Challenges for Hawaii's Post-COVID Workforce

a webinar presentation prepared for the Hawaii Data Exchange Partnership

by Paul H. Brewbaker, Ph.D., CBE
TZ Economics, Kailua, Hawaii
October 27, 2021
Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19
- What employers should expect

*Summary:* we’ll only hit some highlights—based on my familiarity—many dimensions omitted
Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19
- What employers should expect
Sapped by US$ appreciation in 2010s, Hawaii real GDP growth vanished 2018-2019, then pounded by COVID-19; the plan now: less tourism?

Chained 2012 dollars (log scale): trillions (U.S.), billions (Hawaii)

2.2% Aloha Airlines shutdown

Aloha Airlines shutdown

U.S. recessions shaded gray

U.S. recessions shaded gray

Hawaii stagnation

Hawaii stagnation

U.S. (right scale)

Hawaii (left scale)

Note: Aggregate Hawaii GDP data were substantially revised downward on October 1, 2021 (https://www.bea.gov/news/2021/gross-domestic-product-state-2nd-quarter-2021) and are incorporated in this version of this slide (modified from earlier versions as late as September 2021).

Source: U.S. Bureau of Economic Analysis (https://www.bea.gov/data/gdp/gdp-state); regression of natural log of U.S. real GDP 2009Q2-2019Q4 by TZ Economics depicted with 2 standard error bandwidth (99 percent confidence interval), ln(real U.S. GDP) = 1.307074 + 0.005496t where t is a time index in quarters; depicted U.S. time series is real GDP including Hawaii real GDP.
Real Hawaii GDP aligned to end-2019: pandemic changes extreme in travel, tourism, entertainment, and recreation, lagging ag downdraft

Hawaii real GDP by industry indexes (2019Q4 = 100)

Source: BEA, U.S. Department of Commerce (https://www.bea.gov/data/gdp/gdp-state); quarterly real data through 2021Q1 indexed to 2019Q4 = 100.
Hawaii payroll employment dynamics, April-March ending in 2016-2020, and April-June 2021 (2016 = 1.0)

For the record: alternative measures of Hawaii labor underutilization, 4-quarter trailing; U-\(i\), \(i < 3\), \(i > 3\) are uninformative about business cycle.

Alternative definitions of labor underutilization for Hawaii and the U.S.

- U-1, persons unemployed 15 weeks or longer, as a percent of the civilian labor force
- U-2, job losers and persons who completed temporary jobs, as a percent of the civilian labor force
- U-3, total unemployed, as a percent of the civilian labor force (this is the definition used for the headline unemployment rate)
- U-4, total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers
- U-5, total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percent of the civilian labor force plus all marginally attached workers
- U-6, total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers

Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19
- What employers should expect
Notice the container ship traffic jam waiting to enter Honolulu Harbor (yeah, not so much)
Inflation up from binding supply chain constraints 2021Q2-Q3: pandemic disruptions, disarticulated recovery; transitory impulse

Core inflation (less food and energy) has stayed at or below FRB 2% inflation target—goal now: average 2%—why sudden jump 2021Q2?

Percent change, year-over-year

Context for recent increases in delivery times: customary recession decline, rise after Trump, Trade War "suppression," pandemic surge.

Current delivery time diffusion indexes

- Lehman Brothers collapse
- U.S. recessions shaded gray

Supply chain disruptions in semiconductors and motor vehicles partly a result of vulnerabilities from evolution of both industries

- Semiconductor chip industry idiosyncrasies:
  - About one-third of chip manufacturing brands have no in-house fabrication (“Fabless Integrated Circuit” sales), and depend on “Fabs” for their production
  - Foundry market concentration: Taiwan Foundry has over half of global capacity; top 5 companies control ¾ of global capacity—increasing reliance on concentrated Fab market
  - Large share of industry set up for ≥ 16-28 nanometer production; cutting edge is now 5-7 nm
  - Focus on propriety chip design, less on commodity business—lagging autos; “dynamic where there’s been less focus on auto production technologies, more…on cutting edge."
- Trump Trade War legacy, Chinese and EU mercantilism (industrial policy); supply constraints
- Pandemic raised demand for consumer technologies suitable for remote work, learning (laptops), restaurants moving to Cloud, etc., pushing auto sector down the queue at a low point for sales
- Transport costs

