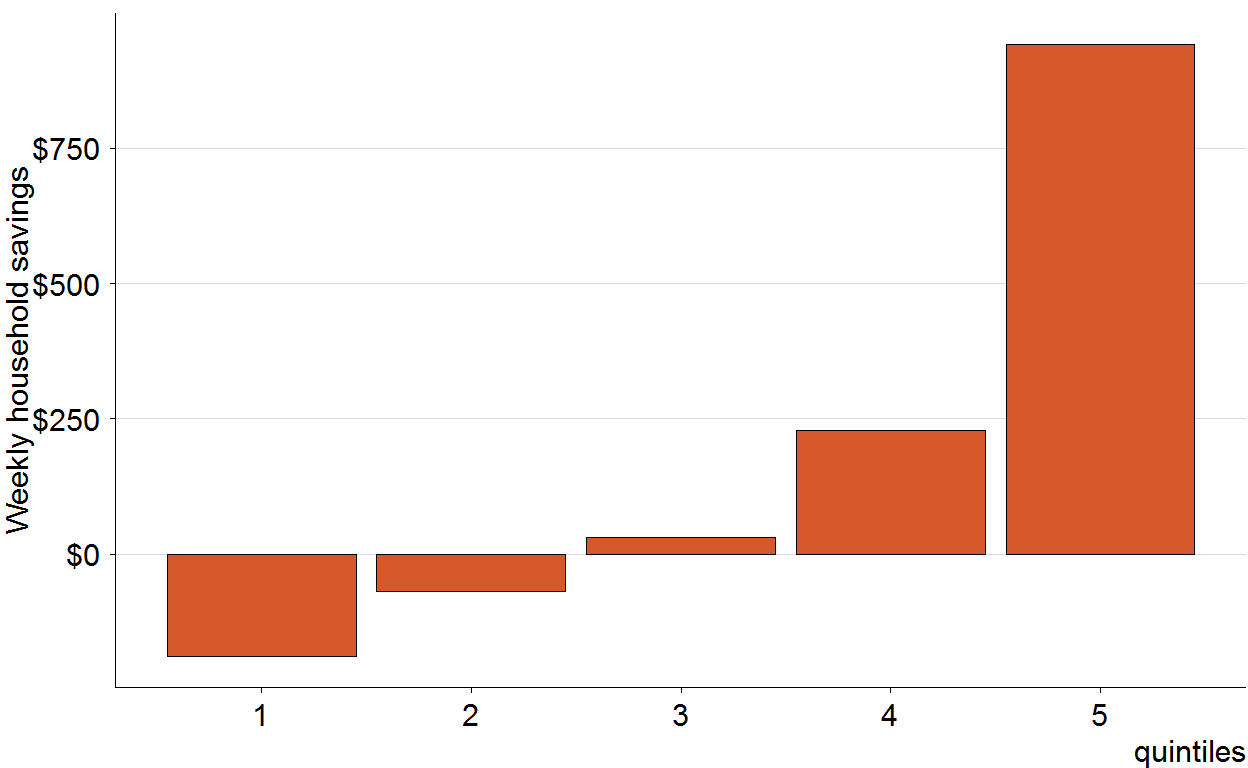
## 

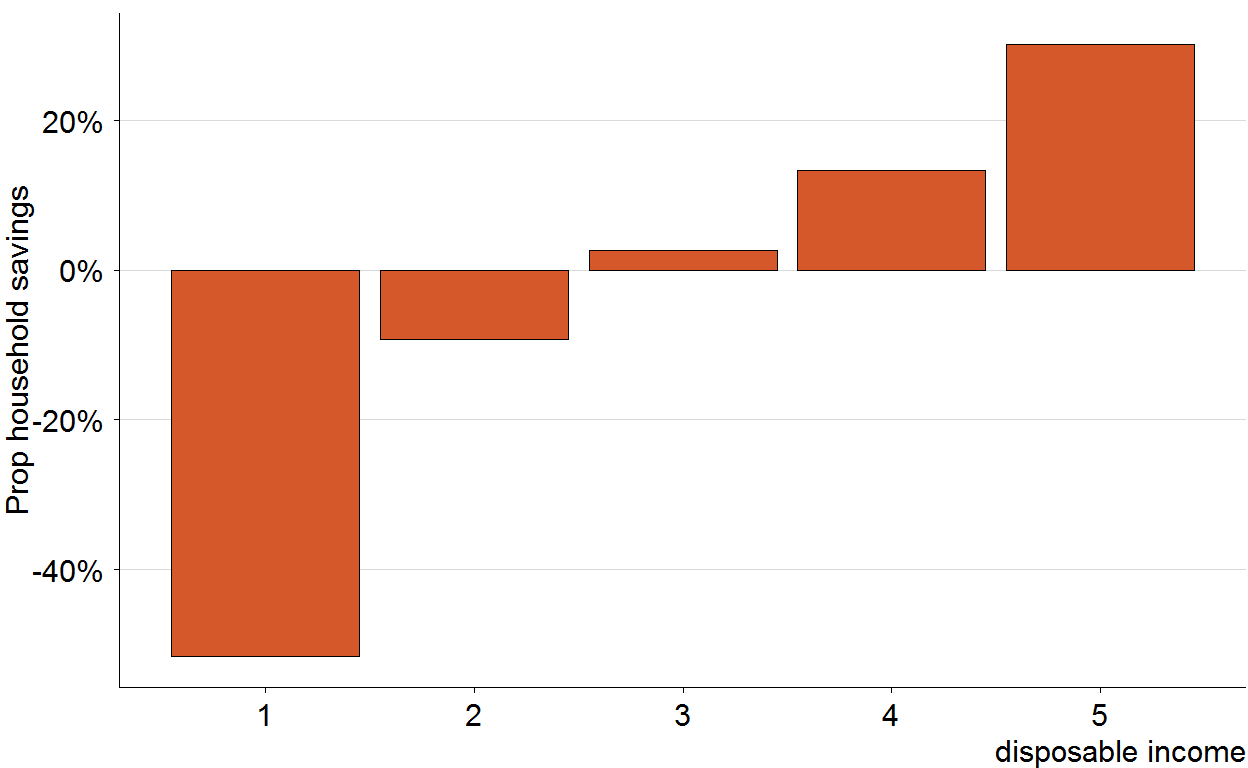
knitr::purl("GST\_costing.Rmd")  
source("GST\_costing.R", echo=FALSE)  
file.remove("GST\_costing.R")  
knitr::opts\_chunk$set(warning = FALSE,  
 message = FALSE,   
 echo=TRUE,  
 fig.height=8, fig.width=13)

hes10hh %<>%  
 mutate(disposable\_income = Total\_current\_weekly\_HH\_income\_from\_all\_sources - Household\_weekly\_expenditure\_on\_income\_tax\_HES\_only,  
 disposable\_income\_annual = 52 \* disposable\_income,  
 disposable\_income\_group = floor(disposable\_income\_annual/25000) \* 25000)  
  
disposable.income.quintiles <-   
 svydesign(data = hes10hh, ids = ~Unique\_household\_number, weights = ~Weight\_HH\_HES) %>%  
 svyquantile(~disposable\_income, design = ., quantiles = (0:5)/5)  
  
create\_qiles <- function(x, breaks){  
 as.numeric(factor(cut(x, breaks = breaks, include.lowest=TRUE)))  
}  
  
savings.by.quintile <-   
 hes10hh %>%  
 mutate(  
 quintiles = create\_qiles(disposable\_income, disposable.income.quintiles)   
 ) %>%  
 mutate(savings = disposable\_income - Total\_goods\_and\_services\_expenditure\_HES\_only) %>%  
 group\_by(quintiles) %>%  
 summarise(avg\_savings = weighted.mean(savings, Weight\_HH\_HES))

