

Detroit: The Arsenal of Democracy

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In December 1940, President Franklin Roosevelt declared that America must become the “Arsenal of Democracy” to support European and Asian nations at war against the Axis alliance of Germany, Italy and Japan. The people of Detroit and the manufacturing might of southeast Michigan accepted the challenge, and produced thirty percent of the war materiel generated by the United States before the end of World War II in 1945. It took ingenuity and perseverance under difficult circumstances, but Detroit came through to lead the country as *THE* arsenal of democracy.¹

Detroit’s industrial infrastructure adapted and grew to produce airplanes, tanks, vehicles, boats, weapons, ammunition, electronics, clothing, food – everything necessary to assist the military efforts at home and overseas. Detroit executives served as leaders of government production agencies. Detroit engineers designed materiel and methods of production that sped needed arms and armament to troops, and saved America millions of dollars. Detroit assembly line workers provided the muscle, and Detroiters of all ages pitched in to make the war machine operate smoothly.

While Detroit helped change the character of the war, the war had significant repercussions on the city as well. Besides sending about two hundred thousand young men and women into the military, over seven hundred thousand residents toiled in factories – many for the first time. People came from all over the country to fill job vacancies. The burgeoning population put a strain on municipal services, while overwork, overcrowding and rationing put a strain on the people.²

Unlike any other city in the nation, Detroit became a war production boom town. Often compared to a “frontier town of the gold rush period,” Detroit maintained a delicate balance between virtue and vice. Citizens did what they needed to do, and their vigilance played a major role in the successful outcome of the war. Victory despite diversity was a source of pride for all Detroiters.³

In the grand scheme, it was the industrial facilities and skills based in the Detroit area that proved most important to the country and her allies. Prior to the war, the United States Army ranked nineteenth in the world in terms of manpower, and was woefully short of arms and munitions of all kinds. This “terrifying weakness of America’s military preparedness” was recognized by President

¹ Dominic J. Capeci Jr. ed., *Detroit and the 'Good War': The World War II Letters of Mayor Edward Jeffries and Friends* (Lexington: University of Kentucky Press, 1996), 1.

² “Detroit: Six Months After” *LIFE*, February, 1943; Arthur M. Woodford, *This is Detroit, 1701-2001* (Detroit: Wayne State University Press, 2001) . 152.

³ William Lovett to Oswald Villard, 20 Jan. 1943, in Capeci, 15.

Franklin Roosevelt and many in Washington. As American involvement in the war became a probability, they turned to Detroit. The city's automobile manufacturers led the world in vehicle production, and the pharmaceutical and chemical plants were also leaders in their respective markets. These manufacturing giants, along with hundreds of other local firms, allowed the nation to quickly match and pass the industrial might of the Axis powers, particularly Germany.⁴

Curiously, German leaders did not give the United States much credit in this regard. In September 1942, Reichmarschall Herman Goring, commander of the Luftwaffe and head of Germany's industrial output, brushed off warnings with the comment that "Americans only know how to make razor blades." This attitude decried the facts. That year Germany produced 7,200 vehicles and 15,556 aircraft. Comparatively, the United States churned out 24,000 and 45,000 respectively – a large percentage coming out of Detroit.⁵

While the war in Europe and Asia began in 1939, the United States was not drawn into the conflict until the end of 1941. However, many of the main armaments of the war – the M-1 rifle, and the B-17 and B-24 bombers – were under development in the 1930s. The needs of England, Russia and China for military materiel began to be addressed by American manufacturers beginning in 1940. In May of that year, President Franklin Roosevelt asked Congress to approve \$1.2 billion* in defense spending, the largest peace time appropriations request ever. Later that month he contacted General Motors president William Knudsen.⁶

Knudsen, a Danish immigrant who had worked his way up from shop floor to front office, worked at Ford Motor Company before joining GM. Because he understood all aspects of the manufacturing process and knew most of the automotive industrial leaders, Roosevelt made him a point man for production of vehicles, tanks, aircraft, weapons, ammunition and uniforms. Knudsen was an initial member of the National Defense Council's Advisory Commission, the director of the Office of Production Management and the Air Technical Command. Eventually promoted to Lieutenant General, Knudsen was charged with focusing America's manufacturing might on its wartime needs.⁷

⁴ V. Dennis Wrynn, *Detroit Goes To War*, (Osceola, WI: Motorbooks International Publishing, 1993), 15; Lt. Col. Eddy Bauer, *History of World War II*, (New York: Galahad Press, 1966), 194.

⁵ Bauer, 251.

