

# Where Have All the Auto Workers Gone?

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## Where Can All the Auto Workers Go?

Randy Eberts

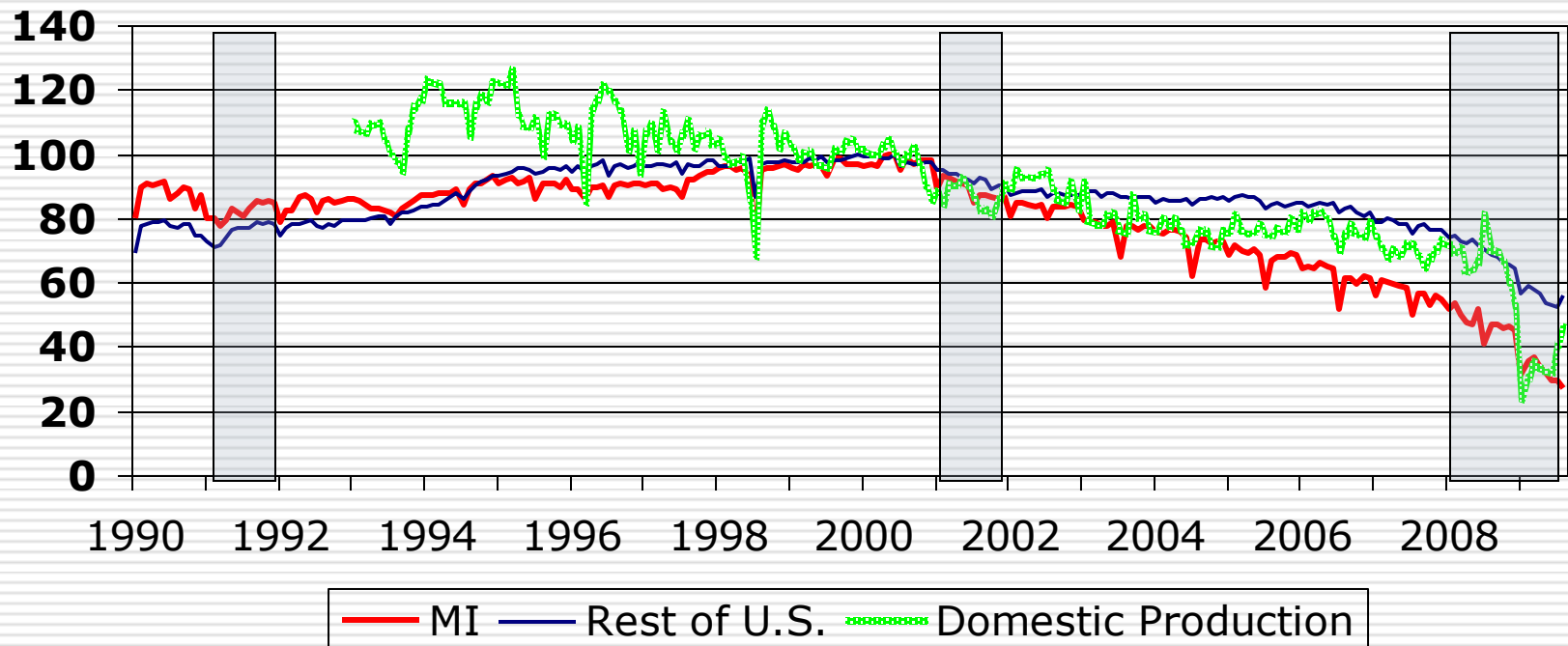
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# The problem for autoworkers is that this is not just a recessionary downturn.

## Index of Auto Manufacturing & Production Index 100 = June 2000



— MI — Rest of U.S. - - - Domestic Production

Source: Based on BLS CES data; BEA motor vehicles data. Note: Shaded areas represent approximate duration of recessions.

# What are the options for a worker displaced from motor vehicle or parts assembly jobs?

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- ❑ Find a job performing similar tasks elsewhere in manufacturing.
- ❑ Look for a new job that can utilize their existing set of skills.
- ❑ Upgrade skills to look for a new niche in manufacturing.
- ❑ Try to transition to a new occupation.
- ❑ Retire from the labor force.

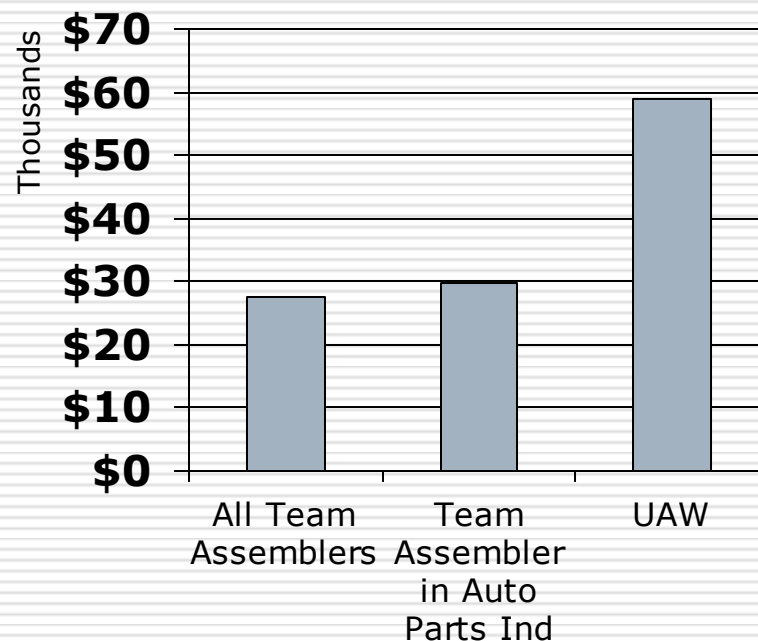
# First off, what occupations fit the typical auto worker? – Assembly and machine operating positions are dominant.

