum compensation since the mid-1950s, both when measured relative to gross labor income (black solid line) and when considering the real increase since 1951 (gray dashed line). Relative to labor income, compensation nearly doubled from about 30% in the early 1950s to between 50% and 60% after the second revision of the BVG in 1964.[1] At the same time, the maximum attainable war widow's pension increased fivefold in real terms between 1951 and 1970. The increase began in the second half of the 1950s. It continued relatively evenly after that, with a notable jump in 1964 when significant "damage compensation" (*Schadensausgleich*) was introduced for widows whose income was less than half their deceased husband's expected income.

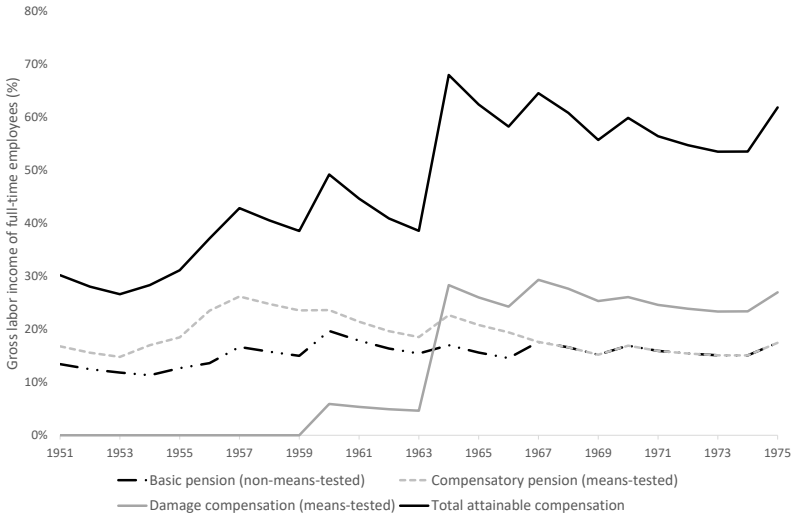
Figure A1(b) shows how the three different types of compensation–non-means-tested basic pension, means-tested compensatory pension, and means-tested damage compensation–have contributed to the increase in the ratio of war widows' pensions to average gross labor income. As can be seen, the basic pension was relatively stable over time, fluctuating between 13% and 17% of average labor income. The increase in the war widow's pension was initially largely due to the fact that the compensatory pension payments outpaced the growth in labor income. Later, the introduction of damage compensation spurred the increase in the maximum war widow's pension. By 1970, means-tested forms of compensation accounted for 72% of the total maximum pension.

[1] The occasional declines are due to the fact that compensation payments were not increased in some years, while labor income generally rose rapidly during Germany's economic boom.

Figure A1: Maximal compensation for war widows, 1951-1975



(a) Relative to gross labor income and real compensation index



(b) Composition of compensation (relative to gross labor income)

Notes: The figure shows the maximum compensation for war widows between 1951 and 1975. Panel (a) shows total compensation relative to the gross labor income of full-time workers (black solid line) and the real increase in maximum compensation since 1951 (gray dashed line; the 1951 value is normalized to 100). Panel (b) decomposes total compensation relative to gross labor income (black solid line) into the part due to basic pension (non-means-tested; black dashed-dotted line), compensatory pension (means-tested; gray dashed line), and damage compensation (means-tested; gray solid line). See the description in Section 2 and Appendix A for further details.
Source: Author's calculations based on the *Bundesversorgungsgesetz* (in its various versions). Data on average gross labor income are taken from Bundesamt für Justiz and BMJV (2020); the price index (standard of living of a 4-person household with medium income) is taken from Statistisches Bundesamt (2023).

B Alternative Definitions of the Control Group

Unfortunately, the MZU71 does not contain the respondents' entire marriage history, but only the year of the last marriage for those married in 1971. This poses two problems for the definition of our control group. First, we cannot exclude the possibility that divorced or widowed women in our control group married only after 1945. We consider this to be a minor problem because women in our sample were well above the average age at first marriage of 25.4 years in 1945. Second, married women who married after 1945, whom we exclude from the analysis, could in principle have been in an earlier marriage during the war (as we only observe their last year of marriage). Again, we consider this a minor problem, as less than 4% of the married women in our sample married after 1945. Importantly, we show in the main text that our results hold in a second survey, the German Life History Study, where we observe women's complete marriage histories.

