ECONOMIC OUTLOOK
2013-14
The University of Arizona’s 32nd Annual Forecast Luncheon
Sponsored by J.P.Morgan

MARSHALL J. VEST
Director
Economic and Business Research Center

LEN JESSUP, Ph.D.
Dean
Halle Chair in Leadership
Professor of Entrepreneurship and Innovation
PATTY FEENEY
President
Southern Arizona Market
Chase

http://ebr.eller.arizona.edu/
OVERVIEW

- Now in the 4th year of (subpar) recovery
  - De-leveraging, reducing debt
  - Classic liquidity trap
  - Uncertainties: Eurozone, China, oil, U.S. fiscal cliff
- Recovery in AZ
  - Slow job growth
  - Mobility of population severely restricted
- Good News
  - Modest acceleration as 2012 approaches
  - signs of life in housing markets

METRO TUCSON GROWTH ACCELERATES IN 2012

<table>
<thead>
<tr>
<th>Components of Population</th>
<th>Annual Growth (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>1976-2011</td>
</tr>
<tr>
<td>Nonfarm Employment</td>
<td>2.6</td>
</tr>
<tr>
<td>Real Personal Income</td>
<td>3.5</td>
</tr>
<tr>
<td>Real Retail Sales</td>
<td>1.7</td>
</tr>
<tr>
<td>Housing Permits</td>
<td>3.5</td>
</tr>
<tr>
<td>Population</td>
<td>2.1</td>
</tr>
</tbody>
</table>

HOUSING MARKETS

- Housing affordability at record highs
- Pent-up demand is increasing
- Existing homes sales are headed higher
  - Strong investor demand
- Inventories of homes for sale are very lean
- Home prices are finally rising
- Construction of new units moving up
  - But still at low level
**HOME PRICES ARE INCREASING**

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

**HOUSEHOLD FORMATION**
- Depends on youngsters leaving home when they get that first job
- Households “decoupling” when economic conditions improve (jobs...)
- Migration flows, which depend on the ability of homeowners in other locales to sell their homes

**HOUSING VACANCY RATES ARE TRENDING DOWNWARD**

- **Arizona**
- **U.S.**

**MIGRATION AND RESIDENTIAL BUILDING, TUS**

- **Housing Permits**
- **Net Migration**
CONSUMER SPENDING
 Consumers still facing a long list of negatives
   • but spending anyway
 Retail sales have cooled in recent months
   • A portion of pent-up demand has been satisfied
 Restaurant & bar sales are surprisingly strong

SALES GROWTH (% CHG Y-Y)
OCTOBER

<table>
<thead>
<tr>
<th></th>
<th>Arizona</th>
<th>Phoenix</th>
<th>Tucson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>2.6</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Restaurant &amp; Bar</td>
<td>7.0</td>
<td>6.9</td>
<td>7.2</td>
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<tr>
<td>Gasoline</td>
<td>0.6</td>
<td>0.2</td>
<td>-0.9</td>
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</table>

Retail Sales, TUS
seasonally adjusted annual rate and moving average

Restaurant & Bar Sales, TUS
seasonally adjusted annual rate
Job growth so far is very slow
- comparable to early 1990s

Percent of jobs lost during the Great Recession that have been replaced:
- Tucson MSA: 11%
- U.S.: 49.4%
**Economic Outlook 2012-2013**

**JOB GROWTH: TUS TRAILS PHX**

<table>
<thead>
<tr>
<th>Year</th>
<th>Phoenix</th>
<th>Tucson</th>
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<tbody>
<tr>
<td>2000</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>2001</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>2002</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>2003</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>2004</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>2005</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>2006</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>2007</td>
<td>-1%</td>
<td>-2%</td>
</tr>
<tr>
<td>2008</td>
<td>-3%</td>
<td>-4%</td>
</tr>
<tr>
<td>2009</td>
<td>-5%</td>
<td>-6%</td>
</tr>
<tr>
<td>2010</td>
<td>-7%</td>
<td>-8%</td>
</tr>
<tr>
<td>2011</td>
<td>-9%</td>
<td>-10%</td>
</tr>
<tr>
<td>2012</td>
<td>-11%</td>
<td>-12%</td>
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**Unemployment Rate**

Seasonally adjusted

<table>
<thead>
<tr>
<th>Year</th>
<th>Arizona (AZ)</th>
<th>Phoenix (PHX)</th>
<th>Tucson (TUS)</th>
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</thead>
<tbody>
<tr>
<td>2000</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>2001</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
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<tr>
<td>2002</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>2003</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>2004</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
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<tr>
<td>2005</td>
<td>-1%</td>
<td>0%</td>
<td>1%</td>
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<tr>
<td>2006</td>
<td>-2%</td>
<td>-1%</td>
<td>0%</td>
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<tr>
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<td>-3%</td>
<td>-2%</td>
<td>-1%</td>
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<tr>
<td>2008</td>
<td>-4%</td>
<td>-3%</td>
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</tr>
<tr>
<td>2009</td>
<td>-5%</td>
<td>-4%</td>
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<tr>
<td>2010</td>
<td>-6%</td>
<td>-5%</td>
<td>-4%</td>
</tr>
<tr>
<td>2011</td>
<td>-7%</td>
<td>-6%</td>
<td>-5%</td>
</tr>
<tr>
<td>2012</td>
<td>-8%</td>
<td>-7%</td>
<td>-6%</td>
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</tbody>
</table>

