

# California Fiscal Focus

A Monthly Report from State Controller Betty T. Yee

April 2018

## Beyond Taxation: Robotics and Rising Seas

As California's Controller, I pay the bills and account for the state's financial resources, with independent audit authority over government agencies' expenditures of state funds. Further, I have broad policy reach through my work on numerous state boards and commissions in the areas of tax, investment, environmental, housing, health care, and transportation. These responsibilities collectively provide valuable insight into the health of our state and its local and regional economies, as well as the financial health of individual Californians. As the chief financial officer for the world's sixth largest economy, I keep a keen eye towards the performance of California's diverse economic sectors.

Early in my administration, I amplified concerns about how our state's tax structure is outdated, unfair, inefficient, and unreliable. However, my policy work punctuates that, before addressing the limitations of the current tax structure, state leaders must address two urgent global economic disruptors:

- **The changing nature of work** — As employment in California's gig economy grows and as technology, artificial intelligence (AI), and robotics increasingly drive productivity, California must prepare for the resulting gaps in work, wealth, and influence. We do not have to fear a robot Armageddon. Instead, we can embrace the advantages of change while thoughtfully preparing for innovations that will displace some jobs. California leaders can incorporate public policies that direct innovation towards opportunities for enhancing the quality of goods produced, quality of services delivered, and quality of life.
- **Climate change** — The increased frequency of natural disasters poses major business risks, challenges our ability to innovate, and necessitates sustainability initiatives. As state leaders, we can support green building, ensure the safety and vitality of ports for commerce, pursue sustainable investments with high rates of return, and transition from a fossil-fuel economy to a clean-renewables economy. However, we will be challenged by the complex impacts of climate change and how and when



[Click here](#) and sign up to have **Controller Yee's monthly newsletter** delivered to your inbox.



(See CHANGE, page 2)

**(CHANGE, continued from page 1)**

to address them — from the large-scale infrastructure improvements to the consumer-level concerns of food and water security.

The changing nature of work and climate change bring sharp focus to the reality that we are living in an era of finite resources. Physical and natural resources are experiencing accelerated depletion every year. Fiscal resources will be further constrained from economic shifts with potential to reduce earnings and decrease consumption. Meanwhile, human resources are abundant and their potential infinite in addressing these impending disruptions. The marriage of these two economic disruptors presents a unique opportunity for California leaders to chart the state's economic transformation, buoyed by the availability of human talent.

**Strengths and Challenges in Diverse Regions**

After publishing a framework in 2016 to guide comprehensive tax reform in California, I reached out to business leaders in the state's distinct geographic regions. They agreed a "one size fits all" tax strategy does not do justice to California's dynamic and diverse economy. Clearly, an overhaul of the tax structure requires consideration of the entire evolving economy and geographic variations of its effects.

While regional strategies differ, business leaders throughout the state expressed similar optimism about their local economic conditions and shared common concerns about the obstacles to sustained economic growth. These concerns include:

- **Workforce development** — Many K-12 and higher education institutions are not preparing the future workforce with the skills necessary to participate in the modern economy. Proficiency in technology is demanded in all fields.



- **High housing costs** — Mortgage and rental costs are creating barriers for workers to accept jobs in high-cost areas. Local governments are challenged to secure enough employees for essential services including teaching, firefighting, and law enforcement.
- **Business tax inequity** — Tax provisions favor large corporations even though small businesses often are the suppliers of goods and services to larger companies. Small businesses create jobs and stabilize communities.
- **Income disparity** — The social and economic impacts of increasingly stratified wages include homelessness, public health risks, public safety threats, social isolation, and a generational cycle of poverty.
- **Working with government** — The volume and layers of rules and regulations are burdensome barriers to business growth. Inconsistent application of employment and environmental protection laws has unintended consequences that add to the cost of doing business.

**(See CHANGE, page 3)**

**(CHANGE, continued from page 2)**

To varying degrees, regional economies are experiencing growth based on their unique resources, strengths, and attributes. Some regions feature world-class destinations for tourism and entertainment, while others lead in manufacturing or international trade. Around coasts and ports, the blue economy is burgeoning through maritime-related companies focused on ocean sciences, aquaculture, and more. Solar, wind, and water power innovations are growing the green economy. The agriculture sector thrives in many zip codes as California supplies much of the nation's fruits, fish, nuts, vegetables, flowers, and timber. The logistics industry for the movement of goods and cargo has thrived in regions that still offer affordable warehouse space and lower labor costs. Outstanding higher education institutions are concentrated in multiple areas, driving the medical and biotechnology sectors. Aerospace and engineering are major assets in some counties, while high-tech development flourishes in others.

Every region has a competitive advantage within an industry. Government leaders can look for ways to bolster these advantages and encourage cooperation through public, private, and academic partnerships.



Although workforce concerns loom large for employers, human capital is still valued as a significant factor for economic growth.

**Technology as Partner, Not Poison**

As technological advances such as AI, robotics, and big data increasingly drive productivity, discussions have turned to what jobs will be displaced and replaced, whether robots will be subject to taxation to offset lost tax revenue, and whether a universal basic income should be paid at subsistence levels to everyone regardless of work status.