Table B1: Robustness: The impact of war widowhood on market work in 1950-1971 across samples

	1950			1960			1971		
	Control mean (1)	IPW (2)	Observations (3)	Control Mean (4)	IPW (5)	Observations (6)	Control mean (7)	IPW (8)	Observations (9)
A. Market employment:									
Baseline sample	0.205	0.138	29,302	0.238	0.058	30,342	0.162	-0.019	30,351
		(0.007)			(0.007)			(0.006)	
Control group: Married women[1] (married 1945 or earlier)	0.156	0.176	21,106	0.174	0.102	21,860	0.114	0.028	21,866
		(0.007)			(0.007)			(0.006)	
Control group: Ever married women[2]	0.225	0.125	31,984	0.248	0.044	33,126	0.166	-0.017	33,137
		(0.007)			(0.007)			(0.006)	
Cohorts born 1915-21	0.227	0.149	13,175	0.293	0.048	13,642	0.334	-0.024	13,652
		(0.011)			(0.011)			(0.010)	
Cohorts born 1919-21	0.241	0.127	6,185	0.311	0.013	6,414	0.366	-0.044	6,419
		(0.016)			(0.016)			(0.016)	
B. Out of the labor force:									
Baseline sample	0.703	-0.093	29,302	0.677	-0.003	30,342	0.776	0.051	30,351
		(0.007)			(0.007)			(0.006)	
Control group: Married women[1] (married 1945 or earlier)	0.739	-0.127	21,106	0.720	-0.044	21,860	0.802	0.020	21,866
		(0.008)			(0.008)			(0.006)	
Control group: Ever married women[2]	0.681	-0.079	31,984	0.665	0.001	33,126	0.769	0.051	33,137
		(0.007)			(0.007)			(0.006)	
Cohort: Born 1915-21	0.696	-0.127	13,175	0.631	-0.018	13,642	0.604	0.048	13,652
		(0.011)			(0.011)			(0.011)	
Cohort: Born 1919-21	0.684	-0.109	6,185	0.616	0.015	6,414	0.571	0.064	6,419
		(0.016)			(0.016)			(0.016)	

Notes: Means of the control group and IPW estimates for war widowhood across different samples of the 1971 Microcensus. The samples differ by the birth years of cohorts considered and the definition of the control group. Each estimate stems from a separate regression. Regressions include as controls a full set of age dummies, an indicator for house ownership in 1939, indicators for expellees from Eastern Europe and refugees from GDR, the number of siblings, a full set of education dummies, indicators for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services, unknown) and the occupational or employment status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, helping family member, out of the labor force including apprentices, in education, and unemployed). Robust standard errors clustered at selection districts (*Auswahlbezirke*) are reported in parentheses. [1]The control group consists only of women who were married in 1971 and whose marriage year was 1945 or earlier. Compared to the baseline sample, widowed and divorced women in the control group (as of 1971) are dropped. [2]The control group includes all women who were ever married. Compared to the baseline sample, the control group also includes women who were married in 1971 but whose last marriage was after 1945.

Nevertheless, in additional robustness checks, we drop widowed and divorced women from the control group and keep all married women in the control group. Table B1 reports the results for our main results on labor force participation in 1950, 1960, and 1971. The results are virtually unchanged when we keep women who were married in 1971 in the control group, even if their last marriage was after 1945. This is to be expected since few women in our sample married after 1945. The differences are somewhat larger when we drop widowed and divorced women from the control group. This is to be expected since only married women remain in the control group–and these tend to have relatively low employment rates at the time. As a result, the initial employment gain from war widowhood is somewhat larger relative to baseline. But even compared to this control group, we find that war widows are more likely to be out of the labor force in 1971. However, this effect is entirely driven by the negative impact on the probability

of being a helping family member.