Source: Comments of Shawn DuBravac, Ph.D., CFA, Chief Economist, IPC, and President, Avrio Institute, from a panel discussion, Auto Market Update sponsored by the National Association for Business Economics, June 24, 2021 (https://www.youtube.com/watch?v=rlQB2o5GzGg&t=379s).
Both demand and supply factors disrupted auto and light truck sales: deep Covid sales decline, production hiatus, ARPA package boost

Million new units, s.a.a.r. (log scale)

- "Employee Discounts"
- Lehman Brothers
- Cash for Clunkers
- Tohoku seismic event
- U.S. recessions shaded
- COVID-19
- ARPA

Core inflation (%) only excludes food, energy: some of these changes were either out-of-synch or just out of left field in early 2021

Lumber futures contracts prices fell 3/4 over summer as resolution of Covid supply chain disruptions began: *transitory* inflation factors.

---


---

*White House releases a statement that it would impose tariffs on $50 billion of goods from China shortly after announcing the final list of covered imports on June 15, 2018; Peterson Institute for International Economics (https://www.piie.com/blogs/trade-investment-policy-watch/trump-trade-war-china-date-guide).
The Donut Effect? Preference shift across segments? Housing supply chain? Oahu median existing home sales price appreciation

Oahu single-family

Oahu condominium

Thousand dollars, s.a. (log scale)

Dichotomous Oahu home price distribution post-Covid shifts: condominium twisting clockwise, SF twisting counterclockwise

Source: Honolulu Board of Realtors (https://hicentral.com/mpr/mpr-2021-07.php, earlier data), four-quarter data through first quarter of each year, 2019, 2020, 2021, empirical gamma distributions estimated by TZ Economics
Oahu single-family home price appreciation by neighborhood in 2020: post-COVID shift to exurbs and suburbs from Honolulu’s urban core

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Shore</td>
<td></td>
</tr>
<tr>
<td>Hawaii Kai</td>
<td></td>
</tr>
<tr>
<td>Aina Haina-Kuliouou</td>
<td></td>
</tr>
<tr>
<td>Makakilo</td>
<td></td>
</tr>
<tr>
<td>Kailua-Waimanalo</td>
<td></td>
</tr>
<tr>
<td>Mililani</td>
<td></td>
</tr>
<tr>
<td>Moanalua-Salt Lake</td>
<td></td>
</tr>
<tr>
<td>Wahiawa</td>
<td></td>
</tr>
<tr>
<td>Makaha-Nanakuli</td>
<td></td>
</tr>
<tr>
<td>Pearl City-Aiea</td>
<td></td>
</tr>
<tr>
<td>Ewa Plain</td>
<td></td>
</tr>
<tr>
<td>Makiki-Miliili</td>
<td></td>
</tr>
<tr>
<td>Waipahu</td>
<td></td>
</tr>
<tr>
<td>Windward Coast</td>
<td></td>
</tr>
<tr>
<td>Waikiki</td>
<td></td>
</tr>
<tr>
<td>Kalihi-Palama</td>
<td></td>
</tr>
<tr>
<td>Wai'ale-Kahala</td>
<td></td>
</tr>
<tr>
<td>Kaneohe</td>
<td></td>
</tr>
<tr>
<td>Downtown-Nuuanu</td>
<td></td>
</tr>
<tr>
<td>Kapahulu-Diamond Head</td>
<td></td>
</tr>
<tr>
<td>Ala Moana-Kakaako</td>
<td></td>
</tr>
<tr>
<td>Downtown-Makakilo</td>
<td></td>
</tr>
<tr>
<td>Hawaii Kai</td>
<td></td>
</tr>
<tr>
<td>Aina Haina-Kuliouou</td>
<td></td>
</tr>
<tr>
<td>Makakilo</td>
<td></td>
</tr>
<tr>
<td>Kailua-Waimanalo</td>
<td></td>
</tr>
<tr>
<td>Mililani</td>
<td></td>
</tr>
<tr>
<td>Moanalua-Salt Lake</td>
<td></td>
</tr>
<tr>
<td>Wahiawa</td>
<td></td>
</tr>
<tr>
<td>Makaha-Nanakuli</td>
<td></td>
</tr>
<tr>
<td>Pearl City-Aiea</td>
<td></td>
</tr>
<tr>
<td>Ewa Plain</td>
<td></td>
</tr>
<tr>
<td>Makiki-Miliili</td>
<td></td>
</tr>
<tr>
<td>Waipahu</td>
<td></td>
</tr>
<tr>
<td>Windward Coast</td>
<td></td>
</tr>
<tr>
<td>Waikiki</td>
<td></td>
</tr>
<tr>
<td>Kalihi-Palama</td>
<td></td>
</tr>
<tr>
<td>Wai'ale-Kahala</td>
<td></td>
</tr>
<tr>
<td>Kaneohe</td>
<td></td>
</tr>
<tr>
<td>Downtown-Nuuanu</td>
<td></td>
</tr>
<tr>
<td>Kapahulu-Diamond Head</td>
<td></td>
</tr>
<tr>
<td>Ala Moana-Kakaako</td>
<td></td>
</tr>
<tr>
<td>Downtown-Makakilo</td>
<td></td>
</tr>
<tr>
<td>Hawaii Kai</td>
<td></td>
</tr>
<tr>
<td>Aina Haina-Kuliouou</td>
<td></td>
</tr>
<tr>
<td>Makakilo</td>
<td></td>
</tr>
<tr>
<td>Kailua-Waimanalo</td>
<td></td>
</tr>
<tr>
<td>Mililani</td>
<td></td>
</tr>
<tr>
<td>Moanalua-Salt Lake</td>
<td></td>
</tr>
<tr>
<td>Wahiawa</td>
<td></td>
</tr>
<tr>
<td>Makaha-Nanakuli</td>
<td></td>
</tr>
<tr>
<td>Pearl City-Aiea</td>
<td></td>
</tr>
<tr>
<td>Ewa Plain</td>
<td></td>
</tr>
<tr>
<td>Makiki-Miliili</td>
<td></td>
</tr>
<tr>
<td>Waipahu</td>
<td></td>
</tr>
<tr>
<td>Windward Coast</td>
<td></td>
</tr>
<tr>
<td>Waikiki</td>
<td></td>
</tr>
<tr>
<td>Kalihi-Palama</td>
<td></td>
</tr>
<tr>
<td>Wai'ale-Kahala</td>
<td></td>
</tr>
<tr>
<td>Kaneohe</td>
<td></td>
</tr>
</tbody>
</table>