⁶ Wrynn, 15; Michael W.R. Davis, "The Speed-Up King" *World War II*, Jan-Feb 2010, 44. – *This figure is Davis's and needs to be confirmed or defined. Beasley, 235, cites a *New York Times* article from May 28, 1940 claiming the request was for \$3B emergency preparedness program funds, and \$700B for U.S. rearmament – Wrynn, 15, notes the \$7B approved for Lend-Lease in March, a figure confirmed by Sulzberger in the American Heritage volume on WWII.

⁷ Davis, 45-47; Letter from the CND to Roosevelt in: Norman Beasley, *Knudsen, a Biography*, (New York: McGraw-Hill Book Company, Inc., 1947), 240.

He called the directors of the American Automobile Manufacturers Association (AAMA) together in October, 1940, and convinced them of the serious work to be done. Over the course of the war, many of them were tasked with shepherding various projects to fruition. K.T. Keller, president of Chrysler Corporation, was placed in charge of the yet-to-be-built tank arsenal in Warren. The Tank-Automotive Center, responsible for “the design, production, delivery and servicing” of every vehicle in the military, was moved from Washington, D.C. to the Union Guardian Building in Detroit and placed under the direction of Brig. Gen. Alfred Glancy, another GM executive. George Romney, spokesman for the AAMA, became managing director of the Automotive Council for War Production in 1943. Alvan Macauley, chairman of Packard Motor Company, facilitated that company’s aircraft engine production. Albert Kahn’s architectural firm, creators of Ford’s Rouge Plant, designed factories, offices and airfields all over the country, eventually overseeing \$200 million in wartime government contracts.⁸

Dozens of manufacturing executives entered the ranks of the “Dollar-A-Year Men” – production experts who worked for the government to expedite factory output. Later in the war, many of these individuals were commissioned with the rank of General, in order to give them clout within the military chain of command. While some of these executives donated their salaries to the war effort, most remained on the payroll of their former employers, while at the same time exhorting the firms to meet production quotas.⁹

Additional appropriation requests were rapidly approved, and the Lend-Lease program was launched in early 1941. Over the course of the war, Britain, the Soviet Union, China and other allies received in excess of \$20 trillion worth of armament and munitions – enough to equip two thousand infantry divisions. Detroit businesses alone accounted for almost \$7 trillion of that. Nearly every manufacturing facility, large and small, was processing military orders. The numbers are staggering, and are included in an appendix to this paper.¹⁰

Much of the direction for spending the massive government appropriations was determined by gathering over fifteen hundred companies at the former Graham-Paige auto plant. Thousands of the needed parts were displayed, and manufacturers, tool makers, designers – anyone with production capability – bid on contracts and subcontracts.¹¹

⁸ Michael W.R. Davis, *Detroit's Wartime Industry: Arsenal of Democracy*, (Chicago: Arcadia Publishing, 2007), 29,33; LIFE, 1943; Wrynn, 71; Beasley, 265; Don Lochbiler, “Architect of Victory” *Detroit News*, 10 Dec., 1973, 5D.

⁹ Wrynn, 75.

¹⁰ Bauer, 336.

¹¹ Woodford, 153.

These government contracts prompted companies to begin manufacturing war materiel, even as they were continuing to produce automobiles and other consumer goods. As early as September 1940, Ford Motor Company had contracts to build Pratt & Whitney aircraft engines. As the Rouge facility remained occupied with car assembly, a special building was constructed in Dearborn over the winter, and manufacturing began in April. The demand created an explosion in production capability throughout the region. The government finally ordered non-military output ceased in December 1941, and the last civilian vehicle – a Ford – rolled off the line on February 2, 1942.¹²

Ford was approached to build B-24 Liberator bombers designed by California-based Consolidated Aircraft Company, who was already producing them at the rate of one and a half per day. Charles Sorenson, a Ford executive, thought they could be produced at a rate of one an hour. To accomplish this, the government hired Albert Kahn to design the Willow Run plant. Covering eighty acres near Ypsilanti, the plant employed over forty thousand people. Curiously, Kahn built his reputation bringing air and light to factory spaces, but had to create this building with no windows in order to meet wartime security requirements. A shortage of tooling and supplies prevented the plant from reaching full production until 1943, prompting the nickname “Willit Run.” But Willow Run eventually fulfilled Sorenson’s prediction, and brought the cost per unit down from \$238,000 to \$137,000. By 1945, 8,685 bombers were produced at the factory.¹³

