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MOBILIZING THE MANPOWER OF MOTHERS: CHILDCARE UNDER THE LANHAM ACT DURING WWII

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ABSTRACT

The Lanham Act was a federal infrastructure bill passed by Congress in 1940 and eventually used to fund programs for the preschool and school-aged children of working women during WWII. It remains, to this day, the only example in US history of an (almost) universal, largely federally supported childcare program. We explore its role in enabling and increasing the labor supply of mothers during WWII using information on the program, war contracts, and employment at the city level. Use of Lanham Act funds for a wartime childcare program was initially controversial. However, the program was eventually well funded per child in average daily attendance and provided generally high-quality care. But it was late to start, limited in scope, and incapable of greatly increasing women's employment in the aggregate. Childcare facilities were funded more in places that already had higher participation rates of mothers and where the wartime need was the greatest. The impact on the children served is still to be determined.

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America was still reeling from the Great Depression when German tanks rolled into Poland on September 1, 1939, and, in hindsight, made a second world war a *fait accompli*. Two days later, Britain and France declared war on Germany. The aerial bombing campaign over London—the "blitz"—began a year later. Orders for American goods by our allies were stepped up and the US military prepared for the inevitable. On December 17, 1940, President Roosevelt told a press conference that despite the US policy of neutrality, we must aid our allies by selling them needed arms and supplies and letting them pay their bills when they could. "Lend-Lease" would pass Congress three months later.

When President Roosevelt delivered his famous radio broadcast to the nation on December 29, 1940, imploring Americans to increase production so the US could become an "arsenal of democracy," unemployment in the US was still around 13%. American workers were delighted to be called back to the factories, mills, and mines of the nation. The first military draft (actually the first peacetime draft in US history) was on October 16, 1940, and the second was on July 1, 1941. There was no apparent labor "shortage" yet in the US, as these were registrations, not mobilizations, let alone deployments.[1] But unemployment rates soon plummeted as labor demand rose and as labor supply was reduced through mobilization. By August 1941 unemployment was just below 10%. By the third draft registration on February 16, 1942, it was 7.4% and by May 1942, it was under 5%.[2]

Contracts to produce war-related goods of all types were issued by a range of US agencies to firms across the nation. A compilation of the almost 191,000 contracts completed from 1940 to 1945 shows that they peaked in number in June 1943, when there were almost 6,000, and that contracts exceeded 1,000 per month even as early as October 1940.[3] The US had asked firms to rev up production of every conceivable item to fight the war on land, sea, and air, and they had done so in the briefest period with an ever-shrinking male labor force.

It was soon clear that the contracts firms had accepted with alacrity were going to be difficult to fulfill due to a lack of labor. Many of the firms were in the small textile towns that dotted the US South. Others were in the US heartland that housed manufacturing facilities strategically placed away from the vulnerable coastlines of North America. Still others were in the larger, well-known industrial centers of America like Detroit, Gary,

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[1] We use the word "shortage" carefully. Wages were not fully flexible upward, and in the short run shortages, as properly defined, emerged.
[2] Official unemployment rates for the early 1940s include those on work relief and are from US Bureau of Labor Statistics, https://www.bls.gov/opub/mlr/2018/images/data/haugen-figure1.stm.
[3] Data are from US Civilian Production Administration (1946), as described in Brunet (2024, forthcoming). We term the dataset the "Brunet-Koustas WWII Contracts Data."

Pittsburgh, and Toledo. And several large contracts were in the shipyards of California and Washington state. Labor had suddenly become the bottleneck.

One way to alleviate the reduction in labor supply due to the draft and the increase in labor demand due to the war contracts was to expand the female labor supply.[4] We explore the role of the Lanham Act, which was used to fund nurseries and extended-hours programs for school children, in enabling and increasing the labor supply of mothers during the war.

Lanham Act nurseries have been celebrated for the past eighty years as the only federally-funded and practically universal preschool program in US history. [5] But there has never been a thorough evaluation of the impact of the Lanham childcare programs and why some cities had funding and others did not. The reasons, to us, are clear.

No one, prior to our work, had ever assembled the nearly full list of the cities served by Lanham Act funding. And there has been no accurate accounting of the expenditures on the childcare programs. Thus, although many have written about the importance of the Lanham childcare programs for the employment of women during the war, the evidence offered has generally been for cities, such as Mobile AL and for firms, such as Kaiser, Ford, and Boeing. Some evidence has been assembled at the state level, but even that, we will note, has not used the correct expenditure data because the historical record has been confusing.

The data we use are at the city level and include war contracts, expenditures on the childcare program, population information from the full count 1940 census, and documents (known as the ES-270 reports) giving contractor employment by city in 1944.

Our main conclusions are that the childcare program arrived somewhat late in wartime planning due to reluctance about a federal childcare program and whether Lanham Act funds could be used for it. Once funded, the facilities were, even by modern standards, well-funded on a per child (in average daily attendance) basis and well run with professional staff, nutritious meals, and long hours needed for the mothers' jobs. But the Lanham facilities, we find, mainly served cities that already had a larger fraction of mothers in the labor force in 1939 than did other places. Not surprisingly these cities also had a greater value of wartime contracts and more claim to being labor shortage areas.

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[4] Rose (2018) concludes that the increase in war production demand, not the decrease in the supply of male labor, was the dominant force in the increase in the demand for female labor during the war.
[5] On the details of the act, see Farrar (1945). For a summary of federal support of childcare, see Cohen (1996). The program lacked universality because the mothers had to be employed, and Black children in many states were in segregated units.

Although we find that the increase in the employment of women from 1939 to 1944 was far greater in cities with Lanham facilities, male employment was also greater in the cities with childcare facilities. We do not have a mechanism for getting a causal impact of the facilities on female employment.

Finally, the program was small relative to the number of children in areas that were served. Consider the following. Of the 3,974 cities that had war contracts, just 529 or 13% eventually had a Lanham facility.[6] Given data on average daily attendance in the facilities, just 2% of the 2-to-11-year-old children in cities with Lanham-funded facilities could have used one of the programs at any point in 1944, when attendance was at its height.[7] Yet, we also know that some of the facilities were of critical importance to working mothers during the war and that almost three-quarter of cities with the greatest deficits of labor, according to the US War Manpower Commission, had a Lanham Act funded childcare facility.

But before we can analyze the impact of the Lanham facilities, we must discuss the involved legislative history of the program, why it was late to start, and how we have obtained information that has eluded many other careful researchers.

1. The Lanham Act and the Evolution of Wartime Childcare Programs

1.1 The National Defense Housing (or Lanham) Act

Despite its fame, an insufficient amount is known about the Lanham childcare program. For example, even after an extensive search we have not located lists of the cities with facilities except for certain states, such as California.[8] Addresses and names of the facilities are almost entirely lacking. There is no accurate accounting of expenditures by city. Provisional accounts of funding, given in the Congressional Record and used by some researchers, are incorrect.

As production for the war increased and as the multitudes moved to small towns and already overcrowded cities, the need for infrastructure of all types—water, sewerage, schools, housing—grew. Added to these requirements was the fact that government projects had slowed during the Depression resulting in dilapidated older structures and

[6] 664 cities had Lanham facilities, but 135 of these were apparently near cities with wartime contracts or were military or training bases.
[7] There were about 5 million 2-to-11 years olds in Lanham cities in 1944. The average daily attendance of all the Lanham-funded nurseries and extended-hours programs was 109K maximum during the summer and 80K maximum outside the summer months. One qualification is that we use aggregates and not whether a particular mother ever used a Lanham facility.
[8] Extensive lists exist for the Works Progress Administration (WPA) childcare facilities, e.g., US Office of Education (1936).

fewer newer ones, such as schools.

The National Defense Housing Act, popularly known as the Lanham Act after Representative Frederick "Fritz" Lanham (D-TX) its lead sponsor, was signed into law in October 1940.[9] The Act allocated federal funds for the construction of facilities in areas impacted by war production. The Federal Works Agency (FWA), the parent agency of the Works Progress Administration, controlled the funds.[10]

In June 1941, Congress passed Title II ("Defense Public Works"), which amended the Lanham Act to allow federal funds to be used for the *operation and maintenance* of facilities not just for their *construction*.[11] Title II would soon open the door for the use of Lanham funds for childcare facility expenditures. The provision gave the President authority to allocate FWA funds in cases of national defense emergencies. But it took more than a year of political wrangling for the bulk of the funds to be allocated.

