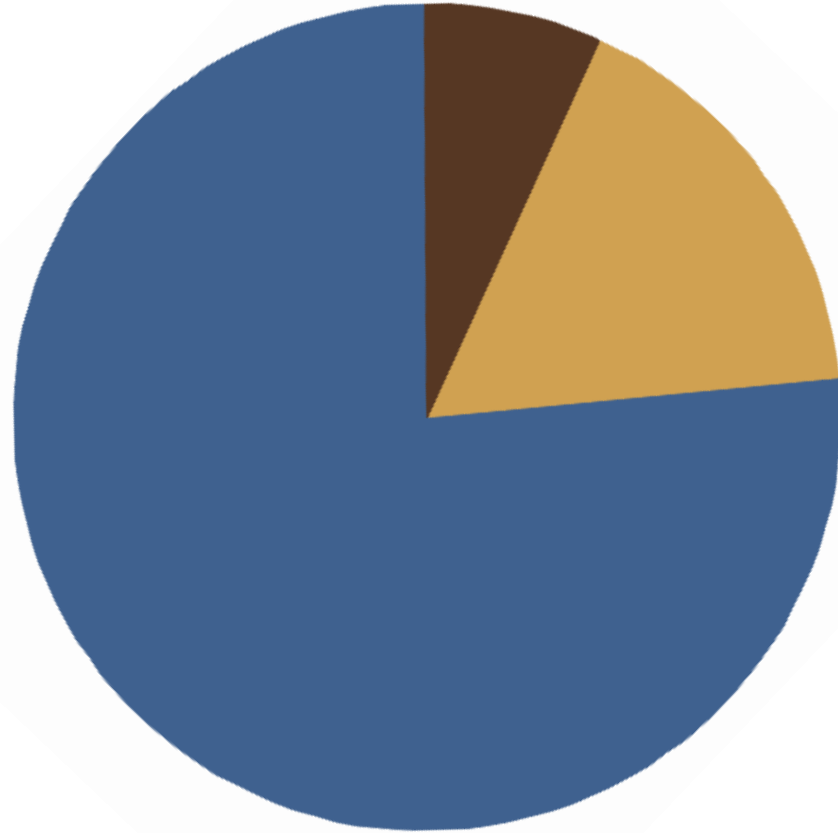


Exploring Utah's Information Technology Labor Migration

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Utah Department of Workforce Services

A Little Warmup...



Why We Did the Research...

YEAR	ANNUAL CHANGE: CORE IT
2011	5.8%
2012	12.1%
2013	8.8%
2014	8.2%
2015	9.6%
2016	6.7%



TRAIN MORE WORKERS!

How much does in-migration of labor support Utah's IT industry?

How It Was Done: Definitions

IT - Industries with high concentration of coding occupations (from OES staffing patterns)

*Coders - Software Developers (Applications and Systems Software),
Computer Programmers & Computer Systems Analysts*

*IT Industries (Core IT) - Software Publishing (5112) & Computer
Systems Design (5415)*

How It Was Done: Data Sources

- **Utah Unemployment Insurance Microdata**
- American Community Survey's Public Use Microdata Sample (Census Bureau)
- Occupational Employment Statistics (BLS)
- Regional Price Parity Index (BEA)



How do we measure migration?

