



INDUSTRY INSIDER TECHNOLOGY, MANUFACTURING & LIFESTYLE PRODUCTS

INDUSTRY REPORT

2017



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EXECUTIVE SUMMARY

January 2017

The Sonoma County Economic Development Board (EDB), in partnership with the Sonoma County Workforce Investment Board (WIB), is pleased to present the Technology, Manufacturing, and Lifestyle Products Industry Insiders report. Our research partner, Moody's Analytics, provided the research for this report.

HIGHLIGHTS



The specialty food and beverage manufacturing sector continues to grow at a rapid clip, in terms of both profits and employment. This growth occurs as more consumers embrace organic and artisanal food products locally and across the nation. For example, sales of organic food and nonfood products have grown nearly three times as fast as conventional offerings in the last decade. **Robust growth in food and beverage manufacturing lifted overall factory payrolls to the highest level since 2006.**



Technology firms in the county are thriving financially; however, this has not translated into a noticeable increase in manufacturing jobs within the county. Many locally based firms are adding research and development staff in the county, but manufacturing positions are going to lower-cost centers in the U.S. and overseas. While technology firms' profits will benefit from increased demand for faster internet and wireless connection additional growth in high-tech manufacturing in the county will be negligible



Labor costs make up the largest share of operating expenses for tech producers and specialty food manufacturers alike, and the tightening labor market foreshadows further increases in operating costs. This will compress profit margins, which will encourage firms to look to lower-cost areas or increase investment in automation. While automation will reduce the need for new workers, the robust startup culture and increased access to Bay Area venture capital will propel growth.

Thank you for your interest in the Economic Development Board's research. For additional information, questions, comments, or suggestions please contact us at (707) 565-7170 or visit www.sonomaedb.org.



Recent Performance. Sonoma County's high-tech and specialty manufacturing industries have reached a fork in the road. While specialty food, beverage and lifestyle products manufacturers are expanding swiftly, high-tech manufacturing and tech-related professional services are flagging. Total manufacturing employment and output have staged a modest comeback as artisanal food and beverage makers grow their footprint both locally and nationally, but employment in high-tech industries has not appreciably grown over the past six years. Large medical device, electronics and broadband equipment makers retain a sizable presence in the county, but their share of total job and output growth has diminished.

Consumers are embracing organic and artisanal food products with growing enthusiasm, helping to drive expansion at county food and beverage producers. According to the Organic Trade Association, U.S. sales of organic foods surged 11% in 2015 to \$40 billion, or nearly 5% of total domestic food and beverage sales. Sonoma County farms, dairies, organic meats and food processors have been quick to seize on this trend and are grabbing shelf space at both local and national supermarkets. Industry expansion has spurred additional hiring: Employment in food and beverage manufacturing has increased by a third over the past four years.

Greater spending on outdoor recreation is lifting sales of outdoor sports equipment and accessories designed in Sonoma County. Meanwhile, increased awareness of ethically sourced and fair trade practices has bolstered local cosmetics and apparel producers. Though a small share of total employment, apparel manufacturers are expanding quickly, lifting apparel manufacturing payrolls to their highest point in three decades.

County technology firms are thriving financially, but rising domestic and international sales have translated into few new manufacturing jobs in the county itself. And though locally based firms are adding research and development staff, most new positions will be located in lower-cost centers in the U.S. and overseas. For example, Keysight Technologies will create several hundred high-paying software development jobs in Atlanta, where it will benefit from synergies with the University of Georgia and lower-cost laboratory and office space. Similarly, Medtronic will add research staff in Europe and Latin America, but few new jobs

will be created at its regional headquarters in Santa Rosa.

Sonoma County's telecommunications and biotech companies are faring well, but recent expansion has done little to lift overall tech payrolls. Broadband equipment maker Calix has introduced a flurry of new products over the past year, cementing its status as a preeminent provider of copper and fiber-optic network solutions. Meanwhile, rising sales of Sonoma Pharmaceutical's proprietary wound treatment products have propelled four successive quarters of revenue growth. However, these industries employ fewer workers than local electronics and medical device firms, and they have given rise to few net new establishments in the past three years.

Macro drivers. The U.S. economy is advancing steadfastly in the face of global headwinds and greater policy uncertainty in the aftermath of the U.S. presidential election. The incoming administration's protectionist stance and pledge to take a hard line on immigration will curtail the economy's long-run growth potential, but the extent of the blow will rest on how forcefully these policies are implemented. Despite these constraints, the economy's fundamentals remain strong, and Moody's Analytics expects the economy to strengthen in 2017 as the drag from low energy prices fades and business equipment spending rebounds.

