



Motor Vehicle Manufacturing Industry Labor Market Analysis Northwest Mississippi

Younger Associates (YA) has evaluated the Northwest Mississippi labor market from the viewpoint of a motor vehicle assembly/manufacturing operation seeking to locate in the region. The Northwest Mississippi labor market is primarily comprised of ten counties including Benton, Coahoma, DeSoto, Marshall, Panola, Quitman, Tate and Tunica counties in Mississippi and Fayette and Shelby counties in Tennessee. Crittenden, Lee and Phillips Counties in Arkansas also provide workers for the Northwest Mississippi labor market and would be an additional source of workers for an automotive assembly plant. However, this assessment provides the potential labor yield for the ten-county primary region, which has excellent highway access for worker mobility.

In 2015, YA completed a comprehensive workforce survey and analysis in the Northwest Mississippi region. A survey of the workforce was conducted in sufficient depth to yield a 95% confidence factor and a $\pm 4\%$ margin of error.

In this labor market assessment, we draw from the in-depth primary data that was collected in that analysis and combine it with the most current data from the Mississippi Department of Employment Security, the Tennessee Department of Labor and Workforce Development and the U.S. Department of Labor and Bureau of Labor Statistics. Data was also used from licensed, proprietary sources such as Claritas and EMSI.

Younger Associates specializes in research for economic development. The firm has pioneered many innovative economic development studies and has developed a workforce survey process that provides highly reliable data that includes all sectors of the workforce. YA is nationally recognized for the quality of the firm's work in analyzing labor market dynamics for economic development. The firm's workforce data has been utilized in successful location decisions for businesses across the U.S.

Motor Vehicle Manufacturing Industry Workforce Availability

As the first step in determining workforce availability, the occupations most in demand by the motor vehicle manufacturing industry were identified. A list was compiled of the top 40 in-demand occupations for the motor vehicle parts manufacturing industry sector as reported by the Bureau of Labor Statistics, May 2014 Occupational Employment Statistics.

The annual employment demand, wage data, location quotients and other occupational characteristics were compiled for the top 40 occupations. Applying information derived from the workforce survey, a labor yield table was developed to project the number of qualified applicants a motor vehicle manufacturer could expect to hire from the Northwest Mississippi region.

Key Findings

- This analysis finds that a new motor vehicle manufacturing employer, providing locally competitive wages and benefits, locating in the Northwest Mississippi region could expect to hire from the current population 2,848 workers from the ten-county labor market area, depending on the selectivity of the employer.
- The Northwest Mississippi average wage (\$19.54) for the top 40 motor vehicle manufacturing occupations is 27.1% lower than the national average wage (\$24.83) for these workers.
- Colleges, universities and other post-secondary training providers serving the Northwest Mississippi area offer approximately 70 training programs that prepare workers for the top motor vehicle manufacturing occupations. In 2014, these higher education training providers produced 3,409 graduates from programs supporting to the top 40 occupations in the motor vehicle manufacturing industry. If business program graduates are excluded, which include programs for occupations such as accountants, human resource and information systems, the number of graduates is still 1,669. This annual influx of trained workers provides a strong pipeline of new workers to complement the initial hiring pool.
- For the top two occupations for automotive assembly—team assemblers and production workers—the location quotient in the Northwest Mississippi labor market is above the national average. There has been a steady increase in the number of workers in these occupations every year since 2007.
- Northwest Mississippi has a proven ability to attract new workers to locate in the region. Good public schools and low cost of living entice young families and others to relocate in the region for employment opportunities. Population growth can be considered a positive factor in the labor yield pipeline.