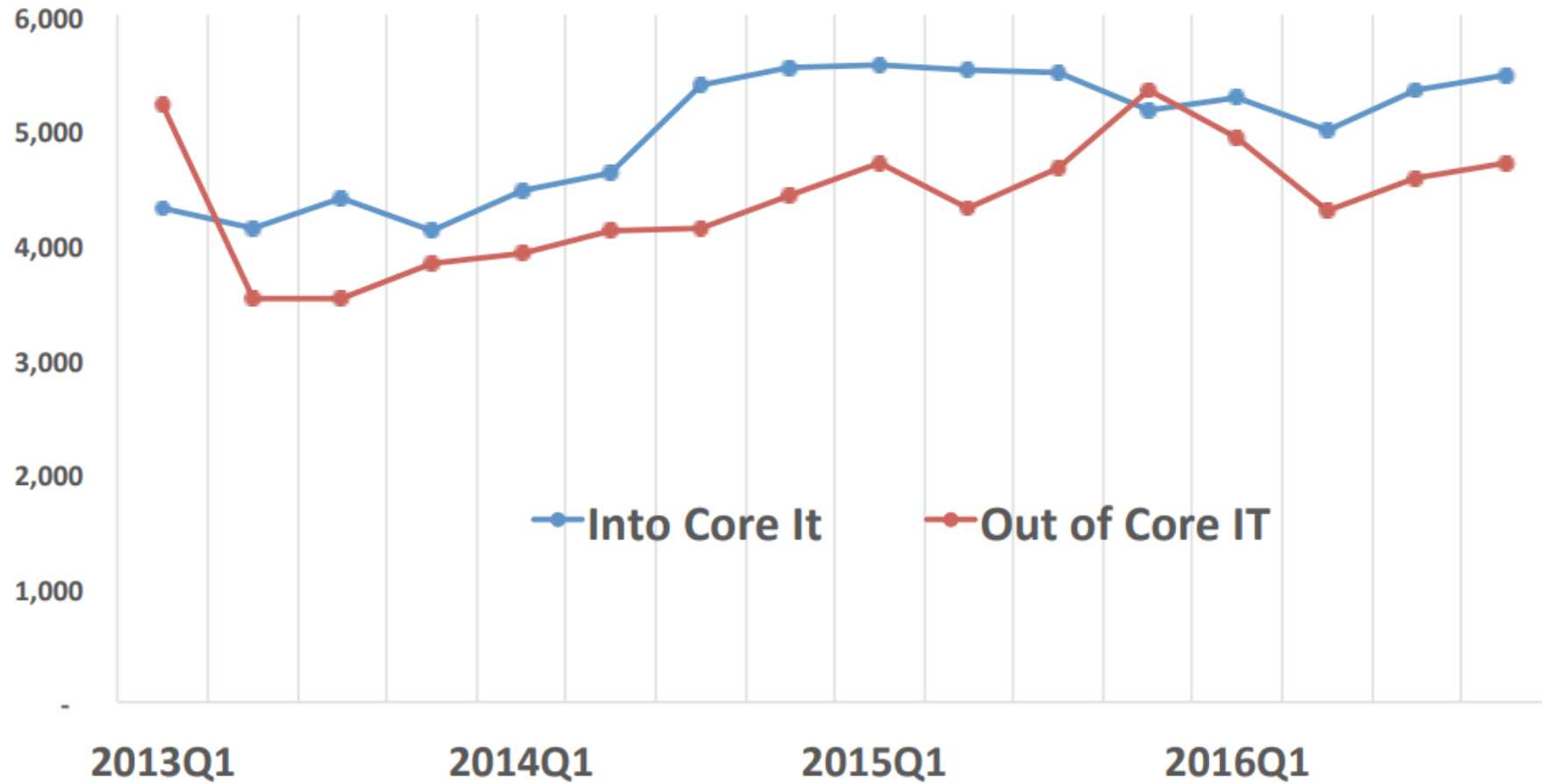
Components of Employment Change

- **Current workers** changing industries in-state (switchers)
- **Workers new to Unemployment Insurance (UI) wage records** – first-time workers, unemployed individuals returning to work or **hires from out-of-state.**
- **Workers exiting UI wage records** - includes retirements, deaths, fires/lay-offs or **workers leaving the state.**

Measuring the Components: Switchers

LAST QUARTER			CURRENT QUARTER			
NAME	SSN	NAICS		NAME	SSN	NAICS
Jason	000-00-0001	5415	JASON SWITCHES OUT (-1 IT JOB) →			3111
Sarah	000-00-0002	3111		Sarah	000-00-0002	3111
Susan	000-00-0003	5112		Susan	000-00-0003	5112
Carl	000-00-0004	2311	CARL SWITCHES IN (+1 IT JOB) →			5112
Maddie	000-00-0005	5415		Maddie	000-00-0005	5415

Utah Workers Switching In and Out of IT



Measuring the Components: New UI Records

Includes:

- First-time workers
- Unemployed individuals returning to work
- Hires from out-of-state

LAST QUARTER

NAME	SSN	NAICS
Jason	000-00-0001	5415
Sarah	000-00-0002	3111
Susan	000-00-0003	5112
Carl	000-00-0004	2311
Maddie	000-00-0005	5415

CURRENT QUARTER

NAME	SSN	NAICS
Jason	000-00-0001	5415
Sarah	000-00-0002	3111
Susan	000-00-0003	5112
Carl	000-00-0004	2311
Maddie	000-00-0005	5415
Paul	000-00-0006	5415
Dana	000-00-0007	5112
Frank	000-00-0008	5112