The labor market is marching toward full employment and is adding jobs at nearly twice the rate necessary to absorb the increase in the working population. Though the pace of job additions will begin to cool next year as the pool of idle workers thins, robust job and wage gains will clear the path for the Federal Reserve to resume its tightening of monetary policy. Sturdy household balance sheets will ease the transition to higher interest rates. Household debt burdens are at their lowest in nearly three decades, and faster wage growth will clear space in consumers' budgets for discretionary purchases, including food and beverages as well as outdoor sporting goods and apparel.

Business spending on capital equipment and intellectual property will end its prolonged lull as stronger wage gains prompt firms to invest in labor-saving technologies. Though investment in software and IT equipment has faltered over the course of the current business cycle, this will change as the labor market tightens. Increased outlays for software, IT and networking equipment will

deliver a much-needed boost to county electronics and broadband equipment makers.

Venture capital flows to Sonoma County have slowed over the past year, mirroring the national trend. However, demand for seed funding will pick up as more organic and artisanal foods producers seek to expand nationally. Though IT and medical device firms have traditionally attracted the highest share of venture funds, more county food producers are seeking startup financing. Access to plentiful startup financing in the Bay Area and in the county itself will enable local producers to better compete on the national stage.

Industry drivers. Consumers are growing increasingly health-conscious, and demand for organic and artisanal goods will strengthen further in coming years, to the benefit of Sonoma's producers. Though organic produce, dairy, meat and snack foods tend to be more expensive than conventional offerings, organic purchases are on the rise across income levels. According to the Organic Trade Association, eight in 10 shoppers purchased organic food products at least once in the past year, a marked increase from the start of the decade. Sonoma County's large constellation of food and beverage makers will benefit from a broader consumer base as more supermarkets stock their shelves with organic and artisanal goods.

Increased leisure spending and greater consumer concern for fair trade practices will play into the hands of the county's outdoor equipment and apparel makers. Though outdoor equipment giant CamelBak carries out most of its production overseas, greater spending on outdoor recreation and equipment will support design and product development teams within the county. Meanwhile, rising demand for ethically sourced clothing will bolster organic apparel producers such as Indigenous and Farm Fresh Clothing.

Sonoma County's technology firms will benefit from increased demand for faster internet and wireless connection speeds, which will drive revenue growth at electronic testing and broadband equipment makers. With the race to develop 5G connection speeds already under way, sales of Keysight Technologies' market-leading signal analyzers and oscilloscopes will accelerate. As smart devices such as watches, intelligent home appliances, and self-driving automobiles become available to mainstream consumers, demand for broadband and electronic testing equipment will strengthen further.

The outlook for the Affordable Care Act is increasingly uncertain, but an aging population will sustain demand for advanced medical procedures and new medical equipment. For example, early diagnoses of arterial disease will lift sales of coronary stents produced locally by Medtronic. Advances in vascular disease treatment will bolster sales of abdominal catheters produced by Endologix at its Santa Rosa plant. Meanwhile, the advent of gene-based and other personalized treatments will create opportunities for the county's smaller medical device and biotech firms to flourish.

Pricing. Robust consumer demand for artisanal and organic food products will make for a favorable pricing environment for county producers, although increased competition within the organic foods segment will apply restraint. Though national apparel makers remain locked in a pricing war, consumers' willingness to pay more for ethically sourced materials will enable county apparel makers to avoid discounting. In contrast, outdoor equipment makers will be hard-pressed to pass along price increases since most local firms rely on foreign production; a strong dollar and fierce competition among sporting goods retailers will further turn up the heat.

Tech firms' pricing power will be mixed as the downward trend in semiconductor prices continues. Though Keysight Technologies holds a dominant position in the market for electronic testing equipment, the strong dollar will give European and Asian competitors more leeway to offer lower prices. On the other hand, pricing power for medical device makers will hold as hospitals upgrade equipment and increased consumption of health services by an aging population sustains demand for new medical devices.

Operating expenses. Labor costs make up the largest share of operating expenses for tech producers and specialty food manufacturers alike, and the tightening labor market heralds further increases in operating costs. Though the 2001 tech bust swept away much of the county's high-tech manufacturing base, surviving plants are highly automated and specialize in high-value production. This will shift the focus of cost-containment efforts to R&D, where worker compensation is significantly higher than in emerging tech hubs such as San Diego, Atlanta and Provo UT. Advances in emerging markets have increased the feasibility of conducting R&D overseas. The county's food and beverage makers will also face higher labor costs, but

lower prices for livestock feed and agricultural commodities will provide relief.