1.2 Funding Wartime Childcare Programs from the Lanham Act

The nursery schools (care for preschool children) and extended-hours school programs (also termed programs for school-age children) that would eventually be funded by the Lanham Act were announced on August 31, 1942. In October 1942, a nursery school operated by New Haven (CT) Teachers College became the first to receive funds.[12] Starting around January 1943, hundreds of cities and communities across the US began to apply to the FWA for grants.[13]

National conferences had been held earlier on the various ways states and localities could facilitate the care of the children of working mothers.[14] Communities across America had already been funding programs to aid working mothers so that young children would not be left alone after (or before) school and so that 2-to-6-year-old preschool children would be cared for during the day. The care of infants was discussed, but most agreed that

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[9] The Lanham Act (Public Law 849, 76th Congress, passed October 14, 1940) set up a War Housing Program under the jurisdiction of the Federal Works Administrator. Executive Order 9070 on February 24, 1942 shifted that responsibility to the National Housing Agency.
[10] See Stoltzfus (2000).
[11] Title II states: "Whenever the President finds … an acute shortage of public works … the Federal Works Administrator is authorized … to relieve such shortage" (Damplo 1987, p. 27). Title I was "Defense Housing."
[12] Gesell (1943) notes the long-standing interest in New Haven in childcare and its seven WPA units.
[13] Index cards (see US NARA, Record Group 171) give approval dates for childcare funding from the Lanham Act and show that most began in early 1943, although a few were dated 1942.
[14] Regional Day Care Committee (1943) is a compilation of ways the program was formulated and announced to the states. Funds were approved for educational purposes around October 1942. Best practices for the nurseries were suggested in US Department of Labor, Children's Bureau (1942).

they would not be included in the federal childcare program.

The wartime preschools followed on the heels of the Works Progress Administration (WPA) nurseries of the Great Depression.[15] Those nurseries were set up for the young children of unemployed and poor parents on work relief. The program was meant to ensure that the nation's preschool children would be nourished, healthy, and mentally sound as we traversed a devastating period of economic depression. The goals of the Lanham Act childcare program differed. Wartime childcare was to help America's mothers of young children take jobs in a robust economy of labor shortages.

The WPA nurseries decreased in number as the economy returned to normal. Although their funding ended in December 1942, many WPA nurseries operating in cities with war contracts were repurposed before funding ran out.[16] On July 2, 1942, Congress passed the Emergency Relief Appropriation Act for FY 1943 that allocated "not less than $6 million … for the operation of day nurseries … for the children of employed mothers."[17] The President added $400K from his emergency fund to help cities apply for funds.

Around the same time, the FWA used an interpretation of the June 1941 amendment, mentioned previously, to expand childcare funding beyond repurposing WPA facilities.[18] But, Congress and the Roosevelt administration wrestled until late August 1943 regarding how to redeploy the Lanham Act funds for childcare and which agencies would be in charge.[19] Consider that a proposed amendment to the Lanham Act, (known as the Thomas Bill, S. 1130, "War-Area Child Care Act of 1943"), passed the US Senate unanimously in June 1943 and would have transferred the funds from the FWA to child-related agencies. In the House, it died in committee.[20]

Instead, Public Law 150, passed by Congress July 15, 1943, increased the allocation from the Lanham Act to the FWA. But disagreements remained. Finally, the various agencies that had vied for control of the childcare funds, including the FWA and the Federal Security

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[15] See US National Advisory Committee on WPA Nursery Schools (1940).
[16] Testimony by Charles Phelps Taft of the Federal Security Agency in May 1943 noted that many WPA nurseries, perhaps 400, could be redeployed as Lanham nurseries (US Senate 1943a, p. 12). We have found evidence that about 240 WPA nurseries later became Lanham nurseries.
[17] Damplo (1987, p. 24). The $6 million was WPA funds, not from the Lanham Act.
[18] See Damplo (1987, p. 11, 26) for a careful analysis of the early use of Lanham Act funds for childcare and also for federal funds use, through the US Maritime Commission, for the childcare program run by Kaiser, and for migratory farm workers, through the Farm Security Administration. See also US Department of Labor, Women's Bureau (1953), p. 18.
[19] Localities and states wanted freedom from the DC bureaucracy, child advocates wanted oversight, and the FWA wanted to retain control of the funds.
[20] See US Senate (1943a). Childcare funds would have been transferred to the US Office of Education and the Children's Bureau and then distributed to states and localities (Strickland 1944).

Agency (FSA), met during the summer of 1943 to iron out their differences.[21] An agreement was forged that divided responsibilities and enabled the childcare program to move forward. It was approved by President Roosevelt in August 1943.[22]

P.L.150 apparently put a ceiling on total future federal childcare expenditures at just $40 million. Subsequent Congressional testimony reported provisional federal expenditures well in excess of that number (US House of Representatives 1945). Yet, the *Final Report of the War Public Services Programs*, issued July 1946, clearly shows that the FWA kept close to the $40 million limit after 1943. Federal outlays were just shy of $20 million in FY 1944, decreased to $14.0 million in FY 1945, and were $7.1 million in FY 1946, or $41.1 in total (US Bureau of Community Facilities 1946). Total federal outlays were around $51.9 million, including the approximately $10 million allocated before 1944. The provisional numbers reported in the Congressional testimony had been far greater and have been the source of confusion regarding federal expenditure on the program.[23]

Another part of the program's cost was paid for by parents and localities. In fact, the federal government was not authorized to pay for the children's meals.[24] When the programs were first proposed, it was assumed that parents would pay half the cost, but their contribution was not supposed to exceed $0.50 per day (that was later increased), and in some cases of need would be far less. In the end, parents probably covered 20% of the full cost, the federal government about 65%, and local governments, firms, charities, and a few states covered the rest. School district funds could not, by law in most states, be used for preschool programs, but they could be used for the extended-hours school programs.

1.3 Mobilizing Mothers and Childcare

The federal government, beginning in 1940, mounted a colorful and wide-ranging propaganda campaign to get women into factories and offices, and to enlist them in the women's auxiliary armed services. Posters were aimed at a range of women from single daughters with watchful fathers, to recently married women longing for their military husbands to return, to older women with proud husbands. But none of the thousands of posters we have viewed features a woman with a young child, and there are no posters of a proud school child whose mother was employed in a munitions factory.

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[21] The FSA was the precursor to the Department of Health, Education, and Welfare and thus would have had significant control of the childcare funds had S. 1130 become law.
[22] US Department of Labor, Women's Bureau (1953), p. 18.
[23] The totals by state for Nov. 1943, fiscal 1945, and fiscal 1946 for the federal government sum to more than $80.96 million. See US House of Representatives (1945). Many researchers (e.g., Herbst 2017) have accepted the provisional state funding numbers for FY 1945 and FY 1946.
[24] Meals were paid out of parental contributions as Lanham funds could not cover food.

Of all demographic groups, mothers with pre-school children were the most resistant to employment, and the nation, as well, resisted employing them.[25] It would be an uphill battle on several fronts to move mothers of young children into the workforce. Nursery school programs would have to be high quality, for in the minds of Americans in 1941, federal nurseries were associated the WPA and with the poorest of Americans.

And it wasn't just the mothers of preschool children who were difficult to employ. Since school often started after the workday began and generally ended before mothers could be home, even women with school-aged children found employment challenging.

Yet even before federal childcare programs were established, some mothers of young children, especially those with husbands overseas or in military training camps, had ventured into factories and shipyards. Many were enticed by the ability to earn substantial amounts and others to be part of the nation's war effort. Their children were taken care of by a host of caregivers, although some were reported to be inadequate (US Senate 1943a).

