Practice Tidy Data, Group 6

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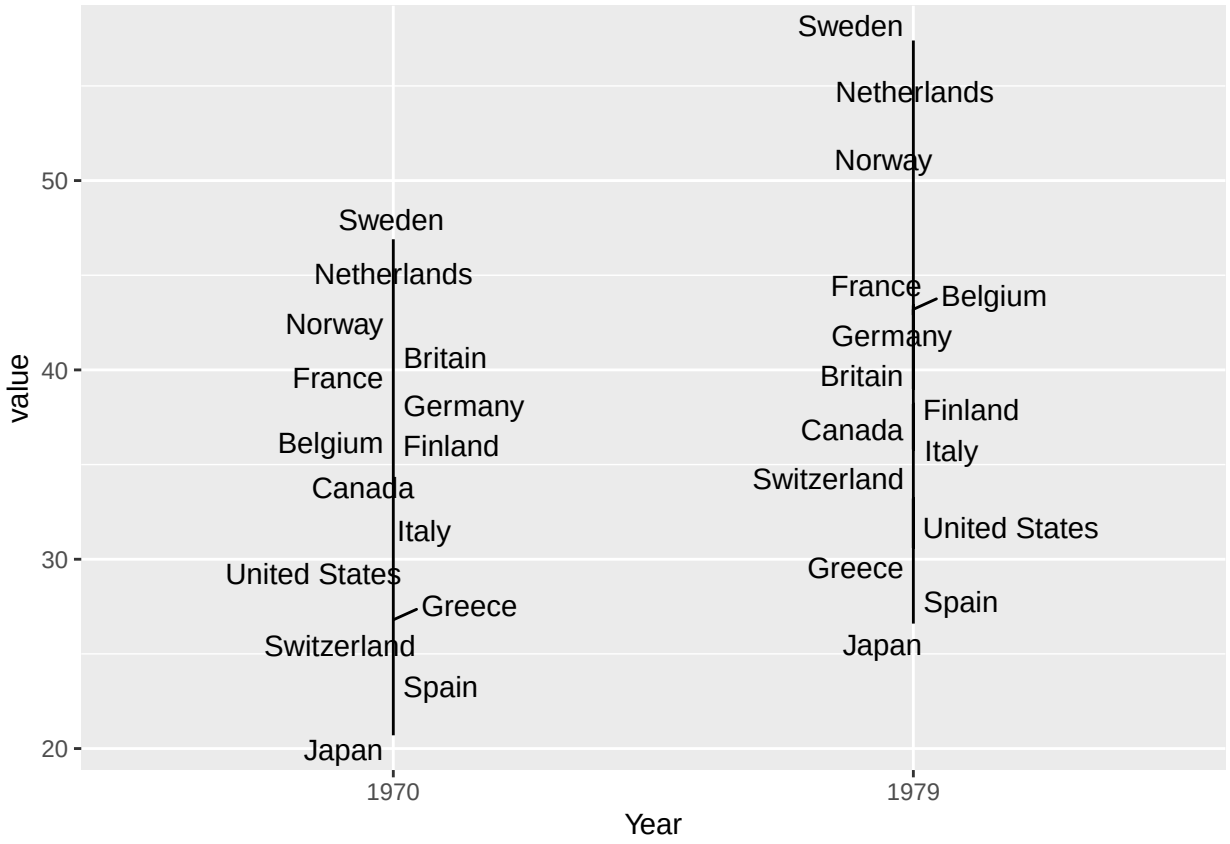
slope Graph - Tufte - Group Assignment Week 5

```
#install.packages("ggrepel")


# Data Set
tax <- tribble(
  ~ Country,      ~ `1970`, ~ `1979`,
  "Sweden",          46.9,     57.4,
  "Netherlands",     44.0,     55.8,
  "Norway",          43.5,     52.2,
  "Britain",         40.7,     39.0,
  "France",          39.0,     43.4,
  "Germany",         37.5,     42.9,
  "Belgium",         35.2,     43.2,
  "Canada",          34.9,     35.8,
  "Finland",         34.9,     38.2,
  "Italy",           30.4,     35.7,
  "United States",   30.3,     32.5,
  "Greece",          26.8,     30.6,
  "Switzerland",     26.5,     33.2,
  "Spain",           22.5,     27.1,
  "Japan",           20.7,     26.6
)


tax_pivoted <- tax %>% pivot_longer(c("1970","1979"), names_to = "Year")

tax_pivoted
```

```
## # A tibble: 30 x 3
##    Country     Year  value
##    <chr>       <chr> <dbl>
##  1 Sweden      1970   46.9
##  2 Sweden      1979   57.4
##  3 Netherlands 1970   44
##  4 Netherlands 1979   55.8
##  5 Norway      1970   43.5
##  6 Norway      1979   52.2
##  7 Britain     1970   40.7
```

```
##  8 Britain     1979   39
##  9 France      1970   39
## 10 France      1979   43.4
## # ... with 20 more rows
```

```
tax_slope <- ggplot(tax_pivoted, aes(Year, value)) +
  geom_line()+
  geom_text_repel(aes(label=Country))

# p<-ggplot(a) + geom_segment(aes(x=0,xend=months,y=year1,yend=year3),size=.75)

tax_slope
```