Motor Vehicle Manufacturing Occupations	Percent of Total	Motor Vehicle Parts Manufacturing Occupations	Percent of Total
Team assemblers	24.3%	Team assemblers	15.2%
Assemblers and fabricators, all other	18.7%	Cutting, punching, and press machine setters, operators	4.2%
First-line supervisors/managers of production workers	2.8%	Machinists	3.7%
Inspectors, testers, sorters, samplers, and weighers	2.7%	Inspectors, testers, sorters, samplers, and weighers	3.5%
Painters, transportation equipment	2.2%	First-line supervisors/managers of production workers	3.3%
Maintenance and repair workers, general	2.1%	Assemblers and fabricators, all other	3.2%
Laborers and freight, stock, and material movers, hand	1.8%	Multiple machine tool setters, operators	2.6%
Industrial truck and tractor operators	1.5%	Tool and die makers	2.6%
Welders, cutters, solderers, and brazers	1.3%	Industrial truck and tractor operators	2.6%
Industrial machinery mechanics	1.2%	Laborers and freight, stock, and material movers, hand	2.1%

A direct approach may be to simply seek another assembly worker job. However, the cut in pay can be huge.

- The U.S. median wage for team assemblers is roughly half that of a UAW member employed by the Detroit 3.
- Workers at part plants typically earn less than those at car plants but slightly more than in other manufacturing industries overall.

**Median Annual U.S. Wages in 2008**

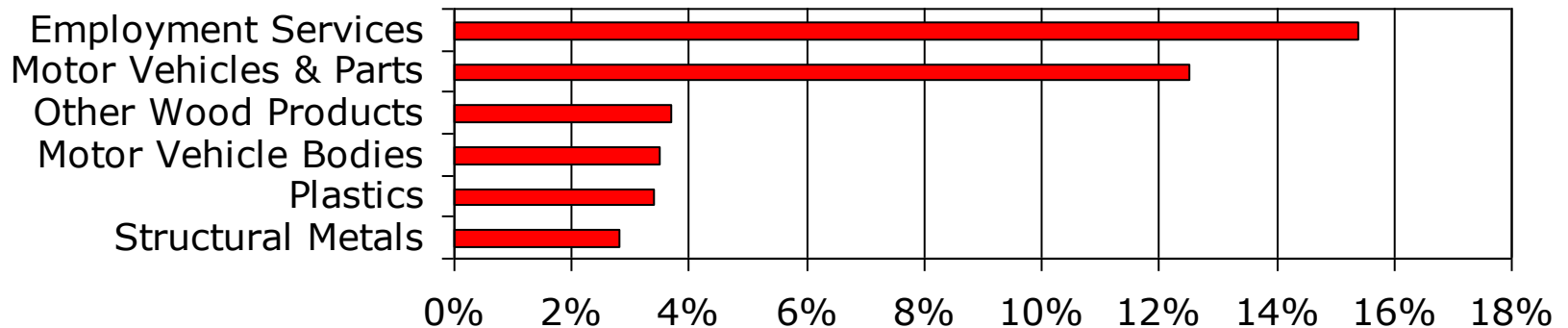


Source: BLS May 2008 OES statistics; and calculation based on UAW hourly data as cited on UAW.org 11/08.

# Temporary employment agencies employ more assembly workers than any other industry in the country.

- ❑ Employment services offer the most opportunities and can be a foot in the door to new industries.
- ❑ However, wages are low: about \$23,000/year for new hires in Michigan.

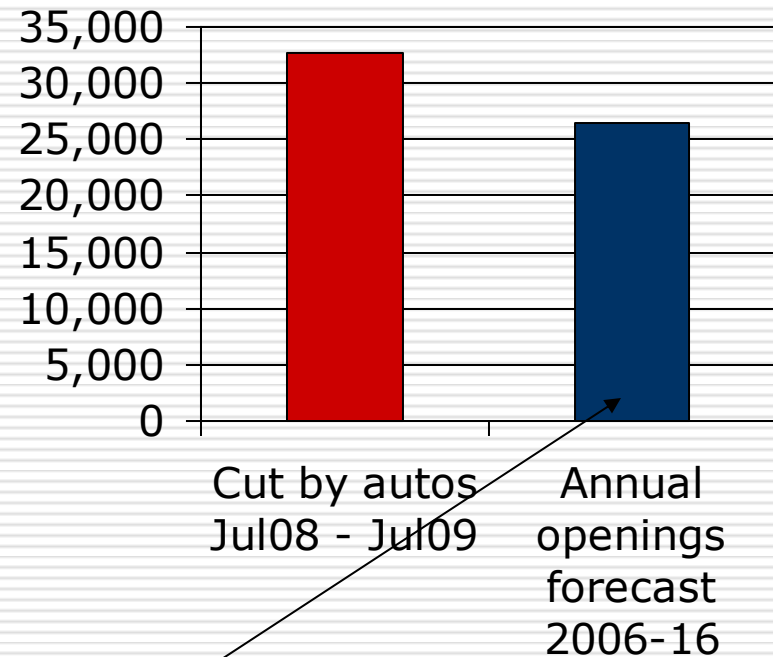
**Industries by Share of Total Team Assembler Occupation Employment**



# Reductions in motor vehicle manufacturing and parts far outnumber even an optimistic forecast of job openings.

- Over the past year, U.S. motor vehicle mfg shrank by 47,100 and parts shrank by 139,500. This should equate to about 32,600 displaced from team assembler occupations.
- The forecast created before the downturn called for only 26,550 annual openings for team assembly workers nationwide.