Selected Demographic Data Northwest MS Labor Market

Demographic Characteristic	Northwest MS 10-County Labor Market
2021 Population Projection	1,327,500
2016 Population Estimate	1,302,556
2010 Census Population	1,281,927
2000 Census Population	1,186,103
Growth 2000-2010	8.08%
Projected Growth 2016-2021	1.92%
Population Age 18-64	806,934
Median Age	36.0
High School Diploma/GED or Above (%)	85.53%
Some College, Post Secondary Training	23.77%
Associates Degree	7.03%
Bachelor's Degree	17.05%
Master's Degree and Beyond	9.55%
Average Travel Time to Work (Minutes)	26.00
Labor Force (Jan-Nov 2015 Average)	590,970
Annual Average Wage (2014)	\$ 48,339
Unemployed (Jan-Nov 2015 Average)	39,920
Post Secondary Completions (2014 - all educational programs)	4,636

Source: Younger Associates, Claritas, U.S. Census Bureau, EMSI, IPEDS.

Labor Force and Employment Data Northwest MS Labor Market

County	Average Jan-Nov 2015			
	Labor Force	Employed	Unemployed	Unemployed Rate
Benton, MS	3,110	2,870	240	7.7%
Coahoma, MS	9,570	8,540	1,030	10.8%
DeSoto, MS	81,750	78,010	3,740	4.6%
Marshall, MS	14,650	13,610	1,040	7.1%
Panola, MS	13,620	12,370	1,250	9.2%
Quitman, MS	2,740	2,430	310	11.3%
Tate, MS	12,040	11,170	870	7.2%
Tunica, MS	4,810	4,310	500	10.4%
Fayette, TN	17,680	16,500	1,180	6.7%
Shelby, TN	431,000	401,240	29,760	6.9%
NW MS Region	590,970	551,050	39,920	6.8%
State of Mississippi				6.4%
United States				5.3%

Source: Mississippi and Tennessee Department of Employment Security

**Annual Average Wages
Northwest MS Labor Market**

County	Businesses	Employees	Total Wages	Annual Average Wage
Benton, MS	86	1,268	\$ 35,942,583	\$ 28,346
Coahoma, MS	658	8,221	\$ 270,772,339	\$ 32,937
DeSoto, MS	2,695	51,301	\$ 1,672,821,637	\$ 32,608
Marshall, MS	418	5,809	\$ 192,565,691	\$ 33,150
Panola, MS	637	10,632	\$ 350,893,970	\$ 33,004
Quitman, MS	141	1,140	\$ 31,504,246	\$ 27,635
Tate, MS	348	5,275	\$ 160,688,796	\$ 30,462
Tunica, MS	283	9,794	\$ 294,084,677	\$ 30,027
Fayette, TN	547	7,410	\$ 298,049,211	\$ 40,223
Shelby, TN	19,500	476,645	\$ 24,636,922,767	\$ 51,688
NW MS Region	25,313	577,495	27,944,245,917	\$ 48,389
Without TN	5,266	93,440	3,009,273,939	\$ 32,205

Source: Mississippi and Tennessee Labor Market Information, Department of Employment Security