Table B1 also shows that the counterintuitive effect of widowhood on labor force participation over the life cycle–elevated in 1950, but depressed in 1971–extends to younger cohorts born in 1915-21 and 1919-21. Almost all of these women were married to men born 1910-25 whose cohorts were fully conscripted during the war, so that selection into military service was negligible.

C Effect Heterogeneity

The main result of Section 4 is that war widowhood increased the probability of market employment only immediately after the war. In the longer run, war widowhood actually decreased market employment. Here, we document that the negative long-term effect on participation is strongest for less educated women with children.

Table C1 presents estimates of the effect of widowhood on market employment in 1950, 1960, and 1971 separately for the subgroups indicated on the left. In the first row, we replicate our baseline results for ease of comparison. We first distinguish between women who have children and those who do not. Not surprisingly, women without children have much higher employment rates in middle age. For example, the control mean in 1950 is twice as high for those without children as for those with children (35.9% versus 18.3%). However, the pattern of the widowhood effect over time–large and positive in 1950 and then declining–is similar for both groups. As we can see, the negative long-term effect is only visible for women with children. For them, war widowhood reduced market employment by 2.4 pp in 1971.

Table C1: Heterogeneity in the impact of war widowhood on market employment in 1950, 1960, 1971

	1950			1960			1971		
	Control mean (1)	IPW (2)	Obser-vations (3)	Control Mean (4)	IPW (5)	Observ-vations (6)	Control mean (7)	IPW (8)	Obser-vations (9)
Baseline	0.205	0.138	29,302	0.238	0.058	30,342	0.162	-0.019	30,351
		(0.007)			(0.007)			(0.006)	
Children:									
With kids	0.183	0.133	25,331	0.222	0.041	26,453	0.157	-0.024	26,444
		(0.008)			(0.007)			(0.006)	
Without kids	0.359	0.159	3,771	0.350	0.080	3,907	0.198	0.009	3,907
		(0.020)			(0.021)			(0.018)	
Education:									
High (>10 years)	0.283	0.219	5,232	0.336	0.137	5,408	0.244	0.048	5,408
		(0.019)			(0.019)			(0.018)	
Low (≤10 years)	0.188	0.122	24,070	0.217	0.029	24,934	0.144	-0.033	24,943
		(0.008)			(0.008)			(0.006)	
Occupational status 1939:									
Market employment	0.461	0.104	8,627	0.446	-0.000	8,985	0.253	-0.036	8,985
		(0.014)			(0.014)			(0.012)	
Helping family	0.088	0.261	2,838	0.142	0.125	2,945	0.136	-0.008	2,945
		(0.025)			(0.025)			(0.019)	
Out of the labor force	0.104	0.137	17,820	0.156	0.061	18,393	0.123	-0.012	18,401
		(0.009)			(0.009)			(0.007)	

Notes: Means of the control group and IPW estimates for war widowhood. Each estimate stems from a separate regression for the subgroup indicated on the left. Regression include as controls a full set of age dummies, an indicator for house ownership in 1939, indicators for expellees from Eastern Europe and refugees from GDR, the number of siblings, a full set of education dummies, indicators for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services, unknown) and the occupational or employment status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, helping family member, out of the labor force including apprentices, in education, and unemployed). Robust standard errors clustered at selection districts (*Auswahlbezirke*) are reported in parentheses.

Second, we show that high-educated women were much more likely than low-educated women to take up market employment after the death of their spouse in WWII. Moreover, for them, the

positive effect persists, albeit muted, until late in life. We find that for highly educated women, war widowhood increased the probability of market employment by 21.9, 13.7, and 4.8 pp in 1950, 1960, and 1971, respectively. In contrast, the effect sizes are 12.2, 2.9, and -3.3 percentage points for women with low education. This differential effect is consistent with previous findings for the US that WWII mobilization increased female labor supply only among highly educated women (Goldin and Olivetti, 2013).

