

To: Sonoma County Board of Supervisors, County Administrator Veronica Ferguson,  
and County Staff  
From: Dr. Jeannette Wicks-Lim, Political Economy Research Institute, University of  
Massachusetts-Amherst  
Date: Nov. 23, 2015  
Re: Impact of \$15 Living Wage for Temporary County Fair Workers

### SUMMARY OF FINDINGS

- **Mandated cost increases will be in the range of \$450,000.** I agree with General Services Director Ms. Tesconi's estimates that mandated raises for the Sonoma County Fair will be in the range of \$450,000. This figure is also consistent with my own cost estimate, as reported in my 2014 study, "[An Assessment of the Fiscal Impact of the Proposed Sonoma County Living Wage Ordinance.](#)"
- **Ripple effect cost increases can be expected to add another \$25,000.** Employers may choose to give raises to workers earning more than the minimum wage after a minimum wage hike in order to preserve the wage hierarchy, or wage scale, in their firm. These types of raises are referred to as "ripple effect" or "spillover" raises. My extensive research on the ripple effect of past minimum wage and living wage measures has found that employers typically maintain a similar but different wage hierarchy before and after a change in their wage floor. In particular, employers tend to implement raises that compress the wage scale, giving the lowest paid workers the largest raises, and only some workers above the wage floor smaller, ripple effect raises. Based on this evidence, I estimate that the cost of ripple effect raises will be about \$25,000. This figure diverges sharply from Ms. Tesconi's ripple effect cost figure of roughly \$250,000, which assumes that the Fair will maintain the same wage hierarchy before and after implementation of a \$15 minimum wage.
- **The impact of a \$15 living wage on admission prices depends on which revenue sources the Fairgrounds uses to fund the raises.** Ms. Tesconi's figures regarding potential admission price increases of more than \$3.00 assume that only paid admissions revenue will be used to cover the living wage raises. However, the Fairgrounds have multiple revenue sources. If all revenue-generating activities by the Fairgrounds help fund living wage raises, the cost increase for admission prices can be expected to be in the range of 5%. This is equal to a ticket price increase from \$11 to \$11.60 for adults and \$5 to \$5.25 for children. If the Fairgrounds only uses County Fair proceeds to cover the living wage raises, then admission prices can be expected to rise 10%, increasing ticket prices from \$11 to \$12.10 and \$5.00 to \$5.50.

## I. Assessment of County's Cost Increase Estimate for the Sonoma County Fair

I've reviewed the estimates of the potential cost increase by Ms. Tesconi and her staff provided in a memo forwarded to me on October 28, 2015 from Marty Bennett, Co-Chair of the North Bay Jobs with Justice. In that memo, she provides two sets of cost estimates. The first assumes that any covered workers would receive only mandated raises (i.e., raises sufficient to achieve \$15.00 per hour). The second assumes that covered workers would additionally receive sufficient raises to preserve the same wage scale that currently exists. Economists frequently refer to these additional raises as "ripple effect" or "spillover" raises. Below I discuss each separately.

**Mandated Raises.** Ms. Tesconi's estimates, based directly from the Fairground's workforce records, indicate that mandated raises would sum to \$406,213 (including both wage increases and increased employer payroll costs) for 527 temporary workers and \$45,034 for 9 seasonal workers. In total, mandated raises would equal approximately \$450,000.

The County's figure is less than, but similar to, my approximation of \$500,000 for these costs. I reported this figure in my 2014 fiscal impact analysis (see p. 12 of "[An Assessment of the Fiscal Impact of the Proposed Sonoma County Living Wage Ordinance](#)"). I generated my estimates based on approximate figures provided in a "[County of Sonoma Agenda Item Summary Report](#)" titled, "Sonoma County Fair and Temporary Employees," from October 8, 2013, using a somewhat conservative assumption that all temporary workers earned California's \$9.00 minimum wage. I also assumed an approximate workforce size of 600—a bit larger than the actual workforce. These two factors help explain why my figure is somewhat larger than Ms. Tesconi's.

*In sum, the estimated cost of mandated raises seem clearly identified as in the range of \$450,000.*

**Ripple effect raises.** A key feature of ripple effect or spillover raises is that they are hard to project precisely because they are not mandated. Employers, such as the Fairgrounds, have some discretion over the extent and size of ripple effect raises, balancing what is financially desirable with what pay incentives need to be preserved for more experienced workers or more challenging jobs. This is indicated by Ms. Tesconi's memo which notes that her estimates assume that the "...existing wage scale [will] be maintained, however, the cost to do so may prove to be too much of a financial burden to pass on to customers. A new rate structure for seasonal employees may need to be developed."

