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## Gender Differences in Factors Influencing Retention in Aviation Occupations

Katya K. Rivera  
*Embry-Riddle Aeronautical University, riverak3@my.erau.edu*

Katie Kirkpatrick  
*Embry-Riddle Aeronautical University, KIRKPAK4@my.erau.edu*

Marisa Aguiar  
*Embry-Riddle Aeronautical University, aguiarm@my.erau.edu*

Lindsay Stevenson  
*Embry-Riddle Aeronautical University, stevenl4@my.erau.edu*

Haydee Cuevas Ph.D.  
*Embry-Riddle Aeronautical University, cuevash1@erau.edu*

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# **Gender Diversity in Aviation Occupations in the U.S.**

**Katie Kirkpatrick, Katya Rivera, Marisa Aguiar,  
Lindsay Stevenson, & Haydee Cuevas**

# Problem Statement

**Gender diversity seriously lacking in aviation domain across workforce**

- **Pilots, controllers, aviation maintenance, etc.**

**Research Questions (RQ)**

- **RQ1: How do the number of male and female employees compare in aviation occupations in the United States?**
- **RQ2: What factors contribute to the retention of females, as compared to males, in aviation occupations in the United States?**

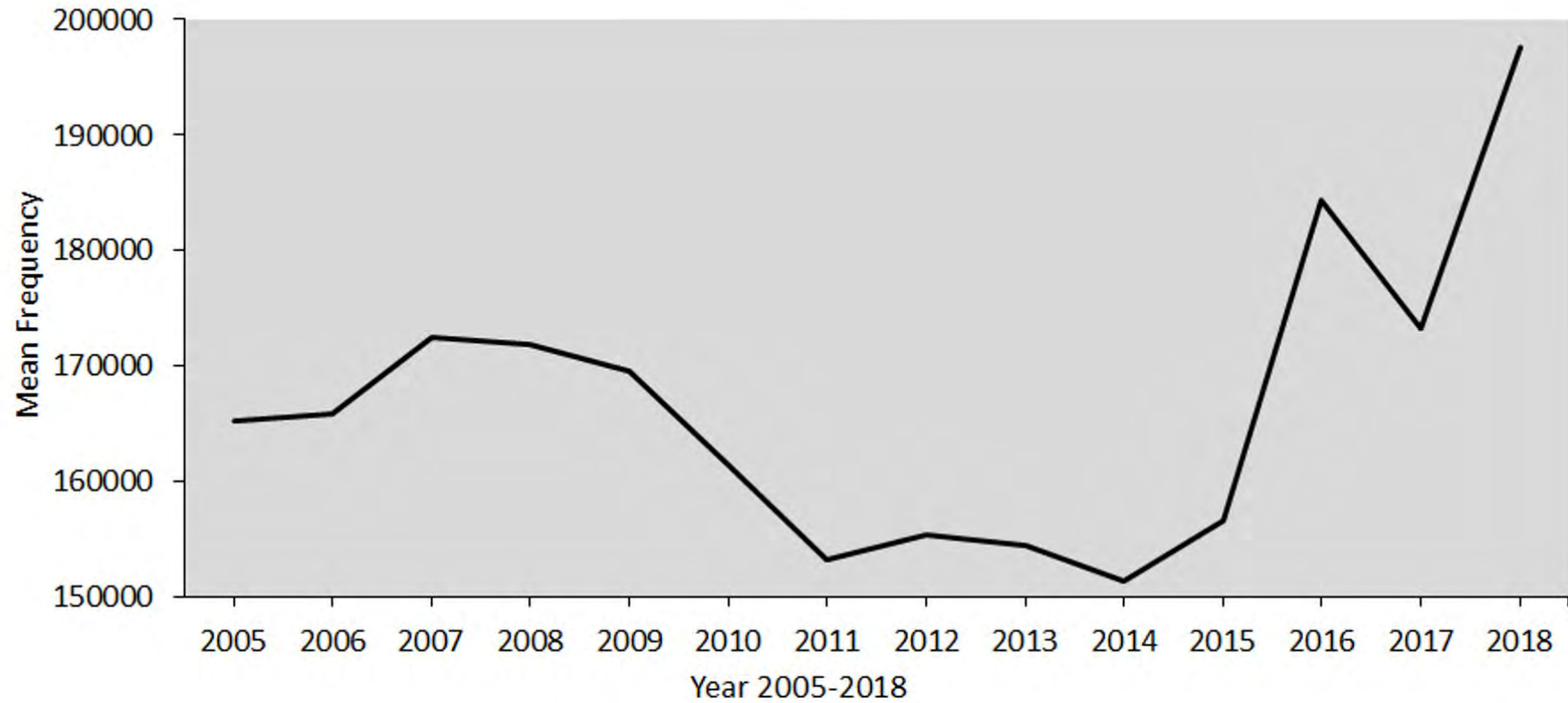
# Methodology

## RQ1

- **Approach: Archival Study**
- **Data Source: PUMS**
- **Time frame: 2005 - 2018**
- **Six Occupations:**
  - **Aircraft Pilot and Flight Engineer**
  - **Aerospace Engineer**
  - **Aircraft Structure / System Assembler**
  - **Avionics Technician**
  - **Aircraft Mechanic and Service Technician**
  - **Air Traffic Controller / Airfield Operations Specialist**