On the other side of the city, the Army and Chrysler were building another Kahn factory to mass produce tanks - the Detroit Tank Arsenal in Warren. Construction began in September 1940, and the first tanks rolled off the line seven months later. Covering over a million square feet, the factory was the largest such facility in the world. Within a year it had produced two thousand M3 “General Lee” tanks, and was the first plant to be awarded the armed forces “E” flag for excellence in production. In 1942, the plant began producing M4 Sherman tanks, and in 1943 delivered 6,612 units. Toward the war’s end, workers assembled the M26 Pershing, the last of three models and 22,234 tanks manufactured at the site.¹⁴

Similar stories were created across southeast Michigan, as old factories were repurposed and new facilities were created in record time. General Motors became the premier supplier for the United States government, dedicating ninety four plants nationwide to war production, and manufacturing

¹² Ford R. Bryan, “Some Contributions to World War II” *The Dearborn Historian*, vol. 43 no.3(Summer 2003), 67-68; Wrynn, 51.

¹³ Bryan, 69-71; Wrynn, 79, W. Hawkins Ferry, *The Legacy of Albert Kahn*, (Detroit: Wayne State University Press, 1970), 26.

¹⁴ Ann M. Bos, and Randy R. Talbot, “Enough and On Time: The Story of the Detroit Tank Arsenal” *Michigan History Magazine*, vol.85 no.2 (March/April 2001), 26-39; Davis, *Detroit’s Wartime Industry*, 46-52.

over 2,300 different items from tiny ball bearings to massive tanks. Packard Motors turned its attention to engine production early in the war, and by 1945 had produced 55,523 Rolls Royce Merlin 12 cylinder aircraft engines used in several aircraft, including the agile P-51 fighter. It also produced 14,000 marine engines used in PT and fast attack boats. McCord Radiator and Manufacturing Company became the leading manufacturer of helmets for GIs, producing over twenty million, in addition to millions of other pieces of ordnance. Detroit's automotive suppliers of all stripes turned out tools, dies, grinding equipment, drills, specialty metals and tubing, and rivets by the billions.¹⁵

It should be noted that it wasn't just automobile manufacturers that were involved. Firms that once made household goods turned out everything from bullets to gas masks. The Detroit Tank Arsenal used parts made by over seven hundred suppliers, many of them local shops and foundries. Recreational boat manufacturers Chris-Craft and Hacker Boat Company sent the Navy thousands of landing crafts and patrol and rescue boats. Parke-Davis Pharmaceutical Company provided penicillin, dried blood plasma, vaccines, serums, ointments, germicides, field dressings and gauze. Industrial film maker Jam Handy created training films. Advertisers and media writers boosted morale and production with persuasive and patriotic propaganda. Printing plants churned out tons of instructional booklets and technical manuals. Educators were brought in to teach Army and Navy recruits at facilities run by General Motors and Ford Motor Company. Farmers coaxed maximum yields from the land surrounding the city in order to feed hungry workers and their families.¹⁶

Not every project met with success. Hudson Motors lost a lucrative electronics contract when it fell behind production schedules. More notably, some attempts to apply automotive manufacturing principles to airplane construction simply did not work. Both Ford and General Motors found many of their machines and tools inadequate on both ends of the spectrum – parts required were too large, and tolerances were too fine. Because airplanes were markedly more complicated than automobiles – a ratio of 15:1 in terms of parts alone – simple design changes affected entire assemblies and required long delays for retooling.

In September 1941, General Motors hired respected aircraft designers and proposed creating a new fighter for the Army. To speed development, elements of existing aircraft were to be assembled

¹⁵Woodford, 154; <http://www.outlawpulling.com/PDF/Packard%20Marine%20Engine.pdf>; http://www.toppots.net/main.php?do=clientsitecontent&action=home&link_id=140.

¹⁶Woodford, 151-155; Jeffrey L. Rodengen, *The Legend of Chris-Craft*, (Ft. Lauderdale: Write Stuff Syndicate, 1988), 130-142; Clive Goodhead, <http://ezinearticles.com/?Chris-Craft---A-Brief-History-of-the-Classic-Boat-Builder-From-1930-to-the-Present-Day&id=4789838>; James P. Barry, *Hackercraft*, (St. Paul, MN: MBI Publishing, 2002), 99-101; *Golden Book of American Industry*, (Palisades Park, NJ: Industrial Publishing Co., 1945), 46-47, 221-222.

around a new fuselage to create the P-75 – a miracle craft. What appeared practical on paper did not translate on the shop floor. The project was plagued with delays and redesigns from the beginning, and it soon became clear that the aircraft would never deliver the tremendous performance that had been promised. The program was cancelled by October 1944.¹⁷