Something had to be done, and there could be no missteps with the wartime nurseries, or else mothers and the general public would be indifferent at best and hostile at worst. Personnel would have to be professionally trained. The programs would have to be engaging, nutritious, healthful, possibly educational, and the hours extensive.[26] The programs that were eventually offered to preschool and school-age children were available year-round and on weekends. Extended-hours programs for 6-to-11-year-olds were generally available from 7am to 7pm, some even longer. Average daily attendance was highest in the summer months when public schools were not in session (California Legislature 1947, table 44a). We should note that the dependent children of *all working parents*, regardless of sex and employment, were eligible.

2. Lanham Act Childcare Facilities by City

2.1 Identifying Lanham Cities

We have compiled a listing of 664 cities with federally-funded childcare programs

[25] The War Manpower Commission requested that industry only employ women with young children after other labor supplies were exhausted (Bond 1945). In 1977, when the General Social Survey (GSS) first asked whether respondents believed that a "pre-school child would suffer if the mother worked," the vast majority of Americans, and even half of all women 20 to 34 years, agreed (authors' calculations from the GSS).

[26] Instructions came from the US Office of Education (1943) in the form of leaflets, such as "School Children and the War Series," Exhibit 10, Attachment 2 of Regional Day Care Committee. See also the "Standards for Day Care of Children of Working Mothers" in US Department of Labor, Children's Bureau (1942), which was distilled from a 1941 Children's Bureau conference of the same title.

(589 were funded to November 1943 and an additional 75 subsequently received Lanham funds). We have appropriations data for 581 of the 589. According to the FWA administrator, the number of communities served increased to 685 by FY 1945 and was expected to rise to 723 by FY 1946 (US House of Representatives 1945, table 5B). Therefore, we have probably identified most of the cities served during the bulk of the period of funding. Because the war ended in 1945, many of the planned areas never materialized. We have mapped the majority we have found in Figure 1, showing the concentration of Lanham cities in the South and West.

Requests by cities and municipalities to receive federal funding through the FWA had to be justified by demonstrating labor supply shortages in fulfilling government contracts and a potential supply of women who would work if their children were adequately cared for. The US War Manpower Commission classified areas as having an "existing or impending critical labor shortage" (US FWA 1944, p. 10; also in the ES-270 reports, to be discussed below).[27] Some cities, such as New York City, could not prove a labor shortage. But most large cities, including Chicago, Los Angeles, Philadelphia, San Francisco, and St. Louis, could and many smaller ones did.

When cities were approved for Lanham childcare funding by the FWA in the months before July 1943, an index card for each was typed containing the expected number of units to be funded (for nurseries and extended-hours programs, separately) and the expected number of children in each of the two programs. The city and state were listed on the card, but not the precise site or address, which may not have been known at the time. Also included was the funding amount agreed upon by the federal government.[28]

We have added cities and funding amounts from FWA data in US Senate hearings in 1943, providing the amounts the federal government allocated for cities and the funds to be provided by the "sponsors," which generally meant parents, local (rarely state) governments, and other institutions. A tentative accounting was done for May 1943. Another gave the amounts approved by the President in November 1943 (see US Senate 1943a, 1943b). Subsequent lists of outlays were aggregated by state.[29] We have found a few

[27] Collins (2001) and Rose (2018) also use the ES-270 reports. The reports are in US War Manpower Commission (1942 to 1946).
[28] The index cards are part of US NARA, Record Group 171, Office of Civilian Defense and were accessed for this project.
[29] US House of Representatives (1945) contains outlays by state but not by city. Note, however, that appropriations do not appear to have been made at the levels given. FWA Annual Reports and its final report (US Bureau of Community Facilities 1946) show much lower final levels.

lists of programs by cities after 1943, including for California and New York, and the FWA final report of Lanham childcare units existing after federal funding had ended.[30]

2.2 Which Places Received Childcare Programs and Funding

Of the 664 cities we have identified as having received Lanham Act childcare funds, 15% were deemed by the US Manpower Commission (and listed in the ES-270 reports) as having been subject to labor force shortages. But almost all the cities in those reports had 1940 Census populations that exceeded 50K. Put another way, of the 399 US cities in the ES-270 report (of November 1944), fully 55% had childcare services funded by the Lanham Act, and 85% did with 1940 populations in the top quarter of that group. Among those deemed in current serious labor shortage by the Commission, 74% received funding. In addition, almost every large city in the US with a war contract received some Lanham childcare funding. Childcare funds were clearly being allocated to areas of labor need, to larger cities, and to those with bigger defense contracts.

Yet, the evidence will reveal that there were several other considerations. For example, a disproportionate share of the funds, relative to population and war contract value, went to small cities, often in the South and the West. A small city or a town with a factory running overtime will appear to have received a disproportionate amount of Lanham funds given population relative to a larger city with a similar factory only in one neighborhood.

Table 1 shows the distribution of the Lanham cities, mean funding per capita, and median funding per war contract dollar by Census division. New England and the East North Central divisions received the smallest amounts on either a per capita or war contract value basis. The South Atlantic, Mountain, and Pacific divisions received the most per capita and per war contract value. We will discuss the war contract data in more detail below.

Similar findings are observed in state-level data (see Appendix Table 1A), covering all war contracts and all Lanham sites. Our funding data is more accurate and complete at the state than at the city level, the main unit of observation here. We find that the ratio of Lanham childcare expenditures (1943-46) to the total value of all wartime contracts (1940-45) was highest in the Southern, Mountain, and Pacific states and lowest in the states of the Northeast and Midwest. For example, South Carolina received 14 times as much Lanham childcare money as did Connecticut, and Georgia received 18 times as much as did New Jersey, each relative to the dollar value firms in each state had in war contracts.

[30] Bond (1945) for NY, California Legislature (1947), and US Bureau of Community Facilities (1946).

We explore the factors that determined which cities received Lanham facilities, in particular the demand for labor and the degree to which mothers could be employed. Communities had to request funds, and some found that to be overly cumbersome.[31] Among the factors that would make a community more able to obtain Lanham funds were the ability of firms to employ women and the increased demand for the firm's products, as indicated by the value of wartime contracts. Another would be the existence of large employers that were willing to train and employ women in factories and shipyards.

To examine the factors that determined which cities were chosen and their level of funding, we use the (probably) full list of the almost 191,000 war contracts in 3,974 cities. Each contract entry contains the product name, firm, value, and dates. We have collapsed the data to the city level and created 26 product categories mapped to 1940 industry codes (see Appendix Table 2A). Each city has an indicator for whether it had any contract in an industry. The total value of contracts has also been aggregated to the city level. Whether or not the city was listed in the ES-270 reports as a labor shortage area is included as an indicator of the tightness of the labor market. Finally, we have demographic information from the 1940 census giving total population and the labor force participation of women with children in different age groups.

Our analysis is at the city level. Each city, *i*, is categorized as to whether it ever received funding for a Lanham (*L*) facility, taking on a value of 0 or 1 and is estimated as a linear probability model. Cities that can be identified in the 1940 full count micro-data census have population data (*logPop*) and information on the aggregate labor force participation of mothers with children in various age groups (*lfpr*). We use the 6-to11-year old group since mothers' participation rates by their childs' ages are highly colinear within cities. The (log) value of all war contracts (*logValue*) is included, as are dummy variables (Ind^j) for any wartime contract in each of the 26 industries. Whether or not the city was surveyed in the ES-270 reports is included with the labor market group each was assigned ($Group^G$) indicating the degree of labor market tightness from most (G = 1) to labor surplus (G = 4).[32] Nine Census division (*D*) dummies are included.

Our Lanham-contracts-population regression sample has 2,923 cities of which 489, according to our data, had Lanham facilities.[33] We also have 581 Lanham cities with expenditure data (*logExp*), of which 452 also have wartime contract and population data.

[31] See Chafe (1972, pp. 166-70) on the difficulty accessing funds and funding delays.
[32] These assignments are as of November 1945.
[33] The contract sample has 3,974 cities of which 2,923 can be identified in the 1940 full-count census. One city is dropped because it had no mothers with a 6-to-11-year-old child. The 1,051 cities that cannot be identified had mean contract values that were 40% of those that could.