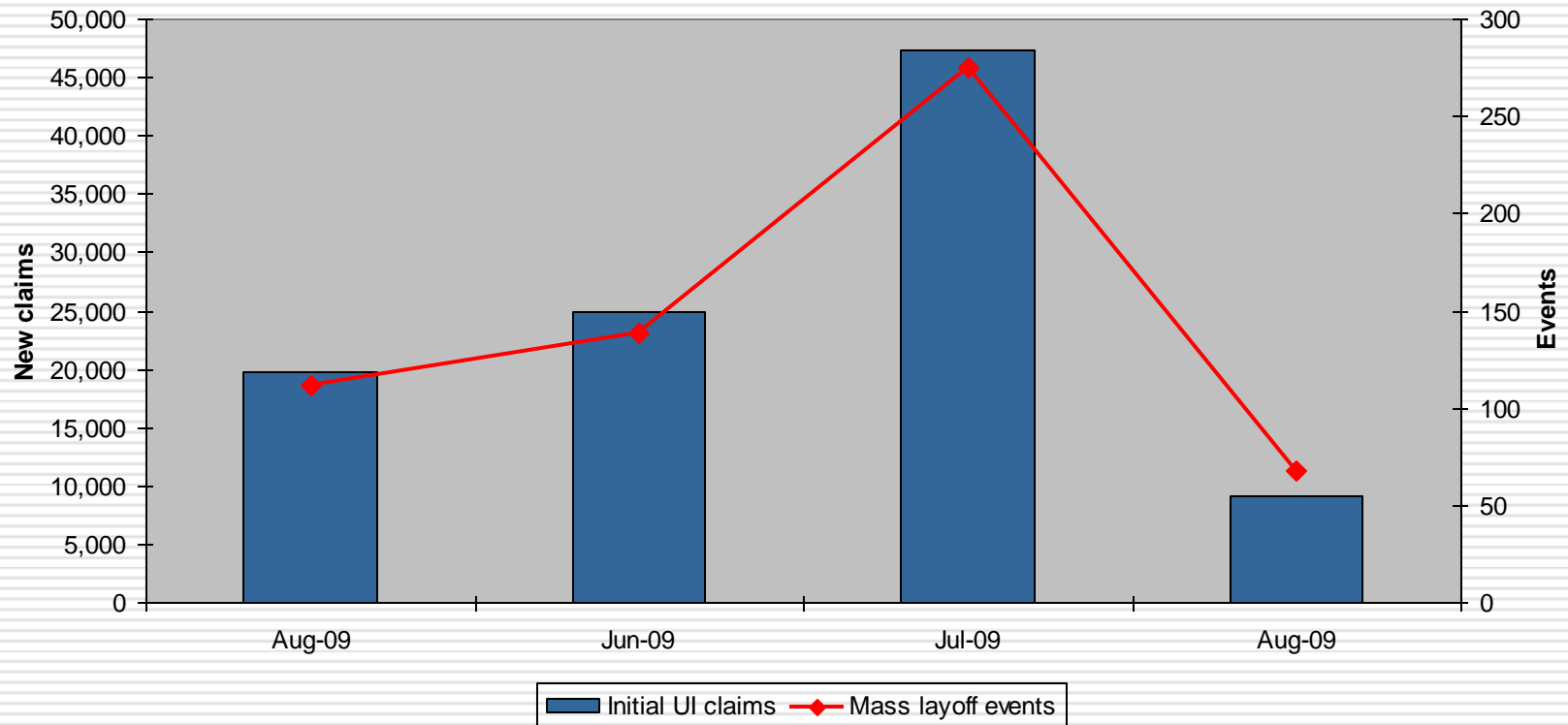
**Team Assembler Occupation Employment**



Only a small fraction of those openings are expected to be in Michigan: 1,100.

# The number of laid-off autoworkers has probably peaked; however, too many have flooded the job market.

U.S. Transportation Equipment Manufacturing Sector Layoffs



Source: BLS, Industry distribution: mass layoffs and initial claimants for UI, Table 3 9/25/09.



So most displaced auto workers seeking employment will need to find new occupations.

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- Another approach is to look at occupational skill requirements and see where former assembly workers might fit with the needs of other occupations.
- O\*NET provides detailed information on occupational skills and allows the user to search for occupations that match.

# Team Assembler Occupational Skills – The focus is on taking directions and operating machinery.

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- ❑ Learning Strategies — Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- ❑ Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- ❑ Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- ❑ Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.
- ❑ Instructing — Teaching others how to do something.
- ❑ Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.
- ❑ Equipment Selection — Determining the kind of tools and equipment needed to do a job.
- ❑ Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- ❑ Coordination — Adjusting actions in relation to others' actions.
- ❑ Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

# There are other occupations that demand a set of skills similar to that of the team assemblers being laid off from automotive.

## Occupations with Skills Similar to Team Assemblers in JobZones Below 4

Skills Matched (out of 10)	Job Zone	Occupation
9	2	Forest Fire Fighters
9	2	Plasterers and Stucco Masons
9	2	Riggers
9	2	Petroleum Pump System Operators, Refinery Operators, and Gaugers
9	3	Respiratory Therapy Technicians
8	1	Derrick Operators, Oil and Gas
8	2	Rotary Drill Operators, Oil and Gas
8	2	Pump Operators, Except Wellhead Pumps
8	3	Radio Operators
8	3	Forest Fire Fighting and Prevention Supervisors
8	3	First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers
8	3	Automotive Master Mechanics
8	3	Refrigeration Mechanics and Installers
<u>Job Zone:</u> 1 = Little or no experience required 2 = Some preparation needed, usually requires H.S. diploma, some experience or job coursework 3 = Medium preparation needed, usually 1-2 years of OJT, some require an associate's degree		

Source: O\*NET.

Many of these compatible occupations pay well, but still not at a level comparable to that paid by the Detroit 3.

