

JOB-TO-JOB FLOWS

AND EARNINGS

IN MANUFACTURING

Dylan Schafer

Economic Analyst

Bureau of Labor Market Information and Strategic Initiatives

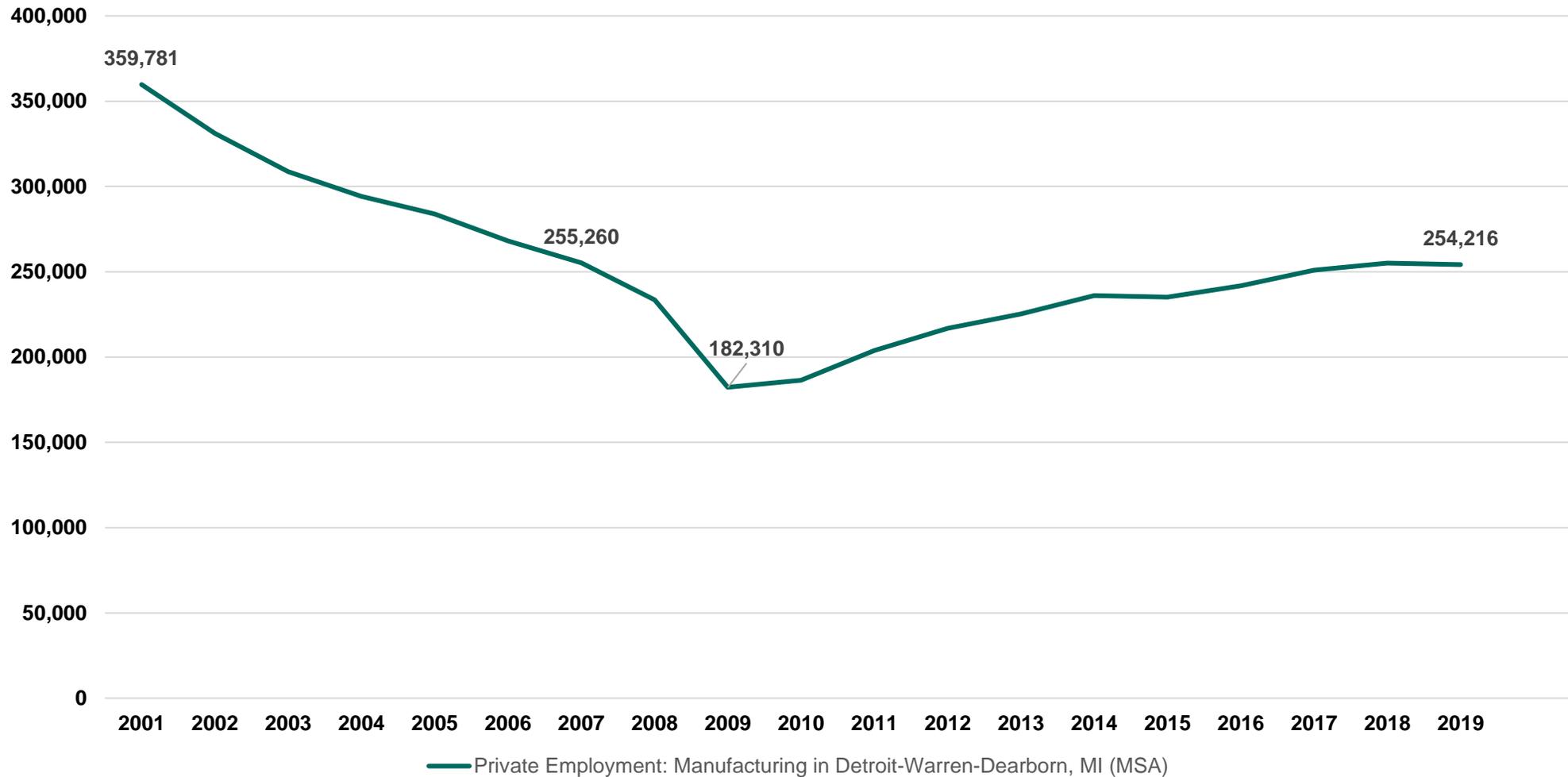
Main Objective

Use new beta release metropolitan statistical area (MSA) Job-to-Job (J2J) Flows and earnings data to gain insight into job and earnings behaviors within the Manufacturing sector in the Detroit-Warren-Dearborn (DWD) metropolitan area.

Using graphs and data visualizations to track

- Hires and separations rates in DWD and flows from and to persistent nonemployment.
- Job flows into and out of the Manufacturing sector and the DWD metropolitan area.
- Breakdowns by age, education, and gender for job-to-job flows.
- Earnings changes when workers switch industries and move across metro areas and state.

All Employees: Manufacturing in DWD MSA (Annual)



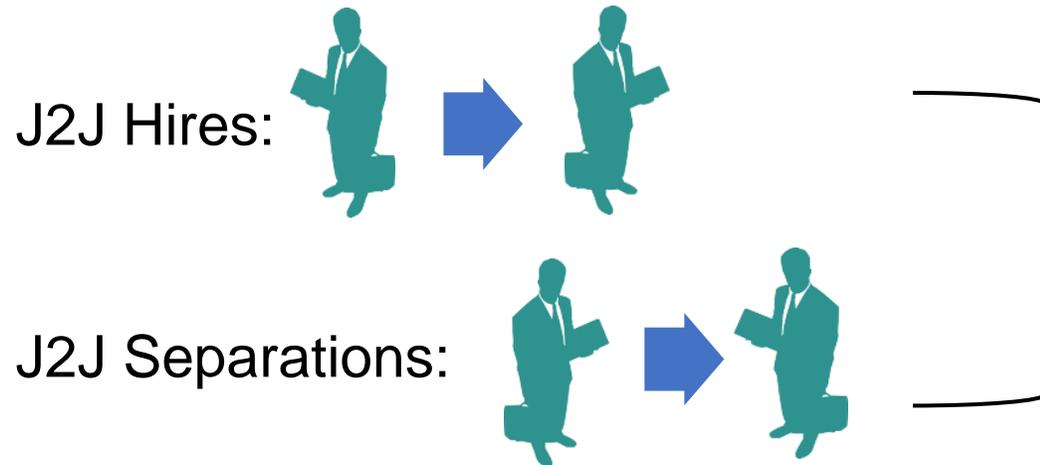
J2J Flows Tool

- A web-based tool for analyzing job flows/employer-to-employer movements.
- Multiple interactive visualizations trace worker movements through industries, geographic labor markets, and to/from employment.

J2J FLOWS:

HIRES AND SEPARATIONS

Job-to-Job Flows: Terms

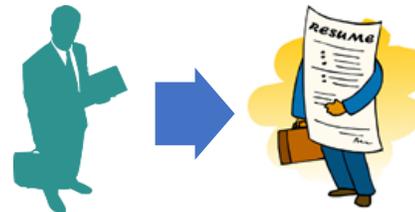


J2J Hires and Separations experienced no intervals of nonemployment. They are equal.

