Welcome.

Lisa Ordóñez
Vice Dean, Eller College of Management

Welcome.

Patricia Feeney
Senior Vice President, Southern Arizona Market
Chase
Our world
Global Economic Outlook

Anthony Chan
Chief Economist, Chase

Our region
Outlook for Tucson

George W. Hammond, Ph.D.
Director, Economic and Business Research Center

Our Roadmap

- Tucson has been growing slowly
- Fiscal drag has been depressing growth
- Trade has been a bright spot
- Wage growth continues to lag
- Tucson is positioned to grow
- Education and infrastructure remain key concerns for our future

Tucson Economy Scorecard
mapazdashboard.arizona.edu

- Business Growth: -0.3% from 2012 to 2013
- Employment Growth: 0.5% from 2013 to 2014
- Median Home Price: $175,800
- Median Household Income: $46,233
- Patents: 15.7 per 10,000 workers
- Real GDP: 0.5% from 2012 to 2014

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Eller College of Management
University of Arizona
Job Replacement Rates

Percent of jobs lost during the Great Recession that have been replaced.

Through October 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix MSA</td>
<td>95.2</td>
</tr>
<tr>
<td>Tucson MSA</td>
<td>46.0</td>
</tr>
<tr>
<td>Rest of State</td>
<td>41.3</td>
</tr>
<tr>
<td>Arizona</td>
<td>84.3</td>
</tr>
<tr>
<td>US</td>
<td>149.2</td>
</tr>
</tbody>
</table>

Arizona Job Growth by Region

Over-the-Year

Percent

<table>
<thead>
<tr>
<th>Year</th>
<th>Phoenix MSA</th>
<th>Tucson MSA</th>
<th>Rest of State</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td></td>
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<td></td>
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<tr>
<td>2008</td>
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<td>2009</td>
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<td>2013</td>
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<tr>
<td>2014</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
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</tr>
</tbody>
</table>

Tucson MSA Government GDP Shares

mapazdashboard.arizona.edu

Government Share of Total GDP (2013)

Percent

<table>
<thead>
<tr>
<th>Category</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Civilian</td>
<td>4.4</td>
</tr>
<tr>
<td>Federal Military</td>
<td>3.4</td>
</tr>
<tr>
<td>State and Local</td>
<td>14.5</td>
</tr>
</tbody>
</table>

U.S. Real Federal Government Spending

Purchases of Goods and Services, Over-the-Year

IHS Economics, October 2015

Percent

<table>
<thead>
<tr>
<th>Year</th>
<th>Federal-Defense</th>
<th>Federal-Nondefense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
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<tr>
<td>2010</td>
<td></td>
<td></td>
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<tr>
<td>2012</td>
<td></td>
<td></td>
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<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Tucson MSA Housing Permits Rebound**

*Seasonally-Adjusted Annual Rates*

- Permits: 1,000, 2,000, 3,000, 4,000, 5,000, 6,000

**Arizona House Prices Rise**

- PHX MSA Median House Price (MLS), SA
- PHX MSA Home Price Index (Case Shiller), NSA
- TUS MSA Median House Price (MLS), NSA

**U.S. Dollar Appreciates**

*Value of the U.S. Dollar*

- Mexican Pesos/U.S. Dollar: 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7
- Canadian Dollars/U.S. Dollar: 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7

**Arizona Merchandise Export Growth**

- Mexico: 13.0, 18.3
- Canada: -4.8, 0.4
- Asia: 1.5, 0.9
- Europe: 2.5, 0.1
- Rest of World: 4.4, 4.1

- Total 2014-2015: +10.1%
- 2013-2014: +7.3%

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Arizona & U.S. Real Wage Growth

Over-the-Year Growth Rate, Wages per Worker

Arizona & U.S. Unemployment Rate

Broadly Defined

Arizona & U.S. Job Growth

Annual Growth Rates

Tucson MSA Job Growth by Industry

2014-2017

Government
Manufacturing
Mining and Logging
Other Services
Leisure and Hospitality
Professional and Business Services
Trade, Transportation and Utilities
Other Services
Financial Activities
Information
Construction
Education and Health Services
Manufacturing
Government
**Tucson MSA Outlook**

<table>
<thead>
<tr>
<th>Growth Rate</th>
<th>Actual*</th>
<th>Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2015</td>
</tr>
<tr>
<td>Nonfarm Jobs</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Personal Income</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Population</td>
<td>1.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Level**

| Housing Permits     | 3,250   | 3,901    | 4,039    | 4,502    |

* Personal income is forecast.

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**Quality of Life Rankings**

**Voting with Your Feet: All Domestic Migrants 2008-2012**

**Tucson MSA Alternative Scenarios**

**Total Employment**

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Key Concerns

► Human capital
  ► Educational attainment: better educated regions will win because they will generate a faster pace of innovative activity

► Infrastructure
  ► We need to be able to move people, goods, and services efficiently within and among metropolitan areas, states, and nations.
Explore data for border economies.
Arizona-Mexico Economic Indicators

[Website link]

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Arizona’s Economy

[Website link]

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