**Salary in Similar Occupations Requiring "Moderate" or Less Preparation**

Job Zone	Occupation	U.S. Median Salary	MI Median Salary
2	Forest Fire Fighters	44,260	43,500
2	Plasterers and Stucco Masons	37,470	42,500
2	Riggers	41,130	29,300
2	Petroleum Pump System Operators, Refinery Operators, and Gaugers	55,010	49,900
3	Respiratory Therapy Technicians	42,400	39,500
1	Derrick Operators, Oil and Gas	41,920	31,600
2	Rotary Drill Operators, Oil and Gas	49,800	37,300
2	Pump Operators, Except Wellhead Pumpers	39,100	39,000
3	Radio Operators	37,120	n.a.
3	Forest Fire Fighting and Prevention Supervisors	67,400	62,000
3	First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers	39,700	58,300
3	Automotive Master Mechanics	35,100	37,900
3	Refrigeration Mechanics and Installers	39,700	45,400

Few of these occupations offer pay at a level similar to what the average Detroit 3 UAW worker was earning: \$58-60,000.

Unfortunately, these compatible occupations are not expanding enough to offer sufficient opportunities to displaced auto workers.

**Occupational Growth and Openings Projected for Michigan 2006 - 2016**

Occupation	Projected Net Growth	Annual Openings from Growth & Replacements
Forest Fire Fighters	6.0%	290
Plasterers and Stucco Masons	6.0%	10
Riggers	0.0%	n/a
Petroleum Pump System Operators, Refinery Operators, and Gaugers	6.0%	10
Respiratory Therapy Technicians	-1.7%	10
Derrick Operators, Oil and Gas	n/a	n/a
Rotary Drill Operators, Oil and Gas	n/a	n/a
Pump Operators, Except Wellhead Pumpers	-12.0%	n/a
Radio Operators	n/a	n/a
Forest Fire Fighting and Prevention Supervisors	7.0%	40
First-Line Supervisors/Managers of Animal Husbandry and Animal Care Workers	2.0%	50
Automotive Master Mechanics	11.0%	790
Refrigeration Mechanics and Installers	8.0%	210

Source: O\*NET; CareerOneStop ([careerinfonet.org](http://careerinfonet.org)).

Another approach is to acquire the skills necessary to stick with a comfortable industry.

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- ❑ Manufacturing still pays better than many other industries and the environment may be more familiar to workers.
- ❑ Some may wish to take training and learn new skills in an attempt to find a more promising niche within the industry.

# Finding a high-paying job in a growing sector of the manufacturing industry usually requires significant training and experience.

**High-Demand Occupations in the Advanced Manufacturing Cluster**

Occupation	National Growth Trend	U.S. Expected Worker Demand	Median Salary Nationwide 2006 (\$)	Skills Matched w/ Team Assembler	JobZone
Environmental Scientists and Specialists, Including Health	Much faster than average	4,200	59,750	4	4
Environmental Science and Protection Technicians, Including Health	Much faster than average	2,400	40,230	3	4
Medical Equipment Repairers	Much faster than average	1,900	41,520	4	3
Industrial Engineers	Faster than average	8,900	73,820	3	4
Biological Technicians	Faster than average	4,100	38,400	4	4
Logisticians	Faster than average	2,700	66,480	4	4
Technical Writers	Faster than average	2,400	61,620	5	4
Medical Equipment Preparers	Faster than average	1,200	28,410	6	2

Job Zone:  
 1 = Little or no experience required  
 2 = Some preparation needed, usually requires H.S. diploma, some experience or job coursework  
 3 = Medium preparation needed, usually 1-2 years of OJT, some require an associate's degree  
 4 = Extensive preparation needed, a minimum of 2-4 years of experience and most require a 4-year college degree

Most manufacturing-related positions that have strong national growth and income potential now require a bachelor's degree and experience.

Source: O\*NET; CareerOneStop (careerinfonet.org).

For displaced Michigan workers who want to stay in manufacturing the options are less promising without significant training.

**Advanced Manufacturing Cluster Occupations in JobZone 3 or 2 and Michigan Opportunities**

Occupation	Annual Openings in Michigan	Median Salary in Michigan	JobZone
Medical Equipment Preparers	20	30,500	2
Helpers--Installation, Maintenance, and Repair Workers	110	23,500	2
Team Assemblers	1,110	27,700	2
Bakers	130	21,000	2
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	160	36,000	2
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	110	35,500	2
Stone Cutters and Carvers, Manufacturing	30	30,000	2
Molding and Casting Workers	30	30,000	2
Purchasing Agents, Except Wholesale, Retail, and Farm Products	260	59,200	3
Electronic Drafters	30	51,000	3
Electrical Drafters	30	51,000	3
Mechanical Drafters	150	52,000	3
Electronics Engineering Technicians	120	50,000	3
Electrical Engineering Technicians	120	50,000	3
Industrial Engineering Technicians	190	46,200	3
Mechanical Engineering Technicians	100	48,500	3
Chemical Technicians	120	39,600	3
Computer, Automated Teller, and Office Machine Repairers	60	42,900	3
Electrical and Electronics Repairers, Commercial and Industrial Equipment	110	51,000	3
Industrial Machinery Mechanics	270	47,900	3
Maintenance and Repair Workers, General	340	36,600	3
Medical Equipment Repairers	70	41,900	3
Glass Blowers, Molders, Benders, and Finishers	30	30,000	3
Potters, Manufacturing	30	30,000	3

Source: O\*NET and Career OneStop.



# Perhaps its time to look for a totally new occupation.

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- ❑ Where are the biggest growth opportunities for occupations with low-to-moderate preparation requirements?
- ❑ Can the skills and interests of displaced auto workers be successfully aligned with dramatically different occupations?