Yet very little discussion has occurred about how to reimagine the work we know today so technological advances may lead to new opportunities. Imagine:

- A farmworker equipped with the technology to serve as the first line of defense in detecting food-borne illnesses
- An in-home caregiver armed with the technology to warn of a patient's potential to fall
- A civil engineer using AI to survey and test infrastructure sites and reduce the time for projects to break ground
- A hospital technician using technology that allows a concussion to be detected in a person without radiation or hospitalization
- An emergency alert operator who combines science and the human touch to send evacuation orders during a natural disaster more efficiently

In each of these examples, no job is displaced or replaced, but the value and productivity of humans is enhanced. Moreover, if California is able to

**(See CHANGE, page 4)**

**(CHANGE, continued from page 3)**

reimagine work — including new career pathways, midcareer options, and critical thinking skills development in our youngest students — economic disruptions will present opportunities for new growth instead of challenges from attempts to maintain the status quo.

As we reimagine work, we look to those job sectors that will remain prominent. Work that requires human compassion cannot be easily substituted with technology. Consequently, professions in childcare, home health care, and teaching will continue to be in high demand. Coupled with technological innovations, employment in these fields will not only flourish, it will result in significantly positive societal outcomes.

From the harsh effects of climate change, the human and economic tolls of natural disasters demand that our basic infrastructure — roads, bridges, dams, seawalls, rail lines, and electrical grids — be significantly reinforced. As the oceans continue to rise, California's coastline communities, along with their businesses and local economies, are at peril. Scientists, environmentalists, and thought leaders focused on climate change impacts are urgently developing innovative solutions and creating new workforce opportunities.

**What Can Government Do?**

Why should government pay attention to the changing nature of work and climate change? Inevitably, spending and consumption will change with substantial impacts on state and local tax revenues, and effects from the gig economy will ripple into other sectors. Moreover, leaving the impacts of climate change to be addressed later will be costly and potentially crowd out fiscal resources for critical public services.



Given the limitations of the state's fiscal resources, the private and public sectors must work together to help transform our workforce by addressing issues of equity and job creation. The private sector can help inform the public education system of the skills necessary for work in the modern economy. California's education system should be flexible enough to offer pathways for training and retraining throughout a person's lifetime — from early childhood to elder years. A basic level of technological proficiency is an essential element of core academic curriculum, as are skills that enhance critical thinking.

Every Californian needs the internet to connect to the rest of the world whether it is to find a job, create a business, access helpful technologies, or obtain medical attention. As we reimagine work, universal and complete access to high-speed internet must be a reality for all to pursue opportunities nearby and afar.

California's current tax system encourages innovation and productivity while failing to incentivize human capital. For example, when a person is replaced by a

**(See CHANGE, page 5)**

**(CHANGE, continued from page 4)**

machine, what happens to revenue generated from payroll taxes and income taxes as machines and software pay nothing? There are plenty of tax provisions, especially for depreciation, that tilt the playing field to automation. Perhaps these could be updated with those that encourage work training and prefer human capital. State leaders also might find ways to offer skill-based completion incentives or midcareer training tax credits designed to help workers acquire or maintain an employable set of skills.

Tax policy is one tool among many to address areas in economic distress, and it can be flexible enough to support California's regional strengths and challenges. Portions of the state are home to some of the nation's deepest levels of poverty and economic inequality; yet these areas promise some of California's greatest pools of untapped economic opportunity.

Government may start now to address the changing nature of work and climate change in a more ambitious and dynamic manner. Are current budget decisions laying the foundation for how to confront the potentially adverse effects? Do they support further development and strengthening of our human and physical infrastructure? Or do they exacerbate existing inequities that could leave underserved and underresourced communities further behind?

The bottom line: Government has to disrupt and be more nimble too as our economy disrupts. For far too long, the state budget has been an act of short-sighted political gains rather than a long-term statement of societal values that embraces human capital as our strongest asset.

**Let's Get to Work**

As concerns heighten over growing income inequality and the lack of economic mobility, California leaders have a tremendous opportunity to tackle the potential harm that technological advances and the changing nature of work will have on workers. We draw lessons from past economic displacements around the country, such as the loss of retail and manufacturing jobs or the shuttering of coal-mining operations. California's diversity of people, thought, regions, economic sectors, and technology uniquely positions its leaders to chart the path for a just transition for its precious human capital.

New economic sectors will emerge to provide opportunities for workers, such as the essential green and blue sectors to address the effects of climate change. The shift away from the traditional employer-employee relationship calls for considering how health care, retirement, and other benefits will be provided and how to ensure inequities are not exacerbated. All eyes around the world look to California as the leader of technological innovation. Let us now work together to establish the Golden State as the global leader in human innovation.

## California Fiscal Focus

A Monthly Report from  
State Controller Betty T. Yee

[www.sco.ca.gov](http://www.sco.ca.gov)

[EOinquiry@sco.ca.gov](mailto:EOinquiry@sco.ca.gov)

(916) 445-2636

P.O. Box 942850  
Sacramento, California  
94250-5872