General Motors had success in airplane construction, generally by using the designs and techniques of aircraft manufacturers like Grumman and GM's Eastern Aircraft Division. In Detroit, most of the output consisted of engines and sub-assemblies. Even Ford's shining success at Willow Run is tempered by the fact that two and a half years after Pearl Harbor the factory had not reached a production rate of fourteen aircraft a day – far short of Henry Ford's early "1000 planes a day" prediction. Perhaps some of this is attributable to the mass-production mentality voiced by Ford, "The manufacture of airplanes, if agreement is had upon just what is wanted, becomes simply an assembly problem." The Army, attempting to address changing battlefield needs, constantly changed "just what was wanted," the efficiencies inherent in economies of scale were lost.¹⁸

Despite this, Detroit successfully answered the nation's hunger for war materiel. Plants throughout the city strove to support the needs of the nation's military and the needs of our allies. Additionally, facilities around the country responded to decisions made by local corporate leaders and military procurement experts. The War Production Board's Detroit District, which included most of the manufacturing in Michigan and Toledo fulfilled contracts valued at almost \$24 trillion. The Detroit area (Detroit and Willow Run) received contracts throughout World War II totaling \$16,777,923,000.¹⁹

This influx of federal funds succeeded in speeding the region's recovery from the Great Depression. Factories were busy, workers employed, and disposable income flowed through the local economy. The flood of war dollars had both positive and negative repercussion, and the city's role as the Arsenal of Democracy left a lasting legacy. Detroit's industrial and physical landscape and infrastructure was changed forever. Additionally, the way Detroiters viewed their city and their fellow citizens was affected.

As the war became increasingly intense in Europe and Indo-China, it captured the interest of the people in Detroit. Many were anxious to assist those countries affected by Axis aggression, for

¹⁷ I.B. Holley, "A Detroit Dream of Mass-Produced Fighter Aircraft: the XP-75 Fiasco" *Technology and Culture*, vol.28 no.3 (July 1987), 578-593.

¹⁸ Robert G. Ferguson, "One Thousand Planes a Day: Ford, Grumman, General Motors and the Arsenal of Democracy" *History and Technology*, vol.21 no.2 (June 2005), 149-154.

¹⁹ War Production Board, *War Supply and Facility Contracts by State, Industrial Area and County*, 1 Nov, 1945, 5.

personal or humanitarian reasons. Many others preferred to remain out of the fray, either for personal or political reasons. This polarity can be explained in part by Detroit's ethnic diversity, but also by a residual isolationism fostered by memories of World War I.

Ethnically, old Detroit families had French and British roots, and more recent immigrants came from Poland, Russia, Greece, Hungary, Czechoslovakia, Austria, Serbia and other nations threatened by German and Italian incursions. Large German and Italian neighborhoods were equally interested in the changing politics of their native countries, but less inclined to rush to war. The strong Irish constituency had little interest in assisting Britain, while a great many Canadian immigrants could not understand any hesitation to commit.

A great number of Detroiters, of all ethnic backgrounds, felt that this was Europe's problem. Historian Arthur Woodford states, "Many had come to accept the theory that American participation in World War I had been a great mistake,...and that the United States should stay out of this new war. [M]ilitary aid, given to the Allies, was all that would be needed to defeat the Axis powers." Henry Ford went a step further and flatly refused to assist with any war materiel that wasn't strictly defensive, even though his lieutenants, Edsel Ford and William Sorenson, saw opportunity in lucrative military contracts.²⁰

No matter the attitudes, Detroit began to feel the effects of the conflict many months prior to America's official entry into the war. With Roosevelt's reelection to a third term in 1940, the country was told that America's best defense was "the success of Britain defending herself." The Lend-Lease program was instituted, as described above, and efforts to rebuild the United States armed forces were accelerated.

The government began doling out military contracts, and Detroit manufacturers ramped up production capability. This increased the need for manpower at the same time that Congress passed the Selective Training and Service Act in 1940 – America's first peacetime draft. Over seventeen million men were required to register nationwide, and millions were soon drafted into active service. Following the Japanese attack on Pearl Harbor, volunteer enlistments into all branches of the armed services soared. Over the course of the war, however, two-thirds of the troops were drafted.²¹

In Detroit, many men received draft deferments because of the roles they played in wartime production. Skilled engineers, chemists, efficiency experts, machinists, trainers and others were

²⁰ Woodford, 151; Wrynn, 10, 15.