What do valuation dynamics tell us about pre-/post-Covid markets?

- Common characteristics of asset pricing bubbles: (a) detachment from economic fundamentals; (b) information asymmetry; (c) herding; (d) expectations of others' expectations

- Currently, Hawaii housing is not experiencing a meme bubble (GME, AMC, cryptocurrencies)
  1. Fundamentals consistent: low interest rates, economic recovery, strong balance sheets
  2. Biological event: preference shift longer-lived assets, detached dwelling safe havens
  3. Covid impact: housing demand moving to suburbs, exurbs, Zoomtowns (“Donut Effect”)
  4. Inelastic supply / regulatory barriers: fewer listings, building (the verb) constrained

- Hawaii home price bobbliciousness in SF but not condos, on Kauai, Maui, Oahu, possibly Kona

- Novel coronavirus SARS-Cov-2 ⇒ novel factors affecting in housing demand and supply
  1. Tourists absent for 6-12 months—zero vacation rental cash flow (fire sale in condos)
  2. Remote work new source of SF demand on intensive margin (there is no extensive margin)
  3. Demographic change and net out-migration: medium- to longer-term factors (Appendix 2)
NABE® Outlook survey ($n = 47$): expecting real growth to slow after 2021Q3 Delta throttling, transitory inflation with wider risk exposures

Implicit inflation expectations: difference (nominal – real) Treas. yields:
LR inflation expectations $\pi^e \leq 2\%$ leave room for symmetric reflation

*Nominal U.S. Treasury yields minus TIPS yields at same maturities

“Following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time” FRB (August 2020)

“When it gets a little warmer, it miraculously goes away” DJ Trump

Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19
- What employers should expect
### BLS averages for 2017-2018 from American Time Use Survey: small pre-Covid workforce proportions worked from home exclusively

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost never</td>
<td>13.7%</td>
</tr>
<tr>
<td>5 days</td>
<td>3.6%</td>
</tr>
<tr>
<td>1-2 days</td>
<td>3.6%</td>
</tr>
<tr>
<td>3-4 days</td>
<td>3.2%</td>
</tr>
<tr>
<td>Never</td>
<td>75.3%</td>
</tr>
</tbody>
</table>

### FRB Atlanta survey (May 11-22, 2020): “the share of working days spent at home is expected to triple after the COVID-19 crisis ends”