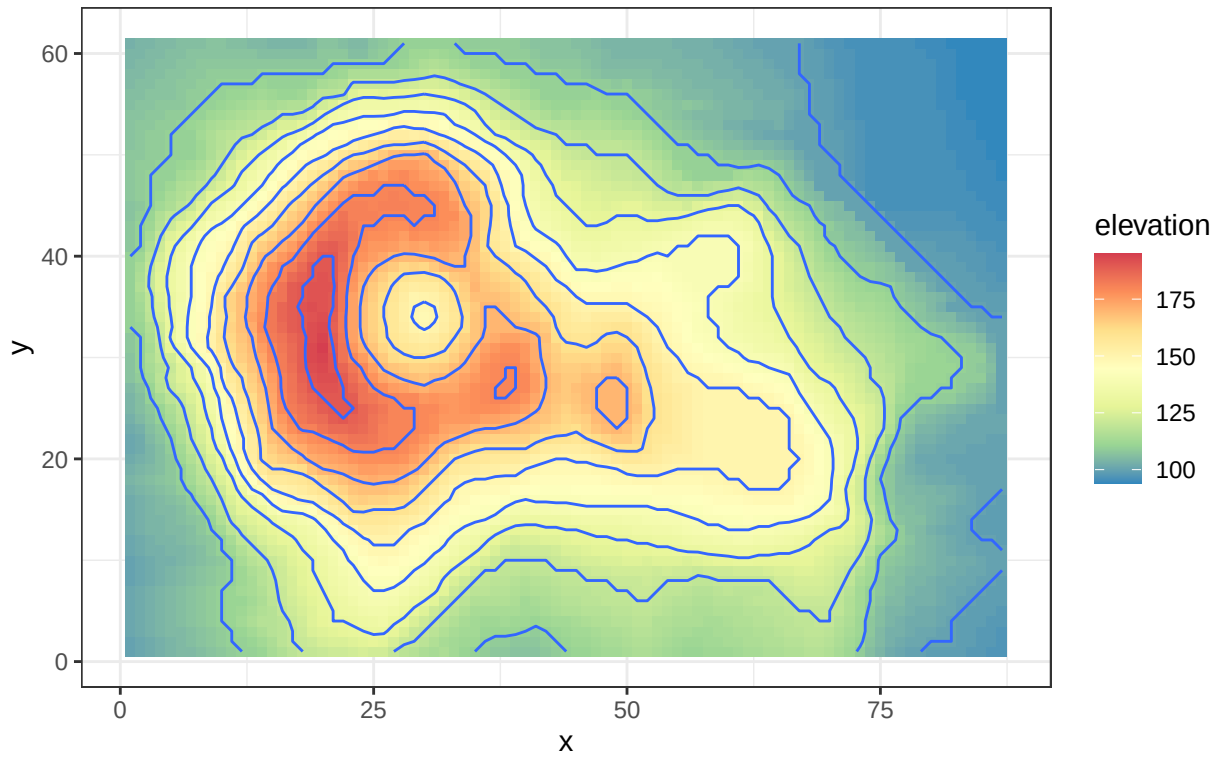


Volcano Heat Map

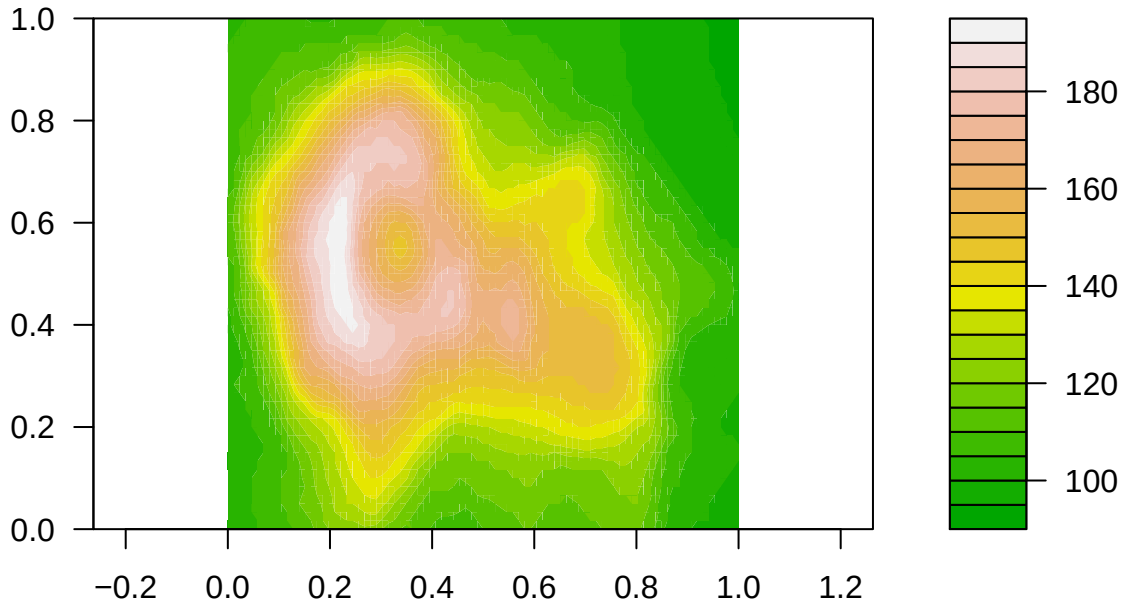
```
volcano_tbl <- as_tibble(volcano)
```

```
## Warning: The `x` argument of `as_tibble.matrix()` must have column names if `.name_repair` is omitte
## Using compatibility `.name_repair`.
## This warning is displayed once every 8 hours.
## Call `lifecycle::last_warnings()` to see where this warning was generated.
```