The two regressions in Table 2 are given by eqs. (1) and (2) to help us understand why some cities received childcare funds and how much they received.

$$L_i = \alpha_1 + \alpha_2 logPop_i + \alpha_3 logValue_i + \alpha_4 lfpr_i + \gamma Group_i^G + \rho D_i + \omega Ind_i^j + \epsilon_i \quad (1)$$

$$logExp_i = \beta_1 + \beta_2 logPop_i + \beta_3 logValue_i + \beta_4 lfpr_i + \delta Group_i^G + \tau D_i + \sigma Ind_i^j + \varepsilon_i \quad (2)$$

We first address, using eq. (1), what determined which of the almost 3,000 cities received Lanham funds. We find, in Table 2 col. (1), that the placement of facilities was a positive function of the total value of the contracts and of the 1940 city population (both in logs). Holding both constant, contract cities with the tightest labor markets (as given by the ES-270 groups) were far more likely to receive Lanham funds. In fact, cities in Group 1, which were deemed to be an extreme labor market shortage, had an increased probability of receiving Lanham childcare funding of 26 percentage points above those in Group 4 or those not on the ES-270 list. Given the ES-270 groups, population, and the industry of the contracts, the value of the contracts had only a minor effect.

The likelihood of having a Lanham facility was considerably higher when the city had a contract in one of the more male-intensive products, such as aircraft, chemicals, and motor vehicles, which had critically important and large defense contractors. Having any contract in chemicals, for example, increased the likelihood of getting a Lanham center by about a third. But the largest coefficient, for the industry dummy variables, was that on service contracts, a highly diverse group in which many of the firms were universities and colleges possibly in cities skilled at getting government funding or unique in their provision of professional services.[34]

Places that were larger, had firms with bigger contracts with the defense industry, produced critical wartime products, and were in areas deemed in severe labor shortage had good reason to apply for funds. The FWA, furthermore, had good reason to favor those areas. That is not surprising.

What may seem surprising is that the labor force participation rate of women in 1940, especially those with school-aged children (6-to-11-years), was *positively* and strongly related to the likelihood of getting funding for a childcare facility or an after-hours program.[35] A one standard deviation increase (0.118) in the pre-war participation rate of

[34] Many of these contracts were for training of some type.
[35] The participation rate of women by age of children is highly colinear and we cannot differentiate the role of the employment of women in general from those with young children. The R-squared is highest using the school-aged (6-to-11-year-old) group.

these mothers increased the likelihood of getting a Lanham facility by about 18%.[36] But there are many reasons why we should not be surprised with that finding.

The facilities, as we have pointed out, were long delayed, and places with mothers who had a greater desire for employment would have had greater need for childcare. More children were being left with relatives and neighbors or were on their own after school. Furthermore, the credibility that facilities would be used mattered when funding was decided. The finding, moreover, would not have surprised contemporaries. A Women's Bureau Bulletin about wartime industries noted that "the group of wartime-employment women contained a markedly high proportion of women with extended work experience" (US Department of Labor, Women's Bureau 1946, p. 4).

Finally, given (log) city population, the (log) value of its war contracts, and the participation rate of its mothers, states in the Pacific, Mountain, and East South Central divisions had a much higher probability of receiving a Lanham childcare program than did states in other divisions. That finding echoes those mentioned previously in our discussion of Table 1.

We also have information on the amount spent by city on Lanham nurseries and extended-hours programs through November 1943, which we analyze in Table 2, col. (2). Whereas the location was dependent on the apparent desire of mothers to be employed, as given by the 1939 employment of women with school-aged children in a city, the amount spent on the facilities per city was more dependent on the population of the city, the total value of the contracts, and the division. Given the size of the place, the value of the contracts, and the type of product, funds were greatest in the states of the South Atlantic and Pacific divisions. Funds were also greater in areas with contracts for textiles, possibly because there were more children per member of the population to serve in those cities.

In sum, we find that cities with higher pre-war participation rates of the mothers of young children were *more* likely to receive Lanham-subsidized childcare services. The facilities were not so much expected to encourage women to enter the labor force as they were to reduce the toll of the war on children and families and decrease turnover rates of employed mothers.

2.3 Expenditures per Child on the Programs

In evaluating the role of the childcare centers and extended-hours programs, it is useful to understand the financial resources eventually spent per child in average daily attendance. We will show that the preschool or nursery program was exceptionally well

[36] The increase is 3 percentage points when the overall likelihood of getting a program was 0.17.

funded relative to per capita income, even by current standards. Other evidence on the nursery program points to their excellent care. But because expenditures were for the two programs together, we must first separate the amounts.

The method we use is the following. The FWA index cards list the approved federal outlays as of July 1943 and the approximate numbers of children in each program. The cards do not have total funding, since localities and parents (the "sponsors") also contributed. Information for 1943 shows that federal outlays were around 55% of total expenditures, and that increased to 65% in later years. Another issue, already mentioned, is that the approved outlays by July 1943 were not always eventual funding amounts.

The main assumption of the estimation is that the funds were used only for items usually considered variable costs (e.g., teachers, cooks, materials, utilities) and not fixed costs (e.g., buildings), a requirement for the use of Lanham funds. We use the data for each city *i*, giving federal expenditures (Exp_i) and the number of children in the two programs, nurseries (N_i^{2to5}) and extended hours (N_i^{6to11}), to estimate the amount per child for each of the two programs (given by the coefficients α and β). Because there are no fixed costs, the regressions in Table 3 contain no constant term. An estimation is done for each of the divisions and for all cities.

$$Exp_i = \alpha N_i^{2to5} + \beta N_i^{6to11} + \xi_i \qquad (3)$$

Using the Table 3 estimates, we obtain the per child cost for the nurseries relative to the school-age programs. We then employ total appropriations and expenditures for the full period, as well as the number of children in average daily attendance across the full period, to obtain average annual allocations per child. Finally, we compare the estimates we produce to cost study estimates for select cities.

The per child federal allocation as of July 1943, as seen in Table 3, row (1), was about $113.5 for each nursery school child and $23.8 for each extended-hours child (all in 1943 dollars).[37] Allocations varied by division (as seen in rows 2 to 7) with higher amounts allotted per nursery child in the Northeast and far lower amounts in the more rural parts of the nation. Differences by division for the extended-hours programs may have to do with differential subsidies from public school districts.

The estimated ratio of the preschool to school-age program federal allocation is 4.77. But the ratio would be lower if other funds went equally to each rather than proportionally, and it is likely that local funds went disproportionately to the school-age programs. Furthermore, the parental charge was often the same for each program. We will

[37] These amounts were funding approvals; appropriations would come later.

use an estimate for the ratio of 2.5 to compute expenditures per child for the nursery and school-age programs and explore sensitivity to that estimate.[38] The higher the ratio, the greater the estimated amount allocated to the preschool program.

Total federal outlays from August 1943 to May 1946 on the two programs were $51.923 million and total expenditures (including that from localities, parents, and others) were $77.931 million. There were 37,773 preschool children in average daily attendance per month and 26,058 school-age children, from August 1943 to February 1946.[39]

Using total outlays and child numbers for the full period from August 1943 to February 1946 and assuming that each preschool child cost 2.5 what each school-age child did, we estimate that $627 was spent on each preschool child and $251 on each school-age child.[40] These back-of-the-envelope calculations are similar to those from cost studies in the final report of the FWA. For example, the operating cost of childcare in a nursery for 22 days per month and 11 hours per day across five Montgomery County, MD cities was $45.70 or $548.40 per year.[41] The operating cost across California during 1944-45 was $610 for preschool centers and $325 for extended day care, all using average attendance.

If these numbers accurately reflect the per child expenditures on the nursery program—and they likely do—the total amount spent would have been around 24% of median family earnings in 1945.[42] These were meant to be high-quality programs, and given the amount spent on each child, they probably were. One reason expenditures were high per child was that the number of children served was never as large as was expected, as given by the estimates on the approval cards from the first half of 1943.