<table>
<thead>
<tr>
<th>Worked from home in 2019?</th>
<th>Will work from home after the pandemic?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rarely or never 90.3%</strong></td>
<td><strong>Rarely or never 73.0%</strong></td>
</tr>
<tr>
<td>5 days</td>
<td>5 days</td>
</tr>
<tr>
<td>3.4</td>
<td>10.3</td>
</tr>
<tr>
<td>2-4 days</td>
<td>2-4 days</td>
</tr>
<tr>
<td>3.4</td>
<td>9.9</td>
</tr>
<tr>
<td>1 day</td>
<td>1 day</td>
</tr>
<tr>
<td>2.9</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Source: David Altig, FRB Atlanta, Jose Maria Barrero, Instituto Tecnológico Autónomo de México Business School, Nick Bloom, Stanford University, Steven J. Davis, Chicago Booth School of Business, Brent Meyer, FRB Atlanta, Emil Mihaylov, FRB Atlanta Fed's Research Department, Nick Parker, FRB Atlanta (May 28, 2020), “Firms Expect Working from Home to Triple,” FRB Atlanta Survey of Business Uncertainty. (https://www.frbatlanta.org/blogs/macroblog/2020/05/28/firms-expect-working-from-home-to-triple)
January 2021 NABE member survey of firms: widespread adoption; “Did your company implement new work from home policies?”

<table>
<thead>
<tr>
<th>Employee Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All employees</td>
<td>35.5%</td>
</tr>
<tr>
<td>Most employees</td>
<td>30.1%</td>
</tr>
<tr>
<td>Some employees</td>
<td>19.4%</td>
</tr>
<tr>
<td>No employees</td>
<td>10.8%</td>
</tr>
<tr>
<td>n.a.</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Source: National Association for Business Economics (https://nabe.com/NABE/Surveys/Business_Conditions_Surveys/January_2021_Business_Conditions_Survey_Summary.aspx); survey question asked of respondents January 4-12, 2021 was, “Did your company implement new work from home policies due to the health crisis?”
U.S. workers who teleworked or worked at home for pay specifically because of COVID-19, excluding those who did pre-pandemic* (BLS)

Percent of workers by educational attainment

*Or those whose telework was unrelated to the pandemic.

U.S. workers who teleworked or worked at home for pay specifically because of COVID-19, excluding those who did pre-pandemic* (BLS)

Percent of workers by gender

- **Women, 25-54 years**
  - 44.9 in 2020.06
  - 37.8 in 2020.08
  - 33.6 in 2020.10
  - 29.7 in 2020.12
- **Women, 25-54 years**
  - 16.9 in 2021.02
  - 14.3 in 2021.04
  - 14.0 in 2021.06
  - 11.1 in 2021.08

- **Men, 25-54**
  - 23.6 in 2020.06
  - 14.5 in 2020.08
  - 11.1 in 2020.10
  - 7.9 in 2020.12
- **Men, 25-54**
  - 4.7 in 2021.02
  - 4.8 in 2021.04
  - 4.5 in 2021.06
  - 4.2 in 2021.08

- **Men, 55+**
  - 29.7 in 2020.06
  - 20.7 in 2020.08
  - 16.0 in 2020.10
  - 12.6 in 2020.12
- **Men, 55+**
  - 16.9 in 2021.02
  - 14.3 in 2021.04
  - 14.0 in 2021.06
  - 11.1 in 2021.08

- **Women, 16-24 years**
  - 23.6 in 2020.06
  - 17.9 in 2020.08
  - 14.5 in 2020.10
  - 11.1 in 2020.12
- **Women, 16-24 years**
  - 16.9 in 2021.02
  - 14.3 in 2021.04
  - 14.0 in 2021.06
  - 11.1 in 2021.08

- **Men, 16-24**
  - 14.5 in 2020.06
  - 11.8 in 2020.08
  - 9.4 in 2020.10
  - 7.0 in 2020.12

*Or those whose telework was unrelated to the pandemic.