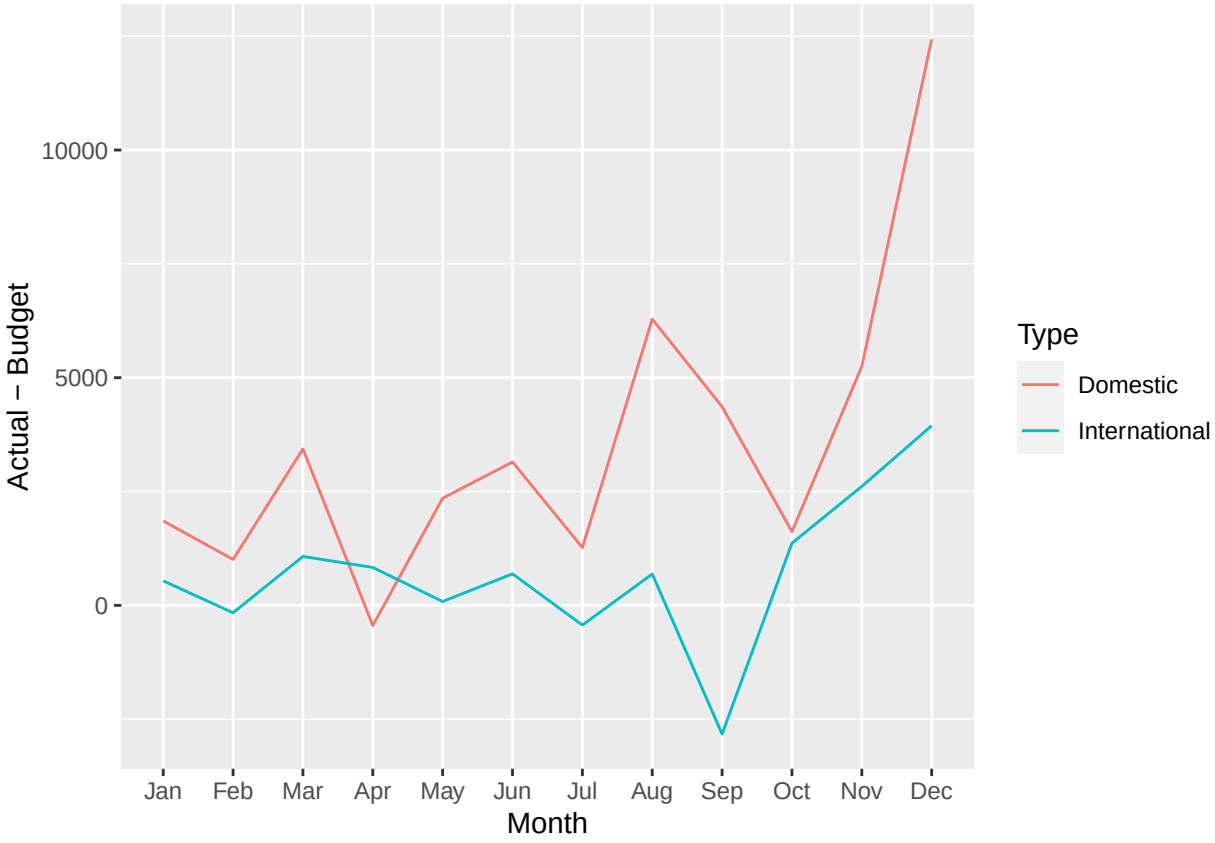
```r
colnames(volcano_tbl) <- 1:ncol(volcano)
volcano_tbl$row <- 1:nrow(volcano_tbl)

heat_map <- volcano_tbl %>% pivot_longer(-contains("row"), names_to = "y",
                                         values_to = "elevation")
names(heat_map) <- c("x", "y", "elevation")
heat_map$y <- as.integer(heat_map$y)
ggplot(heat_map)+
  geom_tile(aes(x,y, fill = elevation))+
  scale_fill_distiller(palette = "Spectral")+
  coord_equal() +
  geom_contour(aes(x = x, y = y, z=elevation)) +
  theme_bw()
```

