Business Demographics, Upcoming Trends, and Consumer Expenditure Data

Nebraska State Data Center
26th Annual Data Users Conference
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Part of Conference Webcast

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• Bureau of Labor Statistics Programs

  – Employment and Unemployment Statistics
  – Prices and Living Conditions
  – Compensation and Working Conditions
  – Productivity and Technology
  – International Labor Data
• Major Pricing and Living Conditions Data
  – Consumer Price Indexes
  – Producer Price Indexes
  – U.S. Import and Export Price Indexes
  – Consumer Expenditure Survey
• CE Survey Background
  – Buying Habits
  – Revision of CPI market basket
  – Two parts
    • Diary of consumer units – recordkeeping
    • Interview – expenditures at 3 month intervals
  – Results integrate both surveys
  – Amounts include taxes
  – Rotating panel design – quarterly changes
  – Representative sample
The Consumer Expenditure Survey

• CE Survey tabulations
  – Full range of demos:
    • Income quintiles and classes
    • Age
    • Size and composition of consumer uit
    • Number of earners
    • Housing tenure
    • Urban or Rural
    • Race/Hispanic origin
    • Geographic Region
    • Education
    • Occupation
• CE Survey tabulations .... Continued
  – Average annual data for
    • Pre-tax income age consumer unit size, region
    • Single consumers gender and income or age
    • Selected Metros (MSA’s) – but not Omaha
    • Data available for 1984 - 2013
The Consumer Expenditure Survey 2010 – 2013 Characteristics

Average annual expenditures by major category of all consumer units and percent changes, Consumer Expenditure Survey, 2010–2013

<table>
<thead>
<tr>
<th>Item</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2010–2011</td>
</tr>
<tr>
<td>Consumer unit characteristics:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2011–2012</td>
</tr>
<tr>
<td>Income before taxes</td>
<td>$62,481</td>
<td>$63,685</td>
<td>$65,596</td>
<td>$63,784</td>
<td>...</td>
</tr>
<tr>
<td>Age of reference person</td>
<td>49.4</td>
<td>49.7</td>
<td>50.0</td>
<td>50.1</td>
<td>...</td>
</tr>
<tr>
<td>Average number in consumer unit:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2012–2013</td>
</tr>
<tr>
<td>People</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>...</td>
</tr>
<tr>
<td>Children under 18</td>
<td>.6</td>
<td>.6</td>
<td>.6</td>
<td>.6</td>
<td>...</td>
</tr>
<tr>
<td>Adults 65 and older</td>
<td>.3</td>
<td>.3</td>
<td>.3</td>
<td>.3</td>
<td>...</td>
</tr>
<tr>
<td>Earners</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
<td>...</td>
</tr>
<tr>
<td>Vehicles</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
<td>...</td>
</tr>
<tr>
<td>Percent homeowner</td>
<td>66</td>
<td>65</td>
<td>64</td>
<td>64</td>
<td>...</td>
</tr>
</tbody>
</table>

- Relatively flat income
- Stagnant home ownership

- Rental unit opportunity?
- What’s happening with HH formation?
## The Consumer Expenditure Survey 2010 – 2013 Food

### Average annual expenditures by major category of all consumer units and percent changes, Consumer Expenditure Survey, 2010–2013

<table>
<thead>
<tr>
<th>Item</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>6,129</td>
<td>6,458</td>
<td>6,599</td>
<td>6,602</td>
<td>5.4</td>
</tr>
<tr>
<td>Food at home</td>
<td>3,624</td>
<td>3,838</td>
<td>3,921</td>
<td>3,977</td>
<td>5.9</td>
</tr>
<tr>
<td>Cereals and bakery products</td>
<td>502</td>
<td>531</td>
<td>538</td>
<td>544</td>
<td>5.8</td>
</tr>
<tr>
<td>Meats, poultry, fish, and eggs</td>
<td>784</td>
<td>832</td>
<td>852</td>
<td>856</td>
<td>6.1</td>
</tr>
<tr>
<td>Dairy products</td>
<td>380</td>
<td>407</td>
<td>419</td>
<td>414</td>
<td>7.1</td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td>679</td>
<td>715</td>
<td>731</td>
<td>751</td>
<td>5.3</td>
</tr>
<tr>
<td>Other food at home</td>
<td>1,278</td>
<td>1,353</td>
<td>1,380</td>
<td>1,412</td>
<td>5.9</td>
</tr>
<tr>
<td>Food away from home</td>
<td>2,505</td>
<td>2,620</td>
<td>2,678</td>
<td>2,625</td>
<td>4.6</td>
</tr>
<tr>
<td>Alcoholic beverages</td>
<td>412</td>
<td>456</td>
<td>451</td>
<td>445</td>
<td>10.7</td>
</tr>
</tbody>
</table>