## Growth Occupations that Require Two-Years or Less of Education or Training

Level of Education Required	Fastest Growth Rate	Largest Numerical Job Growth Expected
Associate degree	Veterinary technologists and technicians Physical therapist assistant Dental hygienists Environmental science and protection technicians, including health Cardiovascular technologists and technicians	Registered nurses Computer support specialists Paralegals and legal assistants Dental hygienists Legal secretaries
Postsecondary vocational award	Makeup artists, theatrical and performance Skin care specialists Manicurists and pedicurists Fitness trainers and aerobics instructors Preschool teachers, except special education	Nursing aides, orderlies, and attendants Preschool teachers, except special education Automotive service technicians and mechanics Licensed practical and licensed vocational nurses Hairdressers, hairstylists, and cosmetologists
Work experience in a related occupation	Sales representatives, services, all other Gaming managers Gaming supervisors Aircraft cargo handling supervisors Self-enrichment education teachers	Executive secretaries and administrative assistants Sales representatives, services, all other Sales representatives, wholesale and manufacturing, except technical and scientific First-line supervisors/managers of food preparation and serving workers First-line supervisors/managers of office and administrative support workers
Long-term on-the-job training	Audio and video equipment technicians Interpreters and translators Athletes and sports competitors	Carpenters Cooks, restaurant Police and sheriff

Plenty of growing occupations that require limited to moderate amounts of training exist; however the skills and interests necessary to make the transition may be quite different from what a typical automotive assembly worker is expected to possess.

# Medical occupations seem like one promising choice; however, there are some major skill differences.

## Skills Common to Both Assembler and Nurse Aide

- Active listening
- Active learning
- Reading comprehension
- Coordination

## Other Skills Needed for Nurse Aide Occupation

- Social perceptiveness
- Service orientation
- Monitoring
- Critical thinking
- Judgment and decision making
- Speaking

Source: O\*NET.

Team assemblers do share some work interests with medical occupations; the big difference is the social nature of the work.

<u>Team Assembler Interests</u>	<u>Nursing Aide Interests</u>
Realistic	<i>Social</i>
Conventional	Realistic
Enterprising	Conventional

<u>Dental Hygienist Interests</u>	<u>Registered Nurse Interests</u>
<i>Social</i>	<i>Social</i>
Realistic	Investigative
Conventional	Conventional

# Differences in Required Skills – It's not just the health care field that requires social skills more than physical or technical skills.

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## Sales Representatives, Wholesale and Mfg

- Speaking
- Time management
- Persuasion
- Service orientation
- Negotiating
- Social perceptiveness

Also this occupation often requires a bachelors degree

## First-line Supervisors, food service workers

- Speaking
  - Time management
  - Monitoring
  - Mathematics
  - Service orientation
  - Social perceptiveness
  - Management of personnel resources
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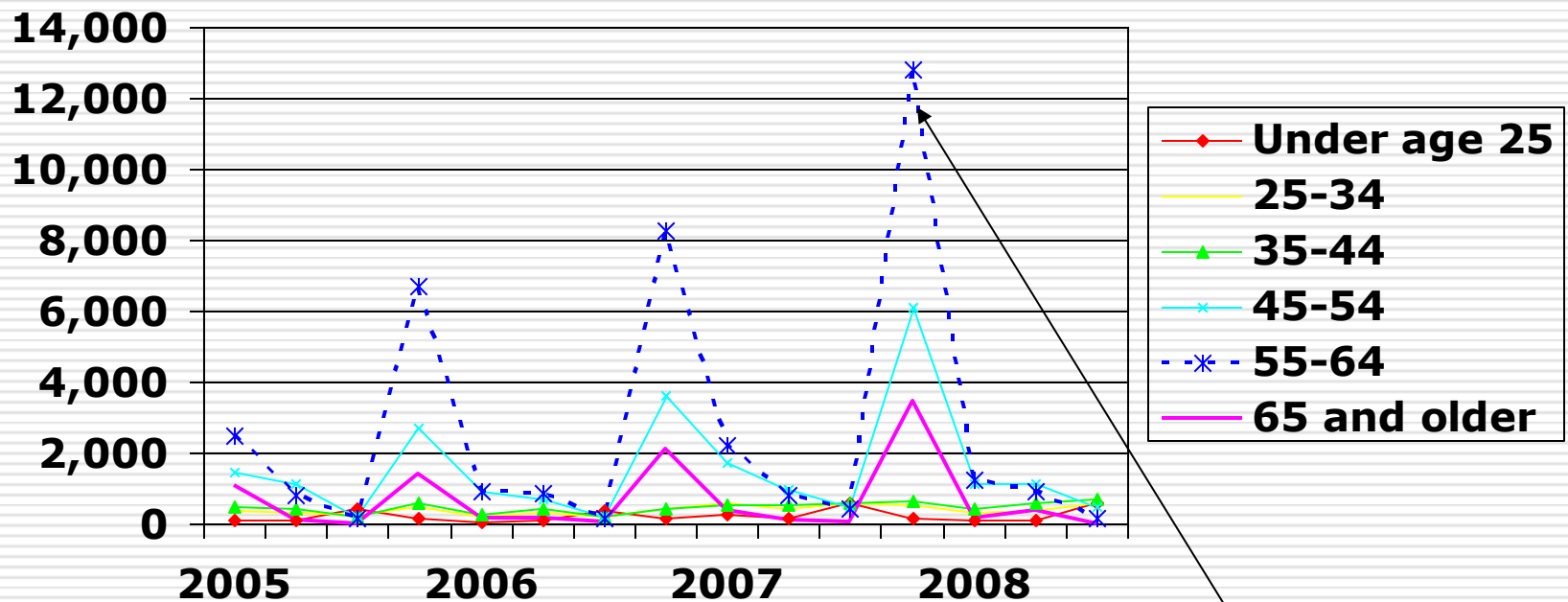
So it's tough out there in the labor force—but what about the retirement option?

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- ❑ Fine for Detroit 3 assembly plant workers – buyouts and union benefits make the option attractive and older workers opt-out on their own.
- ❑ At parts suppliers the story is worrisome. Layoffs are the result of closures and management decisions, which means workers of all ages are impacted.

