

# Malgorzata Pawlak - raport PISA 1/1

## Context

A new working paper by Kathleen McGinn and her colleagues for Harvard Business School purports that working mothers are more likely to raise successful daughters.

## Preparing data

```
# Loading data frame and libraries
load("/Users/Gosia/Documents/UNI/wizualizacja w R/student2012.rmd")
library(dplyr)
library(tidyr)

# Creating data frames with desired subsets of data and removing N/As
girls_gender <- student2012$ST04Q01 == "Female"
girls <- student2012[girls_gender, ]

girls_career <- na.omit(girls[,c("CNT", "ST15Q01", "ST29Q05")])
girls_confidence <- na.omit(girls[,c("CNT", "ST15Q01", "ST43Q01")])

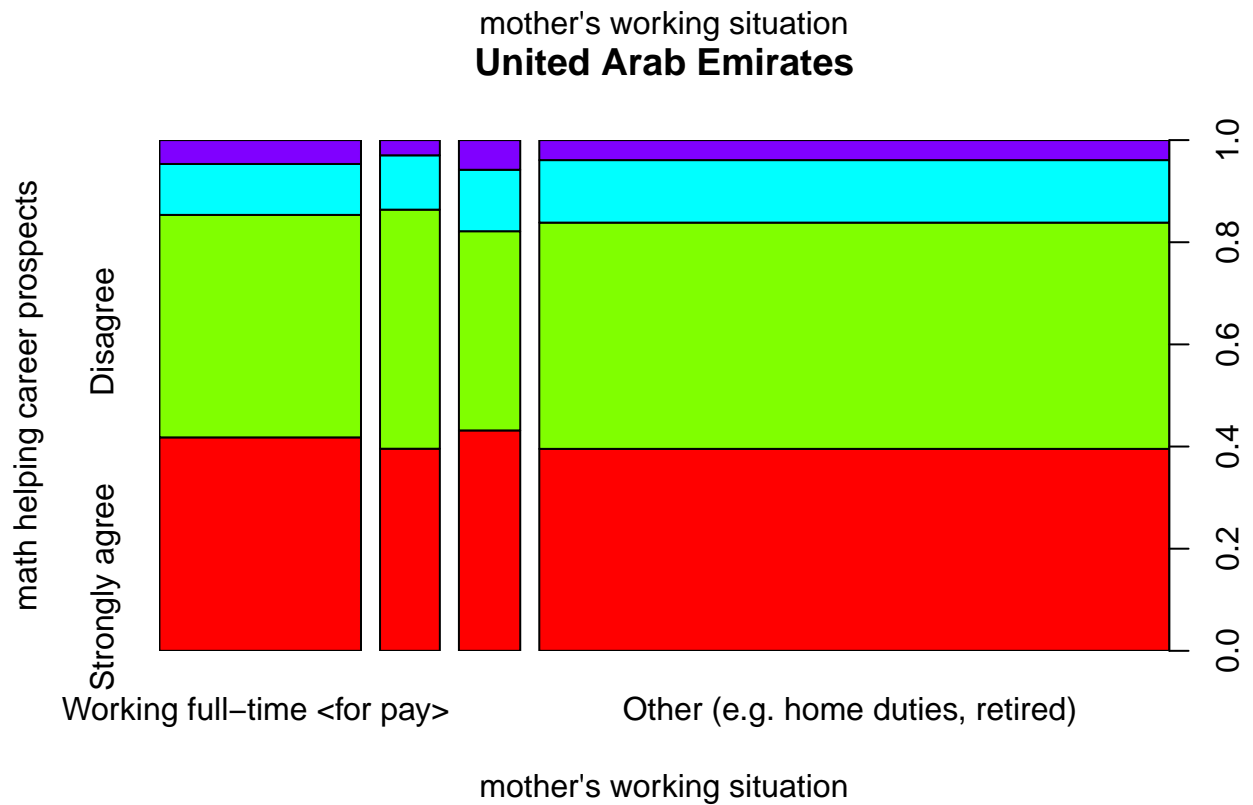
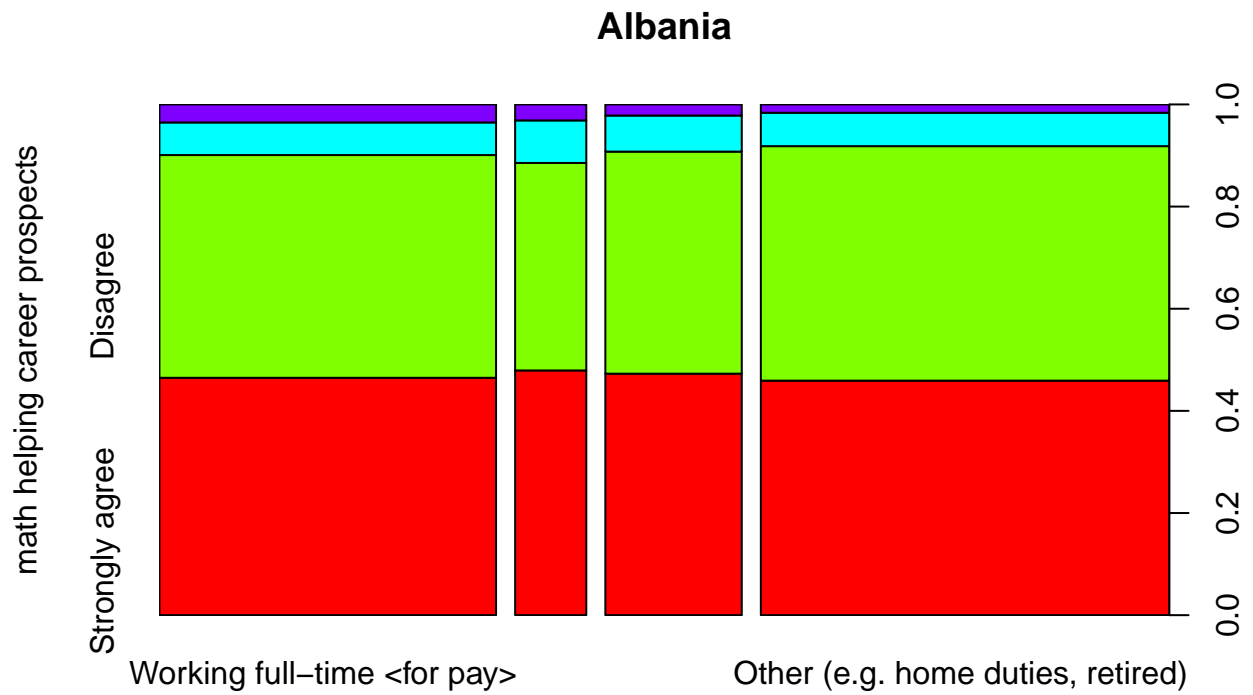
# Creating vector with a list of countries
countries_all <- unique(girls$CNT)
```