- Decline in Food away from home
- Decline in Diary Products
- Farmer’s market opportunity?
- Shift to preparing meals at home versus going out?
The Consumer Expenditure Survey 2010 – 2013 Housing

<table>
<thead>
<tr>
<th>Item</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>16,557</td>
<td>16,803</td>
<td>16,887</td>
<td>17,148</td>
<td>1.5 .5 1.5</td>
</tr>
<tr>
<td>Shelter</td>
<td>9,812</td>
<td>9,825</td>
<td>9,891</td>
<td>10,080</td>
<td>.1 .7 1.9</td>
</tr>
<tr>
<td>Owned dwellings</td>
<td>6,277</td>
<td>6,148</td>
<td>6,056</td>
<td>6,108</td>
<td>-2.1 -1.5 .9</td>
</tr>
<tr>
<td>Rented dwellings</td>
<td>2,900</td>
<td>3,029</td>
<td>3,186</td>
<td>3,324</td>
<td>4.4 5.2 4.3</td>
</tr>
<tr>
<td>Other lodging</td>
<td>635</td>
<td>648</td>
<td>649</td>
<td>649</td>
<td>2.0 .2 0.0</td>
</tr>
<tr>
<td>Utilities, fuels, and public services</td>
<td>3,660</td>
<td>3,727</td>
<td>3,648</td>
<td>3,737</td>
<td>1.8 -2.1 2.4</td>
</tr>
<tr>
<td>Household operations</td>
<td>1,007</td>
<td>1,122</td>
<td>1,159</td>
<td>1,144</td>
<td>11.4 3.3 -1.3</td>
</tr>
<tr>
<td>Housekeeping supplies</td>
<td>612</td>
<td>615</td>
<td>610</td>
<td>645</td>
<td>.5  .8  5.7</td>
</tr>
<tr>
<td>Household furnishings and equipment</td>
<td>1,467</td>
<td>1,514</td>
<td>1,580</td>
<td>1,542</td>
<td>3.2  4.4 -2.4</td>
</tr>
</tbody>
</table>

- Increase in rentals
- Decline in furnishings

These trends tend to reinforce:
- Rental unit opportunity?
- What’s happening with HH formation?
The Consumer Expenditure Survey 2010 – 2013 Transportation

- Decline in gas and motor oil spending
- Decline in Public transit

- Are lower oil prices driving less use of Public Transit?
Average annual expenditures by major category of all consumer units and percent changes, Consumer Expenditure Survey, 2010–2013

<table>
<thead>
<tr>
<th>Item</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparel and services</td>
<td>1,700</td>
<td>1,740</td>
<td>1,736</td>
<td>1,604</td>
<td>2.4 -0.2 -7.6</td>
</tr>
<tr>
<td>Healthcare</td>
<td>3,157</td>
<td>3,313</td>
<td>3,556</td>
<td>3,631</td>
<td>4.9 7.3 2.1</td>
</tr>
<tr>
<td>Entertainment</td>
<td>2,504</td>
<td>2,572</td>
<td>2,605</td>
<td>2,482</td>
<td>2.7 1.3 -4.7</td>
</tr>
<tr>
<td>Personal care products and services</td>
<td>582</td>
<td>634</td>
<td>628</td>
<td>608</td>
<td>8.9 -0.9 -3.2</td>
</tr>
<tr>
<td>Reading</td>
<td>100</td>
<td>115</td>
<td>109</td>
<td>102</td>
<td>15.0 -5.2 -6.4</td>
</tr>
<tr>
<td>Education</td>
<td>1,074</td>
<td>1,051</td>
<td>1,207</td>
<td>1,138</td>
<td>-2.1 14.8 -5.7</td>
</tr>
<tr>
<td>Tobacco products and smoking supplies</td>
<td>362</td>
<td>351</td>
<td>332</td>
<td>330</td>
<td>-3.0 -5.4 -6</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>849</td>
<td>775</td>
<td>829</td>
<td>645</td>
<td>-8.7 7.0 -22.2</td>
</tr>
<tr>
<td>Cash contributions</td>
<td>1,633</td>
<td>1,721</td>
<td>1,913</td>
<td>1,834</td>
<td>5.4 11.2 -4.1</td>
</tr>
</tbody>
</table>