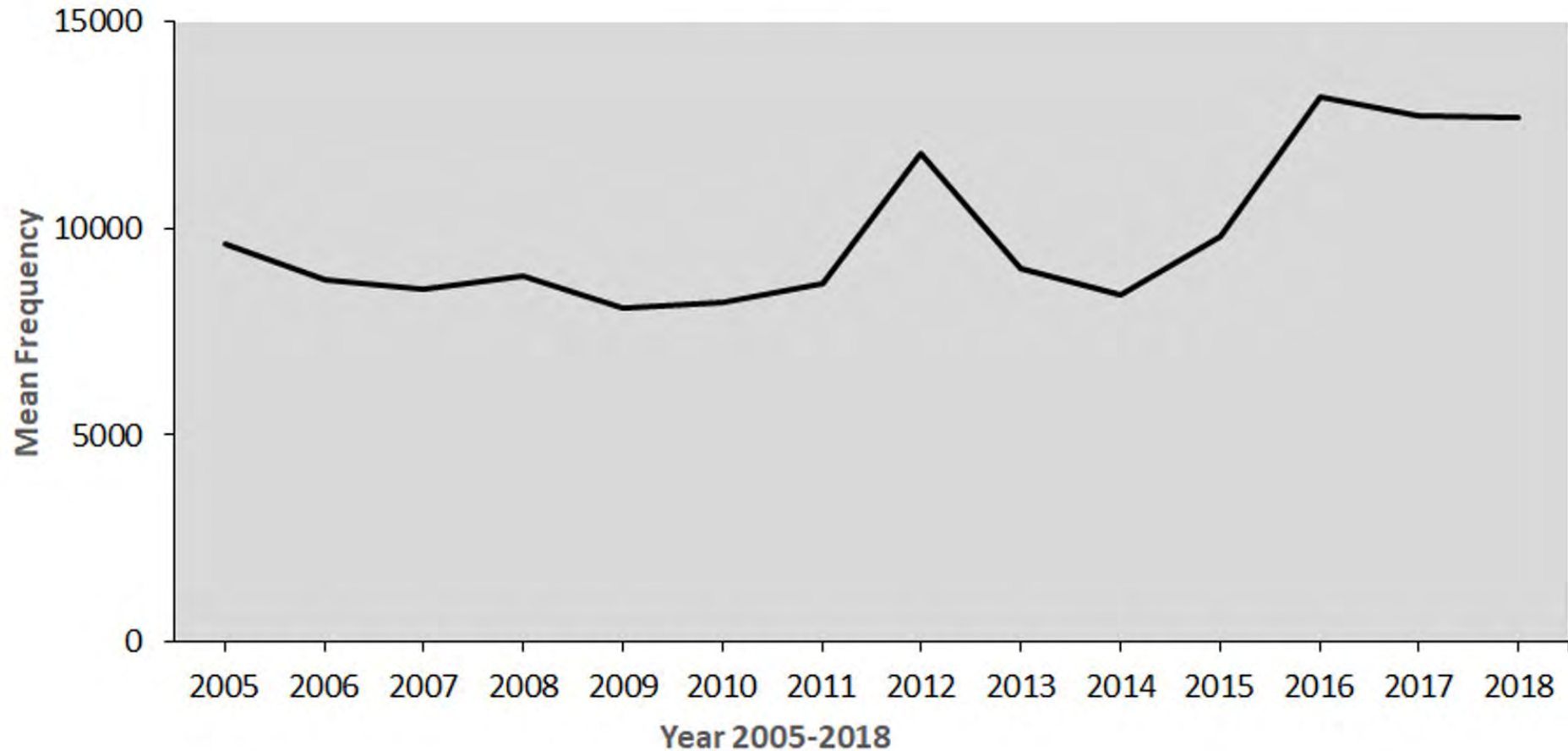
# AIRCRAFT PILOTS AND FLIGHT ENGINEERS

Males

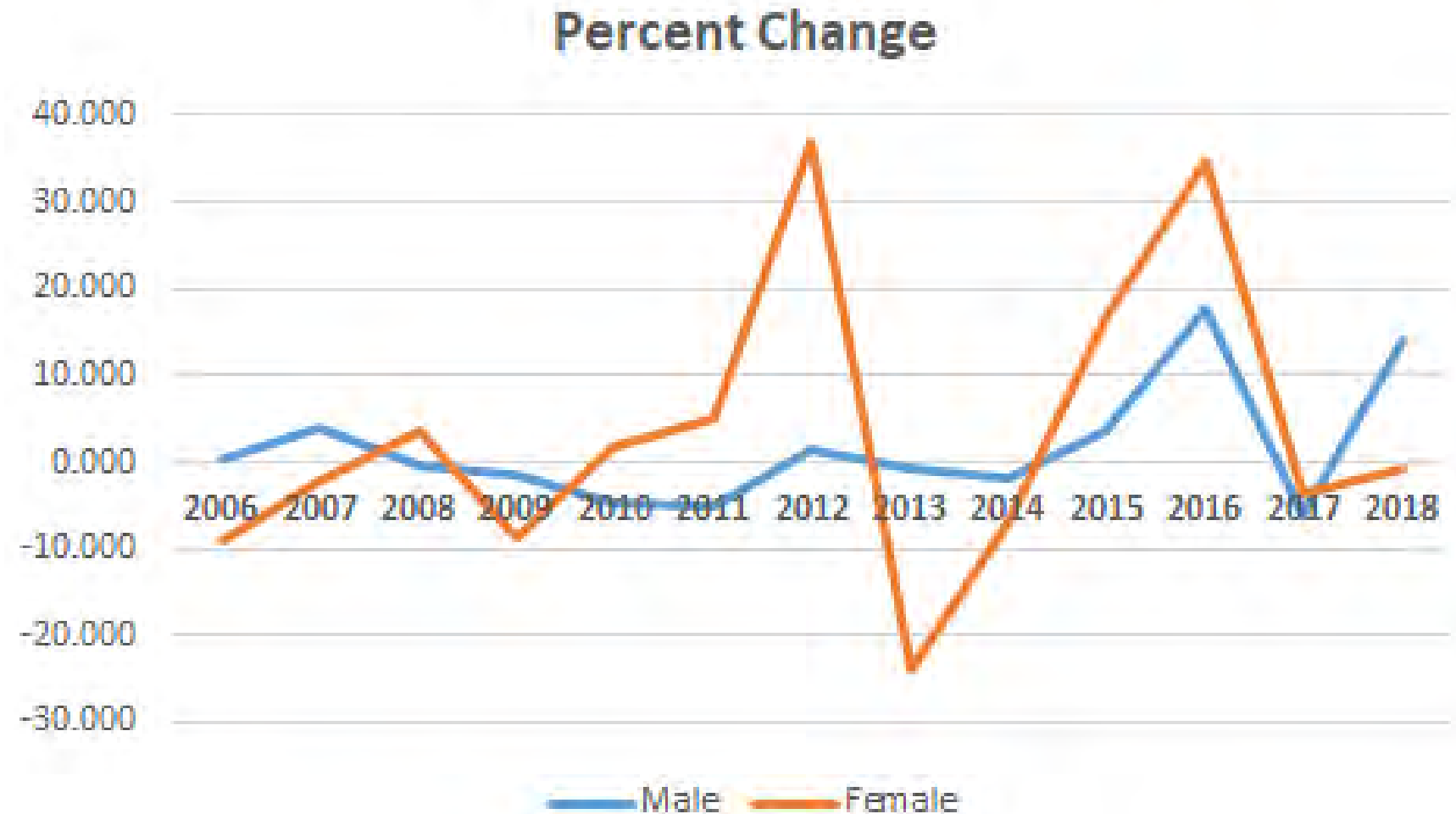


# AIRCRAFT PILOTS AND FLIGHT ENGINEERS

Females

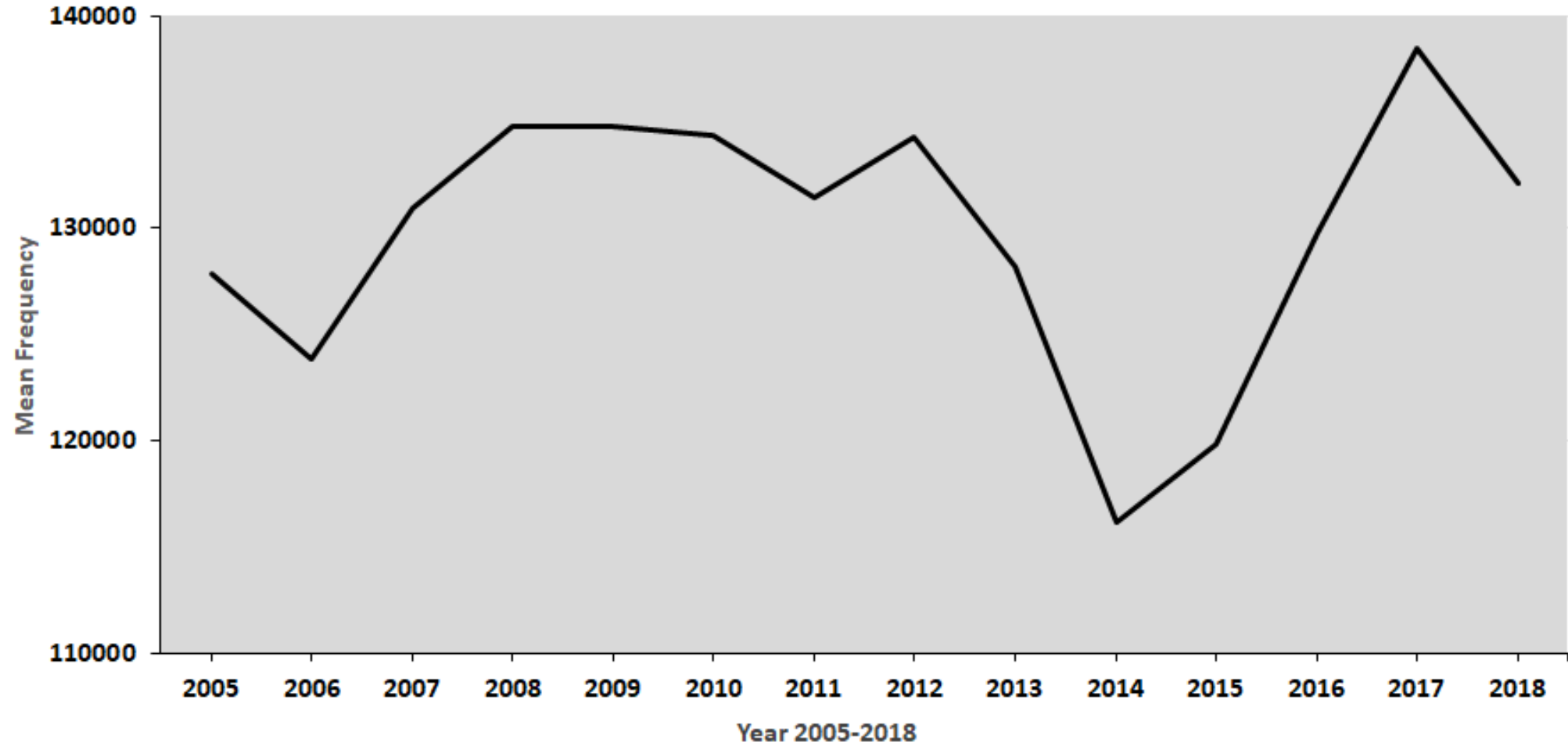