I have extensively studied ripple effect raises in my own research, including for my doctoral dissertation and in published work such as my co-authored book, *A Measure of Fairness: The Economics of Living Wages and Minimum Wages in the United States* (published by Cornell University Press, 2008). For typical minimum wage hikes, ripple effect raises tend to be limited to workers very close to the new mandated wage floor and the size of the raises are smaller for workers further up the wage distribution. This has the effect of compressing a firm's wage scale: the lowest paid workers get the largest raises, and workers above the wage floor get smaller ripple effect raises. These raises tend to be sufficient to preserve their

position above the wage floor but not their distance from it. In other words, employers typically maintain a similar but different wage hierarchy before and after a change in their wage floor. Based on these observations, I would not expect the Fairgrounds to maintain the same wage scale after the passage of a \$15 minimum. In my view, Ms. Tesconi’s upper-end cost estimates are too high because they include ripple effect raises that preserve the same wage scale before and after the passage of a \$15 minimum wage. Her upper-end estimates suggest that ripple effect raises would add about \$245,000 in raises.

I approximate what type of ripple effect raises the Fairgrounds may adopt using a method I have developed to estimate ripple effects raises from other large minimum wage hikes. This method is described in detail in my recent 2015 co-authored report, “[A \\$15 U.S. minimum wage: How the fast food industry could adjust without shedding jobs.](#)” This method combines empirical observations on ripple effect raises from minimum wage laws, as well as, living wage ordinances that impose a wage floor hike similar in size to the Sonoma County proposal.

The first step in this exercise is to draw a more detailed picture of the wage distribution than what is provided in Ms. Tesconi’s October 28, 2015 memo. To do this, I requested and received more detailed information about the wage schedule of the 527 workers from Deputy County Administrator Rebecca Wachsberg. This information includes the number of workers that fall within each wage category shown in Table 1 below and their total hours worked. Working with these figures, combined with the mandated wage costs that Ms. Tesconi provided in her memo, I can approximate average wages for each group. As you can see in the bottom row of Table 1, my approximation of the costs of the mandated raises for these 527 workers closely matches the figure from Ms. Tesconi’s memo—falling within a couple thousand dollars.

**Table 1: Cost of Mandated Raises from \$15 Living Wage for 527 Temporary Workers**

<b>Wage range:</b>	<b>\$9.00-\$11.01</b>	<b>\$11.01-\$13.01</b>	<b>\$13.01-\$16.00</b>
1. # Workers	447	54	26
2. Total Hours worked	58,842	14,600	5,694
3. Avg. Hourly Wage*	\$9.60	\$12.00	\$14.50
4. Mandated Raise (\$15.00 – row 3)	\$5.40	\$3.00	\$0.50
5. Total cost of mandated raises (row 2 x row 3)	\$317,747	\$43,800	\$2,847
6. Add 12% for Payroll/W/C (row 5 x 112%)	\$355,876	\$49,056	\$3,189
Total cost of mandated raises across all workers (cols. 1-3 of row 6):			\$408,121

\* I approximate the average wages so that my total cost figure (nearly) replicates Ms. Tesconi’s overall mandated cost estimate of \$406,213.

I requested but did not receive wage or hours data for the 9 seasonal employees. As a result, for those workers I have to make additional assumptions, which I’ll discuss further below.

Table 2 presents my estimates of the cost of the \$15 minimum, now including ripple effect raises. Again, these are based on past empirical research on how employers typically respond to increases in their mandated minimum wages.

For example, in row 4, I estimate that workers in the lowest wage group—those earning between \$9.00 and \$11.00—will see their average wage rise from \$9.60 to \$15.05. Hypothetically, this could result from all workers in the group rising from \$9.60 to \$15.05. Or, if wage rates vary across workers in this group, then workers currently earning the state’s \$9.00 minimum may go up to \$15.00, and workers currently earning \$10.00 may go up to \$15.20, for example, achieving an overall average wage rate of \$15.05. For workers earning between \$11.00 and \$13.00, I assume that they will get raises that situate their pay raises above, but much closer to, those in the lower wage range, for an average wage rate of \$15.10. And finally, for workers earning between \$13.00 and \$16.00, I assume that these workers’ average wage goes from \$14.50 to \$17.50.

Note that it is possible that ripple effects could extend further if there are workers earning more than \$15 and are covered by the living wage proposal. However, since Ms. Tesconi did not include such workers in her estimates—even in the estimates that maintain the same wage scale—I assume in this analysis that the Fairgrounds is not considering adopting any other ripple effect raises.