- Entertainment and Reading down
- Education down

- Is technology impacting the way we play and learn?
Percent change in average annual expenditures by income quintile, Consumer Expenditure Survey, 2011–2013

<table>
<thead>
<tr>
<th>Quintile</th>
<th>2011–2012</th>
<th>2012–2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest quintile</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Second quintile</td>
<td>1.7</td>
<td>-0.2</td>
</tr>
<tr>
<td>Third quintile</td>
<td>1.4</td>
<td>-1.2</td>
</tr>
<tr>
<td>Fourth quintile</td>
<td>4.4</td>
<td>-1.9</td>
</tr>
<tr>
<td>Highest quintile</td>
<td>5.1</td>
<td>-0.1</td>
</tr>
</tbody>
</table>
Spending and price index percent changes on gasoline, Consumer Expenditure Survey (CE), Consumer Price Index (CPI), 2007–2013

### Table 4. Age of reference person: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2013

<table>
<thead>
<tr>
<th>Item</th>
<th>All consumer units</th>
<th>Under 25 years</th>
<th>25-34 years</th>
<th>35-44 years</th>
<th>45-54 years</th>
<th>55-64 years</th>
<th>65 years and older</th>
<th>65-74 years</th>
<th>75 years and older</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of consumer units (in thousands)</td>
<td>125,670</td>
<td>8,275</td>
<td>20,707</td>
<td>21,257</td>
<td>24,501</td>
<td>22,887</td>
<td>28,042</td>
<td>16,024</td>
<td>12,018</td>
</tr>
<tr>
<td>Consumer unit characteristics:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income before taxes</td>
<td>$63,784</td>
<td>$27,914</td>
<td>$59,002</td>
<td>$78,385</td>
<td>$78,879</td>
<td>$74,182</td>
<td>$45,157</td>
<td>$53,451</td>
<td>$34,097</td>
</tr>
<tr>
<td>Healthcare</td>
<td>3,631</td>
<td>943</td>
<td>2,189</td>
<td>3,188</td>
<td>3,801</td>
<td>4,378</td>
<td>5,069</td>
<td>5,188</td>
<td>4,910</td>
</tr>
<tr>
<td>Entertainment</td>
<td>2,482</td>
<td>1,243</td>
<td>2,214</td>
<td>2,958</td>
<td>3,070</td>
<td>2,651</td>
<td>2,027</td>
<td>2,488</td>
<td>1,422</td>
</tr>
<tr>
<td>Personal care products and services</td>
<td>608</td>
<td>342</td>
<td>538</td>
<td>672</td>
<td>723</td>
<td>638</td>
<td>563</td>
<td>619</td>
<td>491</td>
</tr>
<tr>
<td>Reading</td>
<td>102</td>
<td>46</td>
<td>60</td>
<td>105</td>
<td>88</td>
<td>132</td>
<td>138</td>
<td>146</td>
<td>127</td>
</tr>
<tr>
<td>Education</td>
<td>1,138</td>
<td>2,055</td>
<td>1,019</td>
<td>903</td>
<td>1,970</td>
<td>1,241</td>
<td>319</td>
<td>349</td>
<td>280</td>
</tr>
<tr>
<td>Tobacco products and smoking supplies</td>
<td>330</td>
<td>219</td>
<td>309</td>
<td>331</td>
<td>447</td>
<td>438</td>
<td>185</td>
<td>258</td>
<td>89</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>645</td>
<td>207</td>
<td>577</td>
<td>643</td>
<td>686</td>
<td>841</td>
<td>628</td>
<td>672</td>
<td>571</td>
</tr>
<tr>
<td>Cash contributions</td>
<td>1,834</td>
<td>473</td>
<td>970</td>
<td>1,440</td>
<td>2,007</td>
<td>2,382</td>
<td>2,574</td>
<td>2,391</td>
<td>2,817</td>
</tr>
<tr>
<td>Personal insurance and pensions</td>
<td>5,528</td>
<td>2,203</td>
<td>5,304</td>
<td>7,081</td>
<td>7,672</td>
<td>7,033</td>
<td>2,396</td>
<td>3,392</td>
<td>1,068</td>
</tr>
<tr>
<td>Life and other personal insurance</td>
<td>319</td>
<td>50</td>
<td>125</td>
<td>290</td>
<td>367</td>
<td>440</td>
<td>421</td>
<td>559</td>
<td>237</td>
</tr>
<tr>
<td>Pensions and Social Security</td>
<td>5,209</td>
<td>2,153</td>
<td>5,178</td>
<td>6,791</td>
<td>7,305</td>
<td>6,593</td>
<td>1,975</td>
<td>2,833</td>
<td>832</td>
</tr>
</tbody>
</table>
Slide intentionally left blank
Some of the ideas/analysis presented here come from this book