Finally, Table C1 also examines the effect of widowhood by occupational status in 1939, distinguishing between women who were in market employment, who worked as helping family members, or who were out of the labor force before the war. There are notable differences among these groups in 1950 and 1960, but not in 1971. In 1950, the widowhood effect is largest for those who worked as family helpers in 1939, increasing their probability of market work in 1950 by 26.1 percentage points (or 300% compared to the control group's probability of 8.8%). The increase is also substantial for women who did not work before the war, and more modest for those who were already in the labor force in 1939. The widowhood effect declines between 1950 and 1960 for all three groups, and it disappears by 1960 for those in market employment in 1939. This group also experienced the largest negative effect in 1971, at 3.6 percentage points.

D Evidence on Attitudes towards Work and Gender Norms

This section summarizes evidence of the impact of war widowhood on attitudes towards work and gender norms. We first describe the data source and then discuss findings separately for war widows and their children.

D.1 Data Description

The ALLBUS is a survey that has been collecting data on the attitudes, behavior, and social structure of the German population every two years since 1980. We use data from five waves: 1980, 1982, 1984, 1986, 1988 (GESIS - Leibniz-Institut für Sozialwissenschaften, 2002b,a). Each wave interviewed a random sample of about 3000 West German citizens over the age of 18 (foreigners were excluded). The exact questions vary, so our outcome variables of interest are typically available only for a subset of waves.

All five waves contain information on the complete marital history of the respondents. This allows us to identify women who lost their spouse between 1939 and 1945 (our treatment group). We compare them with women who married before 1945 but did not lose their spouse (control group). We restrict the sample to women born in 1906-21 in order to look at similar cohorts as in the main analysis. Our regressions control for a full set of dummies for the year of birth and year of first marriage, year of interview, and the years of schooling of the respondent and her father.

In addition, the 1988 wave includes the year of death of the respondent's father and mother. Thus, for this wave, we can also examine the children of war widows by comparing respondents whose fathers died in World War II and those whose fathers did not. We focus on cohorts born in 1929-45 and drop respondents whose mothers died before 1945. The regressions control for respondents' year of birth and their fathers' years of schooling.

D.2 Work Attitudes and Gender Norms of War Widows

The ALLBUS waves of 1980, 1982, and 1986 asked respondents about the importance of different domains in life, including family, job, leisure, friends, relatives, religion, and politics, as measured on a scale from 1 (unimportant) to 7 (very important). Table D1 shows that war widows placed a, on overage, 0.36 lower value on the importance of family and children in life (relative to a

Table D1: Impact of war widowhood on the importance of different life areas

	Importance of different life areas (1-7):						
	Family & children	Job & work	Leisure & recreation	Friends	Relatives	Religion & church	Politics
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
War widow	-0.364	-0.083	-0.029	0.023	-0.142	-0.156	0.035
	(0.143)	(0.196)	(0.144)	(0.145)	(0.158)	(0.186)	(0.173)
Control mean	6.404	4.493	5.110	5.364	5.323	4.978	3.749
N	831	832	832	831	833	833	833

Notes: Control means and estimates of the effect of war widowhood on the importance of different domains of life. The sample consists of women born in 1906-21 in the 1980, 1982, and 1986 ALLBUS waves. The outcome variables are measured on a scale from 1 (unimportant) to 7 (very important). Each estimate comes from a separate OLS regression, controlling for a full set of dummies for year of birth and year of first marriage, year of interview, and years of schooling of the respondent and her father. Robust standard errors are shown in parentheses.

control mean of 6.40).[2] For all other domains of life, the differences between war widows and the control group are small. In particular, we find no evidence that war widows attach greater importance to job and work in life. If anything, the impact is negative (but small and statistically insignificant).

The ALLBUS waves of 1982 and 1988 asked several questions about women's roles in family and work. Unfortunately, most questions changed between waves and are thus not directly comparable. We summarize respondents' attitudes towards gender roles by measuring the proportion of progressive statements with which respondents agreed.[3] Column (1) of table D2 shows that this "progressive gender role index" is 7.2 pp higher among war widows, albeit from a comparatively low baseline of 24.6%. In other words, war widows tend to have more progressive gender roles but still disagree with most progressive statements (or agree with traditional statements).