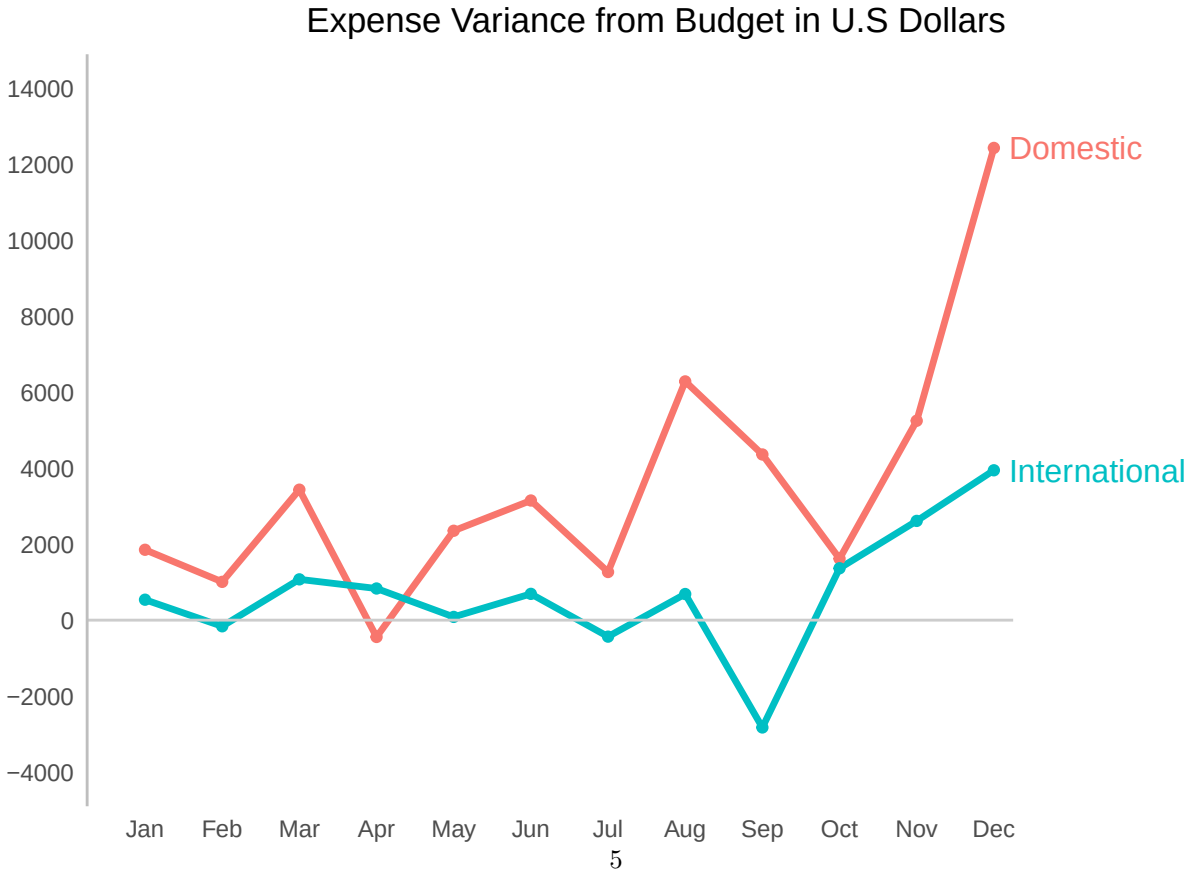


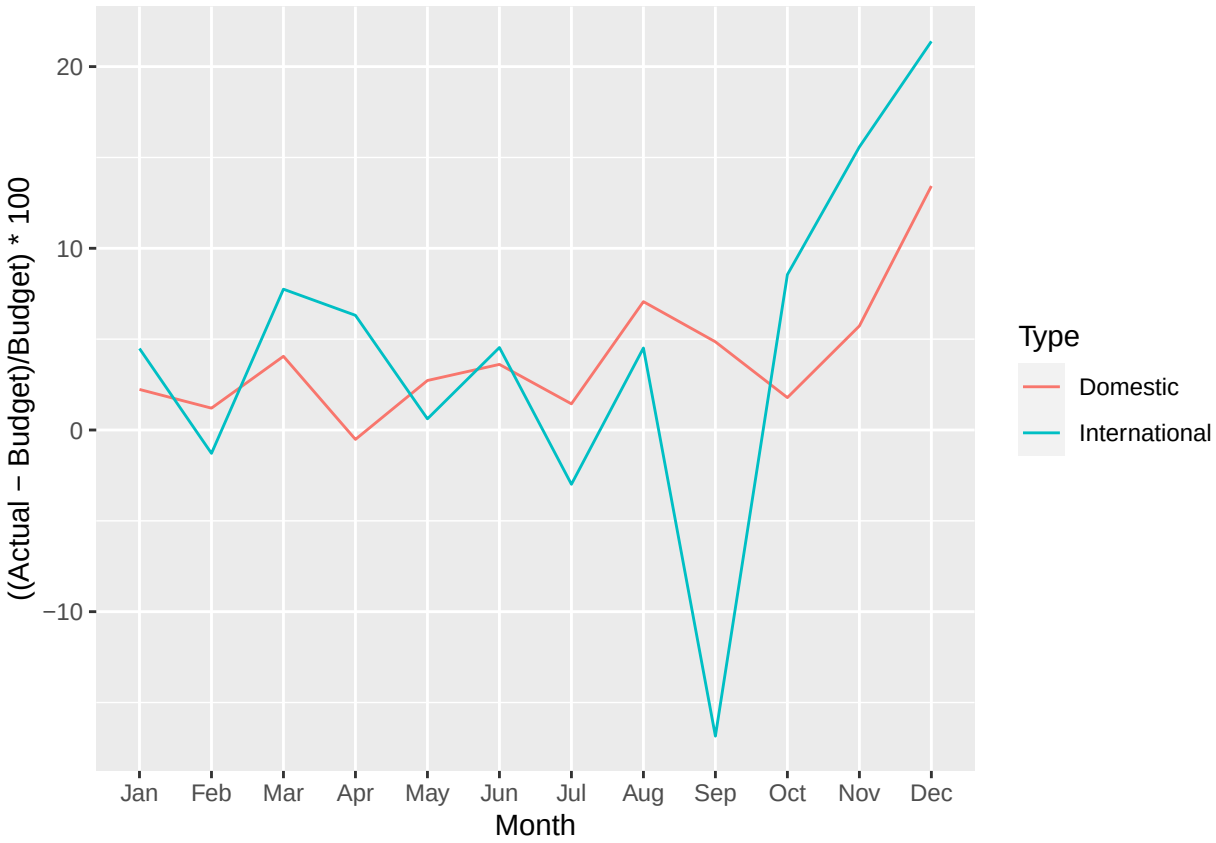

```r
filled.contour(volcano, color.palette = terrain.colors, asp = 1)
```