²¹ Stuart A. Kallen, *The War at Home*, (San Diego:Lucent Books, 2000), 20-23.

retained by their firms to support the war effort. Despite this, almost thirty percent of local factory workers were lost to the military. With factories often working around-the-clock shifts, manufacturers soon began to run short of qualified men to keep up with production quotas. As a result, several non-traditional groups entered the workforce, notably women, African Americans, and handicapped and elderly workers.²²

Labor shortages and efforts to address them caused major changes to life in Detroit, which resulted in occasional friction and conflict. The influx of hundreds of thousands of workers, mostly from rural Michigan and Southern states, caused housing shortages, fomented racial tensions, and changed the demographic make-up of the city. The need for workers and high production demands led to a heightened level of union activity. Women on the shop floor changed the all-male orientation of those organizations and impacted life at home. African American workers experienced discrimination and violent opposition to their hiring and promotion, which sparked a focused activism in search of wage parity and job equality.

Perhaps the most critical employment issue related to Detroit's industrial future was growth of union influence in the manufacturing equation. The labor shortage gave workers leverage when negotiating wages, hours, working conditions and benefits. Despite a patriotic promise by some organizations to avoid work stoppages, strikes were common. In the first ten months of 1942, there were more than seven hundred unauthorized "wild cat" strikes in Detroit. Ford Motor Company, which until this point had been able to stifle union organizing efforts, was forced to negotiate with CIO-UAW for the first time to end a strike in April 1941. Labor historian Steve Babson notes, "Detroit, once the Open Shop capital of the United States, was now the nation's leading Union Town."²³

From a societal perspective, the entrance of thousands of women into the work force changed many aspects of life in Detroit. This newly empowered class of employee, formerly relegated to clerical work and menial tasks, became a significant presence in factories – forty percent in many aircraft plants – changing the social dynamics overnight. While creating the iconic persona of Rosie the Riveter, women working as industrial laborers also altered the perception of traditional home life. With both parents out of the home, children spent more time being cared for by grandparents or taking care of themselves. Extended School Service programs were developed nationwide to helping parents

²² Steve Babson, *Working Detroit*, (Detroit:Wayne State University Press, 1986), 114.

²³ Wrynn, 27, 52; Babson, 112-. Within 48 hours of Pearl Harbor, both UAW and CIO volunteered a no-strike pledge. See Woodie Guthrie song in NPS article, p.85 and Babson, 114.;

manage. In Detroit, the Merrill-Palmer Institute partnered with education students from Wayne State University to teach children how to garden, shop for food, prepare meals and clean house.²⁴

The physical demands of factory work altered accepted norms regarding women's fashion. Trousers proved more practical than dresses, and long hair styles, dangerous around tools and moving parts, either were trussed in bandanas or gave way to shorter cuts. Long hours spent standing or moving around demanded sturdy, comfortable shoes, or even steel-toed boots. After the war, a woman in slacks with low heels and a modest hair cut had become socially acceptable.

Southern whites came to Detroit by the tens of thousands. They brought a folksy culture that was not understood or accepted by the locals. They had difficulty finding housing and encountered rental signs dictating that "No Southerners" need apply. They were relegated to the poorest underdeveloped suburbs, often in field sheds and tents near the newly constructed mega-factories. One thing that many locals and "hillbillies" had in common was their common prejudice against African Americans.²⁵

War time employment allowed black Americans to gain "a degree of economic independence...heretofore unavailable to them." However, as a group blacks in the workplace met more resistance than women or southern whites. Certain ethnic groups, notably the established Polish and Italian laborers, "were particularly hostile to the African American newcomers, whom they both feared and hated." Detroit's Ku Klux Klan and Black Legion legacy was revisited, creating difficult conditions for blacks, both in the workplace and at home. Ford Motor Company had employed blacks for several years, generally in the hardest or most menial jobs. During the war, over ten thousand worked at the Rouge, many in skilled positions. Beyond that, manufacturing remained closed to them until the demands of war production required their hiring. Several work-stoppages occurred when blacks, both men and women, were hired or promoted. Notably, Packard Motors was the scene of several such actions.²⁶

African Americans also suffered to a greater degree from the shortage of housing. The tremendous influx of workers put housing throughout southeast Michigan at a premium. For example, 40,000 people were employed at Willow Run every day, but local housing – quickly and crudely built – was available for only 14,000. Buildings of all kinds were converted to homes, with extended families

²⁴ Marilyn M. Harper, ed. *World War II & the American Home Front: A National Historic Landmarks Theme Study*, (Washington, D.C.: National Parks Service, Department of the Interior, 2007), 67-68.

²⁵ Babson, 115.