Top 40 Occupations for Motor Vehicle Manufacturing Northwest MS Labor Market

SOC	Rank	Description	2007 Jobs	2015 Jobs	2020 Jobs	2015-2020 Change	2015-2020 % Change	2015 Location Quotient	Labor Market Avg. Hourly Earnings	National Avg. Hourly Earnings	National 2015 Jobs	National 2020 Jobs	2015-2020 National % Change
51-2092	1	Team Assemblers	5,948	6,034	6,322	288	4.6%	1.22	\$14.49	\$14.80	1,183,212	1,175,438	(0.7%)
51-9199	2	Production Workers, All Other	1,366	1,462	1,578	116	7.4%	1.44	\$18.28	\$15.28	242,400	246,526	1.7%
51-2099	3	Assemblers and Fabricators, All Other	1,062	1,062	1,188	126	10.6%	1.00	\$13.00	\$13.86	253,026	257,482	1.8%
51-1011	4	First-Line Supervisors of Production and Operating Workers	2,856	2,483	2,358	(125)	(5.3%)	0.96	\$25.21	\$28.10	619,545	608,844	(1.7%)
17-2112	5	Industrial Engineers	1,253	1,391	1,408	17	1.2%	1.36	\$36.60	\$40.92	244,260	248,285	1.6%
51-4031	5	Cutting, Punching, & Press Machine Setters, Operators, & Tenders, Metal & Plastic	649	512	518	5	1.0%	0.63	\$14.59	\$15.68	195,213	184,270	(5.6%)
49-9041	7	Industrial Machinery Mechanics	1,214	1,279	1,365	86	6.3%	0.90	\$24.27	\$24.09	339,253	368,593	8.6%
47-2111	8	Electricians	2,466	2,240	2,295	55	2.4%	0.80	\$22.33	\$25.21	669,287	694,417	3.8%
51-9061	9	Inspectors, Testers, Sorters, Samplers, and Weighers	2,617	2,727	2,757	31	1.1%	1.26	\$16.46	\$18.71	515,613	526,586	2.1%
51-9122	10	Painters, Transportation Equipment	229	209	196	(13)	(6.5%)	0.86	\$21.58	\$21.04	58,168	59,754	2.7%
51-4041	11	Machinists	1,227	1,340	1,416	77	5.4%	0.78	\$21.69	\$19.96	410,426	428,308	4.4%
53-7051	12	Industrial Truck and Tractor Operators	6,708	6,747	6,615	(133)	(2.0%)	2.98	\$13.85	\$16.02	542,330	537,618	(0.9%)
51-4111	13	Tool and Die Makers	157	137	144	7	5.1%	0.42	\$20.10	\$24.09	78,710	76,379	(3.0%)
11-3051	14	Industrial Production Managers	900	829	780	(49)	(6.3%)	1.14	\$44.57	\$48.48	174,298	170,986	(1.9%)
53-7062	15	Laborers and Freight, Stock, and Material Movers, Hand	33,734	35,570	36,843	1,273	3.5%	3.34	\$12.90	\$13.11	2,550,446	2,667,319	4.6%
17-2141	16	Mechanical Engineers	494	503	558	54	9.7%	0.43	\$41.21	\$41.82	282,713	290,909	2.9%
51-4122	17	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	190	204	221	17	7.7%	0.80	\$16.38	\$17.45	60,660	64,712	6.7%
51-4121	18	Welders, Cutters, Solderers, and Brazers	1,174	1,028	1,052	24	2.3%	0.60	\$20.93	\$19.09	407,290	418,311	2.7%
49-9044	19	Millwrights	356	391	402	11	2.7%	2.24	\$24.35	\$24.77	41,720	43,809	5.0%
47-2152	20	Plumbers, Pipefitters, and Steamfitters	1,790	1,653	1,696	43	2.5%	0.86	\$22.94	\$25.00	459,129	486,503	6.0%
49-9071	21	Maintenance and Repair Workers, General	6,495	6,087	6,196	110	1.8%	1.01	\$17.58	\$18.43	1,448,285	1,514,166	4.5%