# AIRCRAFT PILOTS AND FLIGHT ENGINEERS



# AEROSPACE ENGINEERS

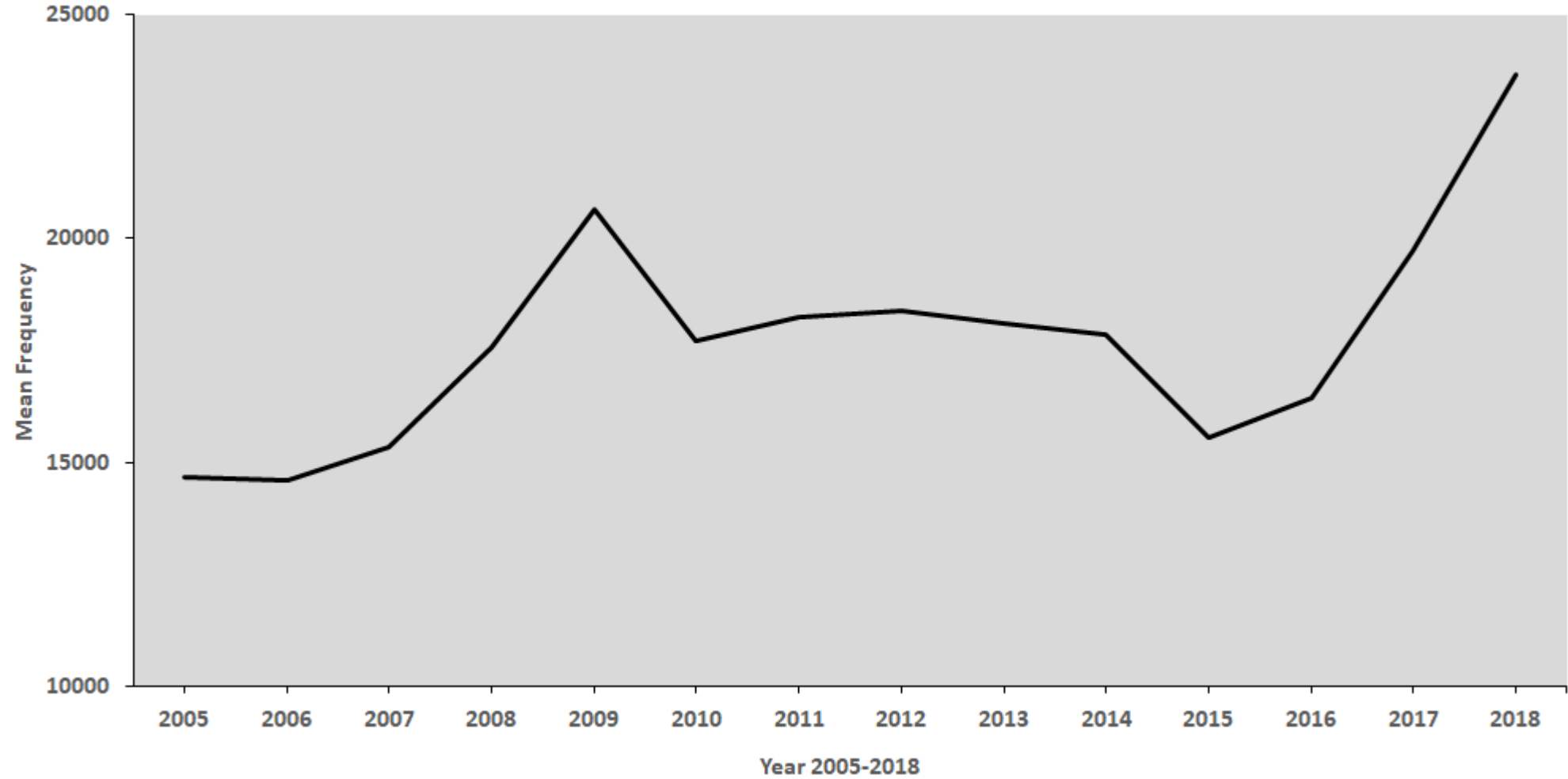
Males





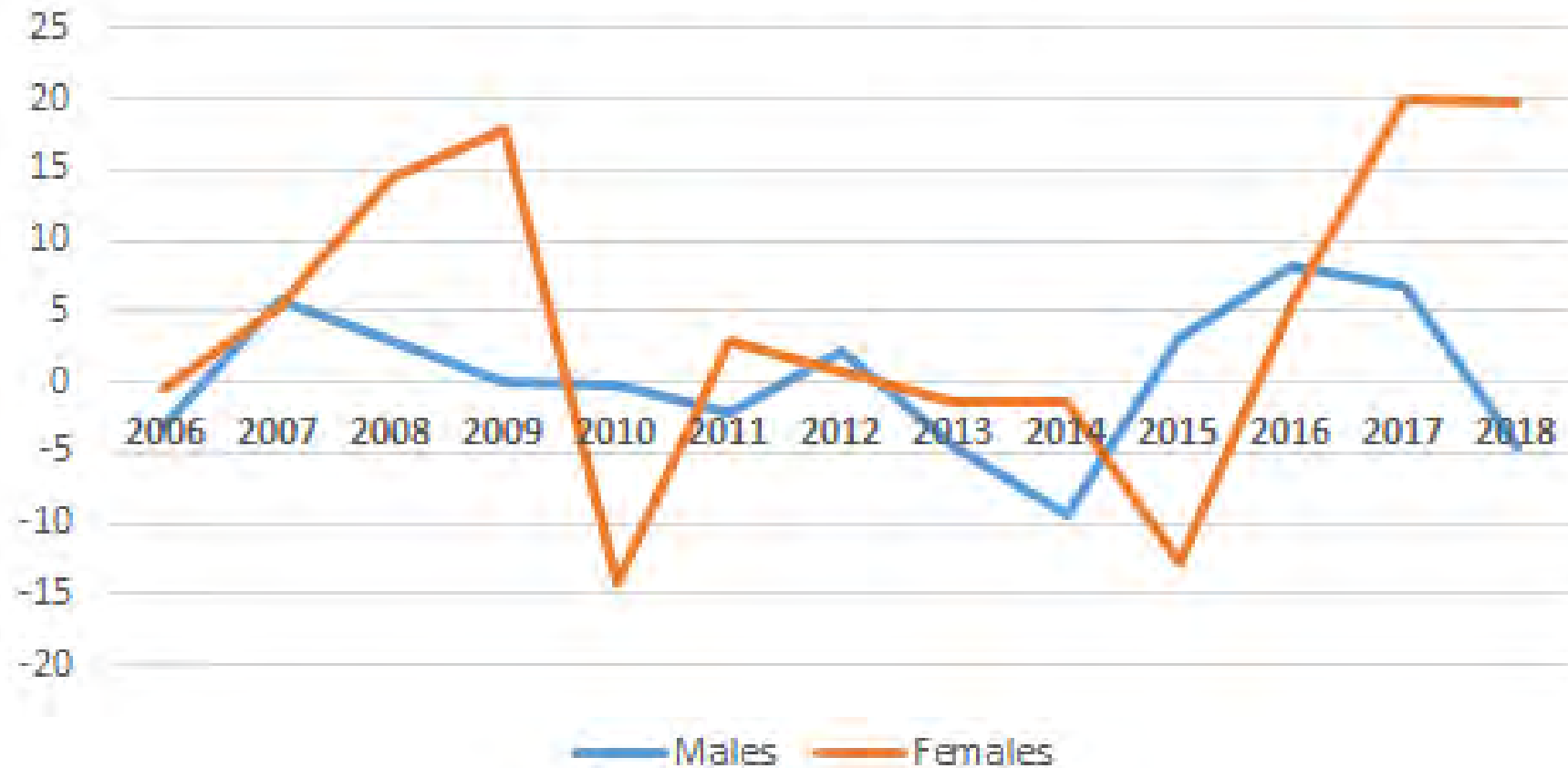
# AEROSPACE ENGINEERS

## Females



