Comparison of Labor With Sales - 2017

Allocate Analytics

July 17, 2018

Headlines

- **These charts compare the number of people clocked in under particular job types with sales per hour. Sales are measured in 3 ways: dollars per hour, checks or tables per hour, and items ordered per hour.**
- **The busy-ness at a particular time on a certain day of the week is quite consistent and predictible. For example, in 2017 you had between 15 and 30 checks at the 5pm hour at least 75% of the time. In some businesses, it's hard to know whether a particular portion of the day will be dead or slammed, but there's less variation in the restaurant.**
- **For most meals, the labor and sales are well-aligned.**
- **When measuring busy-ness by dollars, dinner is bigger. When measuring by checks, lunch is bigger.**
- **On Saturday there's more variation in the number of Managers and Support Staff but there's little variation in the sales.**
- **The busiest times of the week for sales dollars are dinner Thu, Fri, and Sat, yet these are some of the meals with the fewest managers working.**

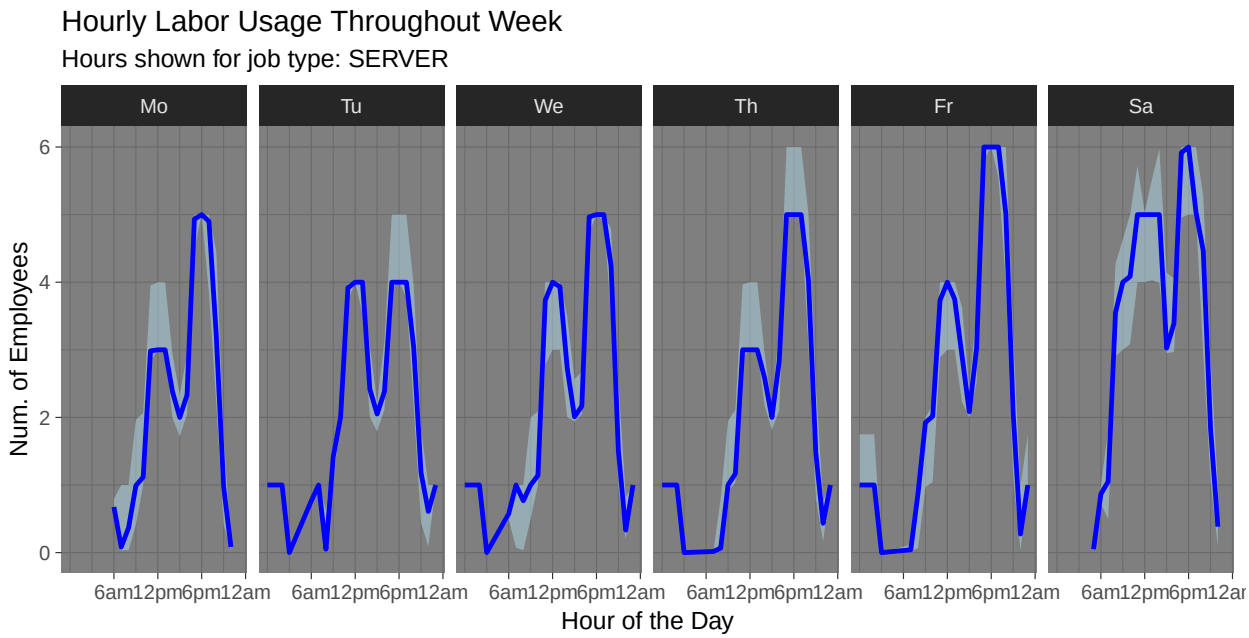
Servers

This first chart shows how many SERVERS are working on average at each hour of the day. All the charts have some form of a blue "M". The two spikes in the M represent lunch and dinner. The first one on the far left is for Mondays (in 2017). It shows that you average 3 servers at lunch and 5 servers at dinner. The light blue shading provides additional information because every day doesn't hit the average exactly. The light blue shows the range where the number will be 75% of the time. For the far left chart, this means you average 3 servers at lunch, and at least 75% of the time you have either 3 or 4 servers. It's also fine to just look at the blue Ms and ignore the shaded intervals if you prefer.

Observations

- The meal times are very clearly defined. Lunch doesn't really bleed into dinner with a partial exception of Saturday.
- Saturday brunch starts earlier and last longer than lunch on most of the other days in terms of staffing.
- Fri and Sat dinner are the times with the most servers on the clock, as would be expected.

I don't expect any of the above insights to be amazing revelations. Much of the value of this chart is found when sales are overlaid, but it's helpful to get a bit oriented to this chart before adding any more to it.