Top 40 Occupations for Motor Vehicle Manufacturing Northwest MS Labor Market

SOC	Rank	Description	2007 Jobs	2015 Jobs	2020 Jobs	2015-2020 Change	2015-2020 % Change	2015 Location Quotient	Labor Market Avg. Hourly Earnings	National Avg. Hourly Earnings	National 2015 Jobs	National 2020 Jobs	2015-2020 National % Change
51-2031	22	Engine and Other Machine Assemblers	154	139	131	(8)	(6.3%)	0.85	\$16.48	\$19.32	39,181	38,996	(0.5%)
13-1081	23	Logisticians	475	527	575	48	8.3%	0.94	\$30.49	\$36.94	134,843	150,469	11.6%
49-1011	24	First-Line Supervisors of Mechanics, Installers, and Repairers	2,434	2,234	2,239	5	0.2%	1.17	\$28.40	\$30.99	457,537	473,270	3.4%
51-4022	25	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	99	99	91	(7)	(8.1%)	1.08	\$15.15	\$17.06	21,847	20,594	(5.7%)
49-3021	26	Automotive Body and Related Repairers	632	562	540	(22)	(4.1%)	0.83	\$19.54	\$19.81	162,619	168,546	3.6%
49-3031	27	Bus and Truck Mechanics and Diesel Engine Specialists	1,384	1,297	1,316	20	1.5%	1.17	\$21.07	\$21.29	264,858	276,264	4.3%
43-5081	28	Stock Clerks and Order Fillers	11,391	10,987	10,836	(151)	(1.4%)	1.37	\$12.32	\$12.21	1,915,537	1,935,275	1.0%
11-9041	29	Architectural and Engineering Managers	482	550	579	29	4.9%	0.70	\$52.52	\$66.56	186,830	193,609	3.6%
43-5061	30	Production, Planning, and Expediting Clerks	2,266	2,279	2,261	(18)	(0.8%)	1.73	\$22.44	\$22.93	314,858	322,435	2.4%
13-1199	31	Business Operations Specialists, All Other	2,405	2,263	2,379	116	4.9%	0.55	\$30.59	\$35.08	990,576	1,037,710	4.8%
17-2199	32	Engineers, All Other	262	258	276	17	6.3%	0.43	\$42.58	\$45.14	143,936	147,335	2.4%
13-1023	33	Purchasing Agents, Except Wholesale, Retail, and Farm Products	901	830	845	16	1.8%	0.65	\$27.02	\$31.11	303,708	310,230	2.1%
11-1021	34	General and Operations Managers	9,181	8,788	9,005	217	2.4%	0.97	\$51.07	\$56.06	2,170,700	2,289,447	5.5%
51-9121	35	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	320	249	240	(8)	(3.5%)	0.64	\$14.45	\$15.78	93,603	92,273	(1.4%)
53-7063	36	Machine Feeders and Offbearers	1,158	1,283	1,263	(20)	(1.6%)	2.85	\$14.13	\$14.73	107,761	107,236	(0.5%)
43-5071	37	Shipping, Receiving, and Traffic Clerks	6,655	6,609	6,421	(188)	(2.9%)	2.31	\$14.81	\$15.28	685,373	691,349	0.9%
13-1071	38	Human Resources Specialists	1,730	1,747	1,886	139	7.4%	0.85	\$27.36	\$30.07	494,223	514,880	4.2%
51-9198	39	Helpers--Production Workers	1,906	1,834	1,969	134	6.8%	1.02	\$10.80	\$12.31	432,115	434,527	0.6%
51-4081	40	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	218	144	151	7	4.6%	0.34	\$14.40	\$16.97	100,295	94,344	(5.9%)
Labor Market Total			116,936	116,566	118,909	2,343	2.0%		\$19.54	\$24.83	19,796,384	20,368,006	2.9%

Completions from Programs Supporting the Top 40 Occupations in Motor Vehicle Mfg Northwest MS Region