U.S. workers who teleworked or worked at home for pay specifically because of COVID-19, excluding those who did pre-pandemic* (BLS)


*Or those whose telework was unrelated to the pandemic.
Survey of firms: “Compared to expectations before Covid (in 2019) how has working from home turned out?” (4 survey waves, 2020)

- Hugely better: 19.0%
- Substantially better: 21.2%
- Better: 20.8%
- About the same: 26.2%
- Worse: 6.9%
- Substantially worse: 3.1%
- Hugely worse: 2.7%

Involuntary mass experimentation, learning-by-doing, re-optimization, investments in equipment and processes, diminished stigma, lingering infection risk, transition from pandemic to endemic coronavirus


n = 2,500 (May, July, September/October 2020), 5,000 (August)
July 2021 NABE Business Conditions survey (of firms): 66% higher sales, 3% lower sales; 53% < 100 employees, 35% > 1,000 employees

Post-Covid Work From Home?
Q. Are work-from-home policies in your company going to remain in place after COVID? If so to what degree?

Worker shortages?
Q. Is your company experiencing shortages of workers? If so, what are the reasons?

Household pulse data* for Hawaii show that ≥ 1/5 of respondents live households in which at least one adult teleworked because of Covid.

*Surveys before April 2021 define “Percentage of adults living in households where at least one adult has substituted some or all of their typical in-person work for telework because of the coronavirus pandemic,” from April-June 2021 “Percentage of adults living in households where at least one adult has teleworked because of the coronavirus pandemic in the last 7 days,” and beginning in July 2021, “Percentage of adults in households where someone worked onsite at a workplace in the last 7 days (i.e. 65.2% between September 1-13, 2021).”

"I'm beginning to think that this pandemic...has accelerated structural change in the economy. ...You can sense it in the distributed platform as a way of working—telework. Automation, global value chains had already...wreaked havoc with the workplace but I think the workplace is changing faster today than at any time since the industrial revolution.

The questions we put out had two sides to them. One side measure the pandemic. ...The other side of that was to take a look at the way that the workplace itself was restructuring. So, we've gone from 36 percent at telework in the payroll employment to about 14 percent and it's leveling off. Well, if it stays at 14 percent that's a very serious, high percentage.

We did surveys on workplace safety, on sick leave, all of that's changing too as the workplace changes. So, I think the research question coming out of this at least for the Labor Department will be to say:
- How has the structure of the workplace changed?
- How has the structure of labor relations changed?

because of the pandemic.

We're not going to go back to normal because the changes already are noticeably permanent in certain areas. That's what our surveys...are beginning to shed light on this, I don't what to call it, maybe it's The New Economy. And on this point 86 percent now of payroll employment is in the services-providing sector...and that really accelerated in the last five years. So, that's another indication that we've got some permanent changes going on."
Pre-pandemic real earnings by educational attainment favored skills-task complementarity despite lower productivity growth after 2005

Pre-pandemic real earnings growth by educational attainment favored women since 70s, enhanced by experience from rising participation.

Mean real earnings at all educational attainment levels higher for men than women, virtually unchanged over decades for less well-educated.

Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19
- What employers should expect
2021Q2 real GDP by state relative to 2019Q4: Hawaii in the deepest hole, most vulnerable; why deliberately shrink its principal export?  