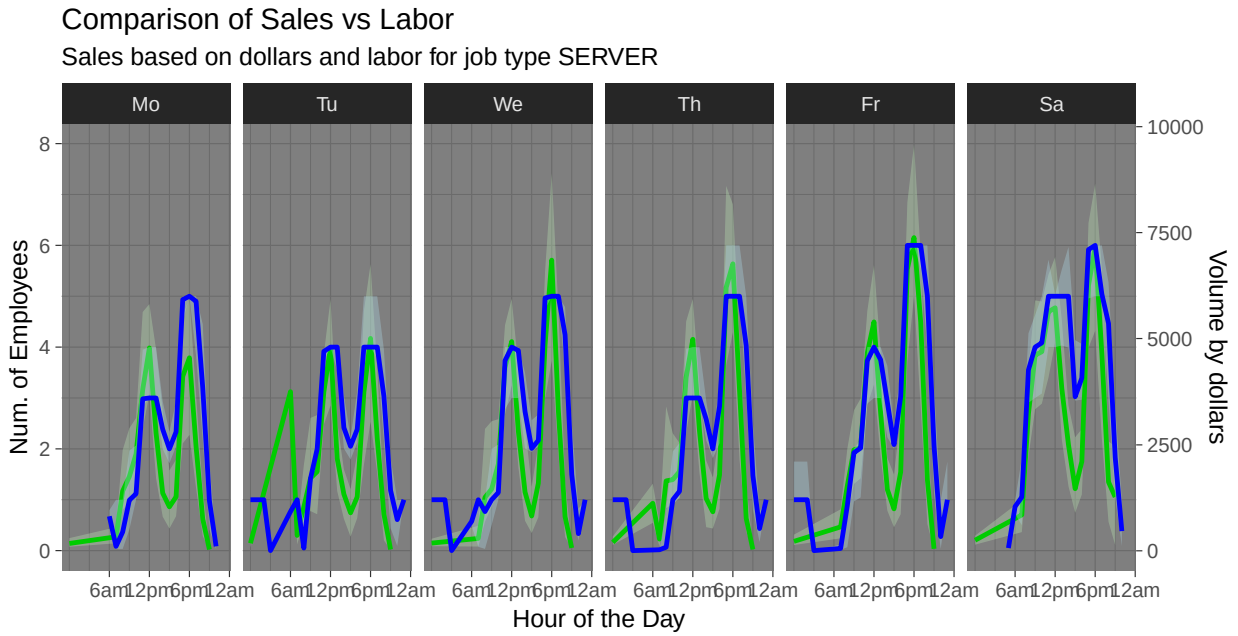


Server compared with dollars (excluding outliers)

This chart overlays dollars per hour on top of the servers per hour chart from above. Green is sales, throughout this document. The scale for the dollars is on the right side. For Monday, both lunch and dinner peak at about $5000 per hour on average. Again, there's a shaded area for the green also, which shows where the sales are 75% of the time

Observations

- There's a spike in sales on Tuesdays at 6am. Is there a known reason why that spike would occur with at least some regularity? I haven't filtered out catering but out of all the checks I did remove the top 1% assuming that would catch the outlier catering sales.
- On Monday, the dollars are similar for lunch and dinner (on far left, green spikes are same height) but the number of servers differs significanly. Lunch patrons often are in a restaurant for a shorter time so maybe fewer servers are needed, but it's a question worth exploring.
- Dinner sales really pick up beginning on Wednesday.
- Thursday is staffed with servers almost exactly like Monday (same shaped blue M), but Thursday dinner is much larger. Would more servers allow for Thursday dinners to be even larger?
- Friday dinner beats out the others for largest meal both in the average and the top of the shaded value.