CIP Code	Program	Institutional Completions* (2014)
04.0201	Architecture	4
04.0301	City/Urban, Community and Regional Planning	7
04.0401	Environmental Design/Architecture	10
04.0601	Landscape Architecture	0
14.0101	Engineering, General	22
14.0201	Aerospace, Aeronautical and Astronautical/Space Engineering	0
14.0301	Agricultural Engineering	0
14.0401	Architectural Engineering	0
14.0501	Bioengineering and Biomedical Engineering	26
14.0701	Chemical Engineering	21
14.0799	Chemical Engineering, Other	0
14.0801	Civil Engineering, General	71
14.0901	Computer Engineering, General	27
14.1001	Electrical and Electronics Engineering	66
14.1099	Electrical, Electronics and Communications Engineering, Other	0
14.1101	Engineering Mechanics	0
14.1201	Engineering Physics/Applied Physics	0
14.1301	Engineering Science	40
14.1401	Environmental/Environmental Health Engineering	0
14.1801	Materials Engineering	2
14.1901	Mechanical Engineering	127
14.2001	Metallurgical Engineering	0
14.2301	Nuclear Engineering	0
14.2701	Systems Engineering	0
14.3201	Polymer/Plastics Engineering	0
14.3501	Industrial Engineering	0
14.4201	Mechatronics, Robotics, and Automation Engineering	0
14.4301	Biochemical Engineering	2
14.9999	Engineering, Other	0
15.0613	Manufacturing Engineering Technology/Technician	44
15.0702	Quality Control Technology/Technician	2
15.1503	Packaging Science	1
40.1001	Materials Science	0
44.0401	Public Administration	82
46.0302	Electrician	51
46.0401	Building/Property Maintenance	0
46.0502	Pipefitting/Pipefitter and Sprinkler Fitter	0
46.0503	Plumbing Technology/Plumber	0
47.0302	Heavy Equipment Maintenance Technology/Technician	0
47.0303	Industrial Mechanics and Maintenance Technology	96
47.0399	Heavy/Industrial Equipment Maintenance Technologies, Other	46
47.0603	Autobody/Collision and Repair Technology/Technician	65
47.0605	Diesel Mechanics Technology/Technician	140
47.0613	Medium/Heavy Vehicle and Truck Technology/Technician	23
47.0615	Engine Machinist	5
48.0501	Machine Tool Technology/Machinist	31
48.0503	Machine Shop Technology/Assistant	39

Completions from Programs Supporting the Top 40 Occupations in Motor Vehicle Mfg Northwest MS Region

CIP Code	Program	Institutional Completions* (2014)
48.0507	Tool and Die Technology/Technician	12
48.0508	Welding Technology/Welder	416
52.0101	Business/Commerce, General	294
52.0201	Business Administration and Management, General	1,445
52.0203	Logistics, Materials, and Supply Chain Management	27
52.0205	Operations Management and Supervision	0
52.0408	General Office Occupations and Clerical Services	46
52.0701	Entrepreneurship/Entrepreneurial Studies	0
52.1001	Human Resources Management/Personnel Administration, General	19
52.1003	Organizational Behavior Studies	0
52.1099	Human Resources Management and Services, Other	0
52.1101	International Business/Trade/Commerce	76
52.1801	Sales, Distribution, and Marketing Operations, General	17
52.9999	Business, Management, Marketing, and Related Support Services, Other	7
		3,409

**See Regional Institution List of Institutions*

Regional Institutions Providing Training for Occupations Supporting Motor Vehicle Mfg Northwest MS Region