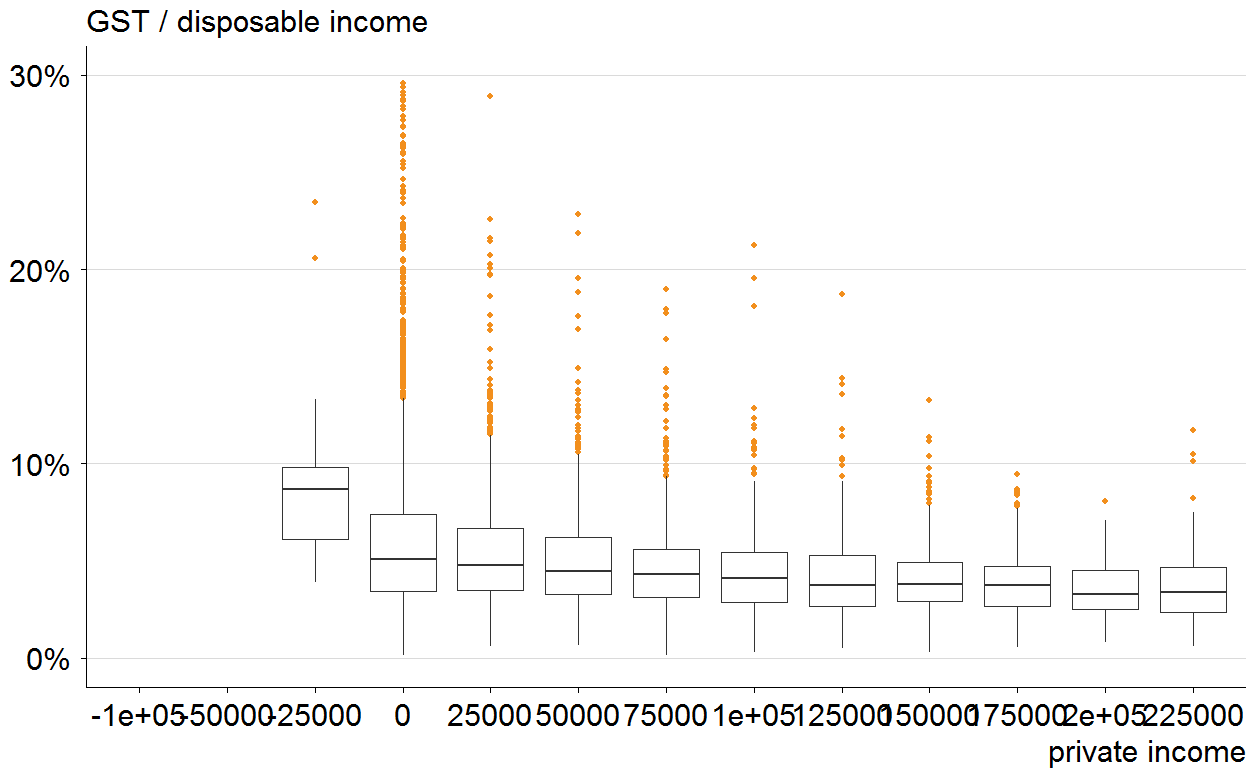
savings.by.quintile %>%  
 grplot(aes(x = quintiles, y = avg\_savings)) +   
 geom\_bar(stat = "identity") +   
 scale\_y\_continuous("Weekly household savings", label=grattan\_dollar) +   
 theme(axis.title.y = element\_text(angle = 90))