Of particular importance for women's labor supply decisions is the compatibility of work and child-care responsibilities. In West Germany, the birth of a child often led previously employed women to give up work altogether in favor of the family, or to interrupt their careers for many years (e.g. Matysiak and Steinmetz, 2008). Previous research based on the 1988 ALLBUS wave has shown that West Germans strongly disapproved of women working outside the home when there are preschool children at home, even more so than respondents in the UK and US (Alwin et al., 1992).

The results in Columns (2) to (5) indicate that war widows were not an exception, as they were not more supportive of women with young children working. Column (2) shows that war widows were only slightly less likely to agree with the statement that young children suffer when the mother works, a statement with which nearly 90% of control group respondents agreed. And while war widows were more likely to approve of women working in situations where childcare is not an issue (Column (3)), they were even slightly more likely to disapprove of women working when they have children (Columns (4) and (5)).

D.3 Attitudes and Gender Norms of War Widows' Children

Table D3 shows that also the children of war widows did not hold more progressive gender norms than their peers. Neither the progressive gender role index (Column (1)) nor agreement with the statement that young children suffer when mothers work (Column (2)) differs statistically

[2] We find similar results for an alternative question that asked respondents in 1980, 1984, and 1984 whether they believed that one needs a family to be truly happy. War widows are 9.1 pp less likely to agree (relative to a baseline of 80.8%).

[3] We count the negation of traditional gender roles as a progressive statement.

Table D2: Impact of war widowhood on work-related gender norms

	Progressive gender roles index (0-1)	Do small kids suffer if mother works? (0/1)	Should women not work if they have		
			no kids? (0/1)	small kids? (0/1)	school kids? (0/1)
	(1)	(2)	(3)	(4)	(5)
War widow	0.072	-0.039	-0.109	0.027	0.037
	(0.029)	(0.040)	(0.067)	(0.054)	(0.101)
Control mean	0.246	0.897	0.183	0.878	0.730
N	512	503	174	176	176
Waves	82, 88	82, 88	88	88	88

Notes: Control means and estimates of the effect of war widowhood on work-related gender norms. The sample consists of women born in 1906-21 in the 1982 and 1988 ALLBUS waves. The outcome variable in Column (1) summarizes the responses to six and nine statements about work-related gender norms asked in the 1982 and 1988 waves, respectively. The indicator measures the proportion of progressive statements with which respondents agreed (including the negation of traditional statements). The outcome variables in Columns (2) through (5) are indicator variables indicating whether respondents agreed with the question in the table header. Each estimate comes from a separate OLS regression, controlling for a full set of dummies for year of birth and year of first marriage, year of interview, and years of schooling of the respondent and her father. Robust standard errors are shown in parentheses.

significantly between the two groups. The same applies to the approval of women's work in Columns (3) to (5), with one exception: Daughters of war widows have a 13.8 pp higher probability of agreeing with the statement that women with young children should *not* work (from a baseline probability of 78.5 pp). Thus, if anything, we find evidence that the experience of growing up without a father has made daughters of war widows less supportive of the compatibility of women's work and caring for young children, potentially because they experienced the challenges faced by their mothers in the postwar period. In any case, even among respondents born in 1929-45, most disapproved of women working outside the home when preschool children are at home.

Table D3: Intergenerational spillovers on work-related gender norms

	Progressive gender roles index (0-1)	Do small kids suffer if mother works? (0/1)	Should women not work if they have		
			no kids? (0/1)	small kids? (0/1)	school kids? (0/1)
	(1)	(2)	(3)	(4)	(5)
		A. Daughters:			
Father's death	0.028	-0.045	0.007	0.138	0.001
	(0.039)	(0.079)	(0.049)	(0.072)	(0.092)
Control mean	0.474	0.730	0.072	0.785	0.506
N	375	361	340	345	338
		B. Sons:			
Father's death	0.017	0.019	0.090	-0.048	0.008
	(0.046)	(0.068)	(0.068)	(0.078)	(0.088)
Control mean	0.434	0.812	0.072	0.843	0.570
N	312	304	287	291	288

Notes: Control means and estimates of the effect of war widowhood on work-related gender norms of their children. The sample consists of respondents born in 1929-45 in the 1988 ALLBUS who did not lose their mother before 1945. Panel A. restricts the sample to women (daughters), Panel B. restricts the sample to men (sons). The outcome variable in Column (1) summarizes the responses to nine statements about work-related gender norms asked in the 1988 wave. The indicator measures the proportion of progressive statements with which respondents agreed (including the negation of traditional statements). The outcome variables in Columns (2) through (5) are indicator variables indicating whether respondents agreed with the question in the table header. Each estimate comes from a separate OLS regression, controlling for a respondents' year of birth and their fathers' years of schooling. Robust standard errors are shown in parentheses.