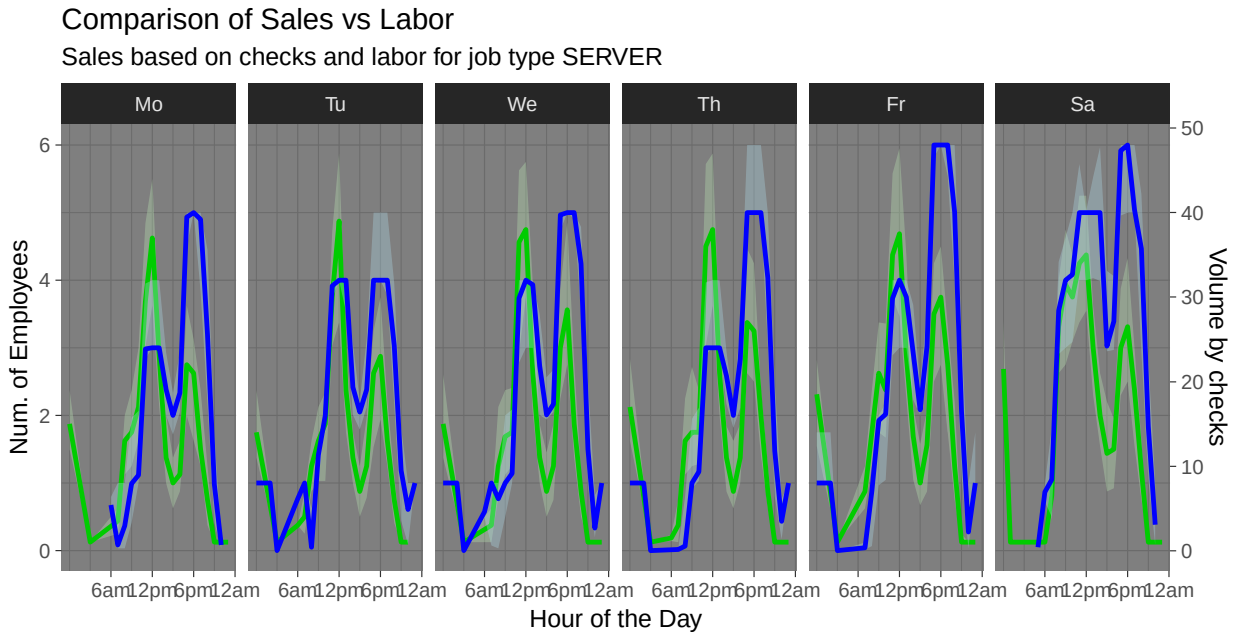


Server compared with checks

In addition to measuring sales by dollars, I measured by number of checks or tables or parties per hour as an alternate measure of busy-ness. This chart shows SERVERS compared with checks. The scale again is on the right side. As an example, approximately 38 checks are entered on average on Mondays during the 12pm hour.

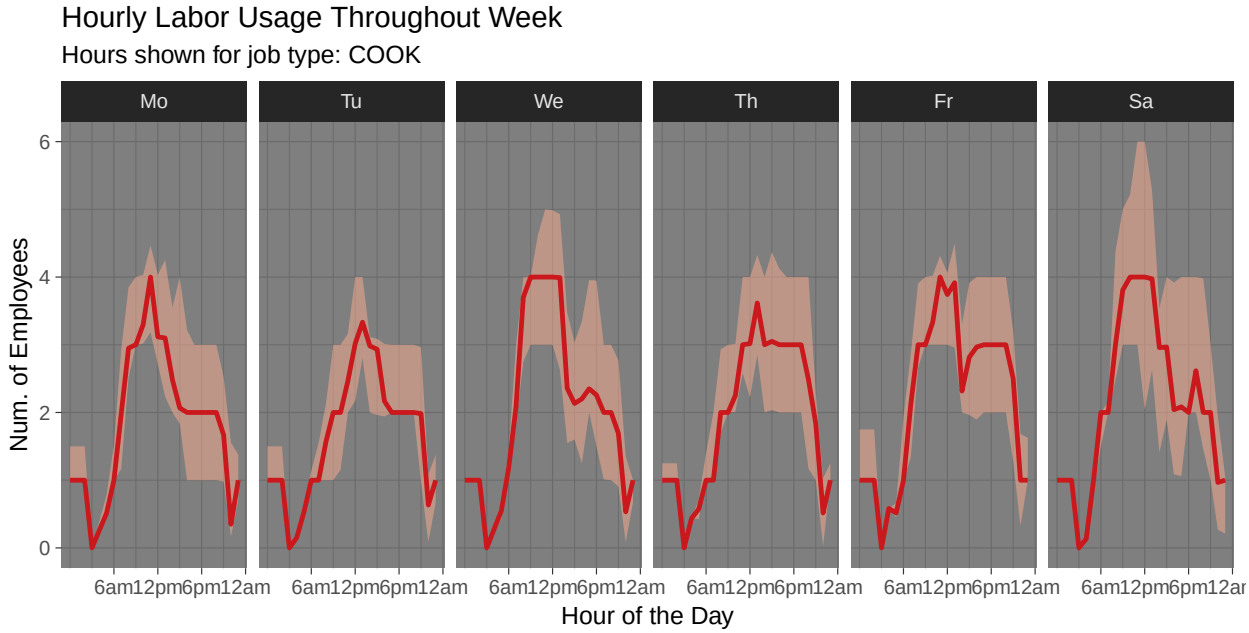
Observations

- On most days, the lunch peak has more checks per hour than dinner does. One measure of how busy servers are is the number of tables they're managing at any one time. Lunch is higher in this regard, but presumably lunch groups are smaller and stay for a shorter time making them less work than the average dinner party. Is it true that servers can effectively handle this higher number of checks per hour at lunchtime? Monday lunch has the biggest difference between the servers and the number of checks per hour. Are 3 servers consistently able to handle the volume at lunchtime on Mondays?



