Productivity savings

ptysav<-function()**{**

##shift hours

coish<-327

ohsh<-226.5

calsh<-55

Chicago Barrel line productivity savings

chi\_psav<-function(){

library(tidyr)

library(readr) ## parse\_number… incluso de factors

library(stringr)

library(varhandle)

library(assertthat)

library(dplyr)

library(lubridate)

##help(package = lubridate)

library(quantmod)

library(reshape2)

library(magrittr)

library(grDevices)

library(RColorBrewer)

library(ggplot2)

library(lattice)

library(datasets)

library(swirl)

##input the necessary data

yp\_fg<-read.csv("2 2) Fior all data.csv")

##Select only Chicago rows, group by weekc, sum inside weekc, select lb and hours

chi\_brr<-**summarize(group\_by(yp\_fg[grep("ch",yp\_fg$Location,ignore.case=T),],WeekC),fg\_lb=sum(PS.Actual.FG.LBS,na.rm=T), mh\_dl=sum(MH.Direct.Labor,na.rm=T),mh\_il=sum(MH.Indirect.Labor,na.rm=T),prod=fg\_lb/mh\_dl)**

chi\_brr$weekc<-as.Date(chi\_brr$WeekC,"%d-%b-%y")

##Build a table for the baseline, early 2018, and another one for the after-the-project results

chi\_brrbl<-summarize**(filter(chi\_brr, weekc>="2018-01-01"&weekc<"2018-09-30")**,fg\_lbbl=mean(fg\_lb,na.rm=T),mh\_dlbl=mean(mh\_dl,trim=0.25,na.rm=T),mh\_ilbl=mean(mh\_il,trim=0.25,na.rm=T), lb\_dlbl=fg\_lbbl/mh\_dlbl,lb\_dl\_mdbl=mean(prod,trim=0.25,na.rm=T)**)**

chi\_brrprj<-summarize**(filter(chi\_brr,weekc>="2018-12-01")**,fg\_lbbl=mean(fg\_lb,na.rm=T),mh\_dlbl=mean(mh\_dl,trim=0.1,na.rm=T),mh\_ilbl=mean(mh\_il,na.rm=T,rtim=0.1),lb\_dl=fg\_lbbl/mh\_dlbl, lb\_dl\_md=mean(prod,na.rm=T,trim=0.1)**)**

**##View(chi\_brrbl)**

**##View(chi\_brrprj)**

##Report the comparison in a two row rable

chi\_brr\_comp<-rbind(setNames(chi\_brrbl,names(chi\_brrprj)),chi\_brrprj)

chi\_brr\_comp$cat<-c("base line","after project")

View(chi\_brr\_comp)

dev.new()

wrapper <- function(x, ...)

{

paste(strwrap(x, ...), collapse = "\n")

}

brr\_title<-"Change in productivity after barrel line enhancements"

n<-ggplot(chi\_brr\_comp,aes(x=factor(cat,level=cat),y=lb\_dl\_md))+geom\_col(aes(fill=cat))+ theme\_bw()+theme(axis.text.x = element\_text(size=11,angle=60,vjust=0.6),axis.text.y=element\_text(size=9))+theme(axis.line = element\_line(colour = "blue"), panel.border = element\_blank())+theme(legend.position="none")+labs(x="Category",y="Productivity, lb/mh-dl",caption=**max(chi\_brr$weekc)+6**,size=10)+ theme(plot.title = element\_text(size=12))+ggtitle(wrapper(brr\_title, width = 65))+scale\_y\_continuous(breaks=c(chi\_brr\_comp$lb\_dl\_md[1], chi\_brr\_comp$lb\_dl\_md[2]), expand = c(0, 0))+geom\_hline(yintercept=chi\_brr\_comp$lb\_dl\_md,group=chi\_brr\_comp$cat,linetype="dashed",color="violet")

##+coord\_flip()

print(n)

}