Hires from Persistent Nonemployment:
(Individual not working for a minimum of three months)



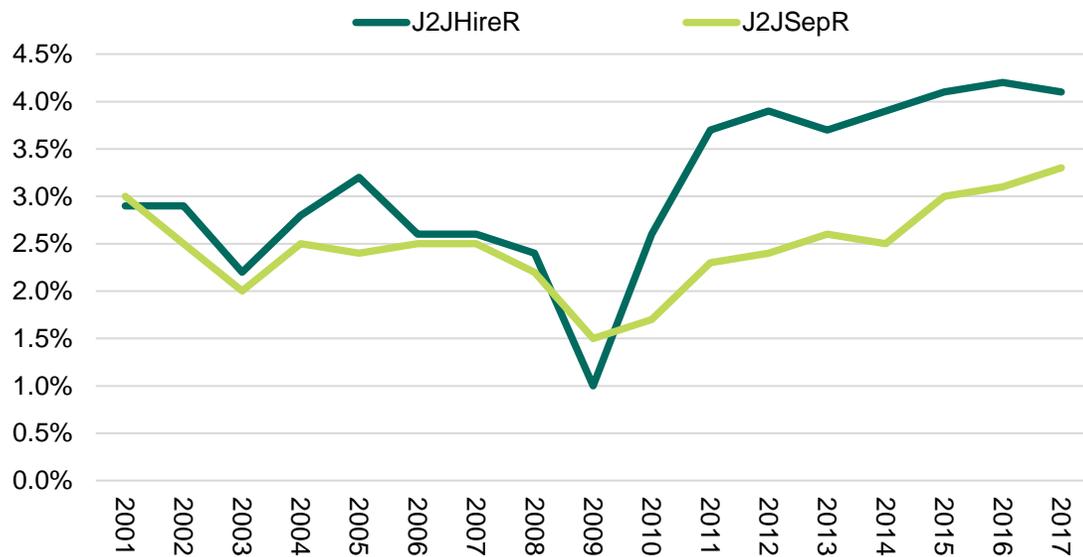
Separations to Persistent Nonemployment:



J2J Flows: Hires and Separations for Manufacturing (Within DWD)

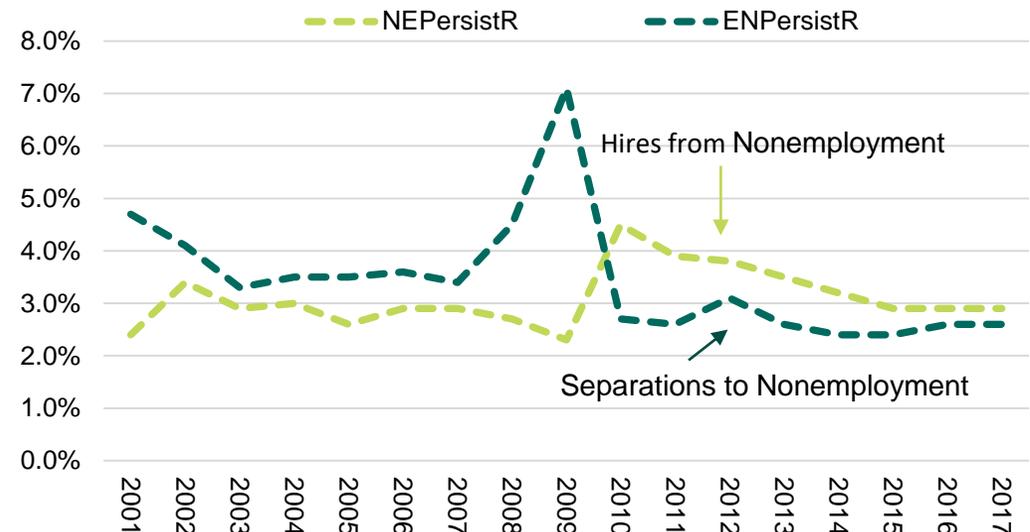
Higher net job flows primarily from job-to-job hires and separations and not from nonemployment.

DWD J2J Hires and Separations (2001Q2-2017Q2)



The J2J hire rate is greater than the separation rate which means that workers are job hopping from other industries and areas.

Detroit J2J Hires and Separations Nonemployment (2001Q2-2017Q2)



Job movement from nonemployment peaked in 2010 after the bankruptcy and have since declined. Separations to nonemployment have also stabilized since 2012.

EARNINGS:

INDUSTRY SECTOR J2J FLOWS

ORIGIN AND DESTINATION

J2J Flows to and from Mfg. (Top Five Industries)

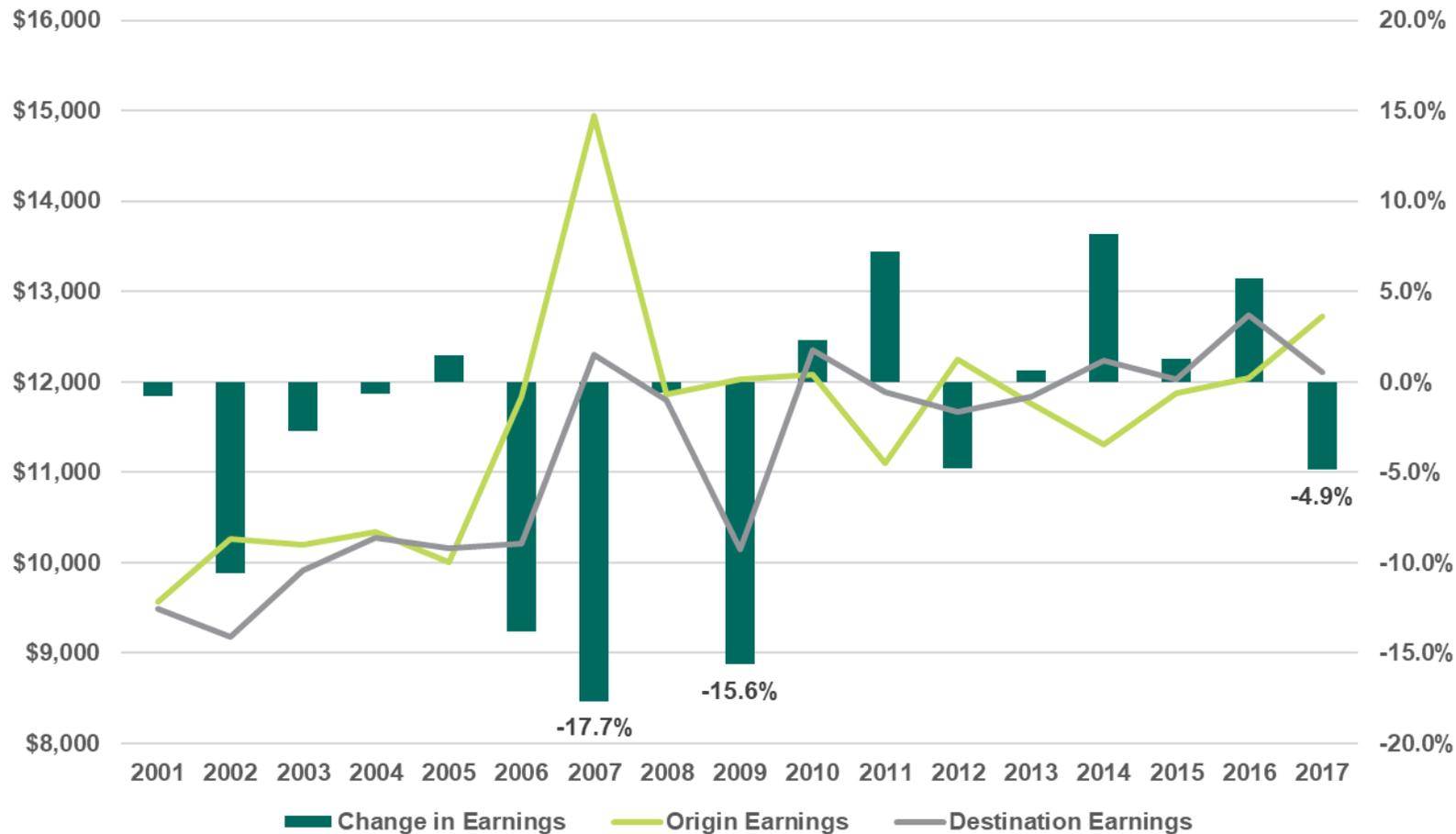
Industries with Most J2J Flows to Mfg.