Cook

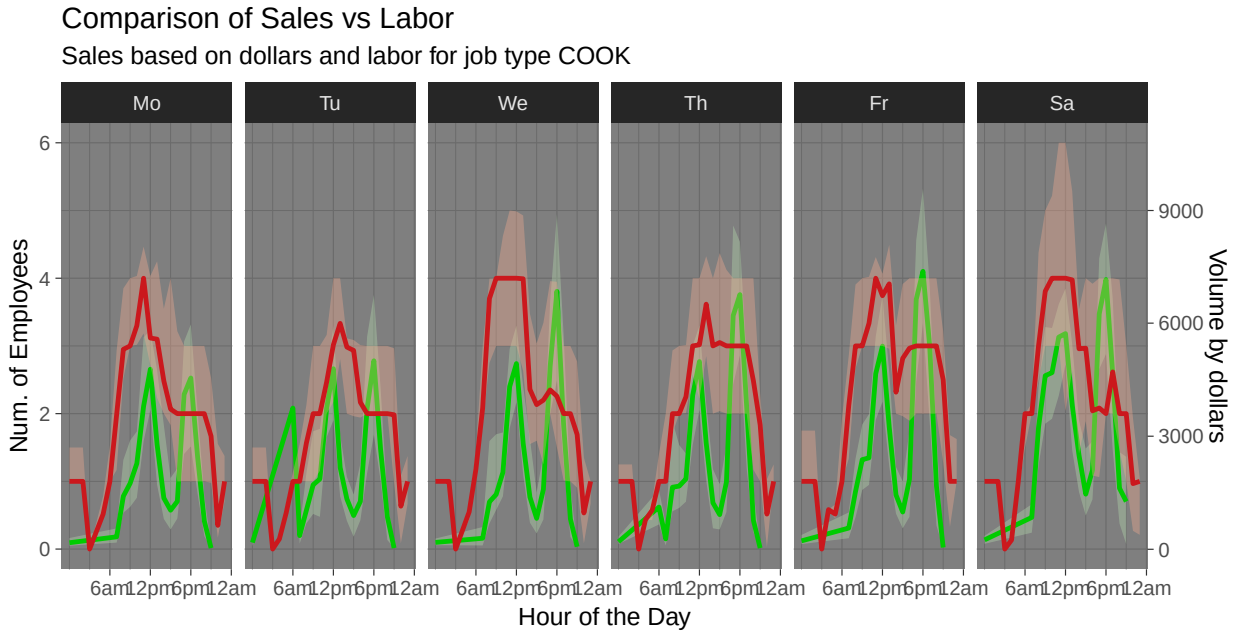
The labor time for cooks doesn't follow the lunch and dinner pattern as clearly as servers do (these aren't Ms), presumably because food preparation extends before and after meals. I've changed the color for contrast when scanning from page to page, but the red represents the same labor hours as the blue line and shading did, except this shows labor hours for cooks instead of servers.



Cook compared with dollars (excluding outliers)

Observations

- It's interesting that Monday lunch is one of the lowest staffed meals of the week for servers but among the highest for cooks. Is there a business reason for this or not? Does catering play a role?
- For many days of the week, the number of cooks on for the dinner hour is most often 2, even on Saturday evening. Saturday dinner brings in roughly the same dollars and number of checks as Thursday, but Thursday typically has one more cook on. The shading shows that the variation between the two may not be as large as the averages would suggest.