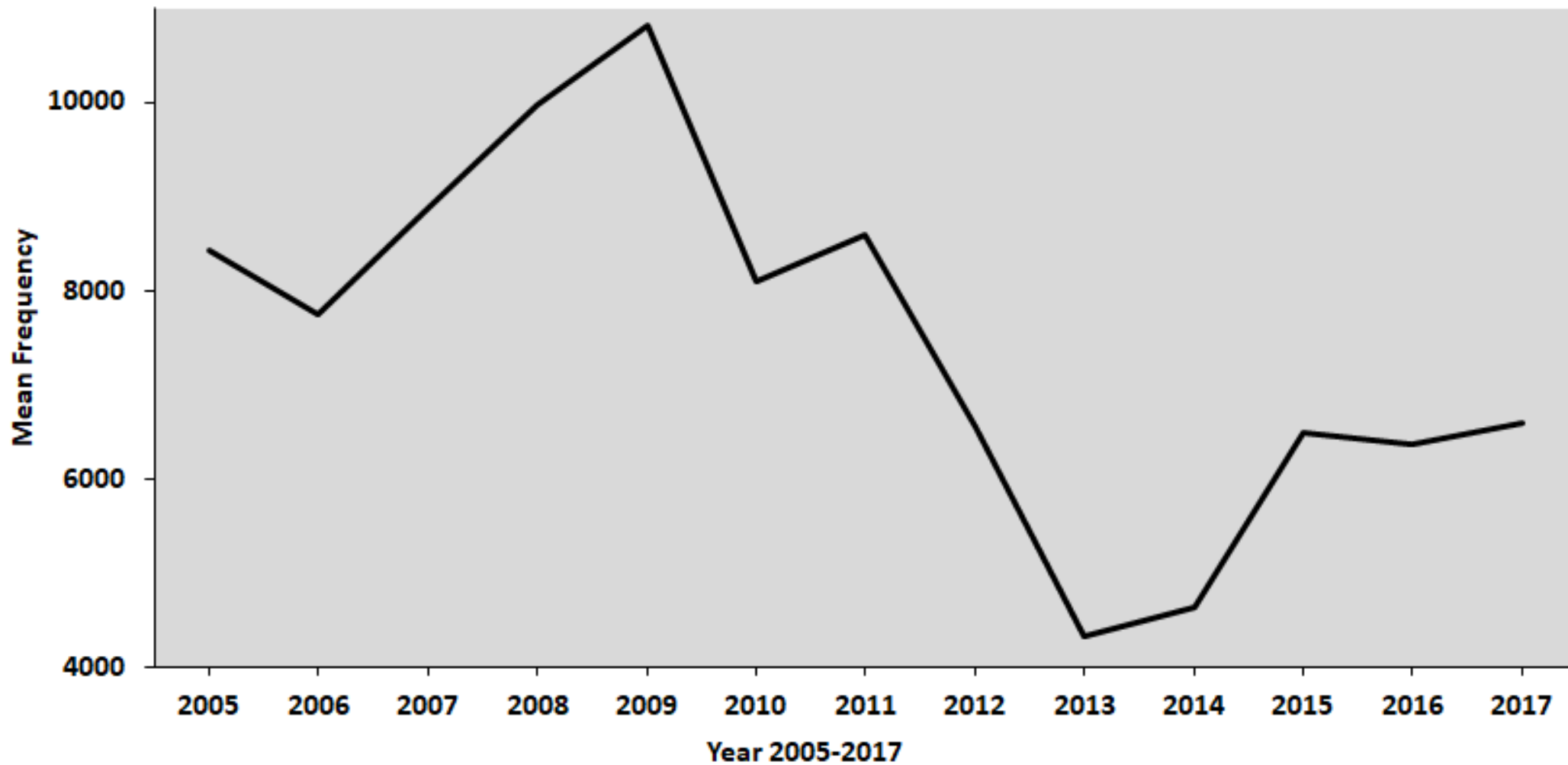
# AEROSPACE ENGINEERS

## Percent Change



# AIRCRAFT STRUCTURE / SYSTEM ASSEMBLERS\*

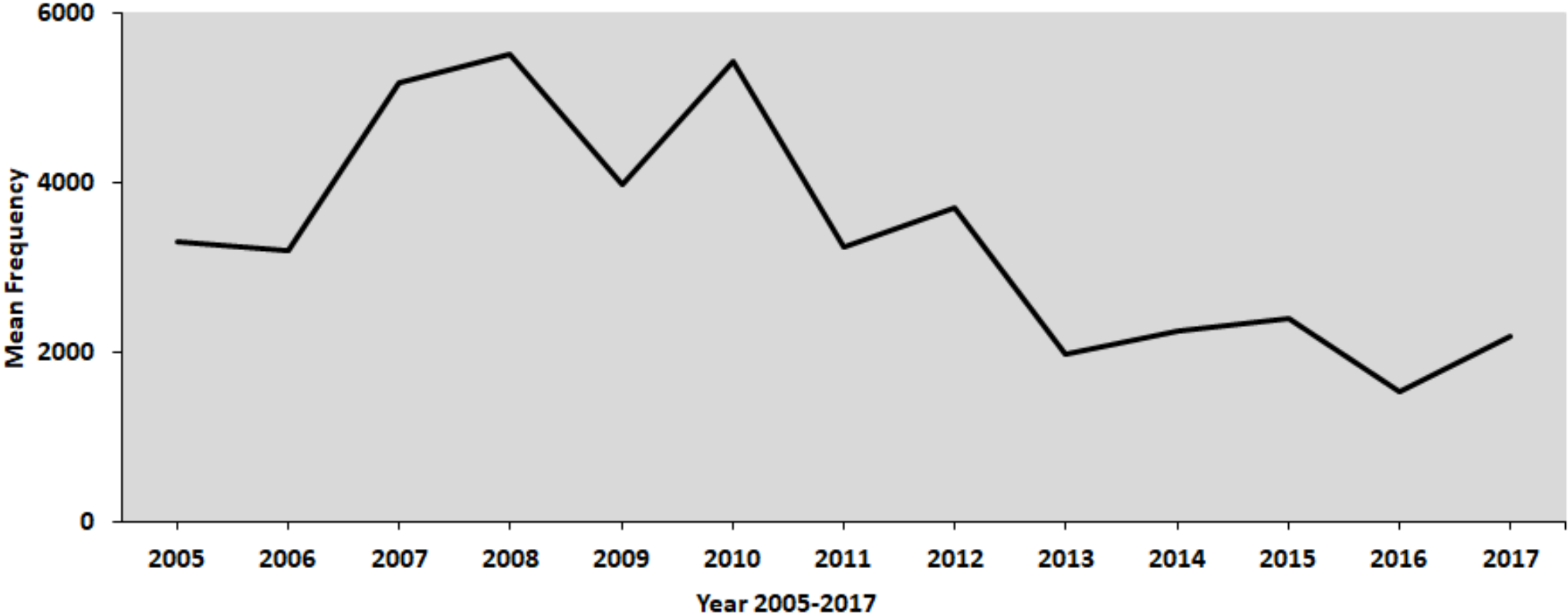
## Males



*\*No data for 2018*