At assembly plants, reductions have been occurring in waves—primarily as a result of workers taking early retirement incentives.

## Michigan Motor Vehicle Manufacturing Separations by Quarter

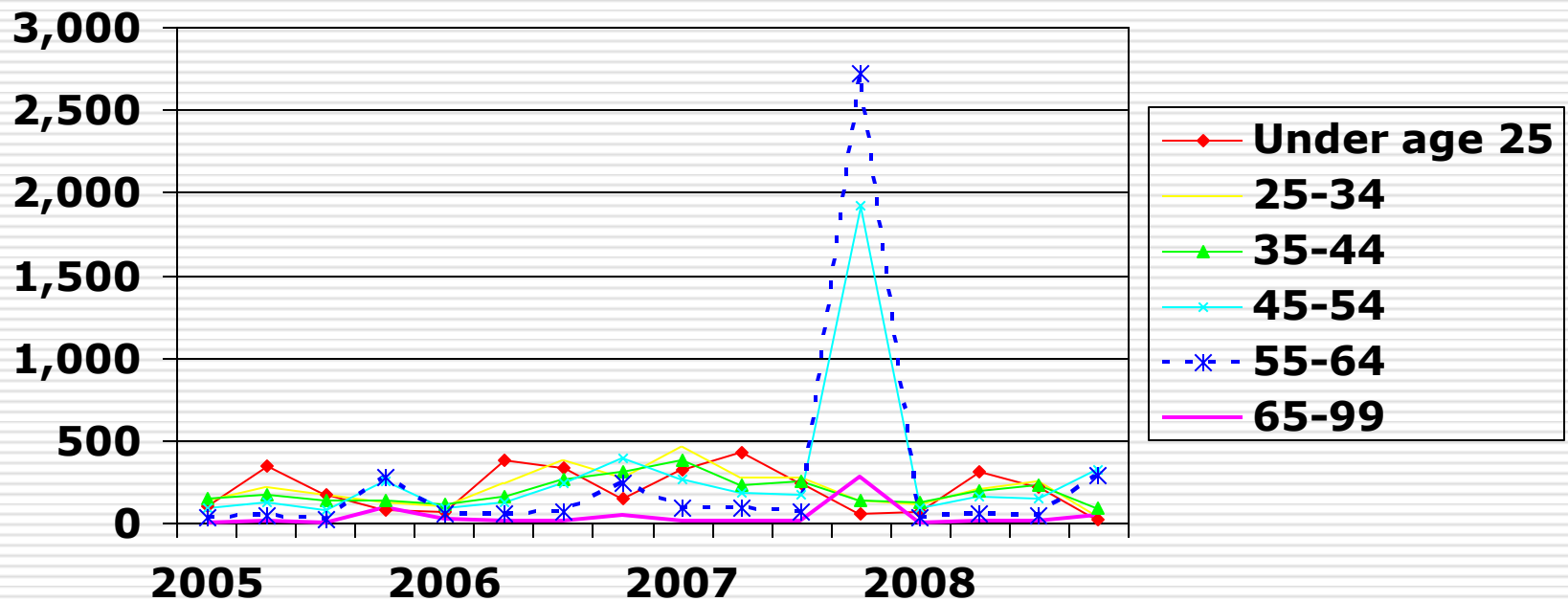


By far, the most separations have occurred among workers age 55 to 64. These individuals are near retirement and may not need to re-enter the workforce.

New hiring numbers are small and steady across age cohorts, with the exception of a strange spike during Q4 of 2007.

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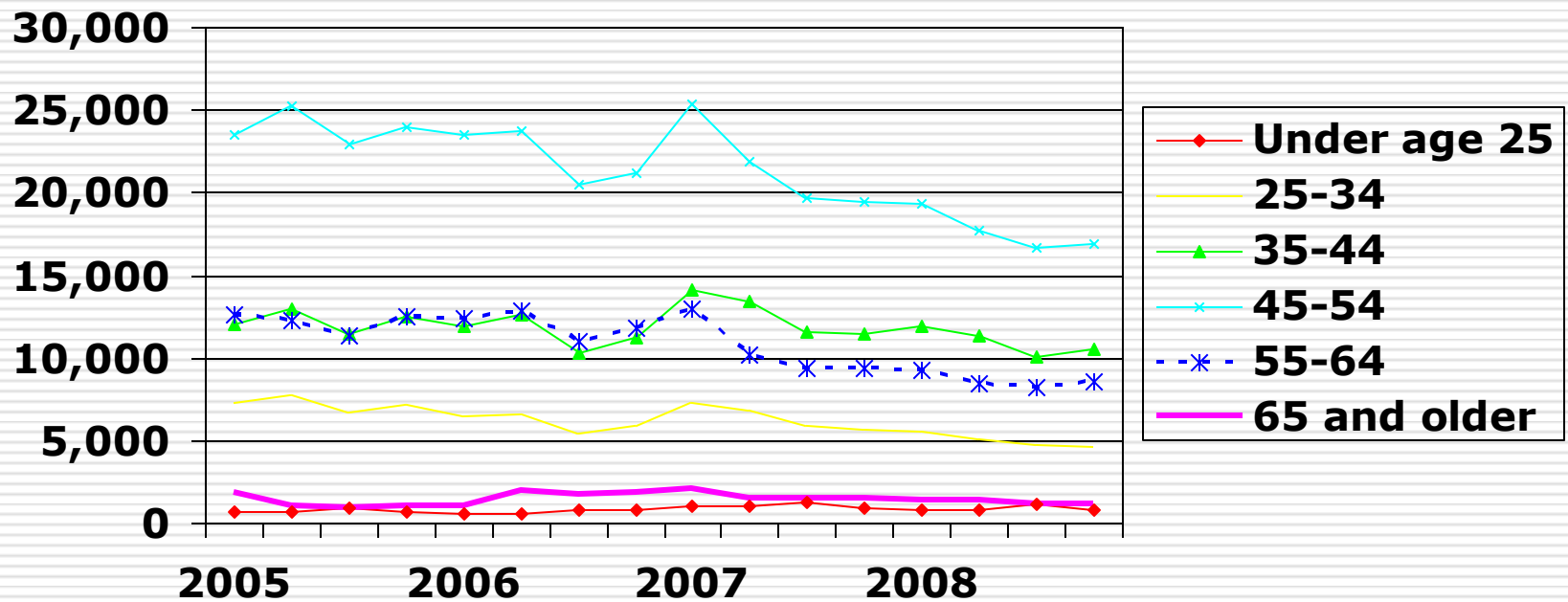
## Michigan Motor Vehicle Manufacturing New Hires by Quarter