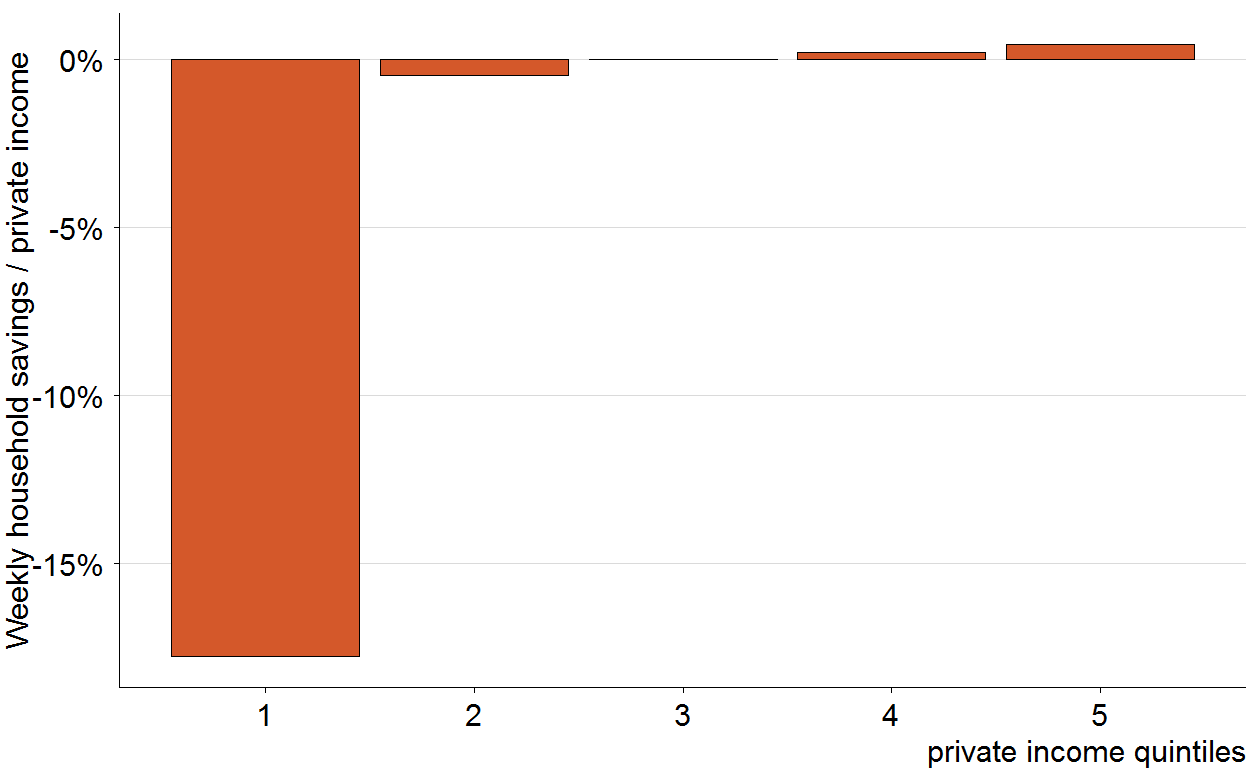
savings.by.quintile\_prop <-   
 hes10hh %>%  
 mutate(  
 quintiles = create\_qiles(disposable\_income, disposable.income.quintiles)  
 ) %>%  
 mutate(savings = disposable\_income - Total\_goods\_and\_services\_expenditure\_HES\_only) %>%  
 group\_by(quintiles) %>%  
 summarise(avg\_savings = weighted.mean(savings, Weight\_HH\_HES)/weighted.mean(disposable\_income, Weight\_HH\_HES))  
  
savings.by.quintile\_prop %>%  
 grplot(aes(x = quintiles, y = avg\_savings)) +   
 geom\_bar(stat = "identity") +   
 scale\_y\_continuous("Prop household savings", label=percent) +   
 xlab("disposable income") +  
 theme(axis.title.y = element\_text(angle = 90))