**Employment to Population Ratio**

<table>
<thead>
<tr>
<th>Year</th>
<th>Phoenix (PHX)</th>
<th>Tucson (TUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0.30</td>
<td>0.35</td>
</tr>
<tr>
<td>2001</td>
<td>0.31</td>
<td>0.36</td>
</tr>
<tr>
<td>2002</td>
<td>0.32</td>
<td>0.37</td>
</tr>
<tr>
<td>2003</td>
<td>0.33</td>
<td>0.38</td>
</tr>
<tr>
<td>2004</td>
<td>0.34</td>
<td>0.39</td>
</tr>
<tr>
<td>2005</td>
<td>0.35</td>
<td>0.40</td>
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<tr>
<td>2006</td>
<td>0.36</td>
<td>0.41</td>
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<tr>
<td>2007</td>
<td>0.37</td>
<td>0.42</td>
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<tr>
<td>2008</td>
<td>0.38</td>
<td>0.43</td>
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<tr>
<td>2009</td>
<td>0.39</td>
<td>0.44</td>
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<tr>
<td>2010</td>
<td>0.40</td>
<td>0.45</td>
</tr>
<tr>
<td>2011</td>
<td>0.41</td>
<td>0.46</td>
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**Forecast Summary, Metro TUS**

<table>
<thead>
<tr>
<th>Category</th>
<th>2011</th>
<th>2012p</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonfarm Jobs</td>
<td>0.1</td>
<td>0.8</td>
<td>1.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Personal Income</td>
<td>4.5</td>
<td>3.6</td>
<td>4.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>7.6</td>
<td>6.1</td>
<td>3.4</td>
<td>3.5</td>
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<tr>
<td>Housing Permits</td>
<td>15.7</td>
<td>29.3</td>
<td>31.6</td>
<td>20.1</td>
</tr>
<tr>
<td>Population</td>
<td>0.5</td>
<td>0.5</td>
<td>0.9</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Pace of recovery slow by historical standards
- restrained by
  - Tight credit, de-leveraging
  - Housing markets
  - Reduced mobility of population
  - Lack of confidence
  - Cautious spending and hiring
  - Drag from public sector
- Mid-decade before damage from recession is repaired
  - 2013 like 2012. Little acceleration until mobility improves and homebuilding recovers
  - Will we suffer another downturn before then?

GOOD NEWS
- WE ARE NOT IN A RECESSION
- OUR ECONOMY IS GROWING
- ELECTION IS FINALLY OVER

BAD NEWS
- LONG WAY TO GO TO A FULL RECOVERY
**UNEMPLOYMENT BY LEVEL OF SCHOOLING**  
**October 2012**

- Less than H.S. 12.2%
- H.S. no college 8.4%
- Some college 6.9%
- Bachelor’s degree or higher 3.8%

**EDUCATION MATTERS!**

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**UNEMPLOYMENT POPULATION 25 YEARS AND OVER**  
**October 2012**

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Participation Rate</th>
<th>Employment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than H.S.</td>
<td>45.1%</td>
<td>40.0%</td>
</tr>
<tr>
<td>H.S. no college</td>
<td>59.5%</td>
<td>54.4%</td>
</tr>
<tr>
<td>Some college</td>
<td>68.8%</td>
<td>64.3%</td>
</tr>
<tr>
<td>Bachelor’s Degree or higher</td>
<td>75.9%</td>
<td>72.8%</td>
</tr>
</tbody>
</table>

**EDUCATION MATTERS!**

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**FISCAL POLICY IS DEAD!**

**WHAT IS THE TEXT BOOK FISCAL POLICY RECOMMENDATION TO SOLVE UNEMPLOYMENT?**

**FISCAL POLICY**

**UNSUSTAINABLE DEFICITS**

- 2009 $1.4 TRILLION
- 2010 $1.3 TRILLION
- 2011 $1.3 TRILLION
- 2012 $1.1 TRILLION

**TOTAL DEBT = $16.3 TRILLION**
FALLING OFF THE FISCAL CLIFF
DECEMBER 31, 2012

- MASSIVE SPENDING CUTS
- MASSIVE TAX INCREASES

“CLIFF NOTES”

HOW BIG IS THE CLIFF?
Tax Provisions Expiring December 31, 2012:
Total = $505 billion

SEQUESTRATION
Spending Cuts after December 31, 2012:
Total = $125 billion

FISCAL POLICY

FISCAL FIGHT
WE WILL HIT THE DEBT CEILING AGAIN AT THE END OF THIS YEAR

Current Ceiling $16.4 trillion
Current Debt $16.3 trillion
FACT: We have a structural deficit in fiscal year 2012

- REVENUE 15.7% OF GDP
- SPENDING 22.7% OF GDP

WE CANNOT GROW OUR WAY OUT OF THIS DEFICIT!