3. The Role of the Lanham Act in Mobilizing Mothers during World War II

We have, thus far, investigated Lanham childcare facilities, where they were funded, and the factors that guided funding agencies. But can we get a sense of their impact? The ES-270 reports, mentioned previously, provide data on female (and total) employment by city in 1943 and 1944. Employment in 1939 at the city level is available from the 1940

[38] Cost estimates for Dallas, TX give a ratio of 1.87; those for California give 1.88 (US Bureau of Community Facilities 1946, tables 8 and 10).
[39] Outlays are from US Bureau of Community Facilities (1946), pp. 78-9, table 5 and children in average daily attendance are from p. 80, table 6 (identical to California Legislature 1947, p. 286).
[40] We get $585 and $311 if we use the ratio of 1.88 from the California cost study.
[41] The period of the cost study in MD is not given but appears to have been for two months in 1944 and was prepared to determine the fee to parents. See US Bureau of Community Facilities (1946), table 5. Costs in MD may have been somewhat lower than in the non-South.
[42] Median income for families and individuals in 1945 was $2,595 (US Bureau of the Census 1948). Childcare costs for 2-to-5-year-olds vary widely, but 25% of median income is a common ballpark estimate for such care today.

census.[43] The difference between the two numbers could be viewed as the increase because of wartime demand and possibly due to whether Lanham facilities existed. But it isn't that simple.

The ES-270 reports are for only reporting contractors (generally in the larger cities), whereas the 1939 data are for all employments in all locations reported in the US Census. Another complication is that there was considerable migration to certain cities. Finally, because we don't have random variation in childcare facilities, the increase in employment between 1939 and 1944 may not have been due to the existence of a facility, but rather to why the facilities were funded. But because we have evidence for both female and male employment for 1939 and 1944, we can see if the employment of women was more correlated with the childcare facilities than was that of men.

We use the 290 cities in the ES-270 report that are also in the 1940 population census and the contract data to estimate the relationship between (log) employment in 1944 (*logEmp44*) and whether the city received Lanham childcare funding (*Lanham*), given the (log) employment in 1939 (*logEmp39*) and the value of war contracts in the city (*logValue*) also including division dummies (*D*). That is, we estimate versions of eq. (4) at the city *i* level for female (*f*) and male (*m*) employment in two separate regressions:

$$logEmp44_i^{f,m} = \gamma_1 + \gamma_2 Lanham_i + \gamma_3 logEmp39_i^{f,m} + \gamma_4 logValue_i + \theta D_i + \eta_i \quad (4)$$

The results are given in Table 4 cols. (1) and (3). We also add the 26 industry dummies and the ES-270 groups, similar to eq. (1). Those results are given in cols. (2) and (4).

The coefficients in Table 4 cannot be given a causal interpretation since Lanham facilities were placed in cities with more demand for female defense workers. In fact, fully 57% of the 290 ES-270 cities included in Table 4 had Lanham childcare funding. Yet it does seem that Lanham facilities were more related to the employment of women in defense work in 1944 than they were to the employment of men in defense work. The statement is robust to including a full set of industry dummies and the ES-270 group dummies.

The relationship between female defense employment in 1944 and Lanham facilities, given total employment in 1939 and the value of defense contracts per city, is strong. The existence of a Lanham facility is related to a 40 log point increase in 1944 defense employment, given all the other factors and to a 28 log point increase including the industry and ES-270 dummies. The relationship is substantial for male employment, but less so, as would be expected. We have also done the same estimation for only the ES-270

[43] The ES-270 employment data, at the city level, begin in May 1943. We use the November 1944 report. The difference in employment from May 1943 to November 1944 was small.

cities deemed by the US War Manpower Commission to be in extreme labor deficit (Groups 1 and 2). Within those cities, the existence of a Lanham facility might be thought of as closer to random. But we find no effect from the same estimation, which would argue more for the selection than the causal explanation.

Given the data available, all we can say is that the Lanham childcare facilities were placed in areas of greater need but may have, in addition, increased the employment and retention of mothers.

4. Summary and Conclusions

Childcare facilities were important in many cities during the war to keep children safe and to preclude front-page stories of child neglect that might have endangered the defense program. But the programs never achieved the enrollment levels they were intended to reach during the planning phase in mid-1942 to spring 1943 and even had they done so, that would have been a small fraction of the children that could have been served.

The number of preschool children, 2-to-5-years-old, intended to be cared for in the 436 cities that included such information on the initial index cards created prior to July 1943, was 73,363.[44] The number of school-age children planned for by the 269 cities that requested funds for the extended-hours programs was 107,529. But average monthly enrollment in 1944 for the preschool group was just 52,330, or 71% of the planned number for just 436 cities of the eventual number of about 630. In fact, total enrollment of preschool children hit 73,660 in May 1945—its maximum—when the number of cities served by these programs exceeded 600. The number of school-age children served was 76,917, its maximum, in August 1944.[45]

It should be no surprise, therefore, that the number of mothers whose mobilization was facilitated by the childcare facilities was never substantial in the nation as a whole or even in the cities that participated. Findings from surveys by the Women's Bureau, mainly from spring to fall 1944 and early 1945, of employed women in ten major war production cities reinforce our conclusions.[46]

The ten cities were among the most important centers of US war production. Three

[44] Although we have data for 446 cities, ten were approved for the extended hours program but not the nursery school.
[45] Enrollment numbers by month and the maximum number of projects are from California Legislature (1947, table 44a, p. 286).
[46] US Department of Labor, Women's Bureau (1946), p. 56. The cities surveyed were Mobile AL, San Francisco CA, Wichita KS, Baltimore MD, Springfield, MA, Detroit MI, Buffalo NY, Dayton OH, Seattle WA, and Kenosha WI. All but Kenosha had Lanham-supported childcare programs.

were in the top ten by contract value and five others were in the top thirty. The Women's Bureau surveys found that among all employed women with children younger than 14 years, 5%, across all the cities, stated that any of their children was cared for in a nursery school. Of those with children younger than 14 years, around 25% would have had a child of nursery school age (2-to-5-year-old). Therefore, the fraction of employed mothers with preschool-aged children who used any nursery school in the ten cities would have been more like 20%.[47]

Therefore, even though only about 2% of all children 2-to-11-years-old in Lanham cities were in the care of a nursery or extended-school program at any moment, a substantial segment of the employed mothers of young children could have used the facilities. Oddly, although there were Lanham facilities in all but one of the cities (Kenosha), the Women's Bureau report never references the nurseries or the extended-hours school programs. If the programs had been essential to the wartime employment of mothers, one would have expected some mention.

The Women's Bureau survey also reported that 20% of all employed women across the ten production areas had children younger than 14 years. That figure for 1939 for the same cities was around 12%, showing the large increase in the employment of women with young children in these wartime production areas. It is also likely that around 8% to 10% of all women in the relevant age group in these ten cities had children younger than 14 years *and* were employed in 1944/45.[48] That figure in 1939 was more like 5%.

Women with young children may not have been a large part of the female reserve labor force in 1945 as the war was ending, but their importance had greatly increased during the war. In addition, detailed planning and projections done in February 1942 by the Office of Community War Services demonstrate the possibility that women with young children could have provided an even greater reserve labor force had the war continued.[49] That they were not is our good fortune, as well as theirs.

We would be remiss if we didn't mention what happened to the Lanham facilities after World War II. Federal funding of the childcare facilities was predicated on wartime

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[47] We assume a uniform distribution from ages 2 to 13 and that no mother of a child younger than two was employed, biasing our calculation upward. Note that Kenosha was the only non-Lanham city among the ten, and no mother in Kenosha claimed to have used a nursery school. Across the ten cities, about 60% of working women with children younger than 14 years had only one child.
[48] Among all women 20-to-44-years-old, 40% were employed in March 1944 (Goldin 1991, p. 748). The percentage was likely greater in the ten cities surveyed. The 8% figure uses 40%; the 10% figure uses 50%. The data for 1939 comes from calculations using the full count 1940 census.
[49] NARA, RG 215, Records of the Office of Community War Services Day Care Division, Entry 46, Box 2, Folder "Day Care Under Community Facilities Act."

necessity. But because some of the military remained away from home even after the Potsdam Agreement and VJ Day, the funding of Lanham projects continued. All projects eventually ended on February 29, 1946.