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Paul	000-00-0006	5415
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Measuring the Components: New UI Records

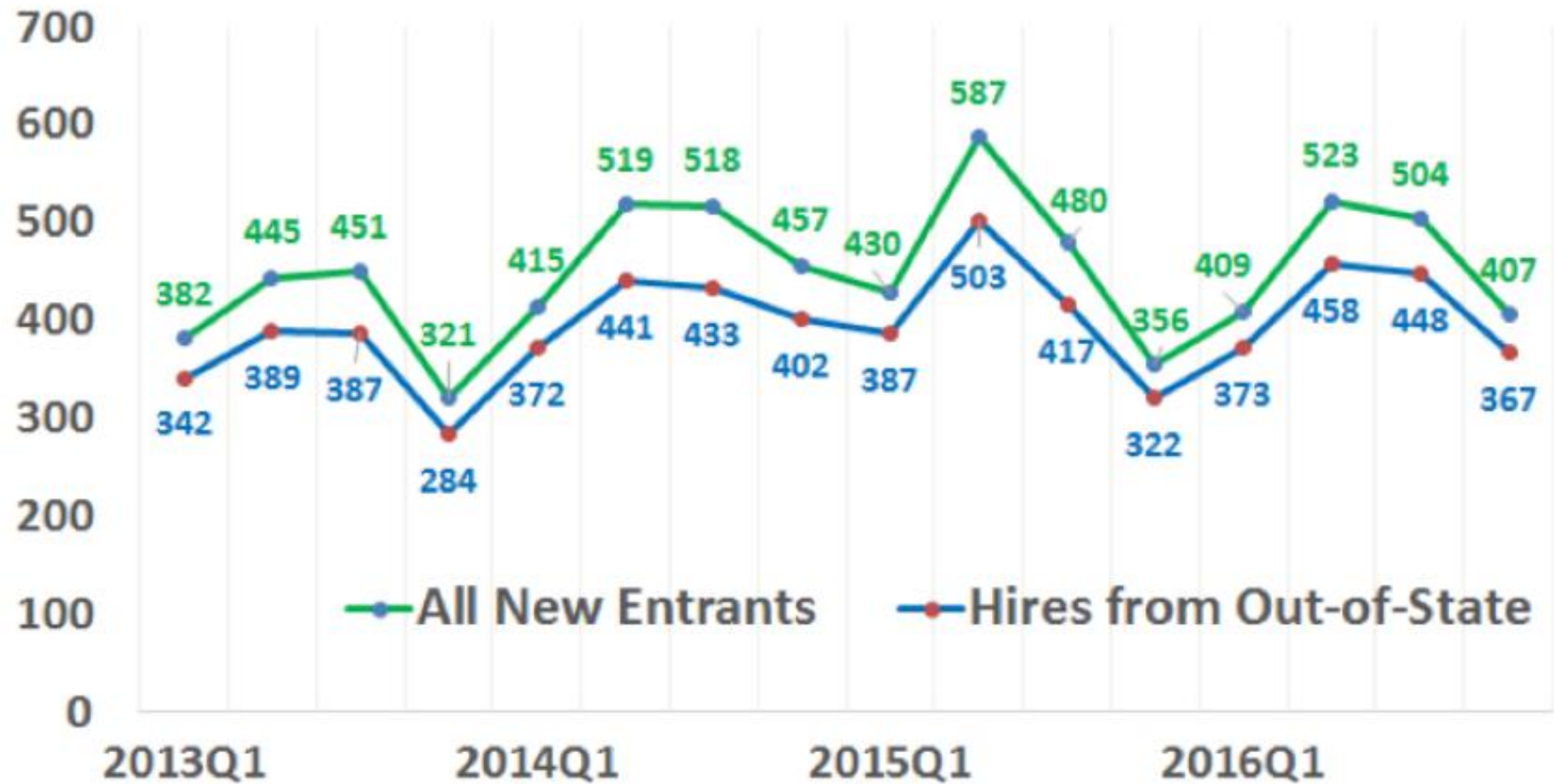
CURRENT QUARTER

Paul	000-00-0006	5415
Dana	000-00-0007	5112
Frank	000-00-0008	5112
Susan	000-00-0003	5112
Carl	000-00-0004	2311
Maddie	000-00-0005	5415
Paul	000-00-0006	5415
Dana	000-00-0007	5112
Frank	000-00-0008	5112