Industry	2007			2017		
	J2J Flows	Origin Earnings	Destination Earnings	J2J Flows	Origin Earnings	Destination Earnings
Wholesale Trade	108	\$ 17,847	\$ 15,735	214	\$ 17,981	\$ 19,676
Retail Trade	141	\$ 5,177	\$ 7,994	249	\$ 6,142	\$ 9,055
Professional, Scientific & Tech. Svs	231	\$ 18,058	\$ 18,228	413	\$ 19,007	\$ 20,243
Admin. & Support & Waste Mgmt. & Remediation Svs.	617	\$ 6,891	\$ 8,619	765	\$ 8,909	\$ 10,677
Accommodation and Food Svs.	108	\$ 2,842	\$ 5,609	197	\$ 3,942	\$ 7,307

Industries with Most J2J Flows from Mfg.

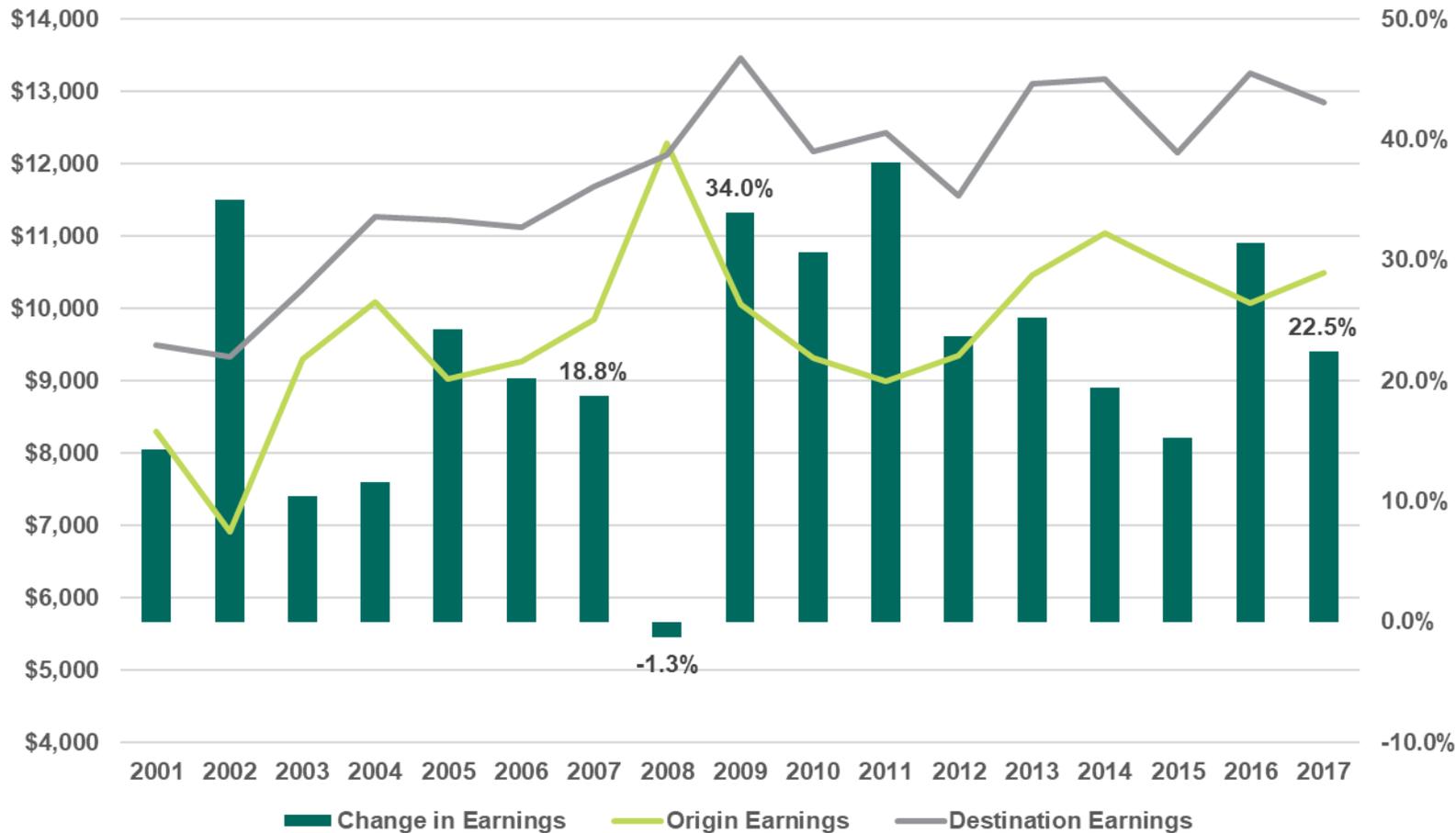
Industry	2007			2017		
	J2J Flows	Origin Earnings	Destination Earnings	J2J Flows	Origin Earnings	Destination Earnings
Wholesale Trade	139	\$ 17,949	\$ 17,500	209	\$ 20,220	\$ 18,620
Retail Trade	59	\$ 7,869	\$ 7,042	108	\$ 9,155	\$ 8,628
Professional, Scientific & Tech. Svs	256	\$ 23,430	\$ 19,096	328	\$ 20,444	\$ 20,199
Mgmt. of Companies & Enterprises	63	\$ 31,978	\$ 24,811	97	\$ 22,025	\$ 21,975
Admin. & Support & Waste Mgmt. & Remediation Svs.	282	\$ 10,646	\$ 9,835	352	\$ 10,590	\$ 10,742

Earnings: Flows From Mfg. to All Other Industries



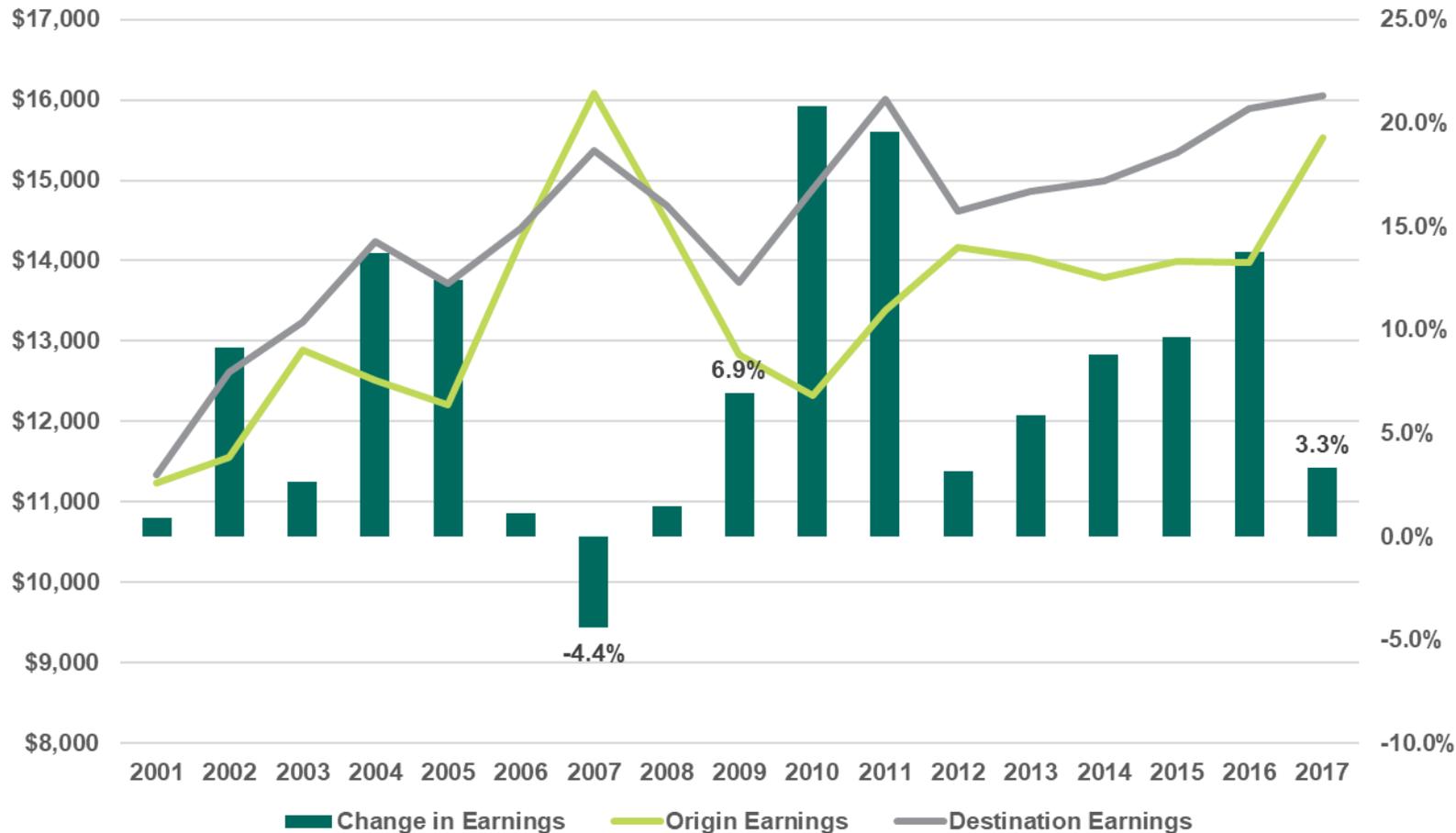
- Destination earnings were trending higher than origin jobs earnings when they dropped in 2017.
- Earnings for workers in current jobs are trending up since 2014, reflecting the tight labor market.
- The peak in origin jobs earnings in 2007 may reflect the buyouts in the auto sector.