## Plots

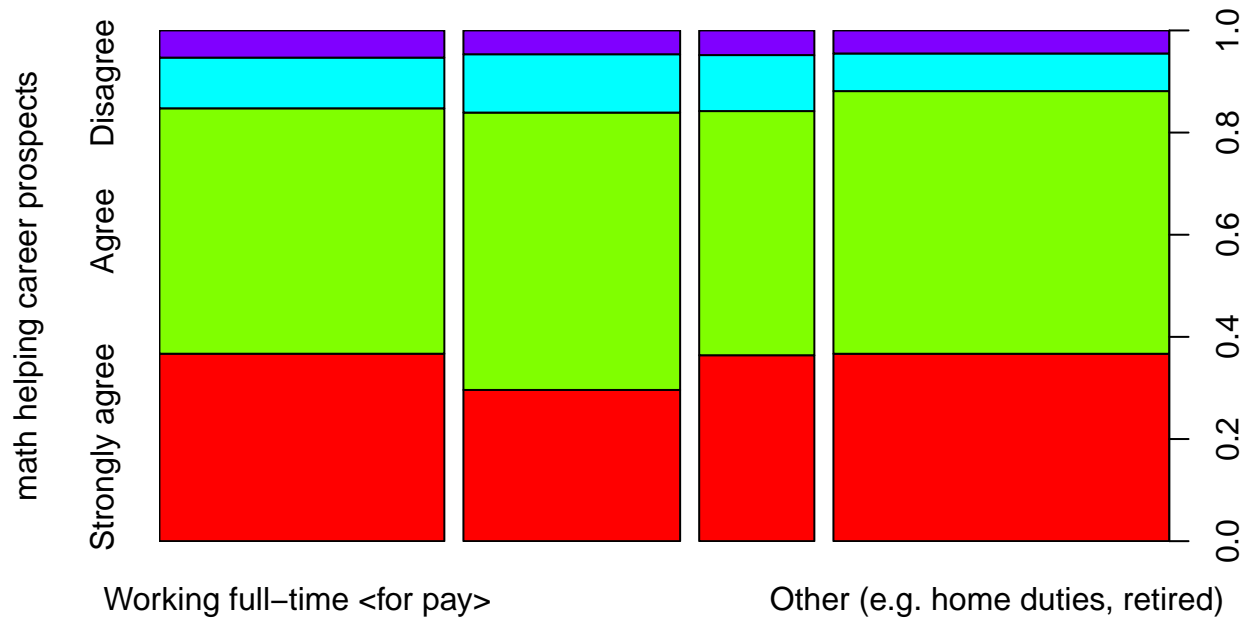
“Learning mathematics is worthwhile for me because it will improve my career”

```
plot_career<-function(country) {
  with(girls_career[girls_career$CNT==country,], plot(ST15Q01,ST29Q05, main=country, las=2, col=rainbow(2)))
}

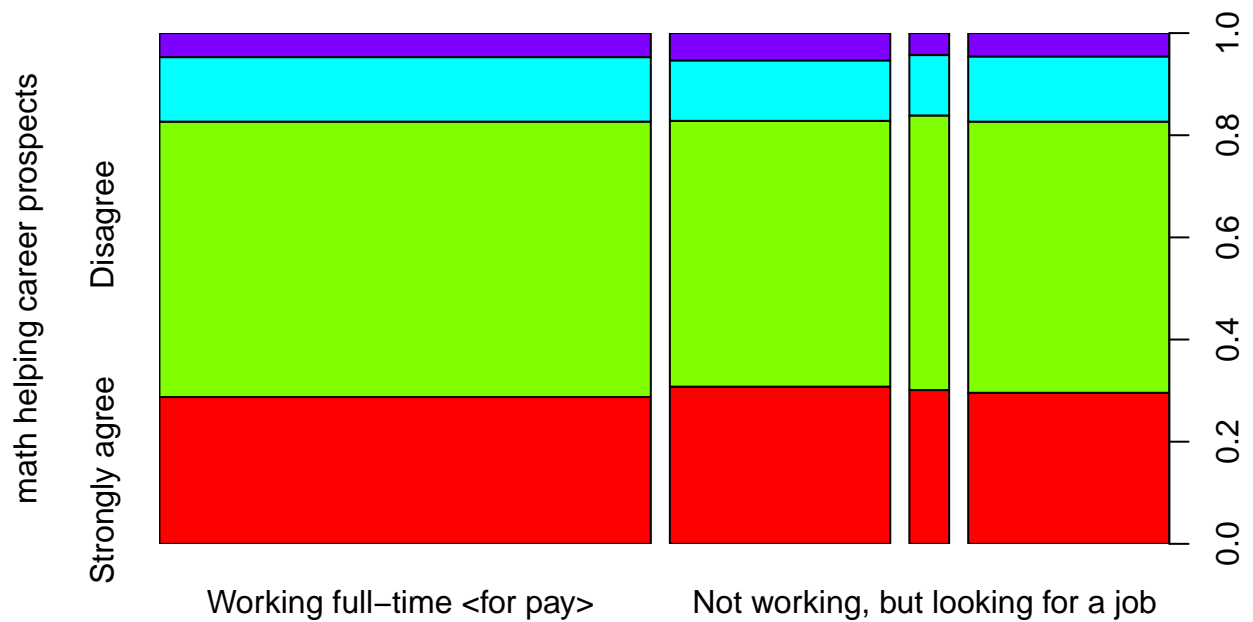
lapply(countries_all, plot_career)
```



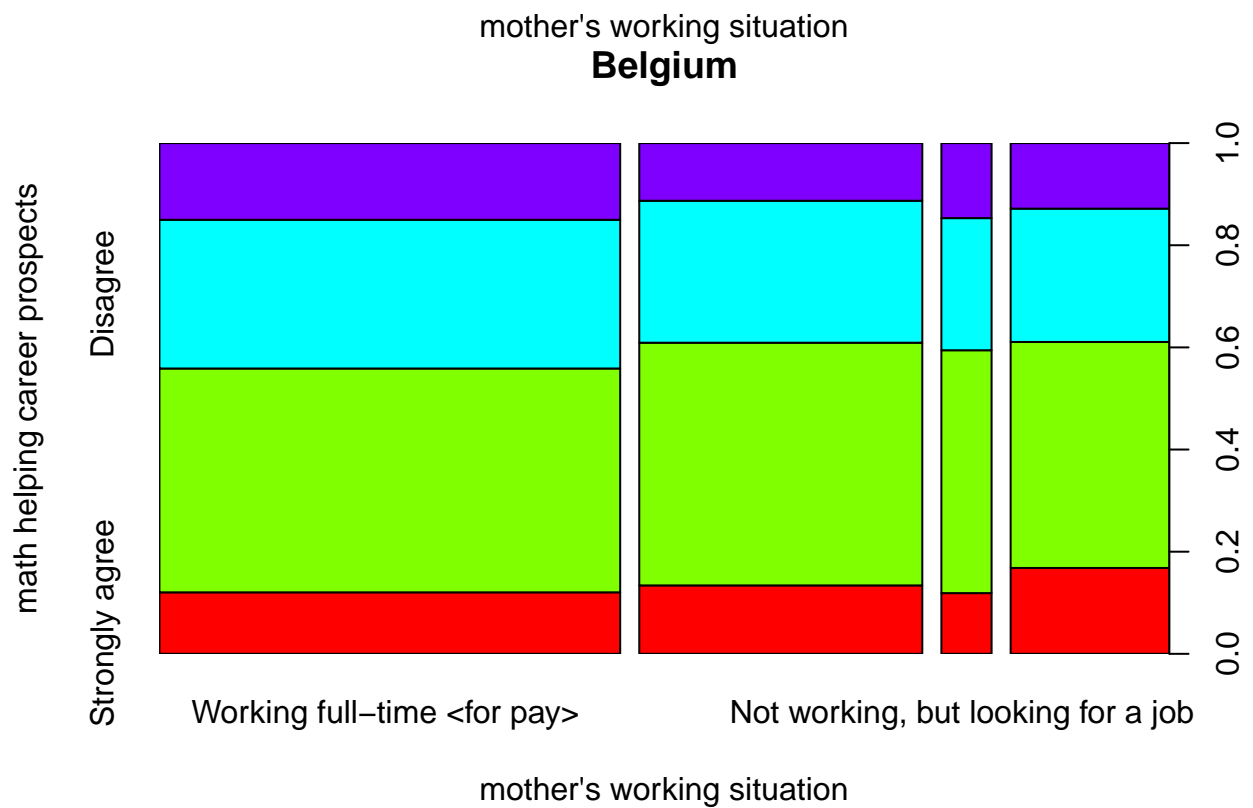
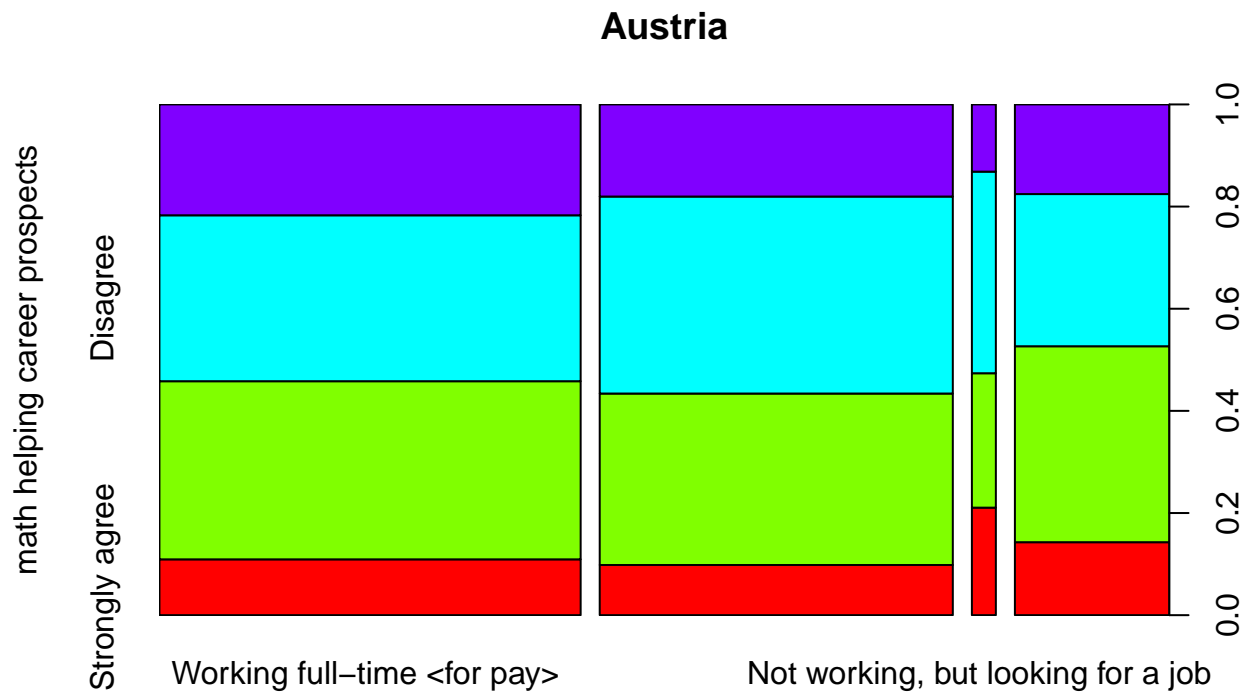