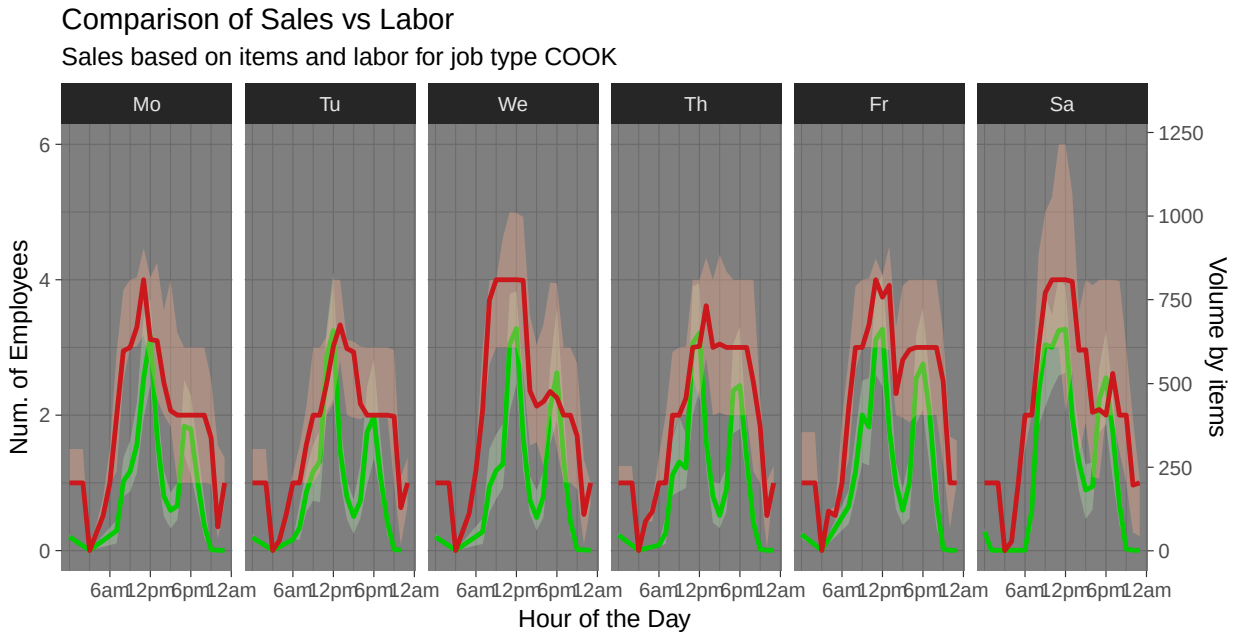


Cook compared with items

Every item ordered must be specifically prepared regardless of its price or how many tables are full. In light of this, I looked at cook staffing against the number of ITEMS ordered per hour.

Observations

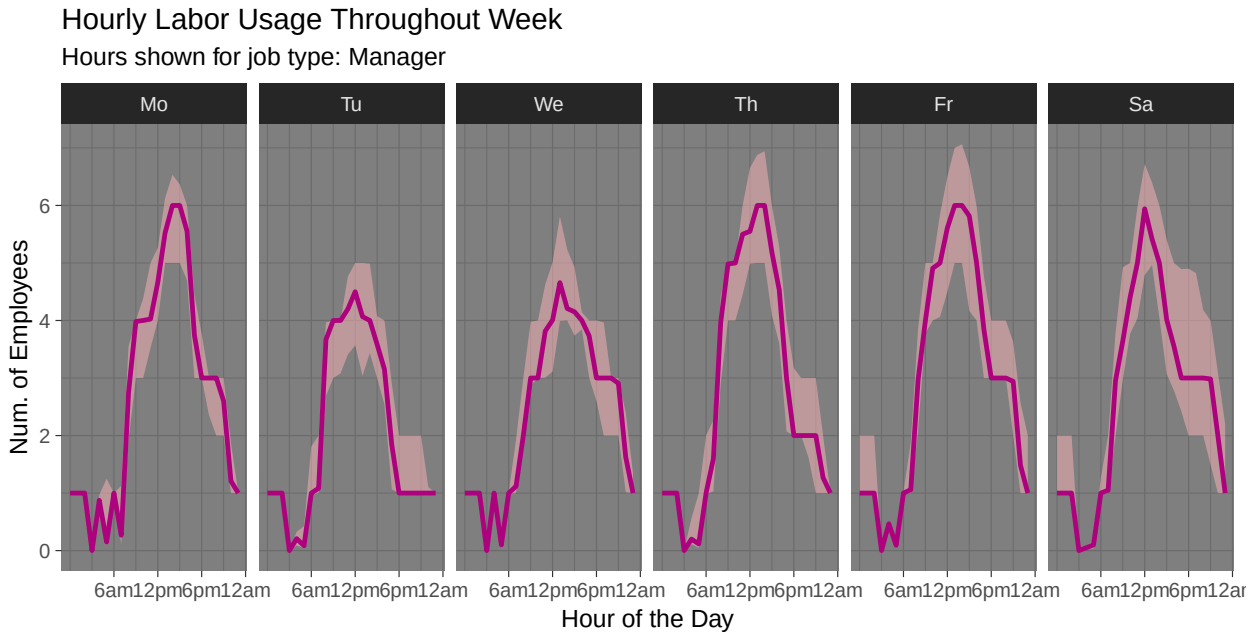
- The cook schedule more closely tracks with busy-ness when the busy-ness is measured by items ordered on the chart below (the red tracks with the green more closely than in the chart above).
- On Monday and Wednesday the cooks start quite a bit earlier than on the other days and earlier than food is being ordered. Is catering the explanation for this, is there another explanation, or is this an unintentional schedule difference?
- There's a wider range on Saturday lunch than for any other meal. The shading at that time extends from 3 up to 6. Yet the range of potential items ordered varies much less, between \$500-\$750 75% of the time. Does the restaraunt need 5 or 6 cooks so often at that time or would 4 be sufficient?