Published: 2014 – Available at UNO Library

Summary: "Bestselling author and financial guru Harry Dent shows why we're facing a decade-long "great deflation“, and what to do about it. Throughout his long career as an economic forecaster, Harry Dent has relied on demographics - the ultimate tool for predicting both big and small trends, decades in advance. Now he explains what's going to happen to our economy with the accelerating retirements of the Baby Boomers. Inflation wanes when large numbers of older people retire, downsize their homes, and cut their spending. The mass retirement of the Boomers won't just hold back inflation, it will actually cause deflation-with a downturn and periodic crises from 2014 until about 2023. His advice will help readers survive and prosper during the challenging years ahead."

HOW TO SURVIVE AND PROSPER DURING THE GREAT DEFLATION OF 2014–2019

Harry S. Dent, Jr.
The Consumer Expenditure Survey tells us how much people spend on certain products—Can be broken down by age, income, education, etc.

- Peak spending (from Dent pages 11-13):
  - Average family borrows the most when parents are age 41 (step-up home purchase)
  - Most spending on potato chips when head of household is age 42
  - Motorcycles at age 47; Recreational vehicles at age 57
  - Spending peaks at age 46 for average family; 53 for more educated/affluent
  - People save the most at age 54 and have highest net worth at age 64

“The Best Leading Indicator – People do predictable things as they age”
~ Demographics drive economic and other trends
Where are we at in the cycle?

There are different ways to define the generations. This uses peaks to troughs in births. Standard babyboom is 1946-1964.

Part of the recent “apartment boom” has been a rising # of millennials hitting that peak age. It may soon fade, but then their increased demand for larger homes will begin!

The key to demographic trends and forecasting is reading the wave—namely, the rising wave of births and growth—and distinguishing the relative size of the acceleration of each generation. The Baby Boom is like a ten-foot-tall wave coming onto the beach, whereas the Echo Boom is a five-foot-tall wave. A surfer can instantly tell you the difference! Although the Echo Boom wave is wider in its scope, the Baby Boom wave is taller and greater in magnitude and peak numbers.
Where are we at in the cycle? (continued)

Were the housing markets in Florida and Arizona destined to comeback after the downturn??

Sure! Demographics foretold that. They have largely recovered and apparently have “more room to run”.

- For years people have been asking about and anticipating the rise in need for nursing homes, assisted living, in home care, etc.
- But those needs weren’t imminent then as we had to move through the “Depression cohort” first (low births in the 1930s).
- It’ll be several years yet before needs for the “oldest old” will really increase.
  - Some boomers will have needs prior to age 84, so there’ll be growth from that.
Peak spending analyses using lagged births has been a pretty good indicator; what does the analysis suggest for Europe’s economic growth?

This simple indicator told me twenty-five years ago that the U.S. economy would expand around 2007 and then slow between 2008 and 2020–23.