Name	Distance from Site	Type	Enrollment	Total Completions All Programs
4-Year Public & Private Schools				
Remington College-Memphis Campus	34.5 miles	4-year, Private not-for-profit	633	514
Le Moyne-Owen College	35.8 miles	4-year, Private not-for-profit	1,006	127
Mid-South Christian College	35.9 miles	4-year, Private not-for-profit	21	7
Strayer University-Tennessee	35.9 miles	4-year, Private for-profit	1,960	282
Baptist Memorial College of Health Sciences	37.4 miles	4-year, Private not-for-profit	1,170	214
Christian Brothers University	37.4 miles	4-year, Private not-for-profit	1,667	440
University of Memphis	38.8 miles	4-year, Public	21,059	4,508
Rhodes College	39.0 miles	4-year, Private not-for-profit	2,054	467
DeVry University-Tennessee	40.5 miles	4-year, Private for-profit	446	108
ITT Technical Institute-Cordova	48.6 miles	4-year, Private for-profit	545	141
Strayer University-Shelby Oaks Campus	48.9 miles	4-year, Private for-profit		276
University of Mississippi	53.0 miles	4-year, Public	22,503	4,824
Rust College	53.1 miles	4-year, Private not-for-profit	963	108
Delta State University	69.9 miles	4-year, Public	3,614	808
Blue Mountain College	77.0 miles	4-year, Private not-for-profit	544	117
Arkansas State University-Main Campus	81.0 miles	4-year, Public	13,144	3,820
Mississippi Valley State University	82.4 miles	4-year, Public	2,222	456
Harding University	86.3 miles	4-year, Private not-for-profit	6,059	1,386
University of Arkansas at Pine Bluff	94.8 miles	4-year, Public	2,513	455
Crowley's Ridge College	95.0 miles	4-year, Private not-for-profit	224	14
2-Year Public & Private Schools				
Phillips Community College of the University of Arkansas	16.7 miles	2-year, Public	1,796	345
Northwest Mississippi Community College	23.6 miles	2-year, Public	7,559	1,162
Delta Technical College	26.4 miles	< 2-year, Private for-profit	662	606
East Arkansas Community College	32.2 miles	2-year, Public	1,268	308
Crowley's Ridge Technical Institute	32.2 miles	< 2-year, Public	212	185
Mid-South Community College	33.7 miles	2-year, Public	1,895	343
Vatterott College-Dividend	34.5 miles	2-year, Private for-profit	667	387
Coahoma Community College	35.5 miles	2-year, Public	2,045	351
Southwest Tennessee Community College	36.8 miles	2-year, Public	10,227	1,276
William Moore College of Technology	37.4 miles	2-year, Private not-for-profit	249	79
Tennessee College of Applied Technology-Memphis	37.5 miles	2-year, Public	1,051	534
Concorde Career College-Memphis	40.2 miles	2-year, Private for-profit	1,310	857
Vatterott College-Applying Farms	48.9 miles	2-year, Private for-profit	285	179
Tennessee College of Applied Technology-Covington	72.7 miles	2-year, Public	244	191
Arkansas State University-Newport	81.3 miles	2-year, Public	2,477	557
Tennessee College of Applied Technology-Whiteville	82.4 miles	2-year, Public	222	126
Mississippi Delta Community College	85.9 miles	2-year, Public	2,705	533
Tennessee College of Applied Technology-Ripley	86.8 miles	2-year, Public	146	121
Arkansas Northeastern College	89.6 miles	2-year, Public	1,425	401
Arkansas State University-Beebe	90.2 miles	2-year, Public	4,140	1,606

Northwest Mississippi Labor Market

Estimated Labor Supply for a Motor Vehicle Manufacturing Company

*The ten county labor market area includes Benton, Coahoma, DeSoto,
Marshall, Panola, Quitman, Tate and Tunica Counties in Mississippi and
Fayette and Shelby Counties, Tennessee*

10-County Labor Market Area

1	Potential underemployment yield	22,262
2	Not employed, but interested in employment	3,201
3	New labor force entrants	3,750
4	Total potential applicants	29,213
5	Qualified Applicants for skill mix	13,146
6	Commute Propensity	65.0%
7	Qualified Applicants Willing to Commute	8,545
8	1 in 3 selectivity ratio	2,848

Explanatory Notes

- 1 Individuals currently working, but possess skills for higher employment levels in the specified occupations. From the labor study, 23.2% of those currently employed report they are underemployed with higher skill levels than the job they currently hold requires.
- 2 Based upon those not currently working, but interested in finding employment (unemployed, separating military, workers returning to the workforce after an absence, but not in the official unemployment count) with an assumed rate of experience in the specified occupations at the ratio of those currently employed.
- 3 Growth component to account for new entrants into the labor force. Includes recent postsecondary completions and new residents that are likely to apply for positions within the specified industry.
- 4 Total eligible population.
- 5 Number of applicants shown in line 4 passing initial screening and offered an interview. The actual percentage will vary according to the skills required by the operation. It is assumed 45% would be qualified for the mix of jobs available.
- 6 Based upon the current commute patterns.
- 7 Number of applicants that are qualified for employment and either live in the Shoals region or would be willing to commute to area for employment.
- 8 The number of employees an employer could hire assuming a selectivity ratio of one hire per three applicants.

Source: Calculations by Younger Associates based upon data from BLS, IPEDS, 2015 Labor Study.