Manager

Observations

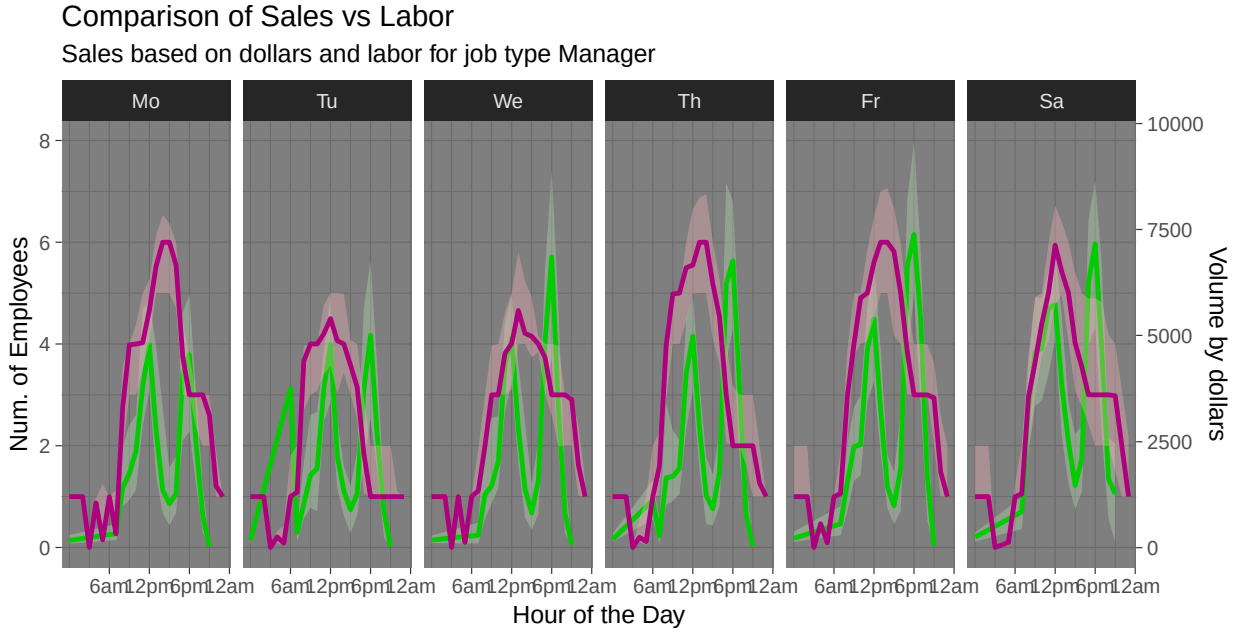
- The schedule has the most managers on at noon or early afternoon. This may be due to the need for full shifts that overlap or may be some other reason.
- The most variability in staffing is for Saturday dinner, when there are between 2 and 5 managers clocked in 75% of the time. As with the cooks, there is less variability with the dollars and check than with the labor hours. This could be due to either inevitable or intentional reasons such as manager vacations or managers who are sick at the last minute. Is there another reason why the number of managers on during Saturday dinner varies significantly?



Manager compared with dollars (excluding outliers)

Observations

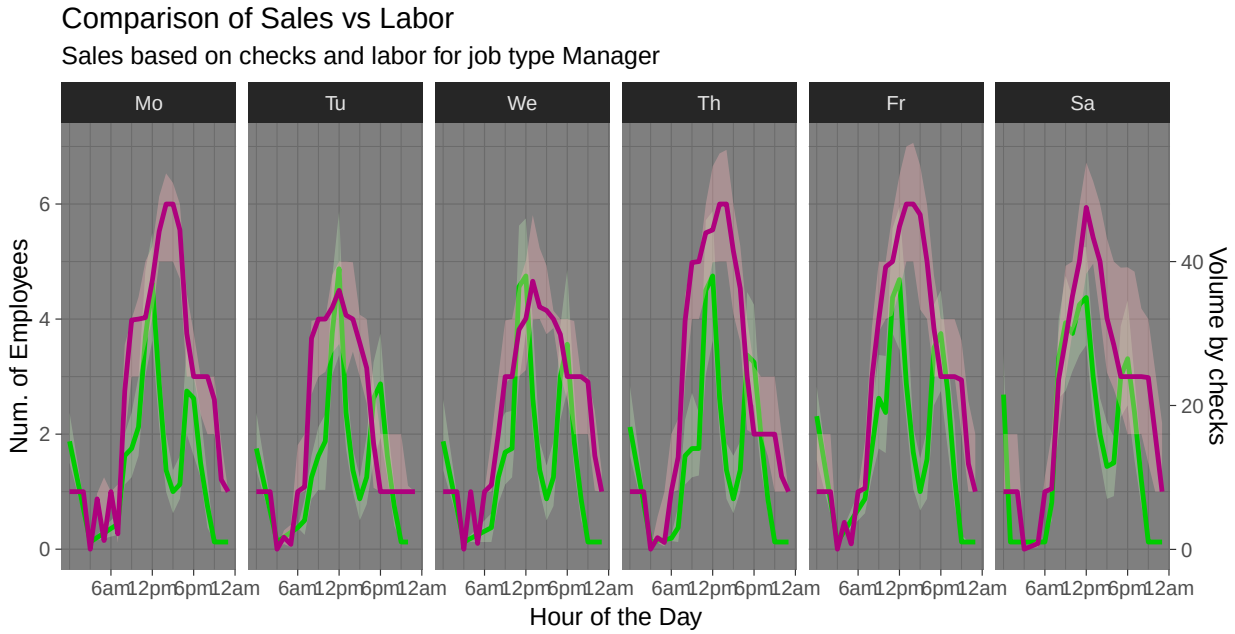
- The most striking thing to me about this chart is that the times of the week when you make the most dollars (Thu, Fri, Sat dinnertime) are times when you have the least number of managers. It's very posible that you'd consider 2-3 managers fully staffed and the times when it's 6 you really have too many. Even if that's the case, these 3 dinner times are theoretically when there's the most risk to the business if someting goes wrong or a server doesn't show up for a shift.