Look at the spending peaks and falls ahead among the entire euro zone. The broader picture of Europe is dismal: a plateau from 2010 to 2013 or 2014 will be followed by a very deep cliff and spending declines to follow. Workforce and population will actually shrink for decades in many countries, especially in southern and central Europe.
Example Analysis for Lancaster County: Let the good times roll!
Demographics were flashing a warning sign in 2007

Projection of Number of "Peak Spenders" at Age 46: Lancaster County, NE 2000 to 2040

Sources: 2000 Census, U.S. Census Bureau, CPAR
2009 Projections for Lancaster County, Nebraska

Average 45-47 year olds
Nationally, echo boom/millennial births peaked in 1990. Thus, 22 years later in 2012 you expect a high point in college grads, with softening thereafter. Note: this doesn’t factor in differences in the rate at which high school grads attend college.

“Office buildings are the most sensitive to upward/downward moves in the economy, especially job creation/losses. This sector does not turn upward until around 2023, so I (Dent) would advise generally waiting to build/invest in office buildings. It is better to lease than own for the next decade.” – pg 83
Local example: Lancaster County, influenced by college students, will see workforce growth, but at lower levels of increase, following the U.S. trend.

The Lancaster County workforce will continue to grow year over year, but the level of increase over the next several years will be about half of what it was in 2005, or will be around 2030.
Practical Analysis: What is the potential college student population?

- Let’s say you were interested not in college graduates by rather potential 18-year olds for college enrollment
- Births delayed by 18 years would give you a good proxy for the number of potential students for enrollment
- In this example, let’s evaluate the counties around Kearney for UN-K (I chose these – others could be used)
Draw a Conclusion: Will UN-K have more potential students from their “local area” to draw from in the years ahead?

Potential 18-Year Olds in "Central Nebraska" based on Births from 1977 to 2014

Source: Vital Statistics Reports, Nebraska Department of Health/Human Prepared by: David Drozd, CPAR @ UNO
What about an analysis for elementary or high school? It is clear why school consolidation has occurred.

A small rise in 2019 will break a string of 29 straight years of decreases. Increased births in the baby boom echo caused a slight increase in the late 1980s – the 3rd wave of births stemming from the baby boom should hold enrollments steady in the 2020s (about 30 years separate the birth waves).
Demand for certain products/services will undoubtedly change

- Certain items may not have as much demand as they do now as the generations transition

  • Recall that the baby boom was a sharp increase, and that it’s echo (millennials) is a longer but less intense rise
    - Thus, you can have a falloff in demand, especially age-specific peak demands

  • One example is housing, specifically single family housing
    - As baby boomers downsize and/or pass away, combined with a higher proportion of millennials renting, demand for single family homes may lessen
    - Potential exists for “dyers to exceed buyers”
With deaths set to rise, more homes will come onto the market, which pressures prices.

Japan is further along in their demographic shift than the United States. They are a very “old” country. Note the correlation between home prices and the ages at which home buying and deaths occur.

The correlation has also been seen in the U.S. It’s where the demographics are heading that is a concern.

Note that Japan’s life expectancy at eighty-four is five years longer than life expectancy in the United States. It’s actually the highest of any major country.
Local Example: Homebuying fundamentals softened into 2009, but look good for the next decade before increased boomer deaths make an impact.

Comparison of Peak Real Estate Buying Age versus Dying Age: Lancaster County 2000 to 2040

Sources: 2000 Census, U.S. Census Bureau, CPAR
2009 Projections for Lancaster County, Nebraska

Age 41 to 43 less Age 78 to 80
Can run analyses you think make sense – this shows the trend if 10% of key ages are in the market to buy vs. turnover from projected deaths.

Comparison of Peak Real Estate Buying Age versus Area Deaths: Lancaster County 2000-2040

Sources: 2000 Census, U.S. Census Bureau, CPAR
2009 Projections for Lancaster County, Nebraska

10% of Ages 31 to 33 and 41 to 43 less deaths
• Census Bureau projections for the U.S.:
  – Have summary tables and downloadable files

• CPAR projections for Nebraska
  – By single year of age and gender for 4 racial groups
    • Hispanic, White non-Hispanic, Black non-Hispanic, Other non-Hispanic: sum of these four is the total population
  – [https://goo.gl/plplIKd](https://goo.gl/plplIKd)

• Consumer Expenditure Survey
  – CE Tables section in middle of page perhaps most useful; microdata are available
Business Demographics, Upcoming Trends, and Consumer Expenditure Data

Nebraska State Data Center
26th Annual Data Users Conference
1:00 to 2:00 p.m., August 19, 2015
Part of Conference Webcast

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