E Additional Tables and Figures

Table E1: Predicting war widowhood status in the Microcensus 1971

	Dependent variable: War widow (0/1)			
	(1)	(2)	(3)	(4)
R2	0.005	0.009	0.011	0.012
Birth year	yes	yes	yes	yes
Socio-demographic characteristics	no	yes	yes	yes
Employment & occupational status in 1939	no	no	no	yes
Sector of employment in 1939	yes	yes	yes	yes

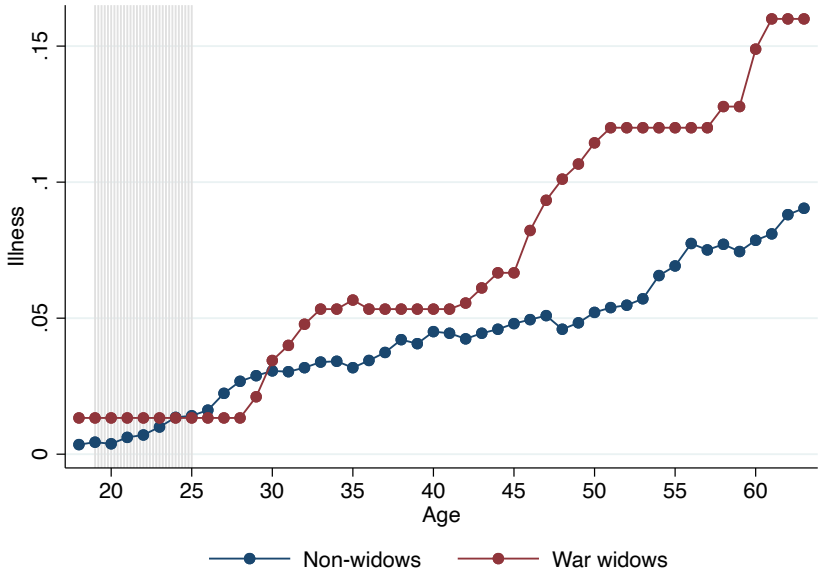
Notes: The table reports the R2 from regressions relating war widowhood status in the German Microcensus 1971 to an increasing number of covariates. Regressions include the following prewar covariates: (1) full set of age dummies, (2) = (1) plus an indicator for house ownership in 1939, indicators for expellees from Eastern Europe and refugees from GDR, number of siblings, full set of education dummies, (3) = (2) plus eight categories for the occupational or employment status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, apprentice, helping family member, out of the labor force, in education, and unemployed). (4) = (3) plus six categories for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services).

Table E2: Exogeneity of war widowhood in GHS

	mean	Dependent variable: War widow (0/1)			
	(std. dev.)	(1)	(2)	(3)	(4)
Birth year	1920.06	0.008	-0.006	0.012	0.018
	(0.81)	(0.021)	(0.021)	(0.021)	(0.024)
# siblings	2.80	-0.006	-0.010*	-0.007	-0.002
	(2.49)	(0.007)	(0.006)	(0.006)	(0.007)
Years of schooling	8.64	-0.011	-0.018	-0.018	-0.019
	(1.26)	(0.013)	(0.014)	(0.014)	(0.016)
Spouse's schooling (years)	9.27		-0.004	-0.001	0.000
	(1.93)		(0.003)	(0.004)	(0.004)
Spouse's birth year	1914.58		0.004	0.007	0.008
	(4.07)		(0.011)	(0.010)	(0.012)
Marriage year	1941.55			-0.032***	-0.038***
	(1.94)			(0.008)	(0.010)
Father's schooling (years)	8.62				-0.013
	(1.95)				(0.009)
Mother's schooling	8.24				-0.014
	(0.94)				(0.013)
Father's occupational score	40.82				0.002
	(11.05)				(0.002)
R2		0.002	0.013	0.043	0.056
N	523	521	411	411	340