Earnings: Flows From All Other Industries to Mfg.



- Workers transitioning from other industries to Manufacturing experienced higher earnings.

Earnings: Flows From and to Jobs in Mfg.



- Earnings levels increased for workers who are moving from one job to another in the Manufacturing sector.

EARNINGS:

MSA J2J FLOWS

ORIGIN AND DESTINATION

Earnings: Flows From DWD to Top Five MSAs (2017 Q2)



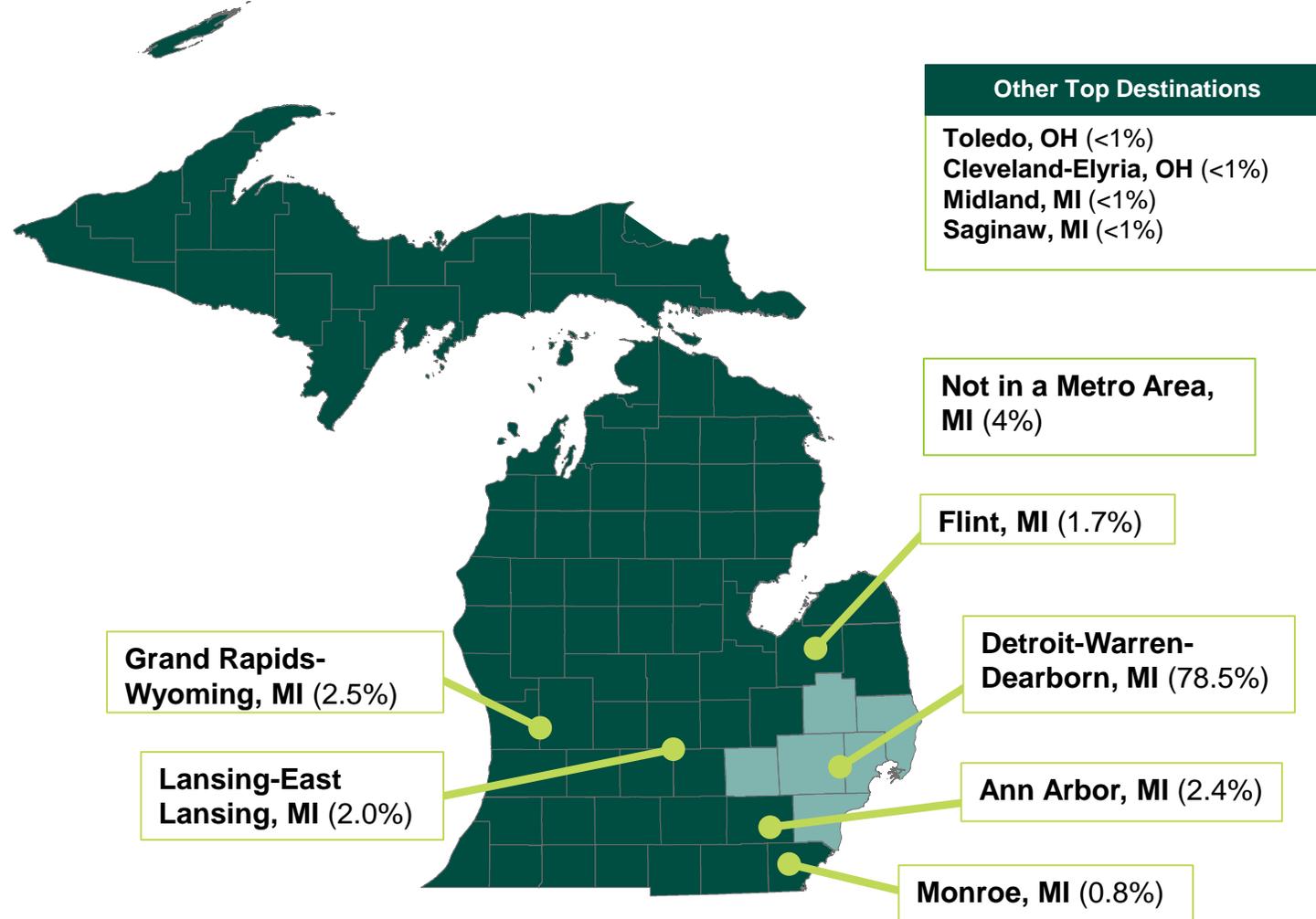
- In 2017, three of the top five MSAs with the most job-to-job flows within the DWD Manufacturing sector had lower earnings at their destination job.

J2J Flows for Mfg. (From DWD to Other Metro Areas)