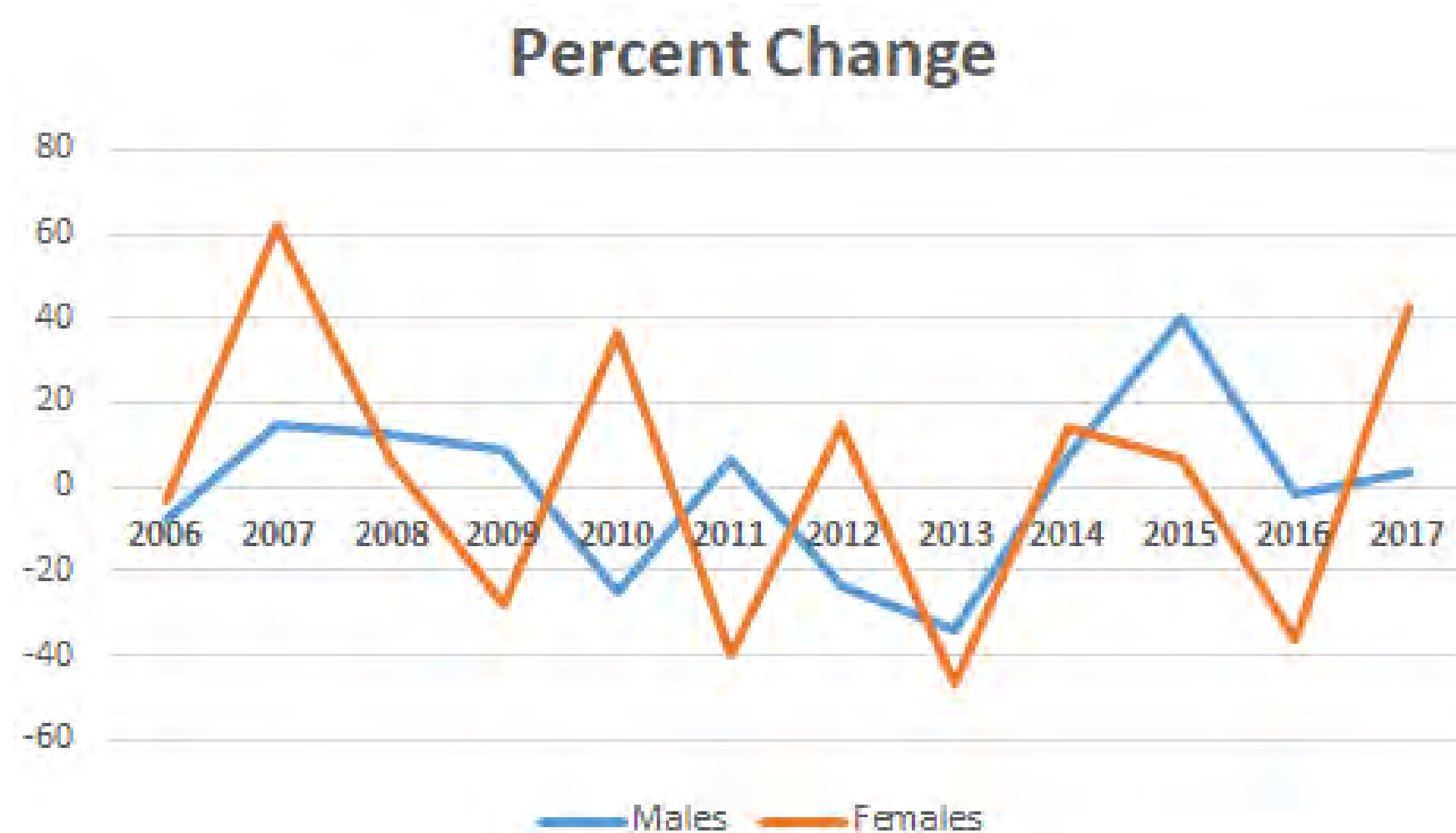
# AIRCRAFT STRUCTURE / SYSTEM ASSEMBLERS\*

## Females



*\*No data for 2018*

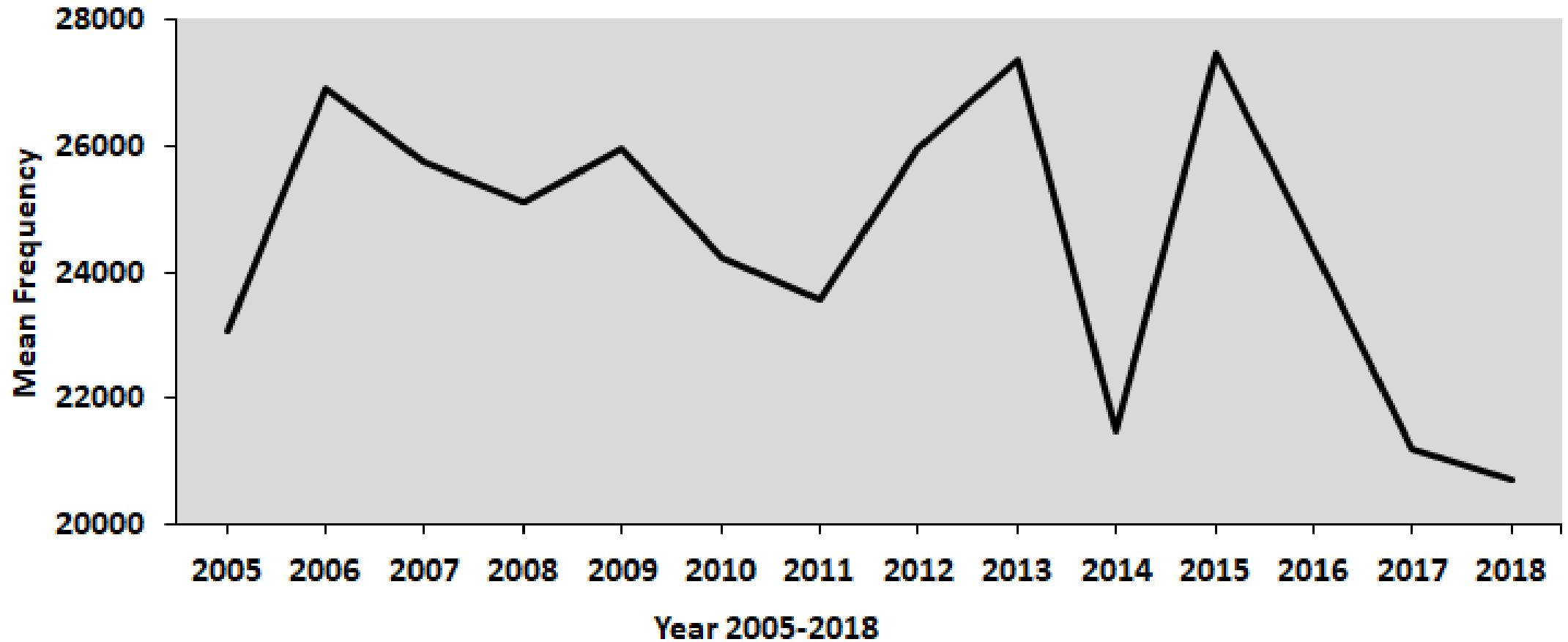
# AIRCRAFT STRUCTURE / SYSTEM ASSEMBLERS\*