Manager compared with checks

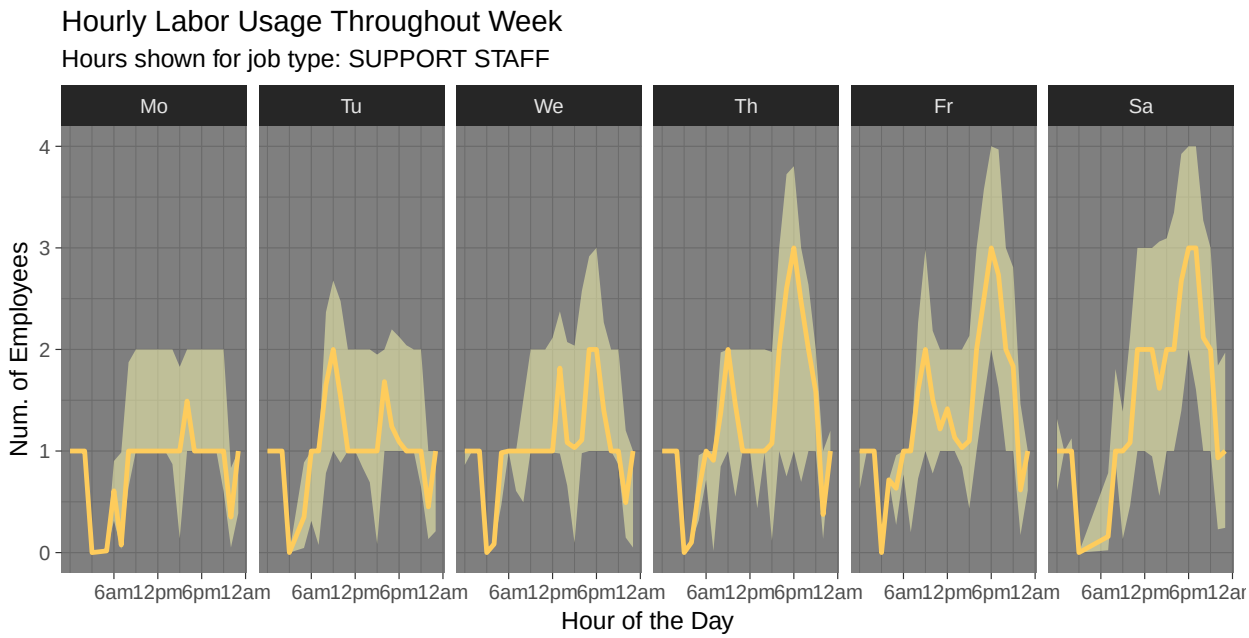
Observations

- The manager hours follow checks more closely than dollars, but I still believe it's worth exploring whether having the fewest managers at the highest dollar times is providing the needed support during those times.
- The manager level for Monday lunch exceeds that of most other weekdays, despite the fact that neither dollars nor checks is high at that time.