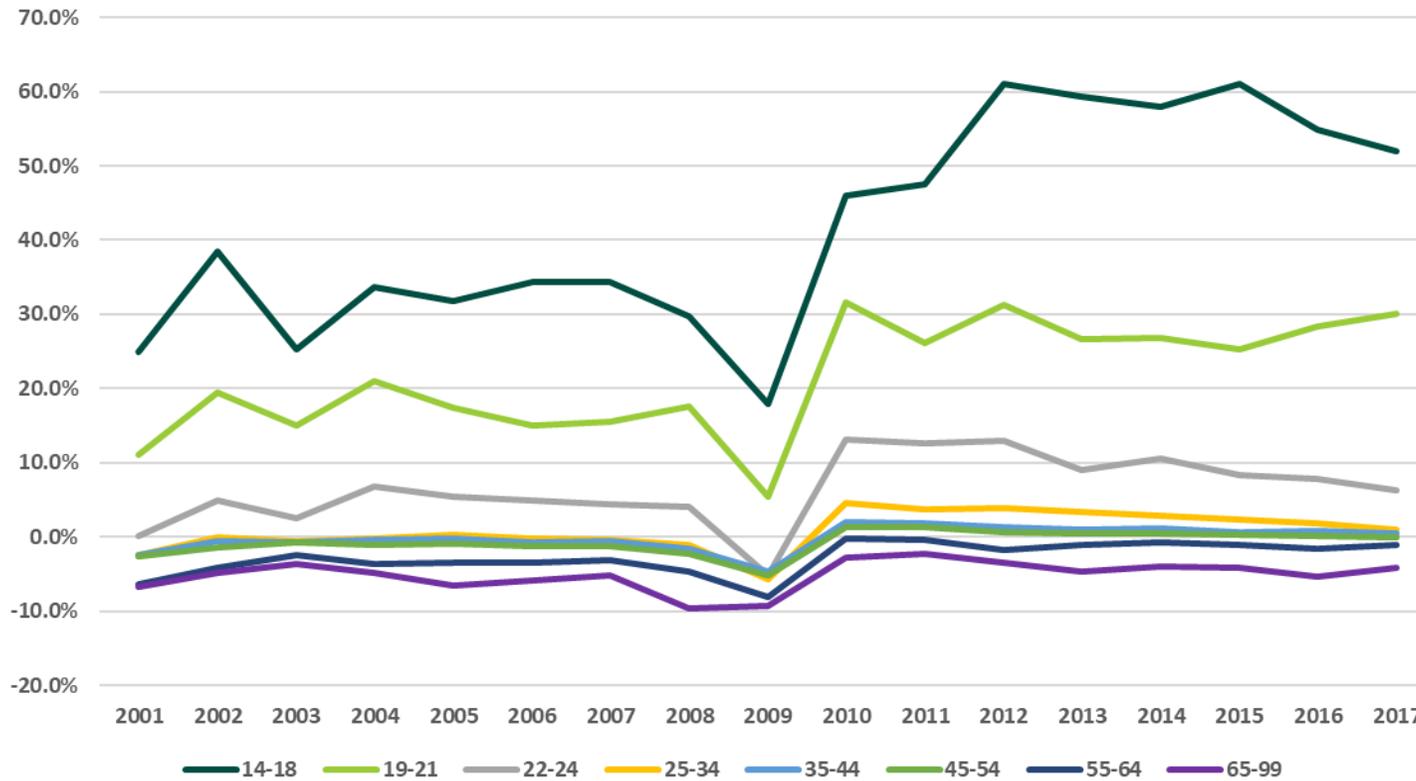
- Job flows declined during the recession, meaning that individuals did not want to change jobs.
- In recent years, we have seen an uptick in the number of job-to-job flows.

J2J Flows Out of DWD (2017 Q2)



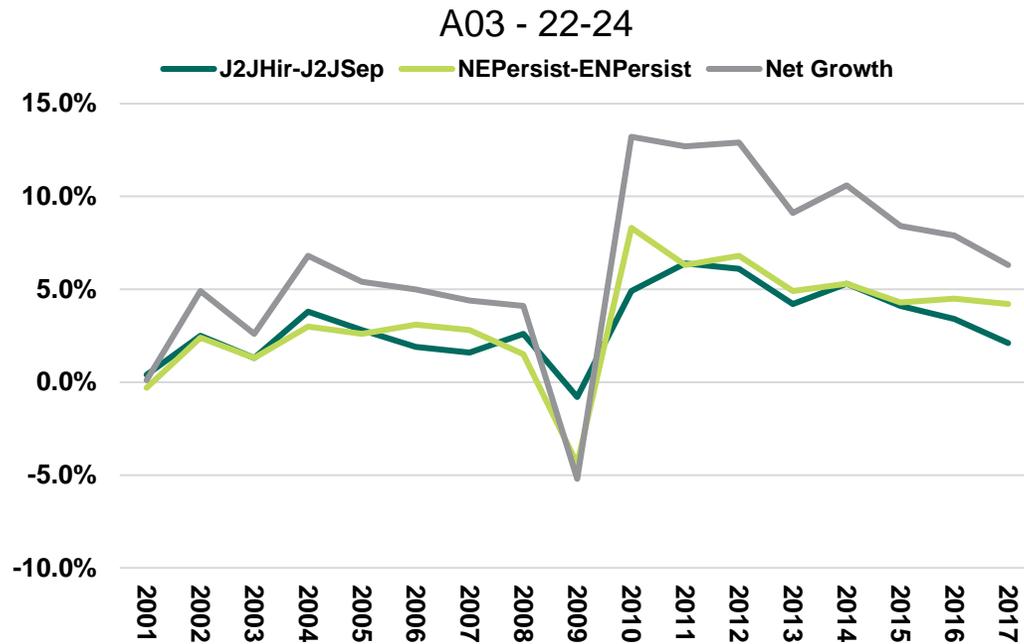
J2J FLOWS BY AGE

Rate of J2J Flows by Age: Net Flows

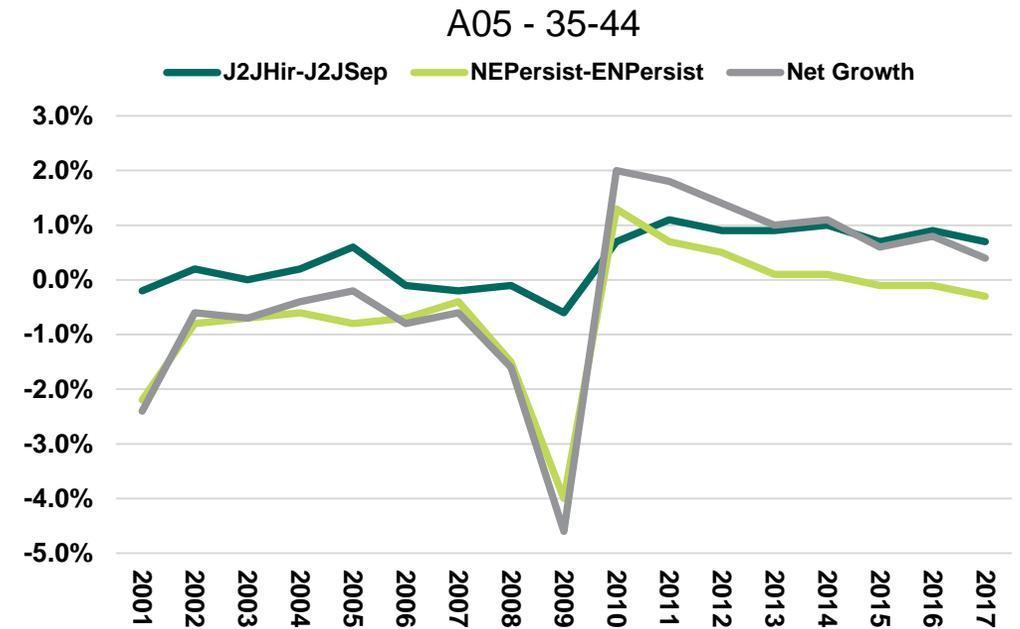


Net flows:
 $(J2jHir - J2jSep) + (NEPersist - ENPersist)$

Rate of J2J Flows by Age (22–24); (35–44)