\*No data for 2018

# AVIONICS TECHNICIANS

## Males



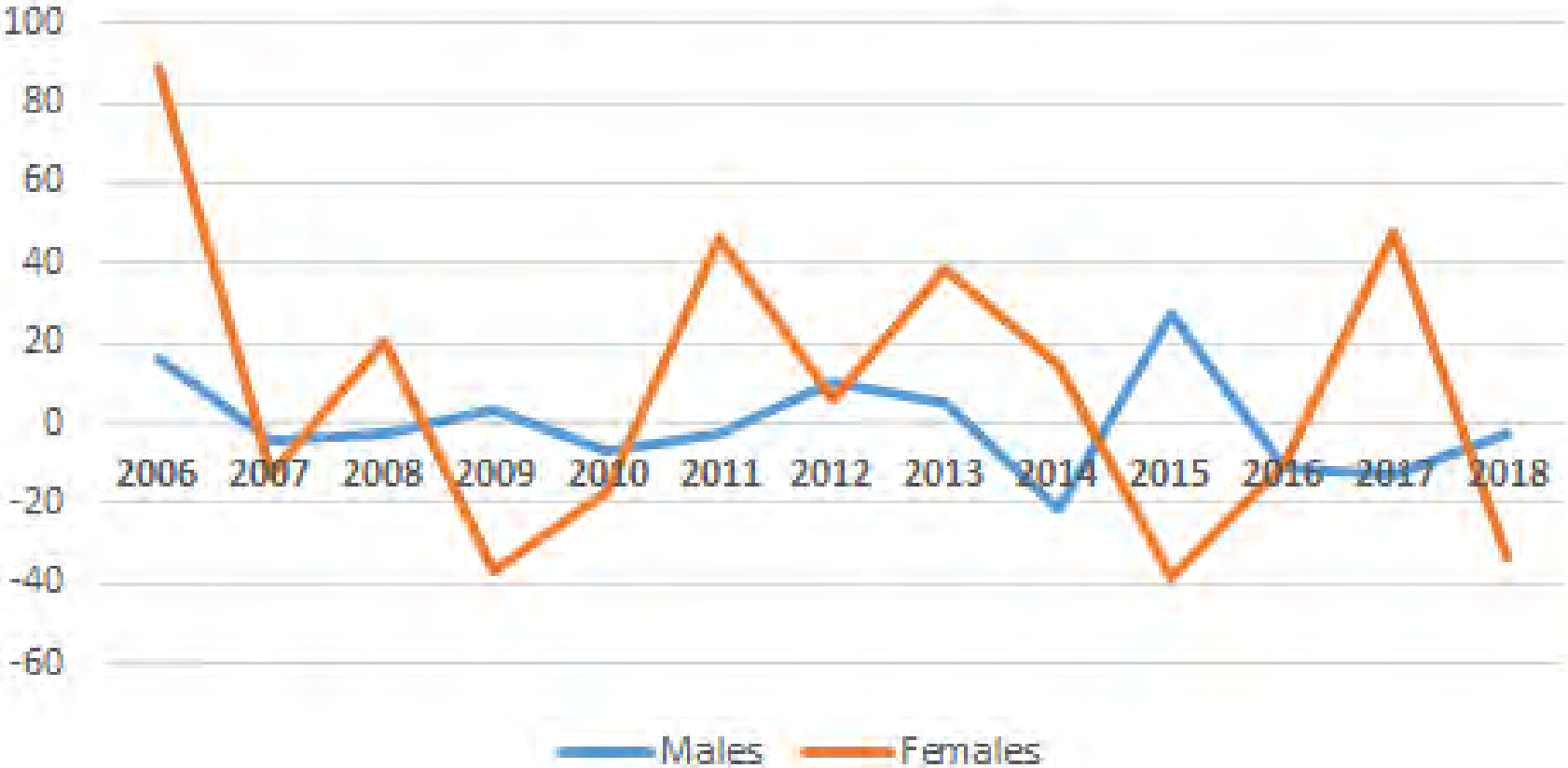
# AVIONICS TECHNICIANS

## Females



# AVIONICS TECHNICIANS

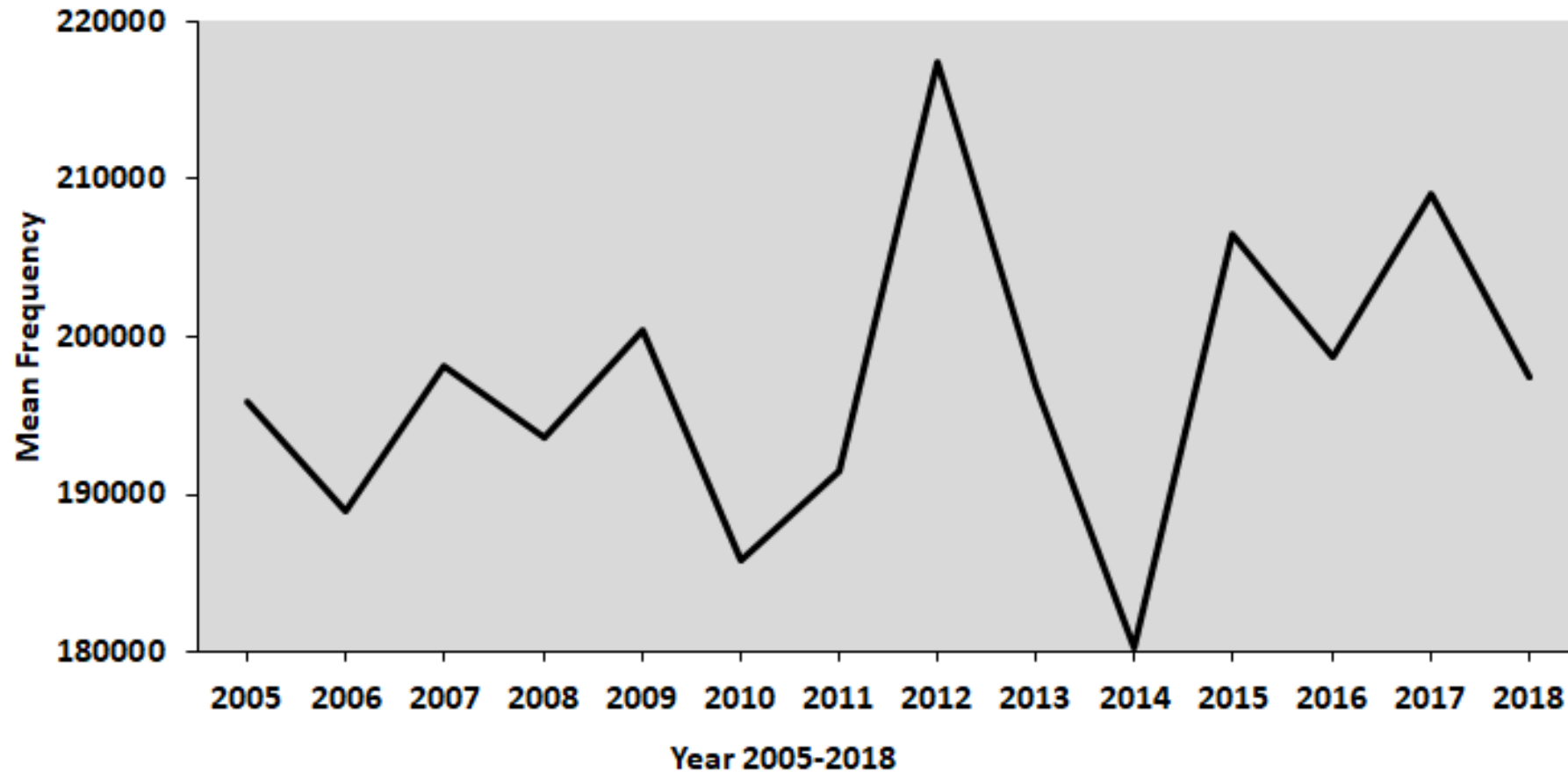
## Percent Change





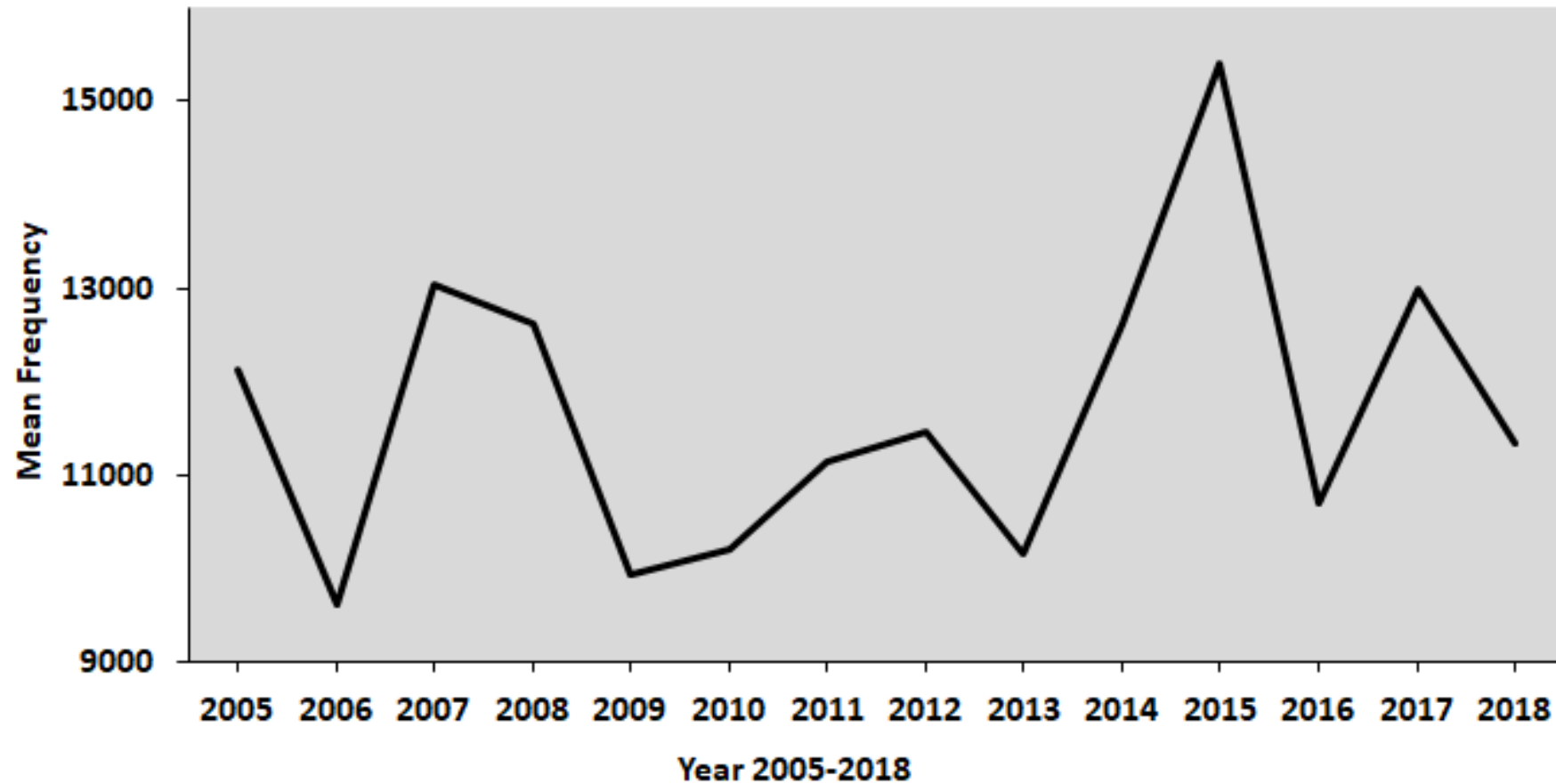