Profitability. Rising labor costs will compress margins, though profits for food, beverage and lifestyle products makers will hold firm. Though competition in the organic foods segment is heating up, robust demand will drive revenue growth and preserve county firms' pricing power. According to the U.S. Department of Agriculture, sales of organic produce, dairy and meat will increase at a double-digit pace over the next two years, and consumers' willingness to pay a premium for organic and artisanal products will safeguard profits despite the county's high business and labor costs. County tech producers will also benefit from robust demand for innovations, but high labor costs will pose an obstacle to the efficient expansion of R&D. As the labor market tightens locally and nationwide, county tech firms will set their sights on lower-cost locales to preserve bottom-line growth.

Long-term outlook. Consumers across the income spectrum are exhibiting a growing awareness of the environmental and ethical practices of the food, beverage and lifestyle products they purchase, all of which confers a positive outlook for county producers. Sonoma County's renowned quality of life and reputation as a haven for organic and artisanal foods will help local food and beverage producers grab shelf space at supermarkets nationwide. Conventional supermarkets, big-box stores and buyers' clubs now account for a greater share of organic food sales than do natural food stores. While such a distribution channel will bring greater competition from mass-market offerings and store brands, it also presents an opportunity for county producers to capitalize on a growing consumer base.

Ready access to venture capital in the Bay Area and in the county itself will be a comparative advantage and will help smaller firms and startups to expand more quickly. However, increased automation will limit the need for new workers. While each new firm will create fewer manufacturing jobs, a robust startup culture will propel growth in new establishments.

Balancing the needs of growing food, beverage and lifestyle products industries will prove increasingly critical as smaller and midsize firms expand domestically and internationally. While the industrial vacancy rate remains elevated, larger manufacturing facilities are in short supply. County stakeholders will need to work closely with local busi-

nesses to balance demands for new industrial space with sustainable practices that preserve the county's natural bounty.

Sonoma County's tech producers have benefited less from the broader Bay Area tech boom than in neighboring Oakland and Marin counties, and additional growth in high-tech manufacturing and services will be negligible. An aging population globally and the increasing affordability of smart technologies will sustain existing firms, but high business costs and a shortage of new engineering graduates will curtail growth in high-tech manufacturing and R&D.

Upside risks. Rising tourist visits will create upside risk for the county's food, beverage and lifestyle products producers. As better wage gains enable visitors to Sonoma's wine country to extend their stays, partnerships with local restaurants and tour operators could cultivate new customers while increasing brand recognition and goodwill. The county's recent vote to join the nation's largest GMO-free agricultural zone could drive additional sales of local food and beverage products should consumers embrace GMO-free products with the same fervor they have organic and artisanal foods.

A faster than expected transition to cloud-based business solutions would bolster sales of county broadband and electronic testing equipment. Meanwhile, a larger embrace of smart technologies in the U.S. and globally will increase demand for electronic testing equipment. Finally, as rents in neighboring Marin County rise, spillover from the booming biotech industry could drive growth in high-paying life-sciences research jobs.

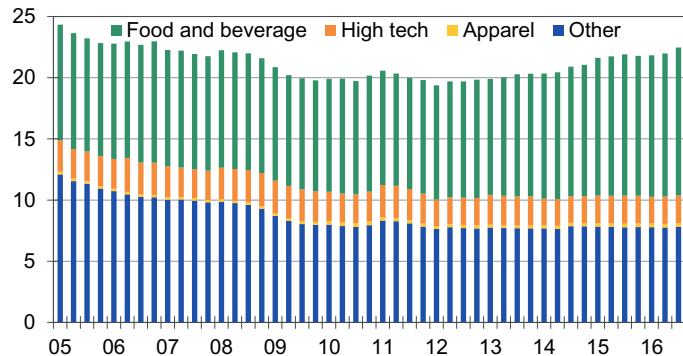
Downside risks. Failure to secure adequate industrial space could cause smaller and midsize firms to expand elsewhere, sapping manufacturing jobs and growth in new establishments. Higher U.S. interest rates will increase the return on safe-haven investments, potentially thinning the pool of venture capital funds for consumer products.

The return of the ACA's medical device tax could hurt the profitability of county producers. The suspension of the ACA's medical device tax has been a boon for local equipment makers, but is set to expire at the end of 2017. Given intense focus on cutting costs, the return of the tax could mean the loss of additional high-tech manufacturing jobs.