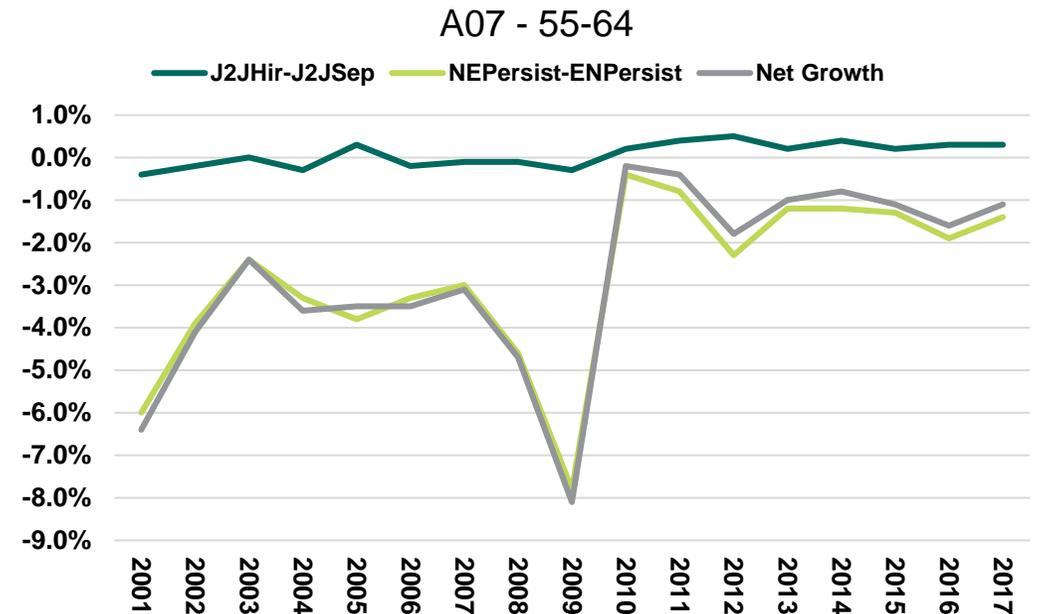
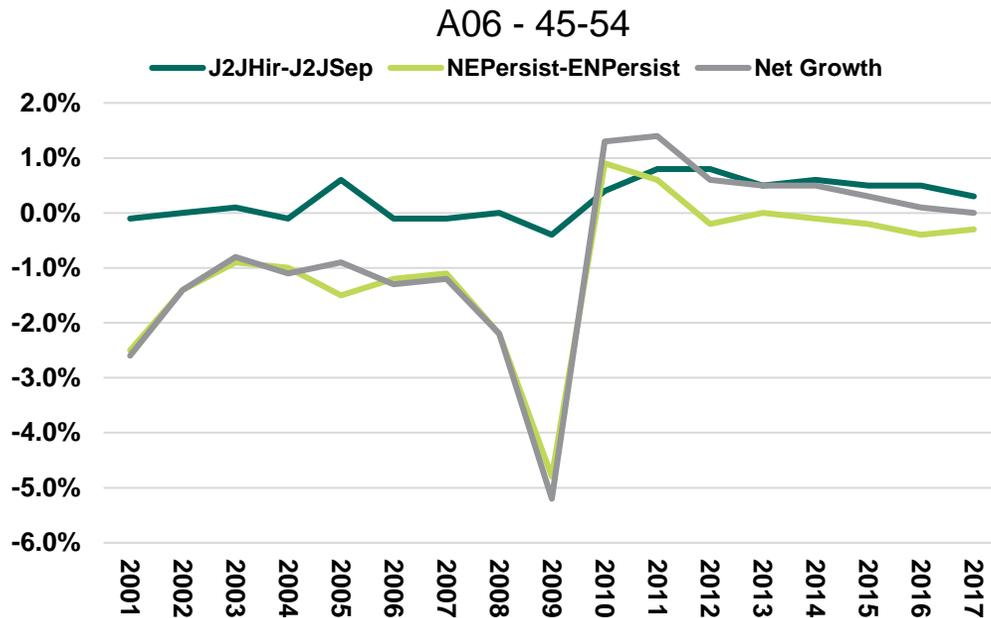


For many years, job movement from nonemployment was typically greater than job movement for those who did not experience a period of nonemployment.



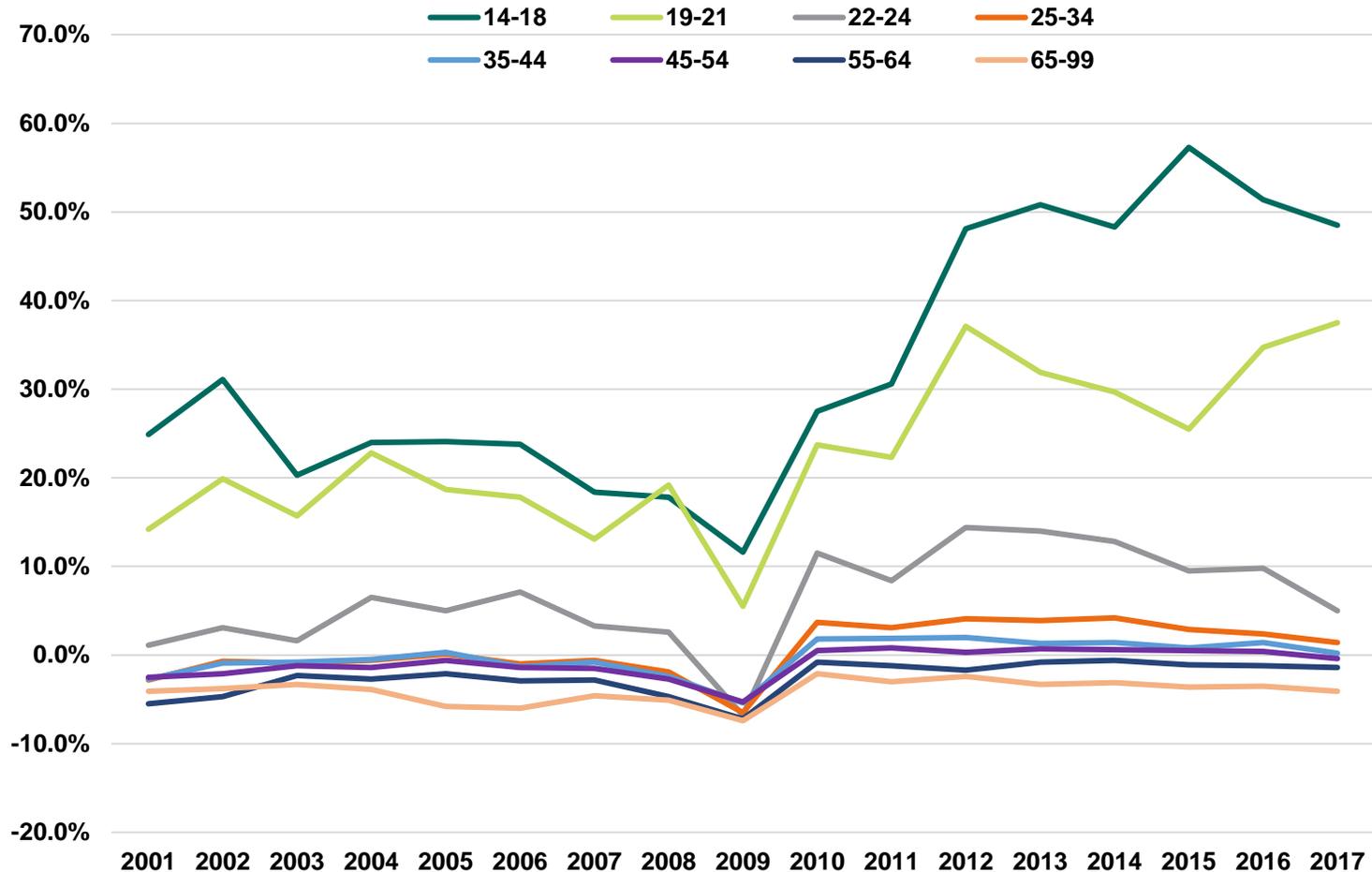
The rate of job movement from nonemployment has been lower than job movement from one job to another. This could imply that employers are not always hiring from the pool of unemployed.

Rate of J2J Flows by Age (45–54); (55–64)



Job-to-job movement has outweighed the rate of movement for those who experienced a period of nonemployment. The rate is stable for those 25 and older.

