portal sim

```
library(tidyverse)
```

```
## -- Attaching packages --------
```

```
## v ggplot2 3.0.0     v purrr   0.2.5
## v tibble  1.4.2     v dplyr   0.7.6
## v tidyr   0.8.1     v stringr 1.3.1
## v readr   1.1.1     v forcats 0.3.0
```

```
## -- Conflicts -----------------
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
p2 <- read.csv("~/../Dropbox/negative_population_trends/portal2.csv")
p3 <- read.csv("~/../Dropbox/negative_population_trends/portal3.csv")
p4 <- read.csv("~/../Dropbox/negative_population_trends/portal4.csv")

p2 %>% group_by(bar, model) %>%
  summarize(samplesize=n(),
            negativebeta = sum(beta<0),
            percent = negativebeta/samplesize*100)
```

```
## # A tibble: 4 x 5
## # Groups:   bar [?]
##   bar                                model samplesize negativebeta percent
##   <fct>                              <fct>      <int>        <int>   <dbl>
## 1 True Population Size, 2 Highest P~ line~      20000        13063    65.3
## 2 True Population Size, 2 Highest P~ log        20000        12970    64.8
## 3 True Population Size, 2 Random Po~ line~      20000         9986    49.9
## 4 True Population Size, 2 Random Po~ log        20000        10013    50.1
```

```
p3 %>% group_by(bar, model) %>%
  summarize(samplesize=n(),
            negativebeta = sum(beta<0),
            percent = negativebeta/samplesize*100)
```

```
## # A tibble: 4 x 5
## # Groups:   bar [?]
##   bar                                model samplesize negativebeta percent
##   <fct>                              <fct>      <int>        <int>   <dbl>
## 1 True Population Size, 2 Highest P~ line~      20000        13239    66.2
## 2 True Population Size, 2 Highest P~ log        20000        13129    65.6
## 3 True Population Size, 2 Random Po~ line~      20000        10067    50.3
## 4 True Population Size, 2 Random Po~ log        20000        10039    50.2
```

```
p4 %>% group_by(bar, model) %>%
  summarize(samplesize=n(),
            negativebeta = sum(beta<0),
            percent = negativebeta/samplesize*100)
```

```
## # A tibble: 4 x 5
## # Groups:   bar [?]
##   bar                                model samplesize negativebeta percent
##   <fct>                              <fct>      <int>        <int>   <dbl>
```

```
## 1 True Population Size, 2 Highest P~ line~      20000        13167    65.8
## 2 True Population Size, 2 Highest P~ log        20000        13043    65.2
## 3 True Population Size, 2 Random Po~ line~      20000         9900    49.5
## 4 True Population Size, 2 Random Po~ log        20000         9877    49.4
```