<table>
<thead>
<tr>
<th>Rank</th>
<th>GDP Relative</th>
<th>State</th>
<th>GDP Relative</th>
<th>State</th>
<th>GDP Relative</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.049</td>
<td>Washington</td>
<td>18</td>
<td>1.016</td>
<td>Florida</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>1.047</td>
<td>South Dakota</td>
<td>19</td>
<td>1.016</td>
<td>Oregon</td>
<td>36</td>
</tr>
<tr>
<td>3</td>
<td>1.043</td>
<td>Nebraska</td>
<td>20</td>
<td>1.015</td>
<td>Missouri</td>
<td>37</td>
</tr>
<tr>
<td>4</td>
<td>1.039</td>
<td>Utah</td>
<td>21</td>
<td>1.014</td>
<td>North Dakota</td>
<td>38</td>
</tr>
<tr>
<td>5</td>
<td>1.038</td>
<td>Iowa</td>
<td>22</td>
<td>1.014</td>
<td>New Hampshire</td>
<td>39</td>
</tr>
<tr>
<td>6</td>
<td>1.036</td>
<td>Montana</td>
<td>23</td>
<td>1.012</td>
<td>Colorado</td>
<td>40</td>
</tr>
<tr>
<td>7</td>
<td>1.036</td>
<td>Idaho</td>
<td>24</td>
<td>1.009</td>
<td>Mississippi</td>
<td>41</td>
</tr>
<tr>
<td>8</td>
<td>1.030</td>
<td>Indiana</td>
<td>25</td>
<td>1.007</td>
<td>Texas</td>
<td>42</td>
</tr>
<tr>
<td>9</td>
<td>1.026</td>
<td>Arkansas</td>
<td>26</td>
<td>1.006</td>
<td>Minnesota</td>
<td>43</td>
</tr>
<tr>
<td>10</td>
<td>1.025</td>
<td>North Carolina</td>
<td>27</td>
<td>1.003</td>
<td>Georgia</td>
<td>44</td>
</tr>
<tr>
<td>11</td>
<td>1.025</td>
<td>California</td>
<td>28</td>
<td>1.003</td>
<td>Virginia</td>
<td>45</td>
</tr>
<tr>
<td>12</td>
<td>1.024</td>
<td>Tennessee</td>
<td>29</td>
<td>1.002</td>
<td>Maryland</td>
<td>46</td>
</tr>
<tr>
<td>13</td>
<td>1.024</td>
<td>South Carolina</td>
<td>30</td>
<td>1.001</td>
<td>Massachusetts</td>
<td>47</td>
</tr>
<tr>
<td>14</td>
<td>1.019</td>
<td>Arizona</td>
<td>31</td>
<td>1.000</td>
<td>Ohio</td>
<td>48</td>
</tr>
<tr>
<td>15</td>
<td>1.019</td>
<td>Kansas</td>
<td>32</td>
<td>0.999</td>
<td>Michigan</td>
<td>49</td>
</tr>
<tr>
<td>16</td>
<td>1.017</td>
<td>Maine</td>
<td>33</td>
<td>0.998</td>
<td>New York</td>
<td>50</td>
</tr>
<tr>
<td>17</td>
<td>1.016</td>
<td>Kentucky</td>
<td>34</td>
<td>0.998</td>
<td>Illinois</td>
<td>51</td>
</tr>
</tbody>
</table>

For much of 2020 Hawaii employment lower than in 1990; some now advocate disestablishmentarianism: tourism, TMT, *maize* genomics.

Post-Covid Hawaii participation rates, employment rates, stepped down from pre-Covid benchmarks, diminished by similar factors

Monthly U.S. private non-ag business applications for federal EIN: post-Covid entrepreneurship impulse: “Take this job and shove it”

Thousand monthly new business applications for a federal EIN, s.a. (log scale)

* Applications for an Employer Identification Number (EIN), except for applications for tax liens, estates, trusts, certain financial filings, applications outside of the 50 states and DC or with no state-county geocodes, applications with certain NAICS codes in sector 11 (agriculture, forestry, fishing and hunting) or 92 (public administration) that have low transition rates, and applications in certain industries (e.g. private households, civic and social organizations).

Sources: U.S. Census Bureau, Business Applications: Total for All NAICS in the United States [BABATOTALSAUS], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/BABATOTALSAUS, seasonally-adjusted data through August 2021.
U.S. Beveridge Curve: higher unemployment ⇔ fewer jobs open; post-pandemic ⇒ even more openings for given unemployment


Slide copyright 2021
Younger workers face larger opportunity cost for *not* acquiring higher education than in past; U.S. labor force participation now lower.

Normalized U.S. labor force participation rates by age: large post-Covid rebound in younger cohorts, persistently lower rates in older cohorts.

“Almost all of the decline in the [labor force] participation rate since the onset of the pandemic is due to changes in job-loss and job-finding rates and thus accounted for by the participation cycle. This is not only true in the aggregate, but also for all of the groups we consider [i.e. by sex, age, education, race and ethnicity]. … We show that these similarities in the source of the participation declines across groups is indicative of a broader pattern: The very uneven effect of COVID-19 on different groups in 2020 largely has subsided in 2021.”

“A longer-run historical comparison … reveals that both the unemployment rate and participation cycle in June 2021 are comparable with those in the early fall of 2014. Using the labor market expansion after 2014 as a baseline, we show that the participation cycle is likely to lag the recovery in the unemployment rate in coming years, just like it did in previous recoveries.”