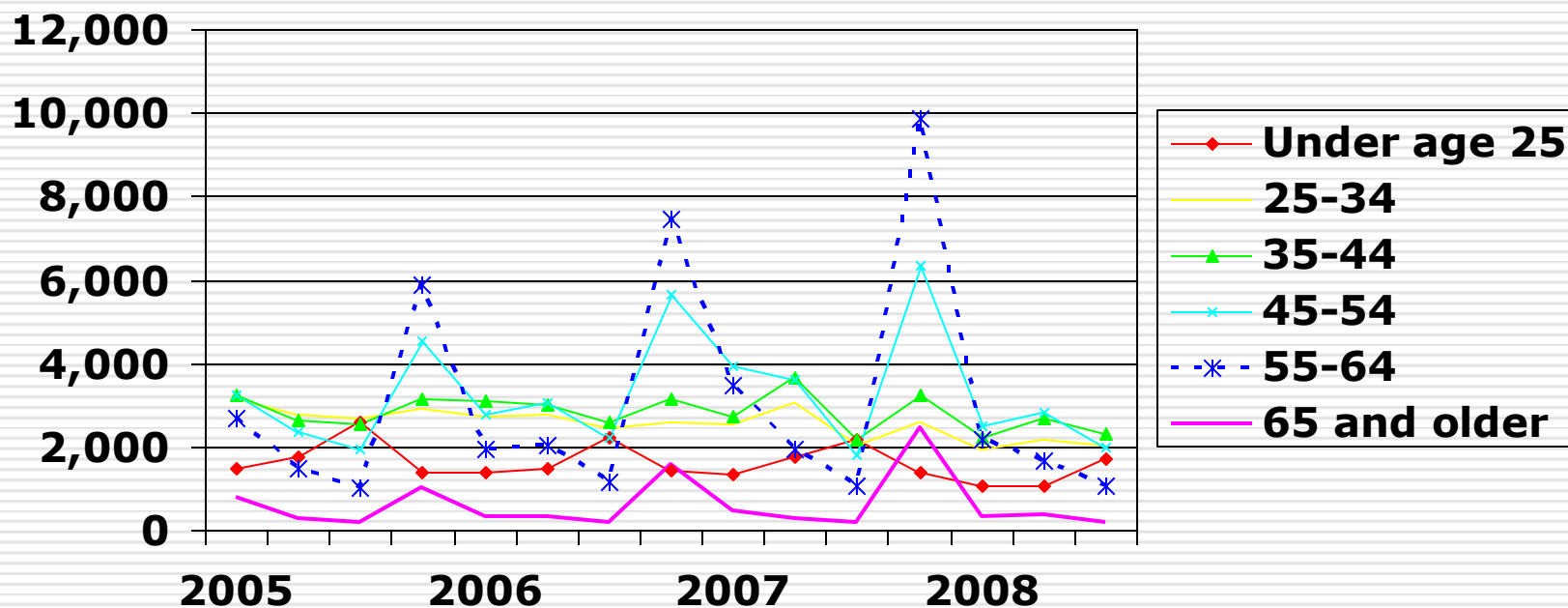
The vast majority of auto workers are still over age 45, however, their numbers are shrinking the fastest.

## Michigan Motor Vehicle Manufacturing Employment by Age



The story is different at the auto parts suppliers: despite retirement waves, younger workers are also being displaced at a steady pace.