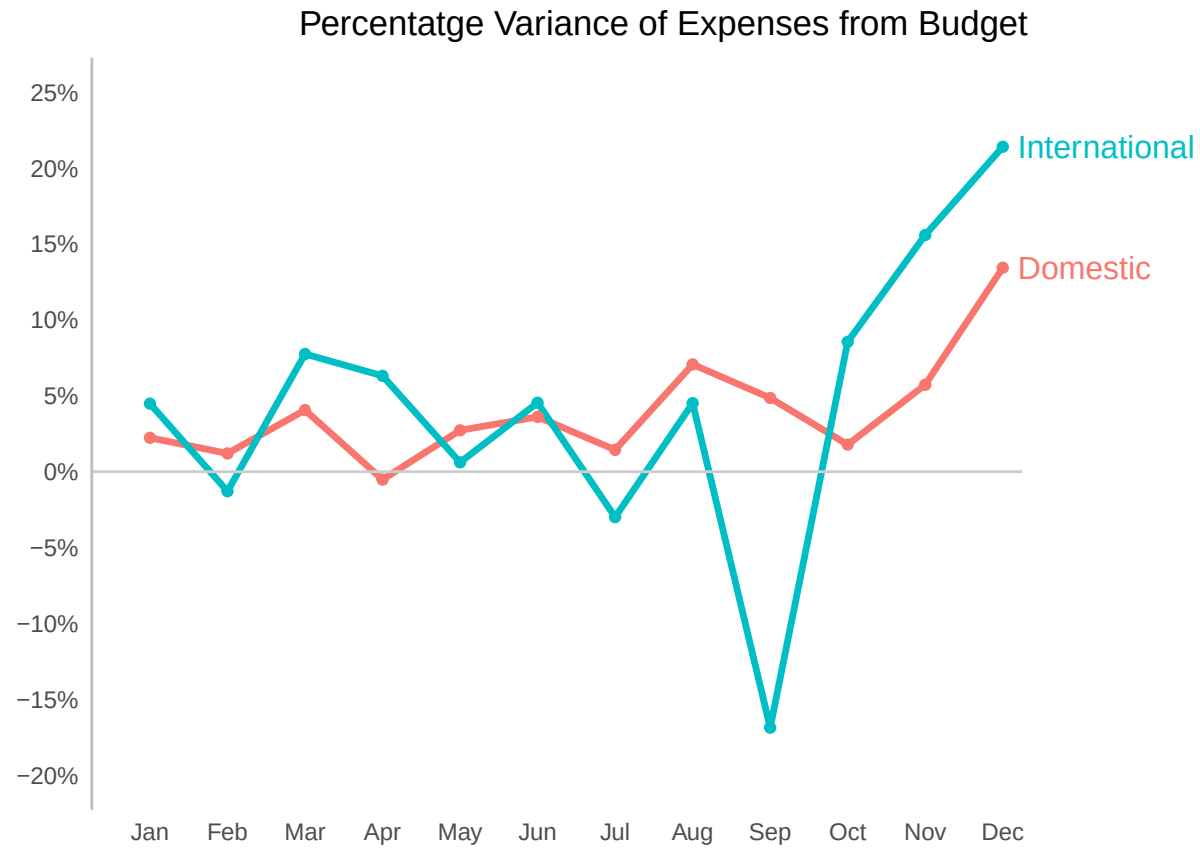

1.0
0.8
0.6
0.4
0.2
0.0
−0.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
180
160
140
120
100

Question 3


10000
5000
0
Actual – Budget
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
Type
Domestic
International


Expense Variance from Budget in U.S Dollars
14000
12000
10000
8000
6000
4000
2000
0
−2000
−4000
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Domestic
International


20
10
0
−10
((Actual − Budget)/Budget) * 100
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
Type
Domestic
International


Percentatge Variance of Expenses from Budget
25%
20%
15%
10%
5%
0%
−5%
−10%
−15%
−20%
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
International
Domestic

“‘