OUT-OF-STATE DETERMINATION MADE IF:

1. NEW RECORD
2. NON-UTAH SSN AREA CODE
3. NOT SEEN IN UI RECORDS PREVIOUSLY (BACK TO YEAR 2000)

Out-of-State Hires v. All New Entrants



Measuring the Components: UI Record Exits

LAST QUARTER

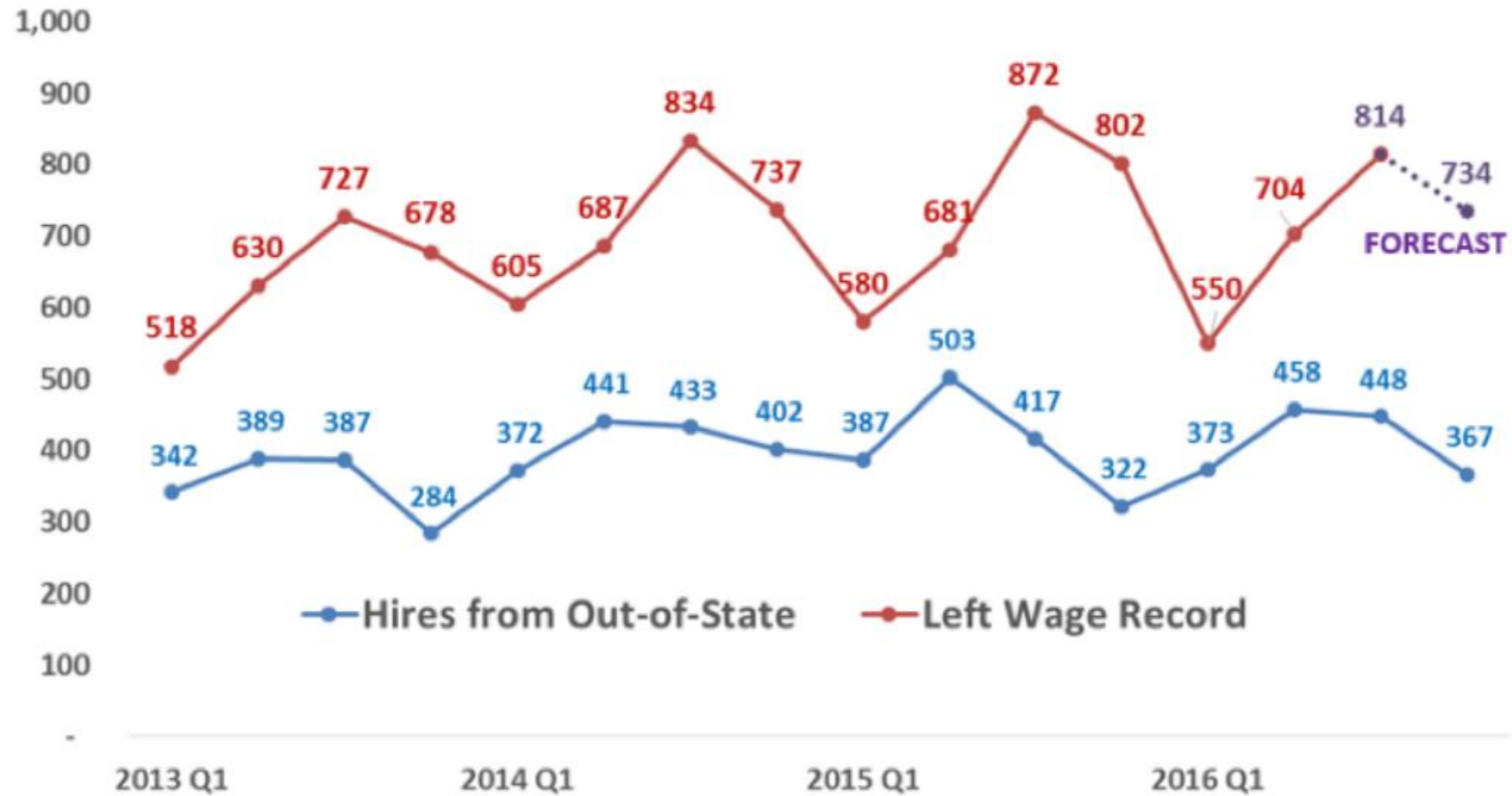
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THIS QUARTER