*Jesse Rogers
December 2016*

Food, Beverage Makers Lift Factory Payrolls

Manufacturing employment, ths

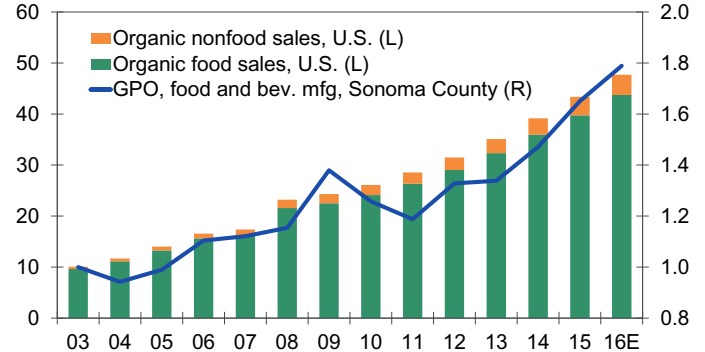


Sources: BLS, Moody's Analytics

The performance of Sonoma County's high-tech and specialty manufacturing industries has bifurcated in recent years, with local tech producers benefiting little from the broader Bay Area tech boom. Robust growth in food and beverage manufacturing has hoisted overall factory payrolls, which stand at their highest level since 2006. However, workers in food manufacturing earn less, on average, than their counterparts in the local medical device and electronics industries. As a result, each additional manufacturing job will contribute less to wage and personal income growth.

Organic Sales Bolster County Producers

\$ bil

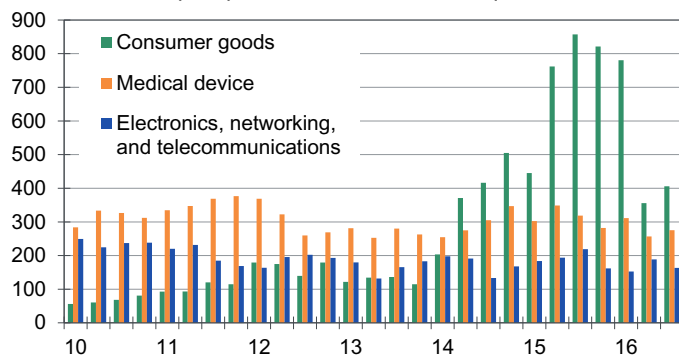


Sources: Organic Trade Association, BEA, Moody's Analytics

Consumers' growing concern for the origin and ethical practices of the food, beverage and apparel products they purchase has been a boon for organic goods producers in Sonoma County. Sales of organic food and nonfood products have grown nearly three times as fast as conventional offerings over the past decade. Robust demand for organic and ethically sourced goods has helped local producers expand to U.S. and international markets. More county producers are scaling up locally, creating positive externalities for the local real estate, transportation and distribution industries.

Seed Funding Rediscovered the Consumer...

\$ mil, venture capital placements, California, 4-qtr MA

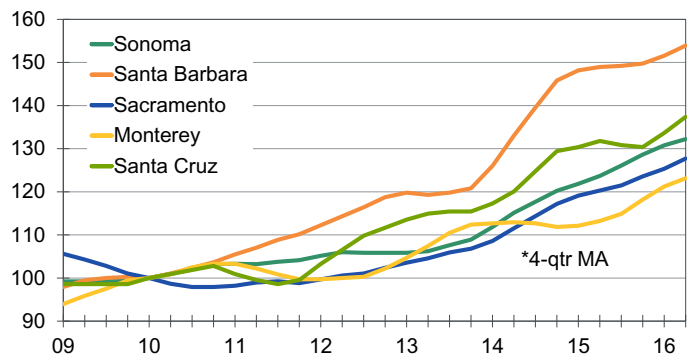


Sources: PwC, Moody's Analytics

After chasing firms in the software, medical device and networking and electronics industries, venture capital has embraced innovators in the consumer goods segment. Venture capital outlays to consumer goods startups, including food and beverage makers, have tripled in recent years and surpass all categories save software. This has created opportunities for local food producers to expand. For example, Healdsburg-based New Barn, a producer of organic nondairy milks and creams, will utilize new seed funding to supply alternative dairy products to Whole Foods cafés.

...Giving Food and Lifestyle Startups a Lift

Establishments, #, food, beverage, apparel mfg*, 2010Q1=100



Sources: BLS, Moody's Analytics

Breakneck sales of organic and ethically sourced food, beverage and apparel have spurred a surge in new-business formations across the state. New-business formations in Sonoma County have kept pace with those in other California counties known for organic farming practices and quality of life. In the long run, balancing food, beverage and apparel producers' need for adequate industrial space with efforts to preserve the county's natural beauty will prove critical, especially as firms expand to meet demand from markets across the U.S. and overseas.



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