**Table 2: Cost of Mandated and Ripple Effect Raises from \$15 Living Wage for Temporary Workers**

<b>Mandated and Ripple Effect Raises</b>	<b>\$9.00-\$11.01</b>	<b>\$11.01-\$13.01</b>	<b>\$13.01-\$16.00</b>
1. # Workers	447	54	26
2. Total Hours worked	58,842	14,600	5,694
3. Avg. Hourly Wage Before \$15 minimum*	\$9.60	\$12.00	\$14.50
4. Avg. Hourly Wage After \$15 minimum	\$15.05	\$15.10	\$17.50
5. Mandated + Ripple Effect Raises	\$5.45 (\$15.05-\$9.60)	\$3.10 (\$15.10-\$12.00)	\$3.00 (\$17.50-\$14.50)
6. Total cost of all raises (row 4 x row 2)	\$320,689	\$45,260	\$17,082
7. Add 12% for Payroll/WC	\$359,172	\$50,691	\$19,132
Total cost of mandated and ripple effect raises across all workers (sum of cols. 1-3 of row 6):	\$428,995		

\* I approximate these so that the mandated cost figures replicate Ms. Tesconi’s overall mandated cost estimate of \$406,213 (see Table 1).

According to my estimates the ripple effect raises for the 527 temporary workers would add a small amount to the total cost, about \$21,000 or an increase of 5 percent. This is due to two factors. First, the very large majority of the raises will be mandated since most workers earn right near the wage floor. Second, if the Fairgrounds follows the practice of past employers they will not maintain the same wage scale with a \$15.00 minimum wage.

To add in the cost of the 9 seasonal workers I assume that the relationship between the cost increase due to ripple effect raises over mandated raises will be similar to what I estimated for the 527 temporary workers. In other words, I would expect ripple effect raises to add 5 percent to the costs of the mandated raises estimated by Ms. Tesconi of about \$45,000, or about \$2,300. The total cost of raises for these 9 seasonal workers, including both mandated and ripple effect raises will sum to about \$48,000.

I estimate that the overall cost increase from a \$15.00 living wage for all 536 covered temporary and seasonal workers will be about \$475,000.

*Based on this analysis, the estimated cost of mandated and ripple effect raises can be expected to be in the range of \$500,000.*

## **II. Impact of Cost Increases on Fair Prices**

Past economic research on minimum wages indicate that firms typically adjust to higher minimum wage by: (1) raising prices, (2) offsetting cost savings due to lower worker turnover, and (3) redistributing revenue within the firm, e.g., using normal revenue growth to pay for the raises of the lowest paid workers. At the same time, every specific firm operates within its own unique circumstances—I do not have any special knowledge on the full range of ways the Fairgrounds may or may not adjust to specific cost increases. Therefore, I limit the purpose of this section to putting the overall costs of a \$15.00 living wage into context with the resources available to the Fairgrounds to cover such costs.

According to the FY2015-2017 Recommended Budget, the Fairgrounds anticipates that it will have approximately \$9.5 million in revenue during the FY2015-2016. The revenue sources include the County Fair (\$5.2 million), Horse Racing/Satellite Wagering (\$1.8 million), Capital Contributions & Other (\$267,000), Interim Events (\$1.7 million), and the Fund Balance (\$563,000).

If we assume that the Fairgrounds will fully pass through its increased labor costs to its consumers, then the size of the price increases it implements will depend on which revenue sources it uses to fund the raises. Prices may be increased across all of the Fairgrounds revenue sources, within the County Fair specifically, or even more narrowly, within the paid admissions of the County Fair. The ultimate mix of price increases should be made to minimize any negative impacts on demand, and therefore, on overall revenue.

Table 3 provides estimates of the how much prices would need to rise in order to fully pass along the labor cost increase to consumers. I am using the word “prices” to cover all charges that the Fairgrounds applies to users of the Fairgrounds (e.g., concessionaires, parking). Note too that these figures ignore the potential savings that the Fairgrounds may experience from the lower recruiting and training costs typically associated with higher quality job offerings. The figures in Table 3 also assume that the Fairgrounds will not have any increase in overall revenue growth due to operating in a healthy local economy, which it could use to help pay for the raises.

**Table 3: \$15 Living Wage Cost Increase Relative to Fairground's Revenue Sources**

<b>Revenue Source</b>	<b>Amount</b>	<b>Price increase needed to cover cost increase</b>	<b>Example: Admission price would rise from \$11 (adult)/\$5 (child) to:</b>
1. All Revenue Streams	\$9,544,640	5.2%	\$11.60/\$5.25
2. County Fair only	\$5,217,400	9.6%	\$12.10/\$5.50
3. Ticket admissions only*	\$1,571,082	32.0%	\$14.50/\$6.60

\*Ms. Tesconi provided the paid admissions figure via email correspondence. The other figures are from the FY2015-2017 Recommended Budget.