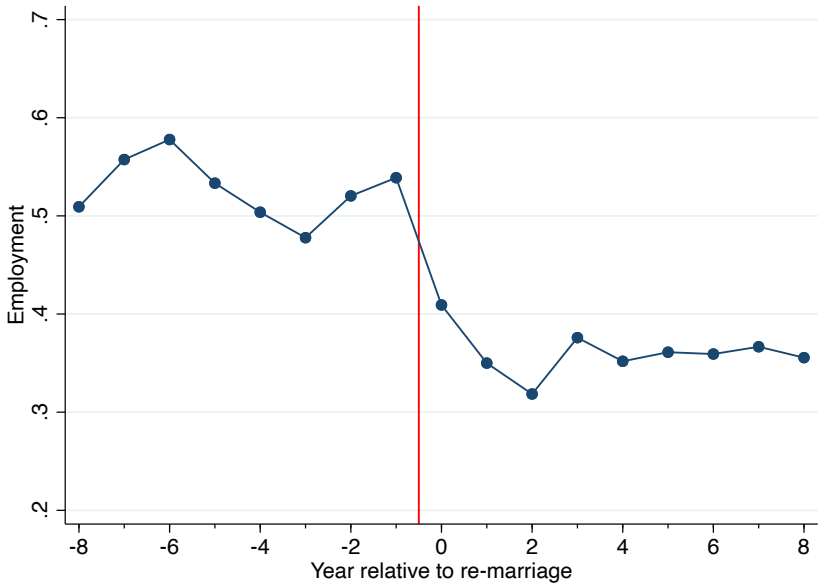
Notes: The table reports coefficient estimates from a regression of war widowhood status on a set of prewar individual, spousal, and parental characteristics for women born 1919-21. Robust standard errors in parentheses.

Figure E1: Illness over the life-cycle



Notes: The figure shows the share of respondents reporting ill health over the life-cycle in the GHS, separately for war widows and non-widows with children born in or before 1945.

Figure E2: Employment rate of war widows around the remarriage year



Notes: The figure shows the employment rate of war widows who remarried in the GHS. The x-axis is the event year relative to the year of remarriage.

F A Static Model of Labor Supply

We consider a simple static model of labor supply in which mothers choose consumption c, hours of work h, leisure time l and child-care time t to maximize utility subject to a production function for child "quality" $q = q(t)$, with $q' > 0$ and $q'' < 0$, and constraints for time $l_0 = h + l + t$ and the budget, $c = wh + R_0$, where w is the hourly wage rate and R_0 are other sources of household income (including labor income of the woman's spouse).

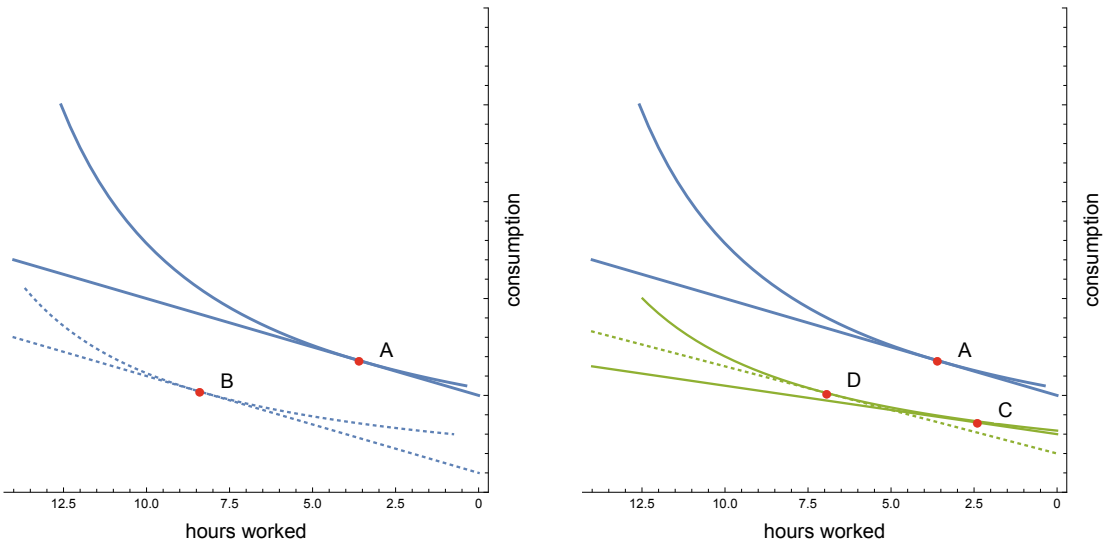
Given the constraints for the budget and time, we can express consumption and hours worked as a function of leisure and child-care time (i.e., $h = l_0 - l - t$), such that the individual's maximization problem simplifies to