# AIRCRAFT MECHANICS AND SERVICE TECHNICIANS

Males



# AIRCRAFT MECHANICS AND SERVICE TECHNICIANS

## Females



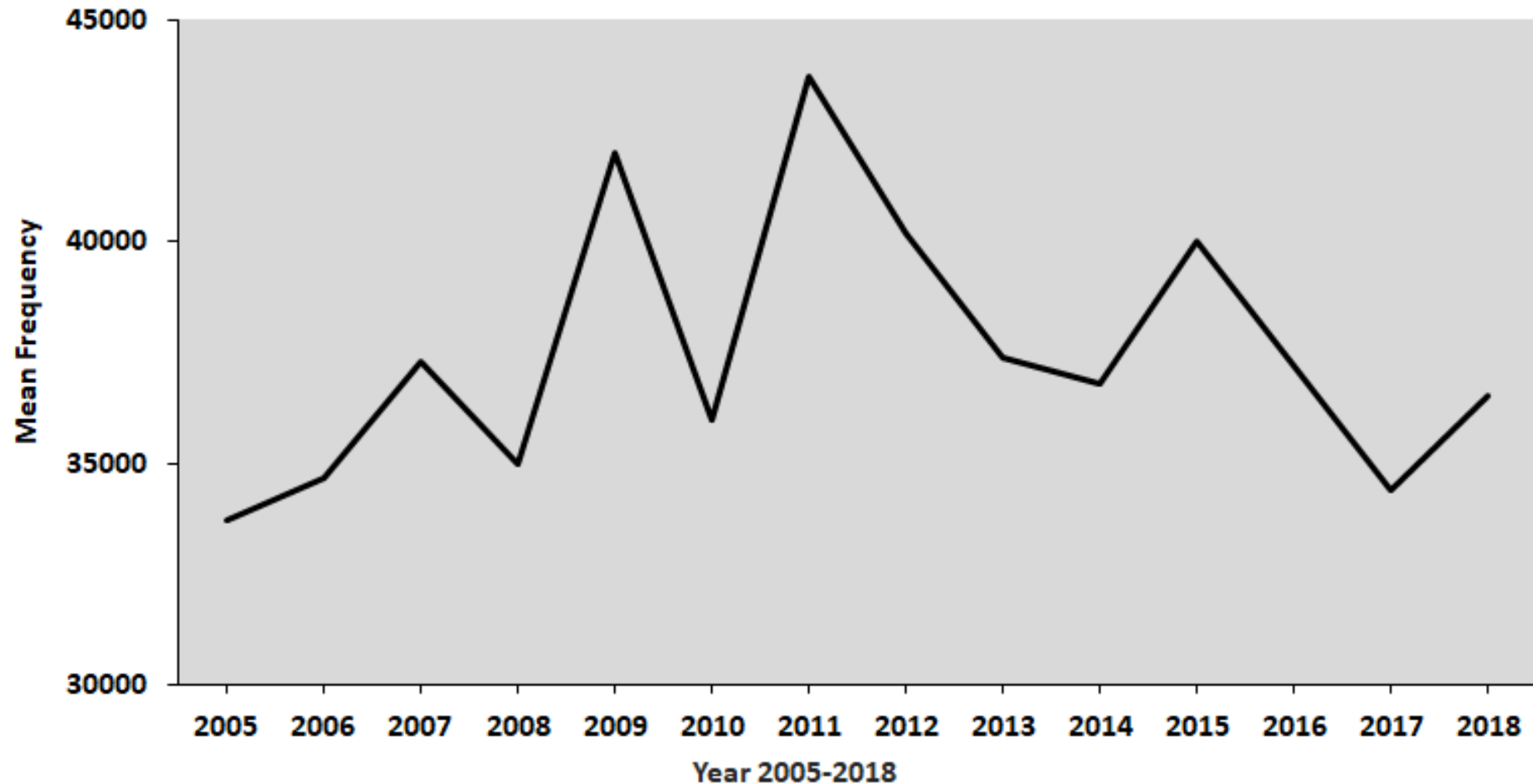
# AIRCRAFT MECHANICS AND SERVICE TECHNICIANS