The numbers in row 1 of Table 3 show that if the Fairgrounds raised its prices across all its revenue sources, then the price increases would be in the range of 5 percent. This would represent increasing an \$11 adult admission to about \$11.60 or a \$5 child admission to \$5.25. If the Fairgrounds only raises prices for County Fair related revenue streams, including paid admissions, concessions, and parking fees, price increases would be in the range of 10 percent. Finally, if the Fairgrounds only wants to consider raising prices on paid admissions, then the price increases would be in the range of a 32 percent price increase. Ticket prices in this scenario would be in the range of a \$3.50 increase for adults (\$11 to \$14.50) and \$1.60 for children (\$5 to \$6.60). In other words, the price impact to consumers will vary considerably depending on how widely the Fairgrounds decides to spread this labor cost increase across its revenue sources.

To the extent that sales decline in response to the price increases, further price increases may need to be made. Recall however that these figures assume that the Fairgrounds will not have any other way to absorb these cost increases, including adjustment channels that other businesses have typically used. Again other firms impacted by minimum wage hikes typically experience cost savings due lower worker turnover, which in turn, lowers firms' recruiting, training, and hiring costs. Also, if the local economy is growing at a healthy clip, firms tend to see their revenue rise because consumers have more income to spend, particularly on items such as arts and entertainment.

Will there likely be further price adjustments due to a fall in ticket sales in response to the cost increase? How ticket sales respond to price increases seems is unclear. Ms. Tesconi described in an email correspondence that the rule of thumb she uses is that a \$1-price increase can be expected to reduce sales by about 5 percent. As a result, raising ticket prices by \$3, the attendance level is expected to decline by 15%, from 176,923 (2015 level) to 150,385. At the same time, in the section of the FY 2015-2017 Recommended Budget that discusses the "Budget Changes" for the Fairgrounds (p.236), the narrative describes how a \$1 increase in prices (or 9% increase) should increase Fair revenue by \$180,000. Based on the most recent admission figure (176,923 paid admissions) this suggests that a \$1 price increase may not be expected to affect ticket sales at all.

Additionally, the recent trend in paid admissions and ticket prices simply appear unrelated. Ms. Tesconi supplied these data to me via email correspondence on Nov. 13, 2015. Since 2011, ticket prices increased twice. In the first instance, in 2012, ticket prices increased from \$9 to \$10 for adults and \$3 to \$5 for children but appear to have minimally impacted admissions (-2%). In the second instance, ticket prices for adults only increased by \$1, yet paid admissions declined by 8%. In 2015, paid admissions declined further (3%) though ticket prices remained unchanged. Paid admissions may be declining, but this appears to be due to factors other than ticket prices. In other words, to maintain attendance levels, and thereby enable price increases to support a living wage policy, it appears that aspects of the County Fair, other than admission prices, need adjustments.

Another way to interpret the inconsistent relationship between price increases and paid admissions is that small \$1 increases may tend to produce little to no impact on paid admissions and therefore other factors influence sales more strongly. Larger jumps in the range of \$3, on the other hand, may have a different impact. If larger price jumps produce stronger reactions among consumers than one potential policy solution may be to spread the cost increase, at minimum, across all revenue-generating activities at the County Fair. This would require a 10% increase in prices, or about a \$1.00 in increase in the cost of an adult admission ticket. Alternatively, the cost increase could be spread across a narrower set of the County Fair's revenue-generating activities and the County Fair could adopt the \$15 minimum wage over a period of two years, instead of one.

One anecdotal, but perhaps relevant, example of how ticket price increases in the range of \$2.00 - \$3.00 may be used to cover increased costs is the experience of the Napa Town and Country Fair. According to reporting in the *Napa Valley Register*, in 2011, the Napa Town and Country Fair increased its admission prices from \$10 to \$13 for adults, and \$7 to \$10 for youth and seniors (see "Fair attendance down slightly, but higher prices fill revenue gap," by Kevin Courtney, August 24, 2011 and "Fair official pleased with stable attendance," by Howard Yune, August 15, 2012). Attendance that year and immediately after fell only slightly, -2.9% in 2011, +0.3% in 2012 (+0.3%). Of course it is hard to know the confluence of factors that contributed toward the relatively stable attendance level despite a \$3.00 price increase. At the same time, the Napa Town and Country Fair's experience suggests that it is possible that a \$3 price increase can be adopted with less of an impact than may be assumed by Ms. Tesconi's analysis.

*In sum, the potential impact of the \$15 living wage on Fairground prices varies widely, and depends on the revenue sources it chooses to use to absorb their increased labor costs. Additionally, the pattern of past attendance levels and price increases do not provide any clear indication that the range of possible price increases needed to accommodate a \$15 living wage will negatively affect County Fair attendance levels.*