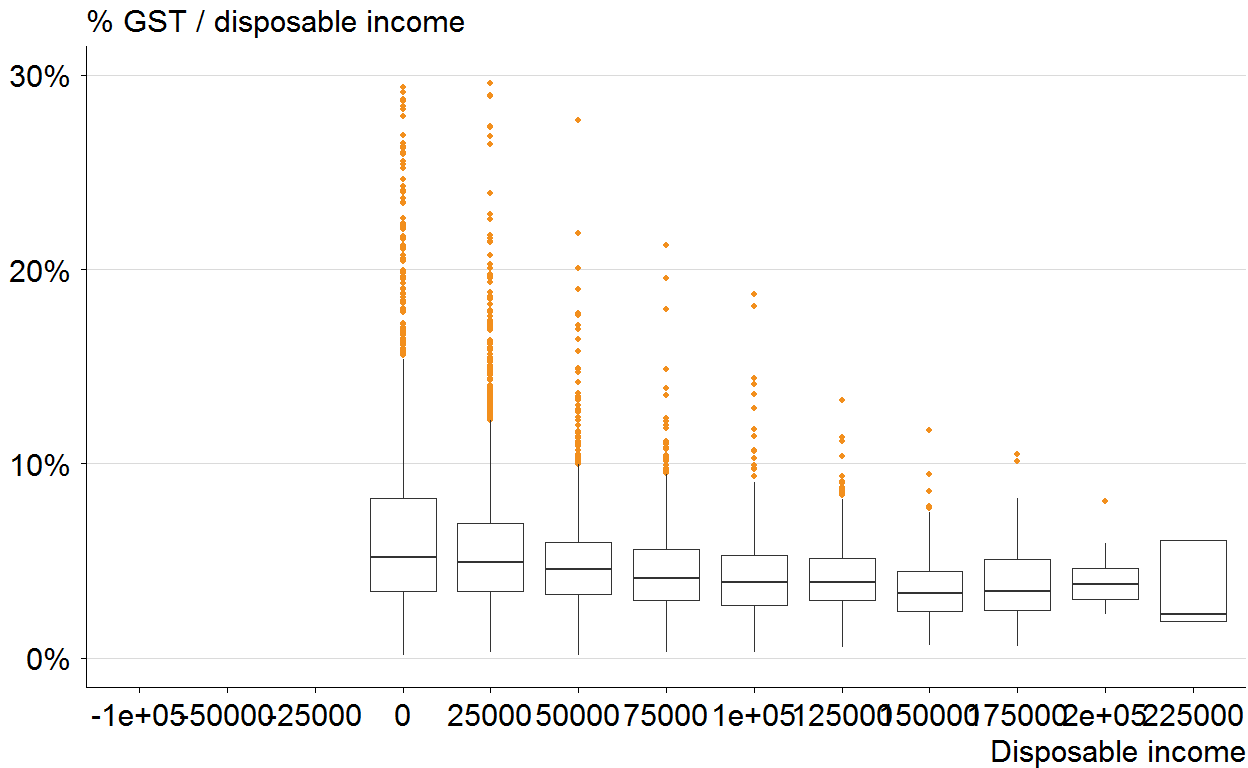
hes10hh %<>%  
 mutate(private\_income\_weekly = Total\_current\_weekly\_HH\_income\_from\_all\_sources - Current\_weekly\_HH\_income\_from\_government\_pensions\_and\_allowances\_basis,  
 private\_income = private\_income\_weekly \* 52,  
 private\_income\_group = floor(private\_income/25000) \* 25000,  
 prop\_gst\_by\_disp\_inc = Weekly\_household\_GST\_on\_all\_goods\_and\_services\_FIS / disposable\_income,  
 prop\_gst\_by\_exp = Weekly\_household\_GST\_on\_all\_goods\_and\_services\_FIS / Total\_goods\_and\_services\_expenditure\_HES\_only)  
  
hes10hh %>%  
 filter(private\_income < 250e3) %>%  
 grplot(aes(x = factor(private\_income\_group),  
 y = prop\_gst\_by\_disp\_inc,  
 weight = Weight\_HH\_HES)) +   
 geom\_boxplot() +   
 ggtitle("GST / disposable income") + xlab("private income") +  
 scale\_y\_continuous(label=percent, limits = c(0,0.3))