SOCIAL SECURITY NEEDS TO BE CHANGED

2012 PROJECTED DIFFERENCE BETWEEN SOCIAL SECURITY DEDICATED TAX REVENUE AND EXPENDITURES IS:

$165 BILLION

2012 SOCIAL SECURITY MEDICARE TRUST FUND REPORT

MEDICARE NEEDS TO BE CHANGED

2012 PROJECTED DIFFERENCE BETWEEN DEDICATED TAX REVENUE AND PREMIUM INCOME AND EXPENDITURES

$38 BILLION

2012 SOCIAL SECURITY MEDICARE TRUST FUND REPORT

TRUSTEE’S REPORT

“LAWMAKERS SHOULD ADDRESS THE FINANCIAL CHALLENGES FACING SOCIAL SECURITY AND MEDICARE AS SOON AS POSSIBLE. TAKING ACTION SOONER RATHER THAN LATER WILL LEAVE MORE OPTIONS AND MORE TIME AVAILABLE TO PHASE IN CHANGES SO THAT THE PUBLIC HAS ADEQUATE TIME TO PREPARE.”

TRUSTEES:
TIMOTHY F. GEITHNER, KATHLEEN SEBELIUS, HIDDE L. SOLIS, MICHAEL J. ASTRUE
WE MUST RAISE MORE TAX REVENUE.

TAXES

WHICH BRINGS ME TO A TEACHING MOMENT:

WHAT DOES MAKE A FAIR TAX?

TAX BASE x TAX RATE = TAX REVENUE

WHAT MAKES A FAIR TAX?

Tax Equity Rules:

HORIZONTAL EQUITY

VERTICAL EQUITY

WHAT MAKES A FAIR TAX?

HORIZONTAL EQUITY:

PEOPLE WITH EQUAL ABILITIES TO PAY THE TAX SHOULD PAY THE SAME AMOUNT OF TAXES.
VERTICAL EQUITY:

PEOPLE WITH DIFFERENT ABILITIES TO PAY SHOULD PAY DIFFERENT AMOUNTS OF TAXES.

Acceptable relative treatment of persons in unequal circumstances.

MEASURES OF ABILITY TO PAY:
- INCOME
- CONSUMPTION
- WEALTH
- BENEFITS RECEIVED
- BEHAVIOR

THE BASE OF THE TAX REPRESENTS THE PERSON’S ABILITY TO PAY THE TAX.

What is the appropriate relative tax on persons with different abilities to pay?
- PROGRESSIVE
- REGRESSIVE
- PROPORTIONAL
**ECONOMIC EFFECTS OF A TAX**

- The economic impact of the tax should be **neutral** unless it is designed to discourage or encourage a specific action.

- A broad based tax has less undesirable economic impacts than a selective tax.

**INCOME TAXES**

**HORIZONTAL EQUITY**

DETERMINING EQUALITY:

- EXEMPTIONS
- DEDUCTIONS
- TYPES OF INCOME
- TIMING OF INCOME

**HOW DO WE DETERMINE ABILITY TO PAY THE TAX?**

EXAMPLES OF DEDUCTIONS USED TO DETERMINE ABILITY TO PAY INCOME TAXES:

- NUMBER OF CHILDREN
- MEDICAL EXPENSES
- COSTS OF EARNING INCOME
- CHARITABLE GIVING
- OTHER TAXES PAID
- INTEREST PAID

**DETERMINING TAXABLE INCOME**

- WAGES AND SALARIES
- CAPITAL GAINS
- DIVIDENDS
TAX AVOIDANCE
CHANGING BEHAVIOR TO AVOID PAYING TAXES - IT IS LEGAL

TAX EVASION
NOT REPORTING ALL THE TAX BASE FOR TAX PURPOSES - IT IS ILLEGAL

DESIGNING A “FAIR” TAX IS TRICKY BUSINESS

IS FAIRNESS IN THE EYE OF:
- THE TAX PAYER?
- THE GOVERNMENT IMPOSING THE TAX?
- THE PUBLIC AT-LARGE?

YOU BE THE JUDGE...

CERTAINTY
IS THE BEST STIMULOUS WE COULD HAVE!

We need the Wizard of OZ to:
GIVE CONSUMERS A HEART,
GIVE BUSINESSES COURAGE,
and GIVE POLITICIANS A BRAIN!
THANK YOU ALL FOR JOINING US!

HAPPY HOLIDAYS!