## Percent Change



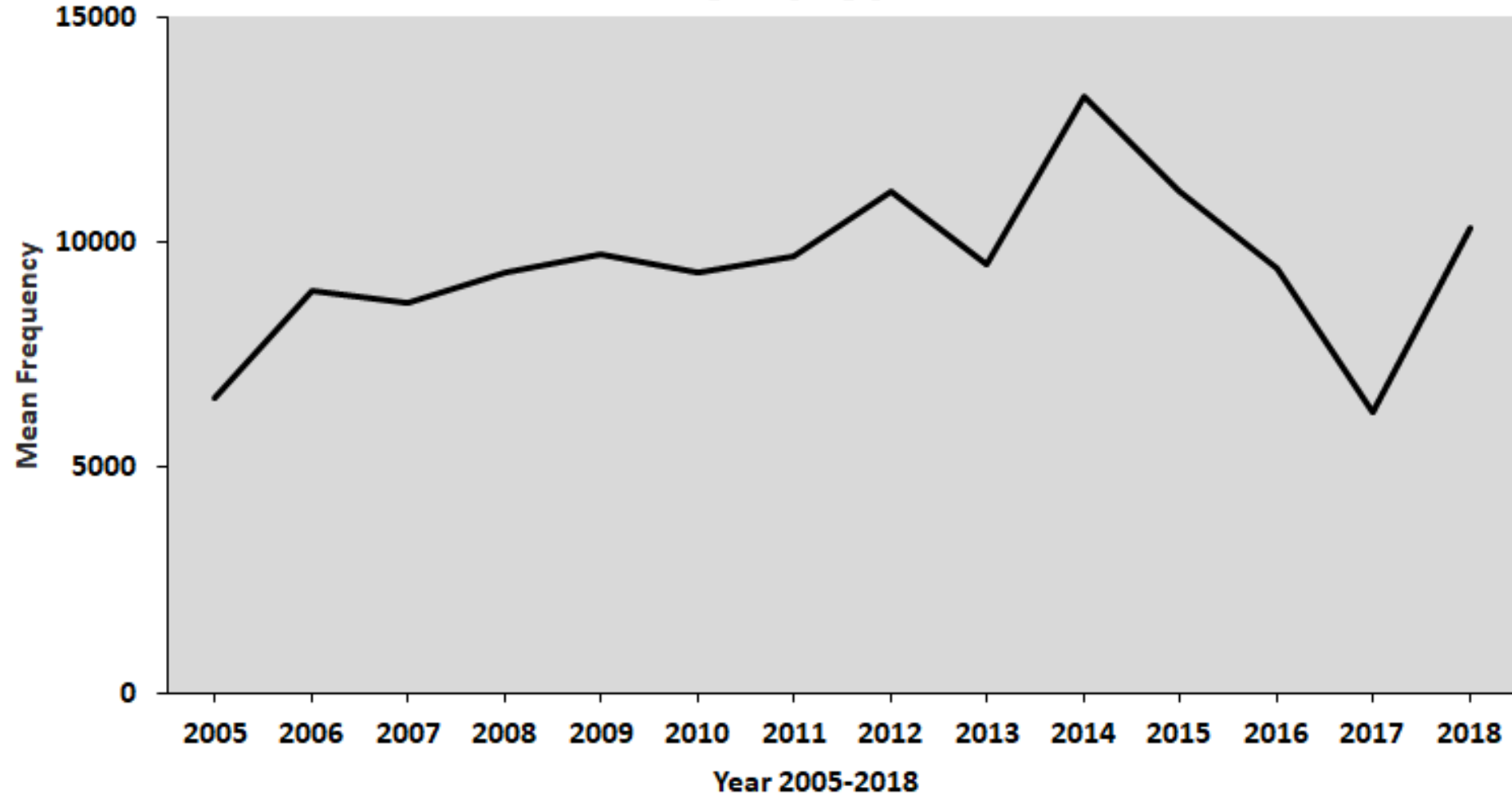
# AIR TRAFFIC CONTROLLERS AND AIRFIELD OPERATIONS SPECIALISTS

Males

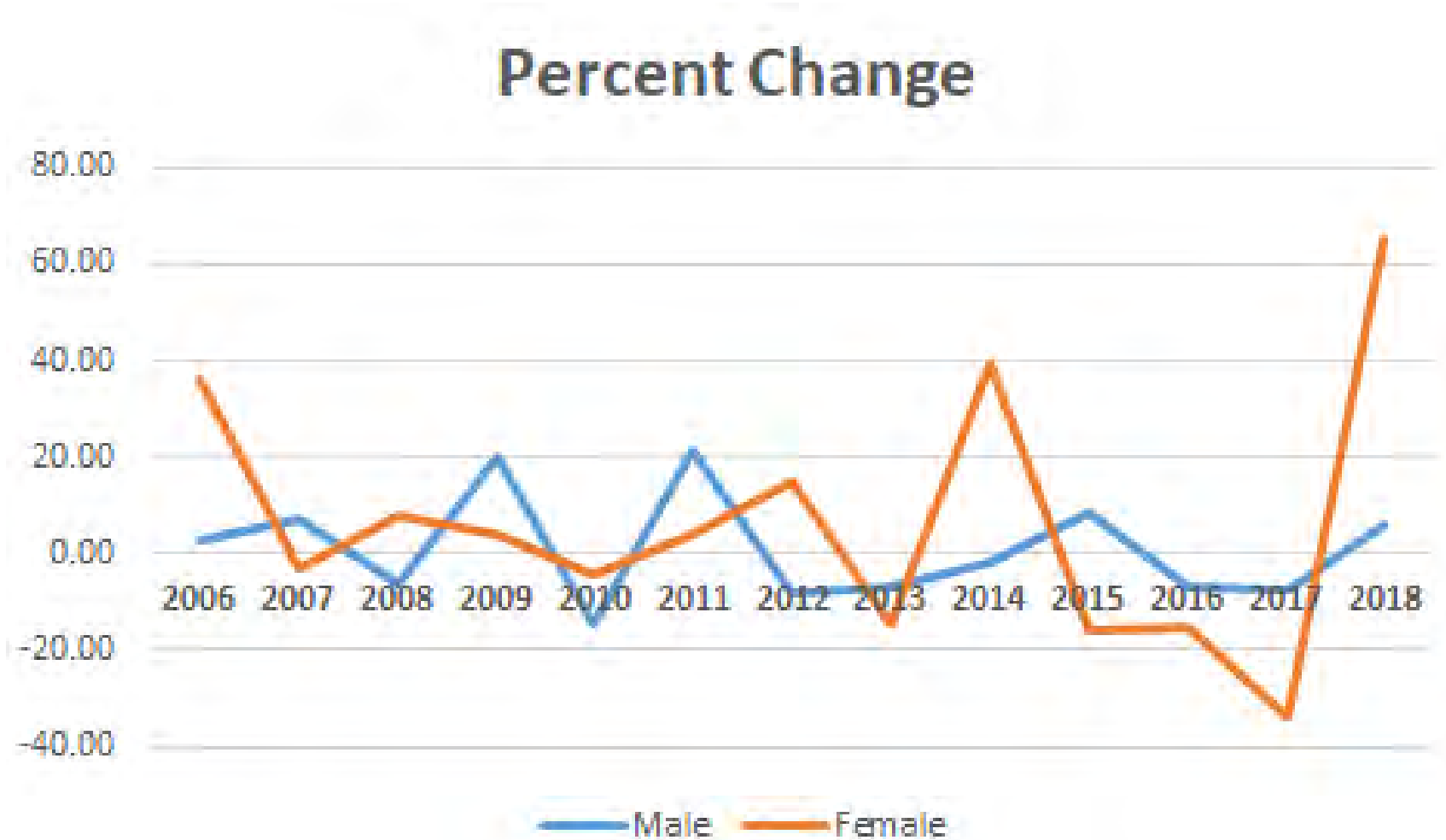


# AIR TRAFFIC CONTROLLERS AND AIRFIELD OPERATIONS SPECIALISTS

Females



# AIR TRAFFIC CONTROLLERS AND AIRFIELD OPERATIONS SPECIALISTS



# Summary

- Females make up a small percentage of the total workforce across aviation occupations
  - Occupations with most females in 2018:
    - Aerospace Engineers: 23,649
    - Aircraft Mechanics and Service Technicians: 15,402
  - Occupations with least females in 2018:
    - Aircraft Structure, Surfaces, Rigging, and Systems Assemblers: 5,514
    - Avionics Technicians: 4,235
- Change across the years has been more erratic for females, compared to males
  - Most erratic over time:
    - Aircraft Structure, Surfaces, Rigging, and Systems Assemblers
    - Avionics Technicians
  - Avionics Technicians

## Next Steps: RQ2

- **Approach: Survey Study**
- **Survey Categories**
  - Job Satisfaction
  - Professional Growth Opportunities
  - Challenging Work
  - Non-Monetary Benefits
  - Monetary Benefits
  - Work-Life Balance
  - Management Practices
  - Sexual Harassment / Gender Bias
  - Aviation Passion
- **Status: Data collection ongoing**
- **Findings applied to promote recruitment and retention across aviation occupations**



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Questions?