Support Staff

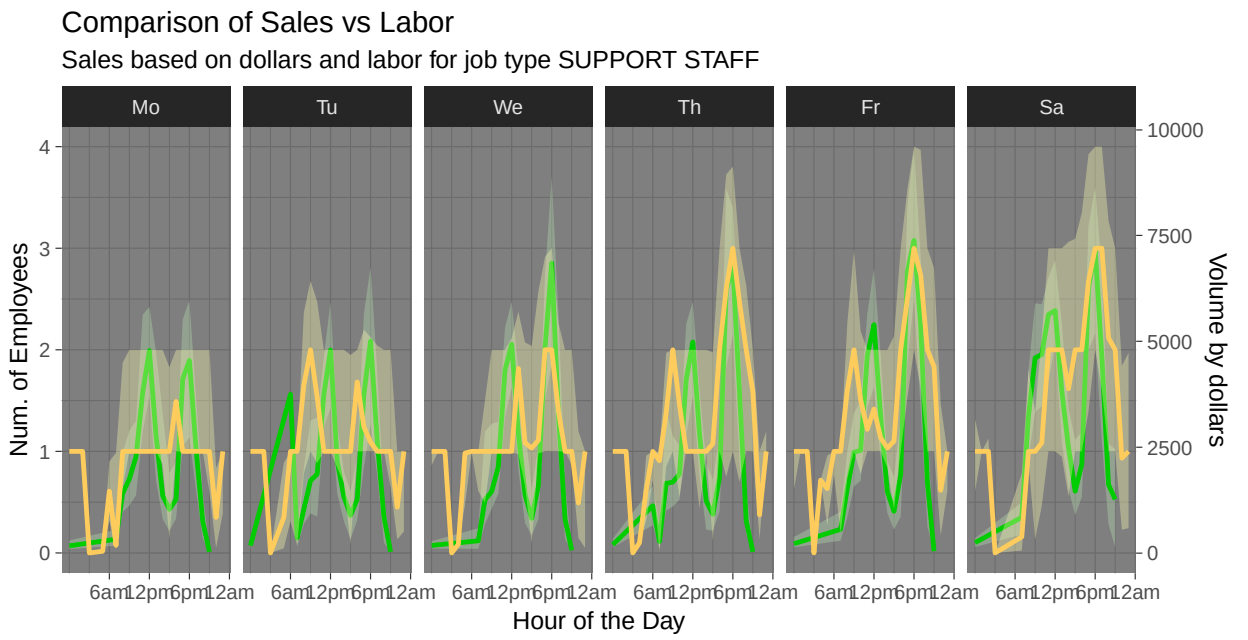
I'm unsure how support staff are used but they are one of the top 4 job types by spending, which is why they're included.



Support Staff compared with dollars (excluding outliers)

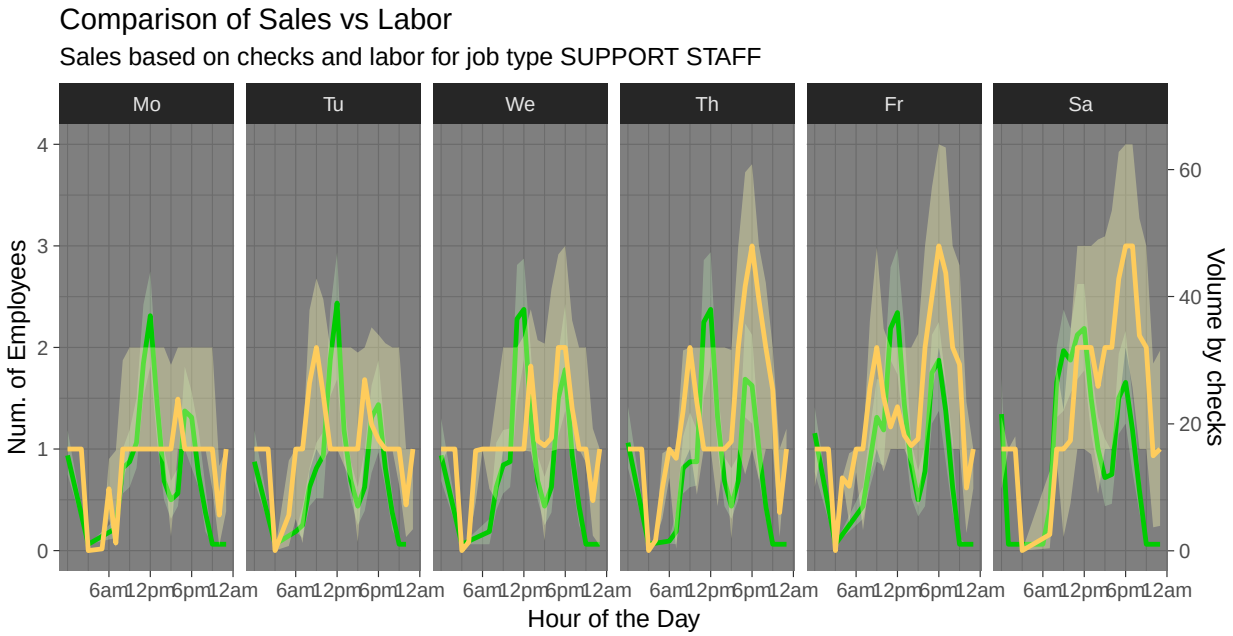
Observations

- This role does match the dollars well, especially for those 3 largest dinner days of Thu, Fri, and Sat.



Support Staff compared with checks

- The hours for Support Staff don't track with checks as well as they did with dollars in the previous chart. That is likely okay but worth seeing vizualized.


Comparison of Sales vs Labor
Sales based on checks and labor for job type SUPPORT STAFF
Mo
Tu
We
Th
Fr
Sa
Num. of Employees
Volume by checks
0
1
2
3
4
0
20
40
60
6am
12pm
6pm
12am
Hour of the Day