²⁶ Wrynn, 115, 83; Harper, 54, 85; Babson, 17.

and borders often sharing cramped quarters. 50,000 black new comers, relegated by laws and restrictions to the poorest neighborhoods, endured Detroit's most decrepit living conditions. As one housing official put it, "There's no money in housing the poorest people well."²⁷

Additionally, an effort to provide federally funded housing for African Americans at the Sojourner Truth Housing Project, built in a white Polish neighborhood, was so badly handled that it resulted in a number of protests and minor riots in February 1942. Thereafter, Mayor Edward Jeffries refused any further federal involvement. This reaction was seen as favoring the white majority.²⁸

At a time when the nation was calling on its citizens to defend sacred democratic principles, this racism, both overt and perceived, spurred African American activism. The National Association for the Advancement of Colored People (NAACP) saw their membership balloon fivefold during the war. With the support of the unions, black Detroiters staged numerous walk outs and demonstration marches, declaring that "full and equal participation of all citizens is fair, just, and necessary for victory and an enduring peace."²⁹

One interesting attempt to organize blacks in Detroit involved recruitment for the "Development of Our Own" movement. With the purpose of getting blacks to revolt against Whites, this movement was instigated by Satohasi Takahashi's Black Dragon Society. The black-owned *Michigan Chronicle* exposed Takahashi's subversive activities, and he was arrested by the FBI.³⁰

As the war progressed, sacrifices demanded of Detroiters increased, while patriotic empathy and patience waned. Poor housing conditions, racial tensions, along with a shortage of consumer goods and a strained infrastructure, finally came to a violent climax. On a hot Sunday in June 1943, a number of fights and beatings broke out on Belle Isle between blacks and whites. Rumors of fictitious atrocities spread throughout town, enraging both factions. Gangs attacked innocent people, looted businesses and burned automobiles, streetcars and buildings. After a day and half, six thousand troops quelled the riot. Thirty four people died, eight hundred were injured, and nearly a thousand were arrested.³¹

This incident exemplified the tensions that had developed over time in a region whose citizens and infrastructure had been pushed to the breaking point. Unfortunate as it was, the participants and

²⁷ Bryan, 71; Wrynn, 83 – 50.2% of Black housing was sub-standard, as opposed to 14% for Whites; Harper, 55.

²⁸ Harper, 116; Capeci, 15-16.

²⁹ Wrynn, 126, Harper, 97- In 1941, black Dodge factory workers walked out three times. The following year, over a hundred black women occupied the personnel office at Ford. In 1943, 1,000 Ford foundrymen quit for three days. Soon afterward, "an integrated crowd of 10,000...marched to Cadillac Square" for a demonstration.

³⁰ Wrynn, 60-61.

³¹ Warren, 116-117.

attitudes that sparked the 1943 riot did not represent all, or even a majority, of the people of Detroit. Overall, the city was proud of its contributions to the war effort, and enthusiastically supported the sacrifices needed to bring about victory.

Workers supported the war in numerous ways outside of their employment. Citizens of all ages endured long lines, increasingly stringent rationing schemes, and a shortage of consumer goods. Despite this, Detroiters avidly supported bond drives, scrap drives, farming programs and other voluntary services.

Residents were concerned about changes in their lifestyle and loved ones serving in the military, but enjoyed several positive aspects of the war. Payrolls doubled nationally during this period, and with unemployment down dramatically, there was lots of disposable income – even in the poorest neighborhoods. Dance halls, amusement parks, cruise ships and movie theaters did a booming business. Movies and advertising appealed to people’s patriotic fervor, and initially the city pulled together.³²

More than 100,000 adults were trained as air raid wardens, medical service volunteers, special police and auxiliary firefighters. Black-out drills and air raid tests were coordinated, anti-aircraft batteries popped up in parks around town, and everyone was on the lookout for saboteurs. UFO lounges at transportation centers were staffed by volunteers, often young college women who accept this duty with civic pride. As the war progressed, families planted Victory Gardens, and children collected scrap paper, metal, rubber and animal fat. People embraced the slogan, “Use it up, wear it out, make it do or do without.”³³

Wartime rationing was inevitable. Even before the attack on Pearl Harbor, people who remembered World War I began hoarding sugar. Silk and nylon for lady’s stockings disappeared for use in parachutes. By 1942, major restrictions were instituted. In February, the country turned their clocks to War Time, similar to Daylight Savings Time, to save electricity. By April, sugar was rationed, followed by red meat, butter, and canned vegetables. School teachers were mobilized to direct registration for the ration program. Ration stamps attempted to assure fairness in the process. Meatless Tuesdays, powdered milk, and Spam became common. Liquor shortages boosted beer and wine sales. Cigarette

³² Wrynn, 28, 56, 65 – While almost 12 million American served in the military, only 20% were assigned to combat units, and only 700,000 were in the front line infantry.

Total American losses were 405,400 killed (80% infantry), 670,850 wounded. 50,000 air crew casualties- Europe. 30,000 air crew casualties – Pacific. 78,000 MIA – soldiers, sailors and air crews. Wrynn, 156.