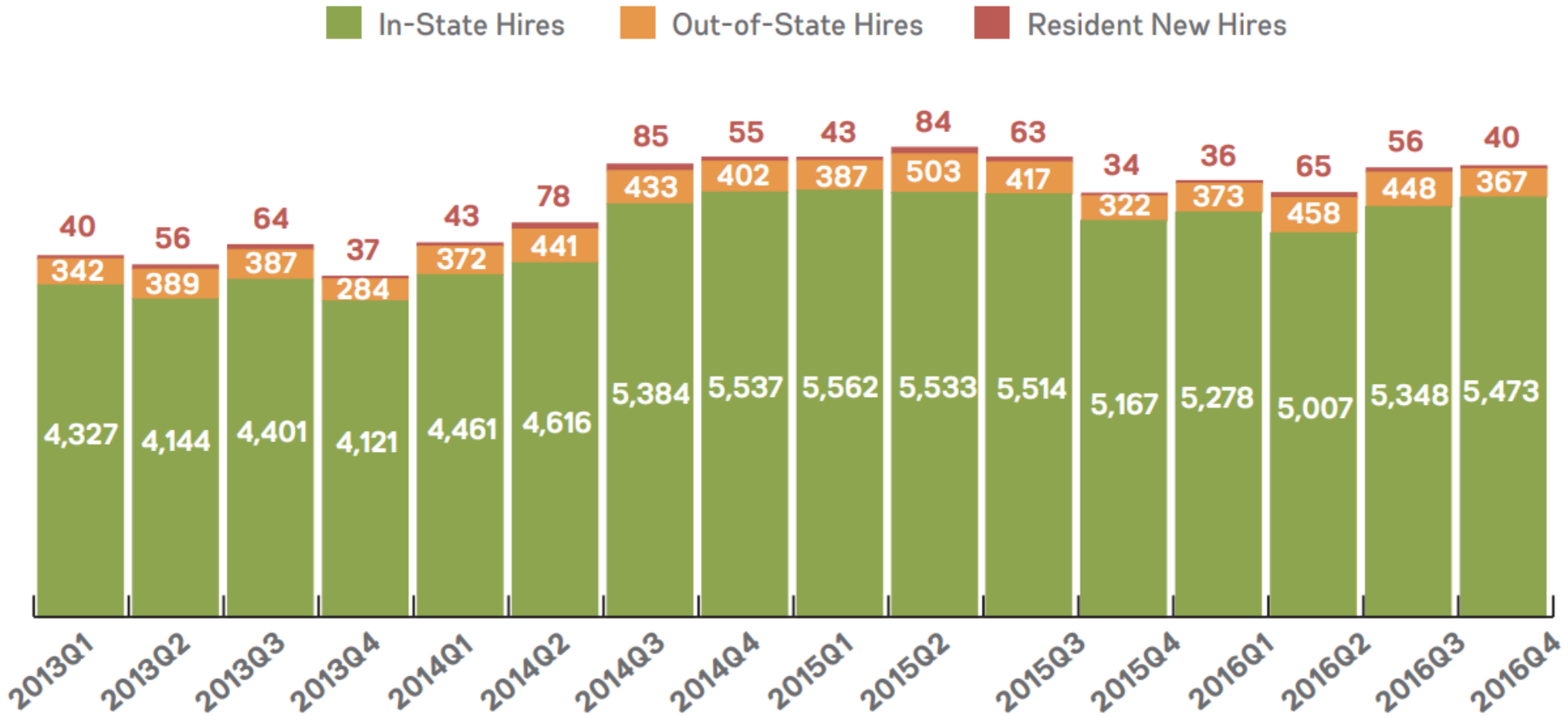
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Includes: Retirements, deaths, fires/lay-offs, workers leaving the state

Out-of-State Hires v. IT Workers Exiting Wage Records



Bringing It All Together... Gross Jobs Added by Component



Source: Workforce Services UI wage records.

Limitations

- SSN Area codes have a limited age range (7 to 45 years)
- State residents with non-state SSN or UI history
- No demographic information from UI
- Catch-all nature of wage record exits

Other Findings

- Used American Community Survey for demographics. Two approaches roughly equal in migration numbers 6,852 (ACS) and 6,325 (UI) from 2013 to 2016
- Calculated flow of coders for tech cities. Statistically significant relationship between cost-of-living adjusted wages and migration
- 50 percent of coders moving to Utah have a bachelor's degree or above — compared to 75 percent of those leaving the state.

Thank You!

Cory Stahle

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Utah Department of Workforce Services