—Hobijn and Şahin (September 2021) “Maximum Employment and the Participation Cycle”

Note: “The measurement of the participation cycle does not require an estimate of the trend participation rate” (Hobijn and Şahin (2021)) so the illustration in the next slide is for heuristic purposes, only (Hawaii data)
Procyclical movement in de-trended Hawaii labor force participation rates (%), zeroed at each unemployment rate trough (vertical lines)

Cumulative changes in de-trended Hawaii labor force participation rates (left scale)


*Christopher Grandy (2002), Hawaii Becalmed: Economic Lessons of the 1990s, University of Hawaii Press

Trend estimate

Vertical lines are cyclical unemployment rate troughs

COVID-19

TBD


*Christopher Grandy (2002), Hawaii Becalmed: Economic Lessons of the 1990s, University of Hawaii Press
Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19
- What employers should expect
Not since 1975 tax cut (after recession already over) has U.S. personal savings rate exceeded 14.7 percent; reminder: SR stimuli are banked

Source: U.S. Bureau of Economic Analysis, Personal Saving Rate [PSAVERT], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PSAVERT, October 6, 2021
U.S. retail and food services sales and e-commerce: post-covid 2010s dining trend return, jump upward in ecommerce-based retail sales

Monthly, billion dollars, s.a. (log scales)

Retail sales excluding food services
(right scale)

Food services
(left scale)

COVID-19

Pre-COVID trends in annualized nominal monthly growth rates:

2015-2019:  ln(retail excl. food serv.) = 5.135180 + 0.002967(t) or 3.6% p.a.
2010-2019:  ln(food services) = 2.615552 + 0.004709(t) or 5.8% p.a.

Source: U.S. Census Bureau, retrieved from FRED, Federal Reserve Bank of St. Louis (https://fred.stlouisfed.org/series/RSXFS, https://fred.stlouisfed.org/series/RSXFS, and calculated difference between the two, monthly through August 2021, and quarterly https://fred.stlouisfed.org/series/ECOMPCTSA) through second quarter 2021, depicted with trend regressions including 99% confidence intervals.
Normalized new daily Covid incidence shows how Deep South states led the Delta wave, which hit Hawaii in July (thanks for going Vegas*)

Daily new COVID-19 cases per million persons (7-day MA)

*Through August 2021, 90.1 percent of Hawaii COVID-19 cases were community-associated, 7.9 percent were resident travel-associated, and 2.0 percent were non-resident travel-associated; in 2019 returning and intended residents comprised 13 percent of passenger arrivals while non-residents comprised 87 percent of arrivals.

Without getting into details: residents didn’t wait for “leaders” to make decisions—Google anonymized Hawaii GPS smartphone mobility data


Hawaii quarantine prior to October 15, 2020 added 15-25 percentage points of decline, but COVID-19 caused low travel, not restrictions.

Weekly passenger counts illustrate the *endogeneity* of travel demand responses to COVID waves, independent of policy interventions.

Most of the Delta passenger decline occurred before the Guv spoke: pandemics depress the economy, public health interventions do not.

Blaming the Guv for people not wanting to travel to catch or spread the Delta variant? Hawaii travel dropped before the Guv’s advisory.

Sources:
Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu

Sergio Correia  
Board of Governors of the Federal Reserve System

Stephan Luck  
Federal Reserve Bank of New York

Emil Verner  
Massachusetts Institute of Technology (MIT) - Sloan School of Management

Date Written: June 5, 2020

Abstract

Do non-pharmaceutical interventions (NPIs) aimed at reducing mortality during a pandemic necessarily have adverse economic effects? We use variation in the timing and intensity of NPIs across U.S. cities during the 1918 Flu Pandemic to examine their economic impact. While the pandemic itself was associated with economic disruptions in the short run, we find these disruptions were similar across cities with strict and lenient NPIs. In the medium run, we find suggestive evidence that, if anything, NPIs are associated with better economic outcomes. Our findings indicate that NPIs can reduce disease transmission without necessarily further depressing economic activity.

Keywords: 1918 Flu Pandemic, non-pharmaceutical interventions (NPI), real economy

JEL Classification: I10, I18, E32, H1
Enumerated topics in the DXP Webinar Series description

- Workforce data by industries
- Supply chain shortages disruptions
- Digital impacts
- Labor force projections
- Long-run impact of COVID-19

- What employers should expect: *to pay more*
▪ It was a pandemic, now it will be endemic

▪ [Thanks, losers (Jacobson v. Massachusetts (1905))]

▪ Normalizing monetary policy, modulated fiscal policy will be headwinds for the worst-performing state economy in America (Hawaii): *Groundhog Day* economic recovery

▪ Structural changes—telework, e-commerce, lagging participation cycle—mixed plate

▪ Nothing about tourism inhibited other export activities pre-Covid, why shrink it now?
Pau