³³ Woodford, 152, Wrynn, 135.

shortages prompted a resurgence of pipe smoking. Metal shortages created restrictions on products as varied as toothpaste tubes, coat hangers, bicycles and refrigerators.³⁴

Because Japan controlled natural rubber supplies, the use of automobiles – and therefore tires and inner tubes – was discouraged. Gas station hours curtailed in 1941, and the maximum speed limit was reduced to thirty five miles per hour. Tire and gas rationing began in early 1942. Most families got “A” stickers, allowing them only five gallons per week. People whose job demanded more could apply for increased allotments. While the State of Michigan lost gas tax revenues, accident rates dropped and local food markets benefitted.³⁵

Restrictions on auto usage place a greater burden on public transportation. Neglected during the Great Depression, outdated bus and trolley stock was required to handle an increased ridership. This was fueled by the growing population, increased employment at far-flung factories, and military personnel on the move. According to historian Dominic J. Capeci, ridership on Detroit’s public transportation almost doubled, rising from 30.8 million in 1940 to 57.2 million in 1944. Arguments and fights became common among frustrated and overworked riders.³⁶

Additionally, the expansion of new communities and over-crowding in old neighborhoods overburdened much of the city’s infrastructure. Besides a shortage of housing and transportation, schools, stores and entertainment venues were crowded. Water, sewage and electrical systems were pushed beyond their limits. While the federal government offered to build new facilities to handle the overload, local communities feared being left with empty or redundant structures – ghost towns – after the war, and reluctantly declined the help.³⁷

Rationing and shortages resulted in inflated prices and an active black market for the most desirable goods. The government instituted price controls, and patriotic posters appealed to folks to “accept no rationed goods without giving up ration stamps” and “pay no more than ceiling price.” While most people followed the rules, illicit activity was common. At least seven percent of Detroit businesses were charged with violations, and up to twenty percent received warnings.³⁸

³⁴ Wrynn, 53, 64, 84, 124-126.

³⁵ Wrynn, 49, 59 – “B” stickers allowed enough gas for people to get to work and home, “C” stickers were for people who drove for a living, “E” stickers covered emergency personnel and doctors, and “X” stickers were for unlimited fuel, generally government use and legislators.

³⁶ Capeci, 18.

³⁷ Wrynn, 81.

³⁸ U.S. Office of Economic Stabilization posters, DHS collection; Wrynn, 115.

There were other elements of “the wild west town” that were hard to avoid. Single factory workers with extra spending money supported a large number of new saloons and beer halls. Daily Variety magazine described Detroit as “the hottest town in America.” Over-exuberant indulgence led to an increased number of brawls and fights, an absentee rate that reached 17% at some factories, and a significant employee turnover rate. A phenomenon known as the “V-Girl” emerged – young ladies whose company a soldier (or any other young fellow) could buy for the price of a dinner and dancing. Such “aggressive promiscuity” resulted in a growing venereal disease problem and an increase in unplanned births.³⁹

Detroit’s government, under four-term mayor Edward J. Jeffries, attempted to address many of the issues facing the city. As a moderate reformer, Jeffries called on citizens to unite in the pursuit of victory. He hired a black housing commissioner, and increased the number of blacks on the city payroll. However, Jeffries was a pragmatic politician. His policies tended to favor industrial interests, and he charged blacks and union leaders with trying to disrupt production. He gave the police a free hand to deal with uprisings and corruption, and the force developed a reputation for brutality and bigotry. With municipal coffers filled with fresh tax dollars, the mayor refinanced the city’s debt and began developing transportation and urban renewal projects that guided Detroit’s future, while choosing to leave racial issues to be settled after the war.⁴⁰

World War II changed life in Detroit forever. It pulled local manufacturing out of the post-Depression doldrums and rapidly took it to production levels never seen before. Labor demands swelled the population, and a majority of the newcomers never left. After the war, unions fought to retain wartime prosperity at a time when availability of workers was peaking. New infrastructure expanded the metropolitan area beyond the city’s limits.

When wartime manufacturing ended, Detroit rapidly retooled for auto production. Most 1946 models were simply new 1941 models, but people bought them as fast as Detroit could make them – the first cars off the Cadillac line had wooden bumpers. Gradually, new materials like synthetic rubber and plastics were incorporated into the manufacturing process, and styling changes brought a new era to automobile design.⁴¹

Pent up demand for consumer goods of all kinds kept factories busy for a few years, but competition eventually forced some firms out of business. Hudson and Nash-Kelvinator merged into

³⁹ Babson, 122; Wrynn, 83, 115.