The units had important demonstration effects, and families and firms in various parts of the nation lobbied to keep the preschools and nurseries open. Despite that urging, California was the only state to continue to fund preschools after World War II through its public school system. In Cleveland (OH), for which the funding was not through the public school system, a lower court ruled that because the childcare centers did not "render any service of charity … [they] are unlawful and constitute an attempt to *supply public funds for a private purpose* in competition with private enterprise."[50]

In sum, we have discussed the fact that the childcare programs funded by the Lanham Act came into being in fits and starts, were not universally supported in Congress, and became a political football more generally. Our estimates show that, on a per child (average daily attendance) basis, they were eventually well funded. While they could have had only a small impact on the aggregate employment of mothers, they could have been of real importance in particular cities and industries. The nursery schools could also have had large and positive effects on the children later in their lives, a topic we will soon be able to explore.

[50] Ferrie v. Sweeney et al. (1946).

Table 1: Distribution of Lanham Childcare Cities, c. 1943, and Funding per Capita and per War Contract Value by Census Divisions

Division	(1) Cities with Lanham Childcare Facilities	(2) Percent of (1) by Division (∑=100)	(3) Mean Funding per Capita by Division	(4) Median Funding per War Contract Value by City
New England	49	7.4	0.96	0.62
Middle Atlantic	73	11.0	1.18	0.84
South Atlantic	120	18.1	1.87	2.51
East South Central	64	9.6	2.01	4.82
West South Central	41	6.2	1.35	1.69
East North Central	98	14.8	0.86	0.39
West North Central	38	5.7	0.91	1.24
Mountain	41	6.2	2.04	7.89
Pacific	140	21.1	2.88	2.92
Number of cities in column	664	664	505	480

Sources: California Legislature (1947); NARA Record Group 171 FWA cards; US Senate (1943a, 1943b).

Notes: Cols. (1) and (2): The FWA cards include data on 448 sites that requested funds by mid-1943. Data from US Senate (1943a, 1943b) give information on sites that received federal funding by 1943 (321 were approved by the President as of May 31, 1943 and 551 in November 1943). The 1947 California state legislature report contains information on 75 additional sites, but without appropriations data, in operation when federal funding ended. The data in this table are the union of all four lists. Funding includes all sources and is given by total allocations for November 1943. If that is missing, we use May 1943, and if that is missing, we use the federal allocation on the index cards divided by the mean of federal/total cost for November 1943 of 57%. Col. (3): "Funding per capita" is computed by dividing by the population 20 to 64 years old in 1939. The means and medians are weighted by population, so they are aggregate values rather than the average of the cities. Col. (4): "Funding per war contract value" is computed by dividing by the value of war contracts. Note that population and contract data do not exist for all cities.

Table 2: Correlates of Lanham Preschool and School-Age Childcare Programs

	(1) Lanham = 1	(2) Log (Lanham Expenditures)
Log (city population, 20-64 years old)	0.0754***	0.273***
	(0.00656)	(0.0596)
Log (Value of war contracts, in thousands $)	0.00756	0.106***
	(0.00399)	(0.0288)
LFPR of mothers with 6-to-11 year olds	0.242***	-0.592
	(0.0609)	(0.545)
Group 1, ES-270 cities	0.256***	0.303
	(0.0415)	(0.160)
Group 2, ES-270 cities	0.150***	0.0637
	(0.0306)	(0.136)
Group 3, ES-270 cities	0.140***	0.0812
	(0.0338)	(0.147)
Group 4, ES-270 cities	0.0262	0.0530
	(0.0409)	(0.209)
Divisions (New England omitted):		
Mid-Atlantic	-0.0535	0.306
	(0.0313)	(0.195)
South Atlantic	0.0558	1.024***
	(0.0341)	(0.208)
East South Central	0.106**	0.906***
	(0.0374)	(0.216)
West South Central	-0.0463	0.704**
	(0.0380)	(0.242)
East North Central	-0.0204	0.523**
	(0.0316)	(0.186)
West North Central	0.00944	0.194
	(0.0362)	(0.229)
Mountain	0.102*	0.774**
	(0.0459)	(0.262)
Pacific	0.231***	1.128***
	(0.0369)	(0.198)
Industries (selected):		
Aircraft	0.0374	-0.0221
	(0.0220)	(0.123)
Chemicals	0.0610***	-0.198
	(0.0178)	(0.111)
Motor vehicles	0.0382	0.063

	(0.0197)	(0.119)
Services	0.0726***	-0.133
	(0.0155)	(0.0983)
Textiles	-0.00969	0.326**
	(0.0171)	(0.106)
Constant	-0.629***	6.067***
	(0.0586)	(0.561)
Mean of dependent variable	0.170	10.434
Number of observations	2,922	452
R^2 (adjusted)	0.336	0.446

* p<0.05, ** p<0.01, *** p<0.001, standard errors in parentheses

Sources: "Lanham," see Table 1 and text. "Lanham Expenditures": NARA Record Group 171 FWA cards, US Senate (1943a, 1943b). "Log(Value, war contracts)": Brunet-Koustas WWII Contracts Data. "Log(city population)," and "LFPR of mothers with children 6-to-11-years": Ruggles et al. (2024) full count 1940 census; "Group 1 to 4, ES-270 cities": US War Manpower Commission (1942 to 1946).

Notes: An observation is a city that had a war contract and is identified in the 1940 full-count census microdata. Col. (1) is a linear probability estimation (see text eq. 1) giving whether the city ever had a Lanham facility, either a preschool or an extended hours facility for school-aged children, from 1943 to 1946. Col. (2) is an OLS regression on the log(total expenditures on the Lanham programs) in the 452 cities for which we have expenditure data (federal plus "sponsor") mainly for FY 1944 (see text eq. 2). "Value of war contracts" is in thousands (000) current dollars. "LFPR" is labor force participation rate. "Group 1 ES-270 cities" were in sufficient shortage that the War Manpower Commissioner advised the War Production Board, in January 1943, not to renew contracts or sign new ones; "Group 2 ES-270 cities" were areas of labor stringency; "Group 3 ES-270 cities" were less in shortage and possibly in labor surplus; and "Group 4 ES-270 cities" were considered to be in substantial labor surplus. Each city can have one or more of the 26 industry dummies, indicating whether the industry had any contract in that city. The coefficients for five are given.

Table 3: Federal Expenditures on Lanham Preschool and School-Age Child Programs, 1943

		Children 2-to-5 years (s.e.)	Children 6-to-11 years (s.e.)	Number of Observations (Cities)	R^2 (adj)
(1)	All divisions to July 1943 (federal only) [a]	113.5	23.7	434	0.904
		(2.53)	(1.05)		
	By division (federal only):				
(2)	New England & Mid-Atlantic OK	185.1	29.0	74	0.961
		(11.5)	(1.48)		
(3)	South Atlantic OK	118.3	11.8	74	0.931
		(5.23)	(2.21)		
(4)	East & West South Central OK	90.8	32.0	79	0.873
		(6.35)	(4.59)		
(5)	East & West North Central ok	115.4	21.2	103	0.938
		(4.00)	(1.78)		
(6)	Mountain OK	71.1	78.6	23	0.977
		(7.93)	(4.78)		
(7)	Pacific OK	121.6	15.1	81	0.913
		(4.82)	(2.64)		

[a] Only two cards had approval dates after July 3, 1943.

Sources: US National Archives and Records Administration (1942, 1943).

Notes: Each row is a separate regression. The dependent variable for each row is the federal cost of both programs. The dependent variables are the number of preschool children ("Children 2-to-5 years") and the number of school-age children ("Children 6-to-11 years"). See text for interpretation. All regressions are estimated by OLS with no constant term. All coefficients are significant at the 1% level.