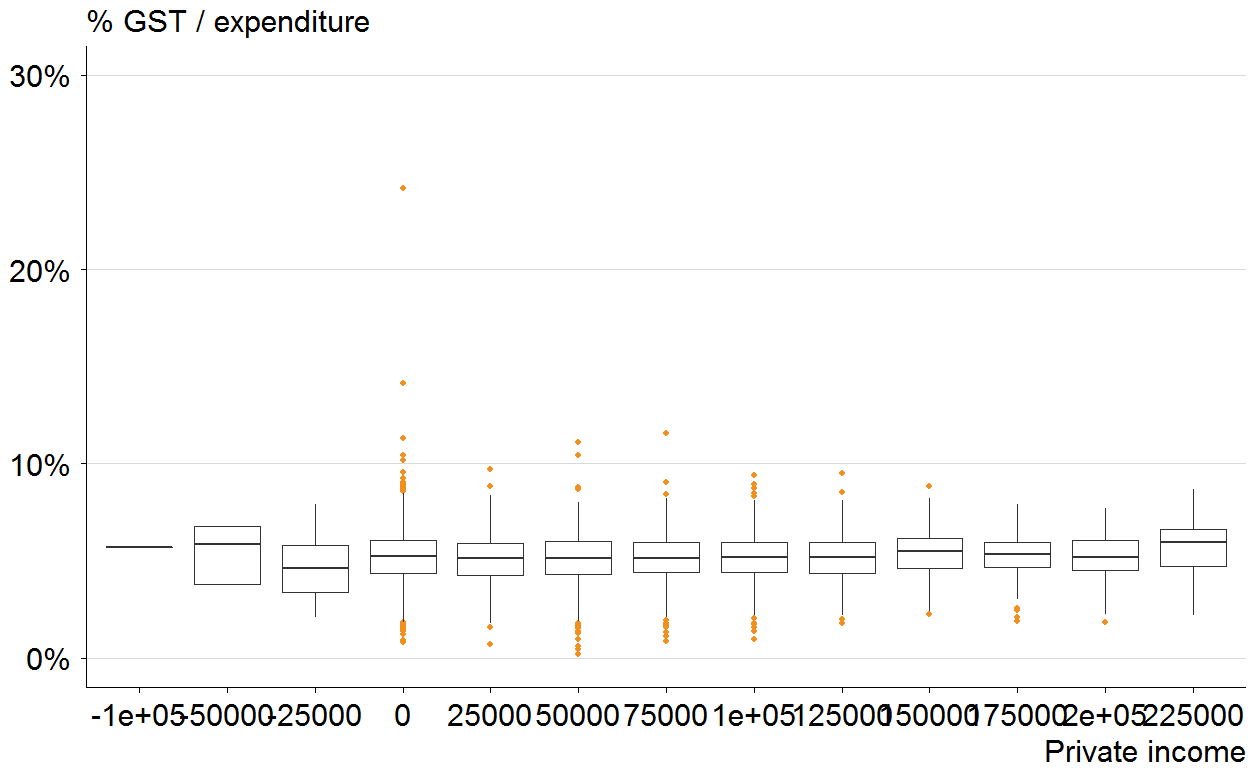
private.income.quintiles <-   
 svydesign(data = hes10hh, ids = ~Unique\_household\_number, weights = ~Weight\_HH\_HES) %>%  
 svyquantile(~private\_income, design = ., quantiles = (0:5)/5)  
  
savings.by.private.quintile\_prop <-   
 hes10hh %>%  
 mutate(  
 quintiles = create\_qiles(private\_income, private.income.quintiles)  
 ) %>%  
 mutate(savings = disposable\_income - Total\_goods\_and\_services\_expenditure\_HES\_only) %>%  
 group\_by(quintiles) %>%  
 summarise(prop\_savings = weighted.mean(savings, Weight\_HH\_HES)/weighted.mean(private\_income, Weight\_HH\_HES))  
  
savings.by.private.quintile\_prop %>%  
 grplot(aes(x = quintiles, y = prop\_savings)) +   
 geom\_bar(stat = "identity") +   
 scale\_y\_continuous("Weekly household savings / private income", label=percent) +   
 xlab("private income quintiles") +   
 theme(axis.title.y = element\_text(angle = 90))



hes10hh %>%  
 filter(private\_income < 250e3) %>%  
 grplot(aes(x = factor(disposable\_income\_group),  
 y = prop\_gst\_by\_disp\_inc,  
 weight = Weight\_HH\_HES)) +   
 geom\_boxplot() +   
 ggtitle("% GST / disposable income") + xlab("Disposable income") +   
 scale\_y\_continuous(label=percent, limits = c(0,0.3))



hes10hh %>%  
 filter(private\_income < 250e3) %>%  
 grplot(aes(x = factor(private\_income\_group),  
 y = prop\_gst\_by\_exp,  
 weight = Weight\_HH\_HES)) +   
 geom\_boxplot() +   
 ggtitle("% GST / expenditure") + xlab("Private income") +   
 scale\_y\_continuous(label=percent, limits = c(0,0.3))



hes10hh %>%  
 filter(private\_income < 250e3) %>%  
 grplot(aes(x = factor(disposable\_income\_group),  
 y = prop\_gst\_by\_exp,  
 weight = Weight\_HH\_HES)) +   
 geom\_boxplot() +   
 ggtitle("% GST / expenditure") + xlab("Disposable income") +   
 scale\_y\_continuous(label=percent, limits = c(0,0.3))