⁴⁰ Capeci, 6-7, 17-19.

⁴¹ Wrynn, 156-157.

American Motors in 1954, eventually incorporating Kaiser's Jeep brand. When Chrysler took over only Jeep remained. Additionally, mighty Packard Motors would not survive the 1950s, DeSoto was discontinued by Chrysler in 1960, and Briggs Manufacturing was among several large plants that closed. The east side of the city lost seventy thousand jobs during the 1950s.⁴²

Many defense plants never found viable products for peacetime production and sat idle. The massive Willow Run facility was sold by the government to ship-building wizard Henry Kaiser, who produced automobiles there for only nine years. The University of Michigan bought the Willow Run airfield for a dollar, and operated it as the major airfield in southeast Michigan until Metropolitan Airport opened in 1965. Conversely, the Army's Tank Arsenal remained the center for United States military vehicle development, and operated as such into the twenty first century.⁴³

Wartime migration was staggering. By 1945, one of every five Americans had moved to another location as a result of wartime production labor needs. Studies showed that eighty percent remained in their adopted towns after the war. In Detroit, the city's population peaked in 1950 at almost two million, and regionally at over three and a quarter million. Veterans returning from the European and Pacific theaters swelled the ranks of labor, many temporary workers were laid off, and unions battled to maintain wages. While there was a period of adjustment, and brief economic downturns in 1947 and 1954, Detroit's industrial base thrived. A decade after the war ended, real wages had risen by forty percent. The "boom town" era gave way to the "baby boom" era.⁴⁴

The level of education enjoyed by Detroiters was at its apex. The specialized production needs during the war meant that people in the skilled trades had gained cutting edge experience, making the labor pool one of the finest in the world. Veterans took advantage of the GI Bill to get advanced degrees which benefitted all aspects of the city's economy. A 1949 millage increase allowed the Detroit Public Schools system to begin a new building program, and changes in the composition of the School Board marked the beginning of a more liberal teaching agenda. Critics say it marked the beginning of the system's decline.⁴⁵

The physical nature of the city changed. During the war, transportation engineers had developed roads to speed the movement of men and materials. The Davison Freeway, the city's first

⁴² Woodford, 162.

⁴³ Bryan, 71; Boz/Talbot, 44-47, Woodford, 163.

⁴⁴ Warren, William M. Tuttle, Jr., 51-52; Wrynn, 157, Babson, 131.

⁴⁵ Wrynn, 157; Jeffery Mirel, *The Rise and Fall of an Urban School System: Detroit 1907-81* (Ann Arbor: University of Michigan Press, 1999), 201-202, 229.

sub-grade freeway, and the Detroit Industrial Highway, between the Rouge Plant and Willow Run, became blueprints for a rapid transit system that would transform metropolitan Detroit. Mayor Jeffries' vision of the future city, in harmony with President Dwight Eisenhower's national highway initiative, allowed several freeways to be built and encouraged movement from the city's core. These expressways also separated neighborhoods and destroyed cultural ties that were decades old.⁴⁶

The 40th Anniversary edition of the *Detroiter* magazine in 1943, published by the Detroit Board of Commerce, proclaimed "Victory is Detroit's Business." Detroit manufacturing certainly embraced the war's challenges. They brought to the table everything necessary to make the city's response successful – supply chain and production expertise, engineering and architectural know-how, a skilled and eager workforce, and a commercial infrastructure that could be quickly adapted and expanded. Most of the players were in the automotive sphere and intensely competitive. Yet they came together in a spirit of cooperation with one goal in mind – American and Allied victory. For five years, victory was Detroit's business.⁴⁷

Detroiters of all classes and backgrounds put forth their best effort, whether in a factory, laboratory, office, farm field or home. They worked hard, played hard, and overcame obstacles presented by overcrowding, product shortages and fatigue. They enjoyed some of the best dance music and some of the sappiest movies ever made. And they pulled together when violence and vice tried to divide them. Through it all, the people of Detroit made sure the war machine kept churning out the tools America's soldiers needed to win.

In William Knudsen's assessment, "While we had troubles in both material and labor, on the whole there was an enthusiasm and patriotism displayed which would warm anybody's heart, and bolster up their faith in our country and its immense resources to finish the job."⁴⁸

⁴⁶ Peter Gavrilovich and Bill McGraw, *Detroit Almanac*, (Detroit: Detroit Free Press, 2001), 234; Woodford, 163, Capeci, 19-20.

⁴⁷ *The Detroyter*, June 28, 1943, found at www.detroitchamber.com/

⁴⁸ Beasley, *Knudsen*, 357.