Rate of J2J Flows by Age Within Mfg. (Females)

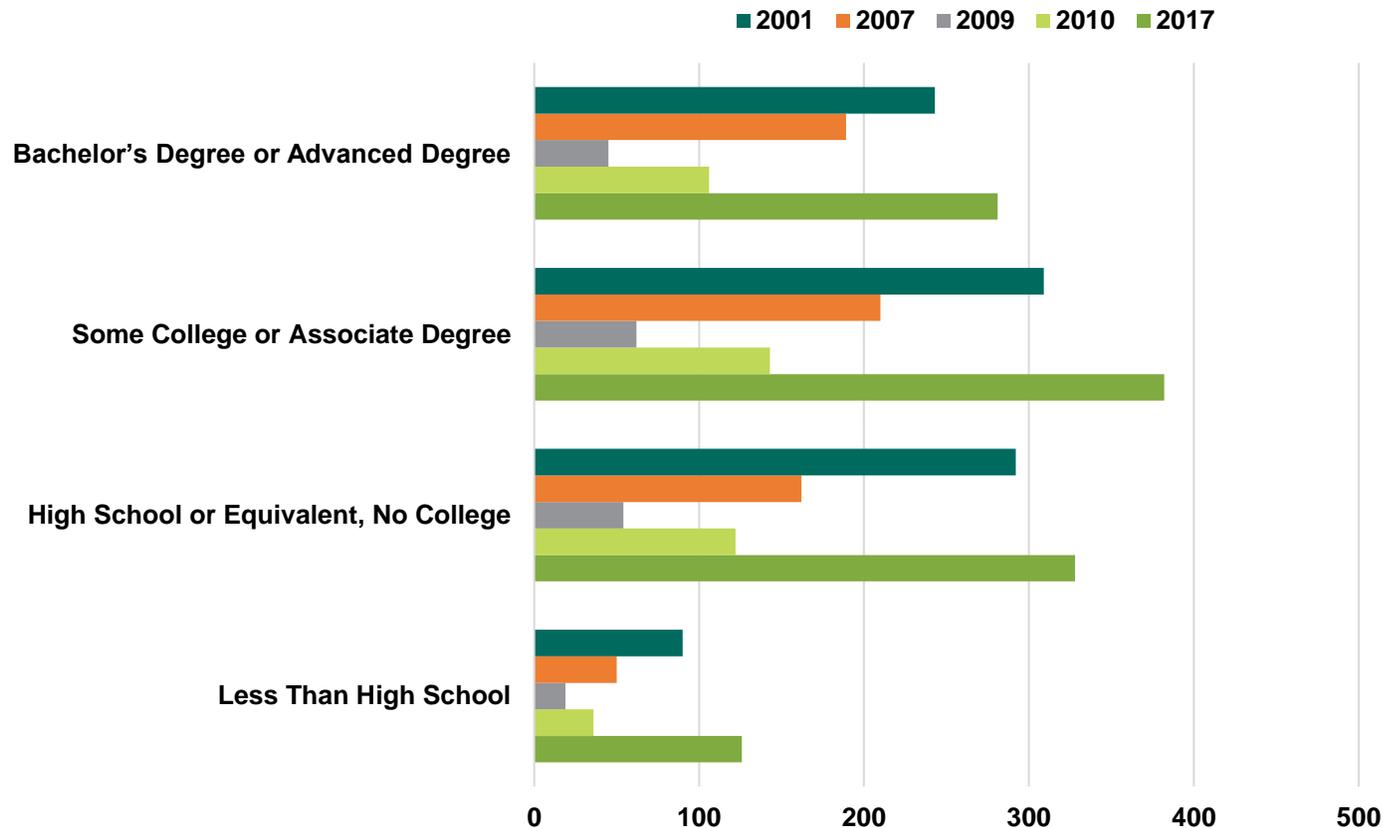


- The rate of job-to-job flows have been relatively steady in past years for females 25 and over.
- The younger female population has seen sudden changes in their rates in recent years.