Table 4: Female and Male Employment by City in the 1940s and Lanham

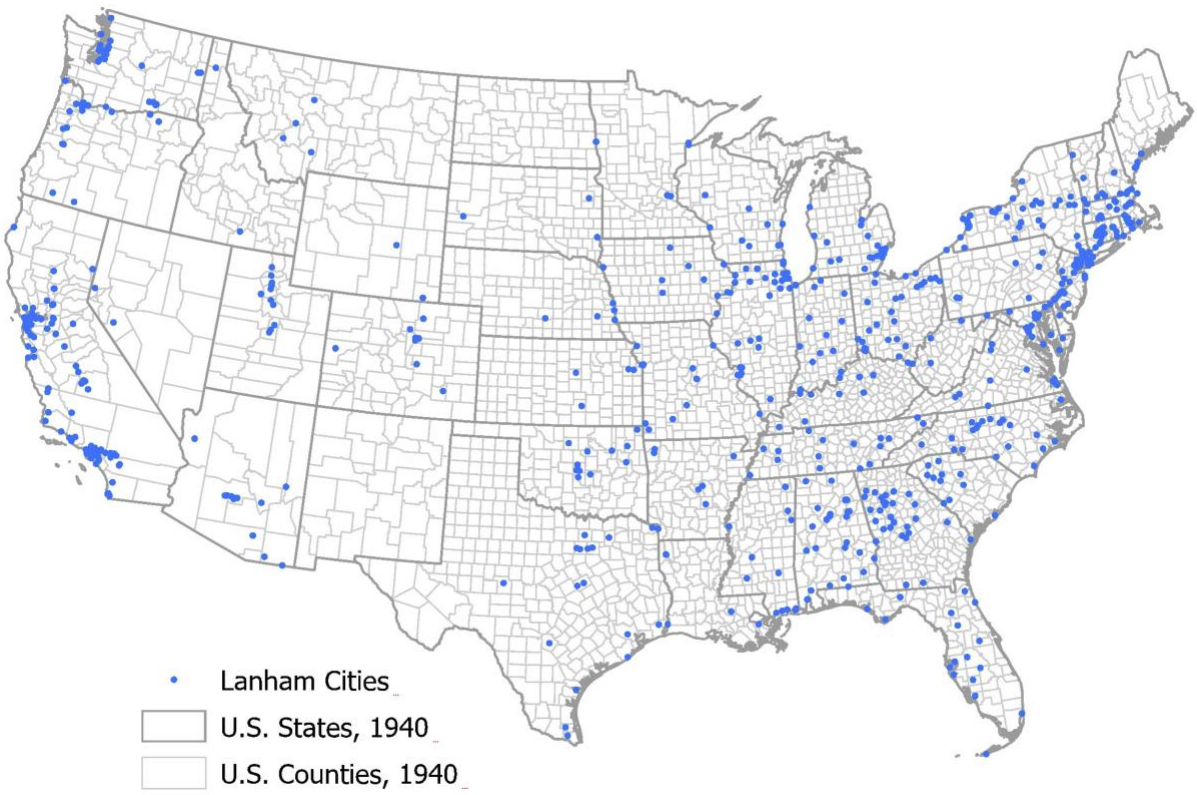
	Log Female ES-270 Employment 11/44		Log Male ES-270 Employment 11/44	
	(1)	(2)	(3)	(4)
Lanham (0, 1)	0.402***	0.276*	0.228*	0.121
	(0.109)	(0.109)	(0.0984)	(0.0971)
Log(Employ. 1939)	0.587***	0.553***	0.553***	0.560***
	(0.0515)	(0.0721)	(0.0493)	(0.0686)
Log(Value)	0.178***	0.125**	0.217***	0.161***
	(0.0313)	(0.0398)	(0.0290)	(0.0357)
Constant	1.482***	2.767***	1.467***	2.579***
	(0.389)	(0.609)	(0.384)	(0.609)
Division F.E.	yes	yes	yes	yes
Industry dummies		yes		yes
ES-270 groups		yes		yes
Mean of dept var	8.32	8.32	9.15	9.15
Number of Obs.	290	290	290	290
R^2 (adjusted)	0.661	0.695	0.694	0.731

* p<0.05, ** p<0.01, *** p<0.001, standard errors in parentheses

Sources: "Log Female (Male) ES-270 Employment 11/44": US War Manpower Commission (1942 to 1946). "Lanham (0, 1)": see Table 1 and text. "Log(Employ. 1939)" and "Log(1939 Pop.)": Ruggles et al. (2024) full count 1940 census. "Log(Value)": Brunet-Koustas WWII Contracts Data, expressed in thousands of current dollars in wartime contracts. Industry dummies and ES-270 groups: see notes to Table 1.

Notes: The regression sample uses only cities in the ES-270 reports that were not grouped in labor market areas (e.g., Portland-Vancouver, OR-WA). The ES-270 reports provide employment data only from reporting wartime establishments. The 1939 US census micro-data gives employment in all sectors and are for those 20 to 64 years. Employment is female for cols. (1) and (2) and male for (3) and (4).

Figure 1: Map of Lanham Act Funded Facilities



Sources: See text.
Notes: The dots are cities that had funding for at least one nursery or extended-hours public school program from the Lanham Act during 1942 to 1946. The map includes 684 cities, more than in our empirical work which identifies 664 cities. The additional 20 come from newspaper reports and include those in nearby towns that may have had a facility even though the funds were given to a larger city.

CRediT authorship contribution statement
Joseph Ferrie: Writing—review & editing, data curation.
Claudia Goldin: Writing—original draft, review & editing, conceptualization, data curation, validation, investigation, methodology,
Claudia Olivetti: Writing—review & editing, data curation, validation, investigation, methodology

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Replication data and code available at: https://doi.org/10.3886/E215082V1

Appendix Tables 1A and 2A can be found at PROVIDE SITE.

References

Bond, Elsie, 1945. “Day Care of Children of Working Mothers in New York State during The War Emergency.” *New York History*, 26(1): 51-77.

Brunet, Gillian. 2024. “Stimulus on the Home Front: The State-Level Effects of WWII Spending.” *Review of Economics and Statistics*, forthcoming. https://doi.org/10.1162/rest_a_01432

California Legislature. 1947. *Technical Staff Report to the Joint Committee on Preschool and Primary Training.* January 17.

California Senate. 1943. *Committee to Investigate the Establishment of Nursery Schools and Child Care Centers*. Fifty-fifth session. State of California.

Chafe, William Henry. 1972. *The American Woman: Her Changing Social, Economic, and Political Roles, 1920-1970*. New York: Oxford University Press.

Cohen, Abby J. 1996. “A Brief History of Federal Financing for Child Care in the United States.” *The Future of Children* 6(2): 26-40.

Collins, William. 2001. “Race, Roosevelt, and Wartime Production: Fair Employment in World War II Labor Markets.” *American Economic Review* 91(1): 272-86.

Damplo, Susan M. 1987. “Federally Sponsored Child Car During World War II: An Idea Before Its Time.” Final Draft. Women’s Legal History Seminar. Georgetown Law School. https://repository.library.georgetown.edu/handle/10822/1051129

Farrar, Laurence A. 1945. “The Administration of a Child Care Center during the War Emergency.” M.A. thesis submitted to the Department of Education, College of the Pacific.

Ferrie v. Sweeney et al. 1946. No. 564259. Court of Common Pleas of Ohio, Cuyahoga County. 72 N.E. 2d 128. June 26.

Gesell, Arnold. 1943. “The New Haven Child Care Center: An Account of its Origins and Organization” *Childhood Education* 19(8): 367-70. https://doi.org/10.1080/00094056.1943.10725783

Goldin, Claudia. 1991. “The Role of World War II in the Rise of Women’s Employment.” American Economic Review 81(4): 741-56.

Goldin, Claudia, and Claudia Olivetti. 2013. "Shocking Labor Supply: A Reassessment of the Role of World War II on Women's Labor Supply," *American Economic Review, Papers and Proceedings* 103(3): 257-62.

Herbst, Chris M. 2017. "Universal Child Care, Maternal Employment, and Children's Long-Run Outcomes: Evidence from the US Lanham Act of 1940." *Journal of Labor Economics* 35(2): 519-64.

Michaelis, John U. 1943. "An Appraisal of the Lanham Act School Program with Special Reference to the Problem of Federal Control over Public Education." University of Maryland. PhD dissertation.

Regional Day Care Committee. 1943. *A Handbook for State and Local Agencies and Child Care Committees*. Policies and Procedures Governing the Day Care Programs of the Federal Government. Atlanta GA. January.

Rose, Evan K. 2018. "The Rise and Fall of Female Labor Force Participation During World War II in the United States." *Journal of Economic History* 78(3): 673-711.