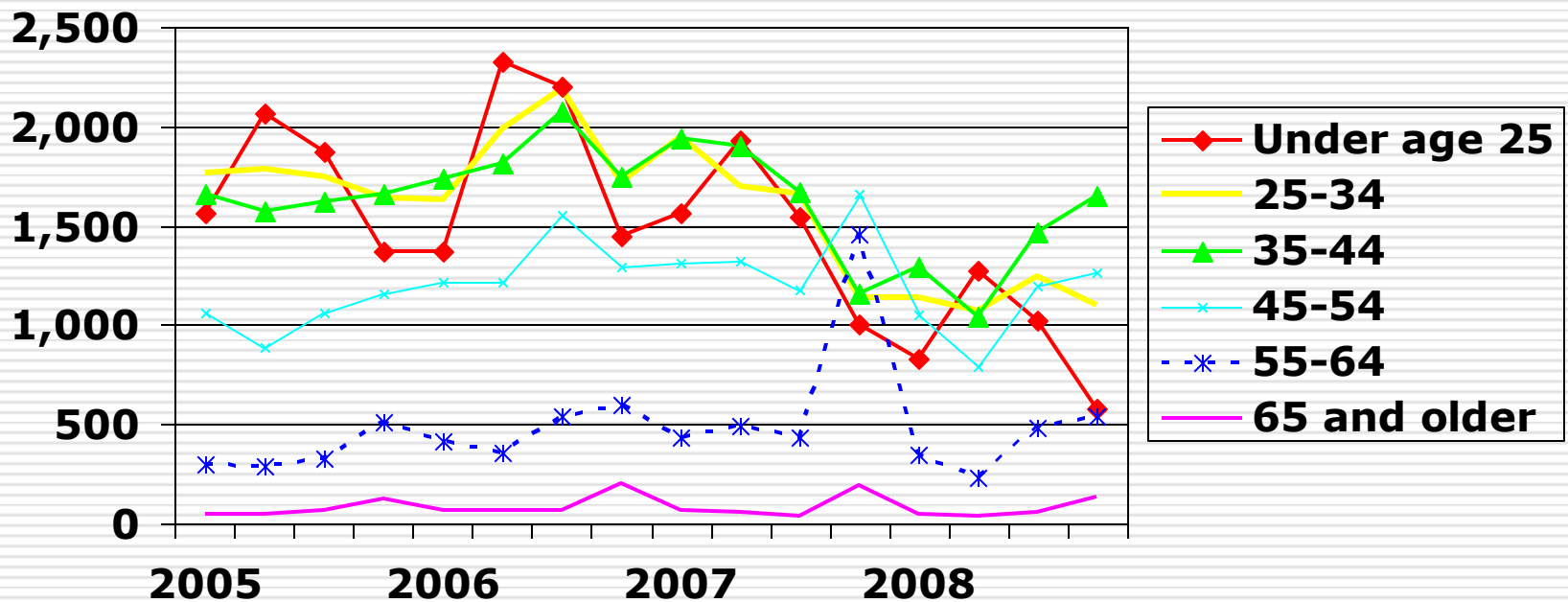
## Michigan Motor Vehicle Parts Manufacturing Separations by Quarter



The average number of separations per quarter during 2005 to 2008 was 6,846 for workers over age 45 and 7,020 for workers under age 45.

The downturn in automotive parts manufacturing has impacted the age profile of new hires.

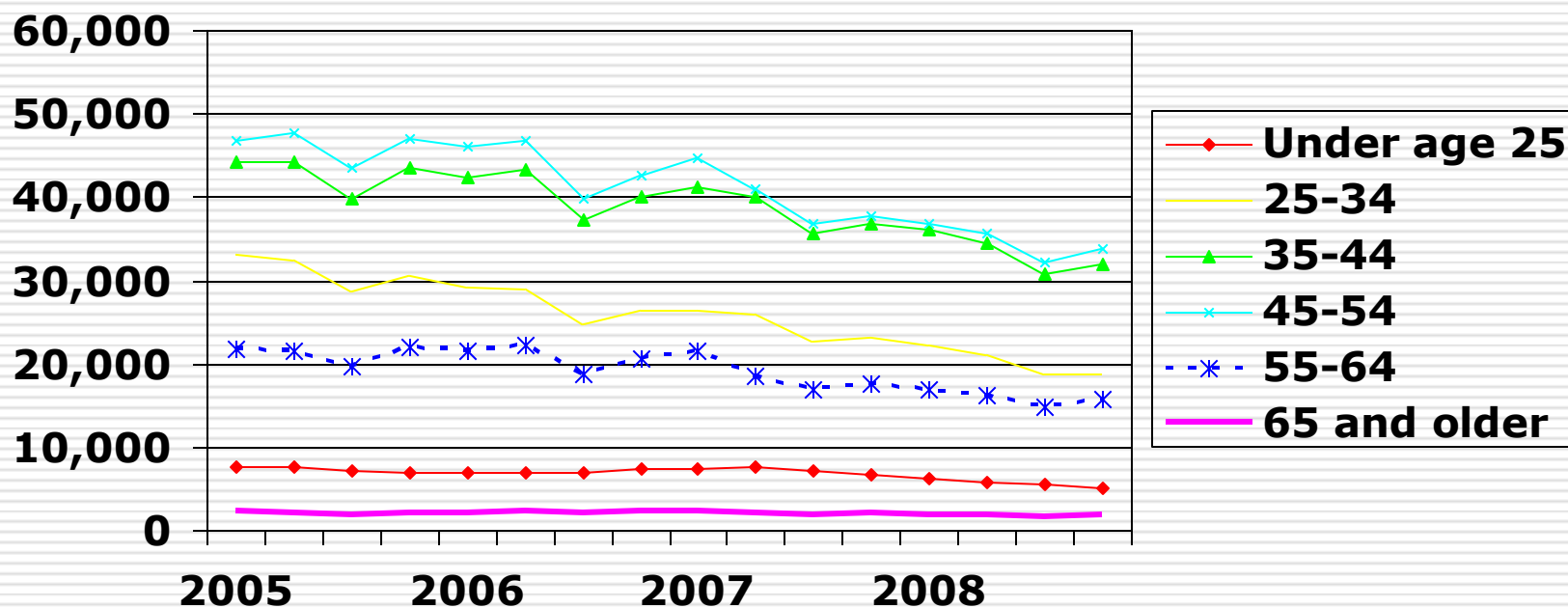
## Michigan Motor Vehicle Parts Manufacturing New Hires by Quarter



It is unclear if younger workers are shying away from the industry or if they are simply facing stiffer competition from more experienced workers.

At parts suppliers, the employment of younger workers has actually fallen faster than older workers.

## Michigan Motor Vehicle Parts Manufacturing Employment by Age



Between Q3 2005 and Q3 2008 auto parts employment of persons under age 45 shrank by 25,500. Most of these workers will need to find new occupations.

# Summary: What's a worker to do when their auto job ends?

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- ❑ Getting another factory job won't be easy—nor as rewarding as it once was.
- ❑ Occupational opportunities are limited for the existing autoworker skill-set.
- ❑ Training and skills development will be necessary just to get another job at the same or lower wage.
- ❑ Detroit 3 workers may have the retirement option; however, chances are the typical worker laid off from a parts supplier will need to go back to work.