J2J FLOWS AND EARNINGS

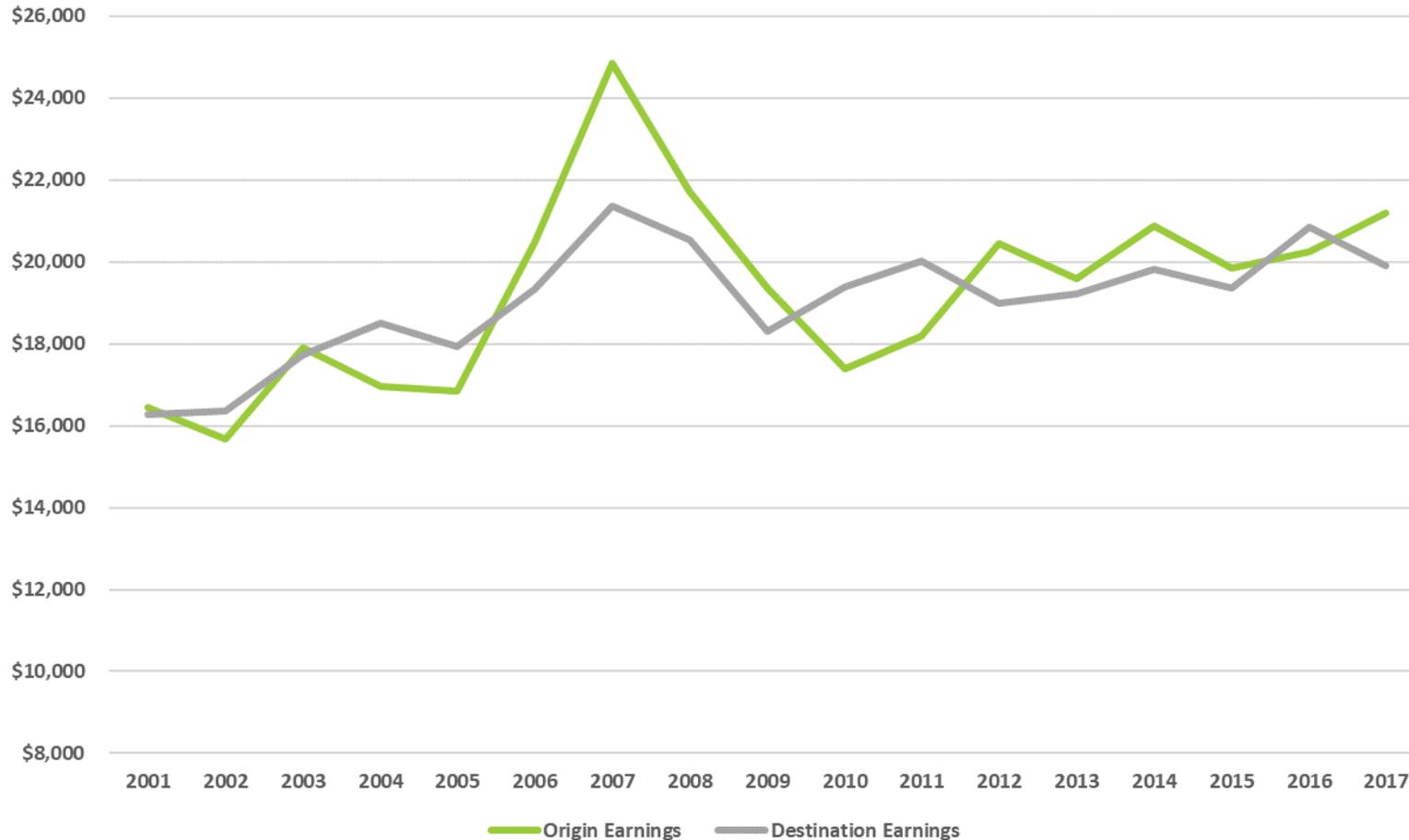
BY EDUCATION

J2J Flows by Education



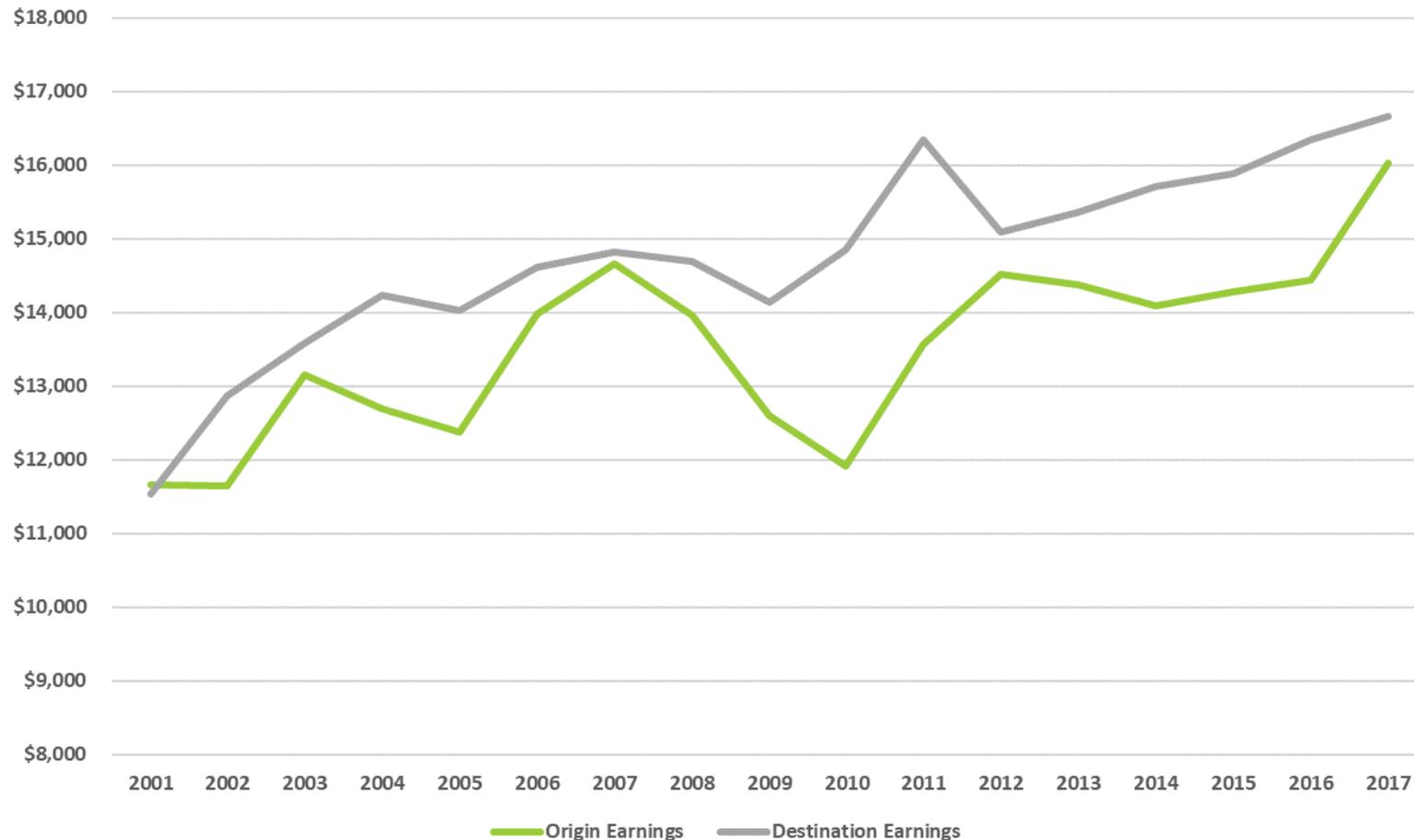
- The level of job-to-job flows within the Manufacturing industry in 2017 is near the same level as it was in 2001.
- Near the end of the recession in 2009, flows were minimal, but they began to show noticeable increases the following year.

J2J Earnings by Origin and Destination (BA or higher)



- Those moving from job to job in the Manufacturing industry who have a bachelor's degree or higher typically have earned less at their destination job.

J2J Earnings by Origin and Destination (Some College or Associate Degree)



- Alternatively, those with some college or an associate degree have consistently earned more at their new job than their old.

Key Takeaways: J2J Flows Mfg. Sector (DWD)

- In the DWD MSA, job flows have been stable after the recession and bankruptcy.
- The largest job transitions to the *Manufacturing* sector are from the *Administrative and support* and *Waste management and remediation services* sector.
- Job movements into the Manufacturing sector from other industries bring in higher earnings.
- Younger workers have higher rates of job flows. The rates decline as a worker's age increases.
- Earnings for those with some college or an associate degree have typically been higher at their destination job, while the opposite is true for those with a bachelor's degree or higher.

Website: <https://lehd.ces.census.gov/data/#j2j>

Data

LEHD makes available several data products that may be used to research and characterize workforce dynamics for specific groups. These data products include online applications, public-use data, and restricted-use microdata. The Quarterly Workforce Indicators (QWI), LEHD Origin-Destination Employment Statistics (LODES), Job-to-Job Flows (J2J), and Post-Secondary Employment Outcomes (PSEO) are available online for public use. Confidential microdata are available to qualified researchers with approved projects through restricted access use in [Federal Statistical Research Data Centers \(FSRDCs\)](#).

Note: The data released by LEHD are based on tabulated and modeled administrative data, which are subject to error. Because the estimates are not derived from a probability-based sample, no sampling error measures are applicable. However, the data are subject to nonsampling errors, which can be attributed to many sources: misreported data, late reporters whose records are missing and imputed, and geographic/industry edits and imputations. The accuracy of the data is impacted by the joint effects of these nonsampling errors. While no direct measurement of these joint effects has been obtained, precautionary steps are taken in all phases of collection and processing to minimize the impact of nonsampling errors.

Job-to-Job Flows (J2J)

Job-to-Job Flows (J2J) is a set of statistics on job mobility in the United States. J2J include statistics on: (1) the job-to-job transition rate, (2) hires and separations to and from employment, (3) earnings changes due to job change, and (4) characteristics of origin and destination jobs for job-to-job transitions. These statistics are available at the national, state, and metropolitan area levels and by worker and firm characteristics.

To browse the J2J data files in their directory structure or to access them with a FTP program (must be able to access HTTP), go to: lehd.ces.census.gov/data/j2j/. J2J data can also be accessed via [Job-to-Job Flows Explorer](#). This analysis and visualization tool allows for the construction of tables, maps, and charts to compare, aggregate and analyze flows by worker and firm characteristics.

Download J2J data:

Use the selector tool below to choose and download files. Note: .xls format is available only for smaller files.

Version: Region: Type: Format:

[top](#)

LEHD Origin-Destination Employment Statistics (LODES)

Data Extraction and Methodology

Description of Available J2J Data

- *J2J Data Series*: These files contain **count data** about job-to-job flows as well as flows to/from nonemployment, nationally, by state, and by metropolitan area. Data is available for all firms and workers as well as by firm characteristics (industry, age, size) and by worker demographics (sex by age, sex by education, race by ethnicity).
- *J2JR Data Series*: These files contain **rate data** about job-to-job flows as well as flows to/from nonemployment, nationally, by state, and by metropolitan area. Data is available for all firms and workers as well as by firm characteristics (industry, age, size) and by worker demographics (sex by age, sex by education, race by ethnicity).
- Explanation of rates measures (for separations, hires, and OD): Most count measures have comparable rate measures, which are constructed by dividing the count measures by the base. The base for all rates is $(\text{MainB} + \text{MainE})/2$ Example: $\text{MHireR} = \text{MHire} / ((\text{MainB} + \text{MainE})/2)$. Where Main B is beginning of quarter employment and Main E is end of quarter employment.

Data Extraction and Methodology

2JOD Data Series: These files contain **origin and destination job characteristics data** of job-to-job flows—specifically, job transitions that take place within the same quarter or in adjacent quarters. Data is available by:

- Origin state/destination state (including within-state job-to-job flows)
- Origin state/destination state by worker demographics (sex by age, sex by education, race by ethnicity)
- Origin state/destination state by origin industry/destination industry
- Origin metropolitan area/destination metropolitan area
- Additional interactions of the characteristics listed above, along with age and size of the origin and destination firm.

Thank you!

Dylan Schafer

Email: SchaferD9@Michigan.gov

Phone: 313-456-3064