Ruggles, Steven, Matt A. Nelson, Matthew Sobek, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Evan Roberts, and J. Robert Warren. 2024. IPUMS Ancestry Full Count Data: Version 4.0 [dataset]. Minneapolis, MN: IPUMS.

Stoltzfus, Emilie. 2000. "Child Care: The Federal Role during World War II." Congressional Research Service. Report for Congress. http://congressionalresearch.com/RS20615/document.php

Strickland, Ruth G. 1944. "The Care of Children in Wartime." *Pi Lambda Theta Journal* 22(3): 143-46.

US Bureau of the Census. 1948. *Current Population Reports, Consumer Income*. Series P-60, No. 1. January 28.

US Bureau of the Census. 1969. Current Population Reports, *Estimates of the Population of the United States and Components of Change: 1940 to 1969*. Series P-25, No. 418. March 14.

US Bureau of Community Facilities. 1946. *Final Report of the War Public Services Programs*. Prepared by War Public Services Staff (July). Microfilm. Filmed from the holdings of the Office of Management and Budget Library, Washington D.C. and accessed through Widener Library Harvard University.

US Bureau of Labor Statistics. No date. https://www.bls.gov/opub/mlr/2018/images/data/haugen-figure1.stm

US Civilian Production Administration, Industrial Statistics Division. 1946. *Alphabetic Listing of Major War Supply Contracts: Cumulative June 1940 through September 1945*. Volumes 1-4. No publisher.

US Department of Labor, Children's Bureau. 1942. *Standards for Day Care of Children of Working Mothers*. Children in Wartime No. 3. Bureau Publication 284. February. US GPO.

US Department of Labor, Women's Bureau. 1946. *Women Workers in Ten War Production Areas and their Postwar Employment Plans*. Bulletin no. 209. US GPO.

US Department of Labor, Women's Bureau. 1953. *Employed Mothers and Childcare*. Bulletin no. 246. US GPO.

US Federal Works Agency (FWA). 1944. *Fifth Annual Report: Federal Works Agency*. June 30. Washington, D.C.

US House of Representatives. 1945. To Amend Section 204, Title II, of the Act to Expedite Provision of Housing. Committee on Public Buildings and Grounds. 79th Congress, 1st session, May 16 and 22.

US National Advisory Committee on WPA Nursery Schools. 1940. Bulletin of Information for WPA Nursery Schools.

US National Archives and Records Administration (NARA). Record Group 171. Records of the Office of Civilian Defense. Federal Works Agency (FWA) cards for 1942 and 1943.

US National Archives and Records Administration (NARA). Record Group 215. Records of the Office of Community War Services Day Care Division. Entry 46, Box 2, Folder "Day Care Under Community Facilities Act."

US Office of Education. 1936. "A Directory of Nursery Schools in the United States," compiled by Mary Dabney Davis. Office of Education Circular no. 163, as Reported to the US Office of Education 1935-36. Washington, D.C.

US Office of Education. 1943. *School Children and the War Series*. Leaflet. Washington, D,C.

US Senate. 1943a. *Wartime Care and Protection of Children of Employed Mothers*. Committee on Education and Labor US Senate. 78th Congress, 1st session on S. 876 and S. 1130. June 8. US GPO.

US Senate. 1943b. Wartime Health and Education. Committee on Education and Labor. Subcommittee on Wartime Health and Education. United States Senate, 78th Congress, December 2. US GPO.

US War Manpower Commission. 1942 to 1946. "Summary of ES-270 Reports." Hathi Trust online copy of various reports from 1942 to 1945 issued, depending on year, by: (1) Reports and Analysis Division, Bureau of Employment Security, Social Security Board; (2) Labor Market Division, Bureau of Program Planning and Review, War Manpower Commission; (3) War Manpower Commission, Bureau of Program Requirement; (4) War Manpower Commission, Reports and Analysis Service.

Appendix Table 1A: Lanham Expenditures on Nurseries and Extended-Hours Programs, 1942 to 1946, and Federal Expenditures on War Contracts (000), 1940 to 1946: by State

State	(1) Sum of Contract Value (000) 1940-1945	(2) Total Lanham Expenditures 1942-1946	(3) Lanham Exp/ Sum Contracts (000) = (2)/(1)
ME	1,218,708	79,367	0.065
NJ	12,520,158	1,366,790	0.109
PA	12,837,193	1,473,097	0.115
CT	7,721,761	994,618	0.129
IN	8,943,311	1,210,681	0.135
WI	4,597,222	651,846	0.142
KS	2,554,539	371,746	0.146
WV	712,922	132,661	0.186
NY	21,599,437	4,305,717	0.199
MA	6,870,944	1,586,989	0.231
IL	11,980,292	2,927,968	0.244
MI	17,341,370	4,654,583	0.268
OH	15,634,953	4,396,470	0.281
RI	1,191,396	347,814	0.292
TX	5,994,994	2,042,244	0.341
NH	403,281	138,942	0.345
MD	4,670,581	1,692,212	0.362
IA	1,086,965	497,915	0.458
OK	1,454,666	695,884	0.478
MN	1,661,032	797,797	0.480
MO	3,462,810	1,740,850	0.503
VT	210,334	111,121	0.528
LA	1,368,291	870,516	0.636
DE	431,922	286,293	0.663
NE	836,438	676,170	0.808
VA	1,401,499	1,164,185	0.831
KY	601,426	500,098	0.832
OR	1,835,659	1,553,454	0.846
DC	831,542	709,869	0.854
AL	1,488,766	1,288,319	0.865
MS	469,665	444,070	0.946
AR	198,427	192,011	0.968
NC	1,395,507	1,526,108	1.094
WY	82,677	98,009	1.185

TN	1,213,995	1,452,291	1.196
WA	3,837,465	4,684,712	1.221
CA	16,730,059	20,975,794	1.254
CO	375,505	513,709	1.368
NV	34,302	51,247	1.494
SC	617,415	1,137,067	1.842
GA	1,413,106	2,783,028	1.969
ID	19,580	47,292	2.415
FL	822,188	2,320,112	2.822
MT	28,165	140,508	4.989
ND	7,615	44,544	5.850
AZ	133,091	821,180	6.170
UT	114,561	965,150	8.425
SD	4,835	44,772	9.260
All States	$180,992,570	$77,507,820	0.428

Sources: Col. (1) Contract Value from Brunet-Koustas WWII Contracts Data; see Brunet (2024, forthcoming); col. (2) Lanham total (federal and sponsor) expenditures by state, US Bureau of Community Facilities (1946).

Notes: New Mexico is omitted because no cities in the state received Lanham nursery or extended-hours funds. Totals do not include separate funds for school buildings. Expenditures for childcare under the Lanham Act are those given in the Final Report of the FWA, summed in current dollars, and likely exclude an initial $6.4 million given to continue the WPA nurseries by the FWA and the President.

Appendix Table 2A: Industry Aggregates for War Defense Contracts in the Regression Sample of Cities

Product Aggregates	Mean contract value per city ($000)	Fraction of cities having any contract for the product
Agricultural products	578	0.042
Aircraft	15425	0.126
Ammunition	2638	0.179
Apparel	814	0.267
Bombs	2223	0.229
Chemicals	1056	0.186
Electrical	4048	0.181
Food	15	0.025
Glass	190	0.057
Leather	273	0.069
Machinery	4854	0.300
Manufactured products	3031	0.317
Marine (e.g., boats, ships)	6434	0.171
Materials	240	0.146
Medical supplies	181	0.067
Metals	1424	0.278
Motor vehicles	4784	0.162
Paper, printing, packaging, etc.	334	0.189
Petroleum and coal	1369	0.120
Railroads	281	0.037
Rubber	464	0.086
Services, various	852	0.244
Steel	1281	0.256
Textiles	1222	0.195
Textile products	892	0.279
Wood products including lumber	314	0.259
Number of cities	2,923	2,923

Notes: Aggregates were created by Brianna Alderman from the approximately 14,000 separate, but often related (e.g., Cotton Duck; Duck Cloth) product codes in the Brunet-Koustas WWII Contracts Data; see Brunet (2024, forthcoming). The means and fractions are from the regression sample of 2,922 cities having information on contracts and population from the 1940 full-count micro-data census.