$$\max_{l,t} U(c(l,t), l, q(t); \theta).$$

The parameter θ of the utility function represents the "disutility of work", which may vary with age or social norms, i.e. the "stigma" that society might place on working single mothers.[4]

Taking first-order conditions with respect to l and t, the optimal choices of leisure and child-care time are characterized by $\frac{U_l}{U_c} = w$, i.e., the marginal rate of substitution between consumption and leisure is equal to the wage, and $U_q/U_c = w/q'(t)$, i.e., the marginal rate of substitution between consumption and child quality is equal to the ratio between the wage and the marginal effect of child-care time on child quality. The optimal choices of hours worked and consumption follow from the time and budget constraints.

Figure F1: Labor supply of war widows



(a) Income shock from losing one's spouse

(b) Means-tested compensation

Notes: Budget constraints and indifference curves in a static model of labor supply with $U = c^{1/2}l^{1/2}q(t)^{1/2}$ and $q(t) = t^{1/2}$. Sub-figure (a) illustrates the income effect from losing one's spouse, modeled as a reduction in the non-labor income R_0. Hours worked increase from point A to B. Sub-figure (b) illustrates the effect from a means-tested compensation scheme that partially offsets the reduction in R_0 but also reduces the effective take-home wage from work (decreasing hours worked from A to C, solid line), and an alternative policy in which compensation is less means-tested (increasing hours from A to D, dotted line).

Figure F1 provides an illustration how the loss of a spouse (sub-figure (a)) and means-tested compensation schemes (sub-figure (b)) affect hours worked h and consumption c. For this illustration, we assume a Cobb-Douglas utility function with $U = l^{1/2}c^{1/2}q(t)^{1/2}$, $q(t) = t^{1/2}$ and

[4] It might also vary with past work experience, either because of physical exhaustion or because working mothers accumulate experience that improves their attachment to the labor market.

no stigma. In sub-figure (a) we interpret the loss of a spouse as a negative income shock (i.e., a decrease in R_0).[5] The budget curve decreases accordingly (dashed line). Assuming leisure is a normal good, such income loss decreases leisure, decreases time spent on childcare, increases participation, and increases working hours conditional on participation (*income effect*). In the illustration, hours worked increase from point A to B.

In sub-figure (b) we illustrate the effect of a compensation scheme that is partially means-tested. Because the income from additional hours of work crowds out compensation, the effective budget curve is flatter (green solid line) than the corresponding budget curve without compensation (blue line). This reduction in the effective wage rate disincentives labor supply (*substitution effect*); in the example, compensation payments decrease hours worked from point A to C.

Sub-figure (b) also plots an alternative compensation policy that is characterized by lower unconditional payment (i.e., the budget curve has a higher intercept at $h = 0$), which are however less rapidly withdrawn with labor income. Income therefore increases more rapidly with hours worked (dashed green line). As a consequence, the income effect dominates the substitution effect, and hours worked increase from point A to D.

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[5] Given the traditional gender norms at the time, the loss of a husband represents a greater shock to a household's income than time spent on childcare.