## Argentina

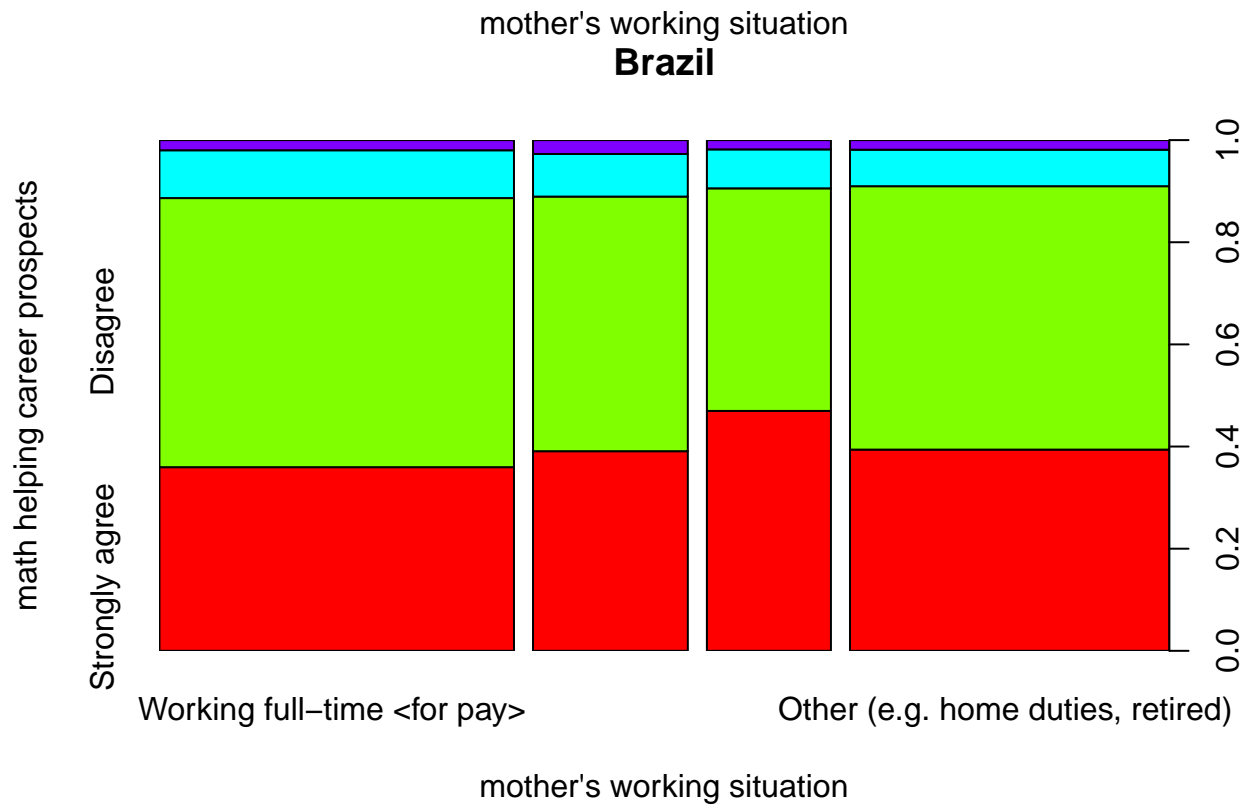
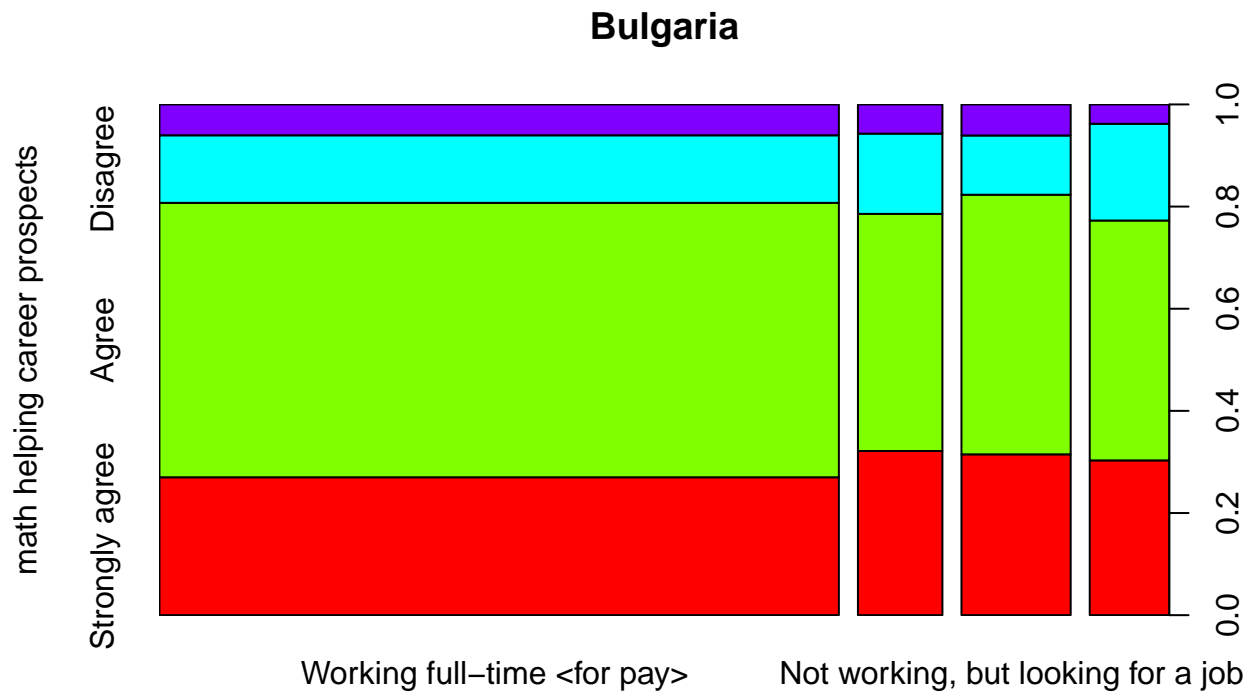


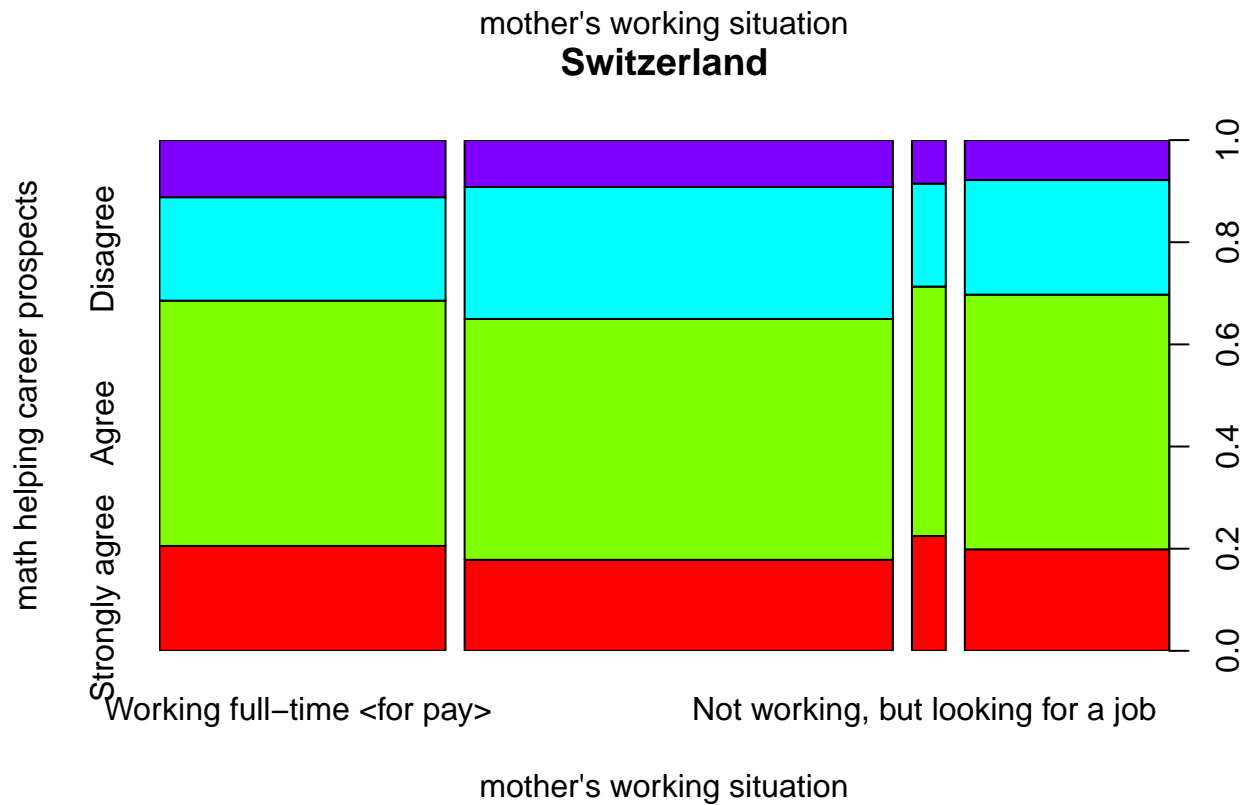
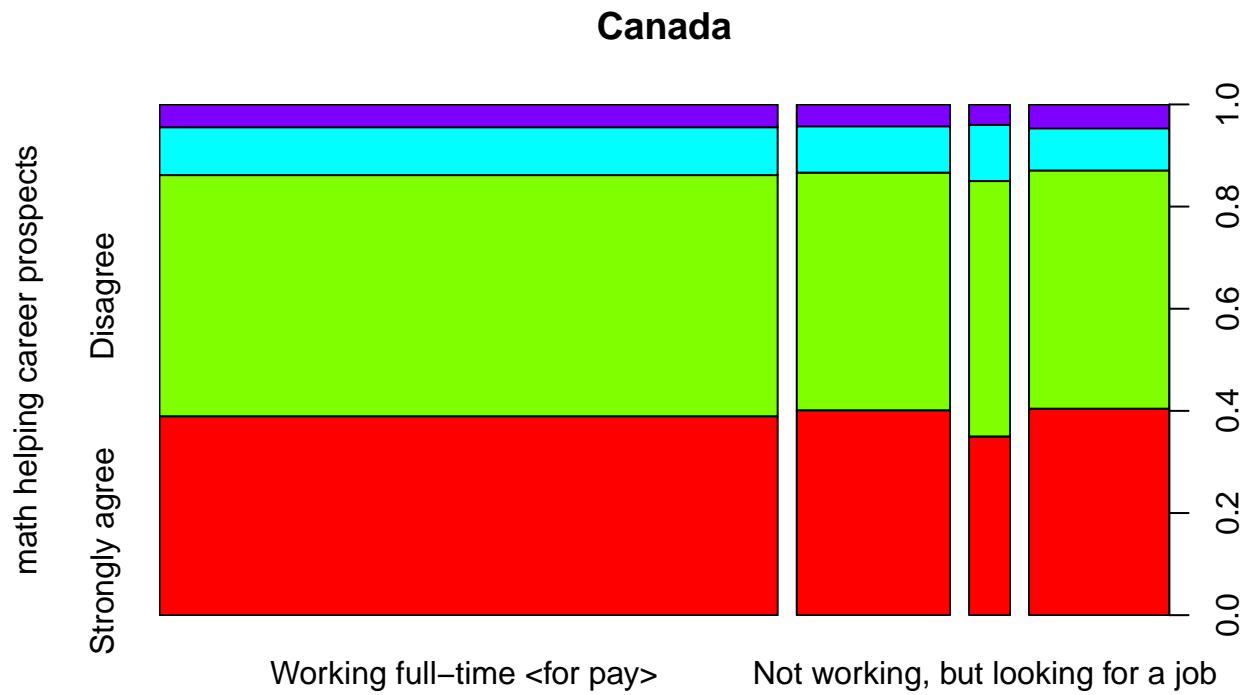
## mother's working situation Australia

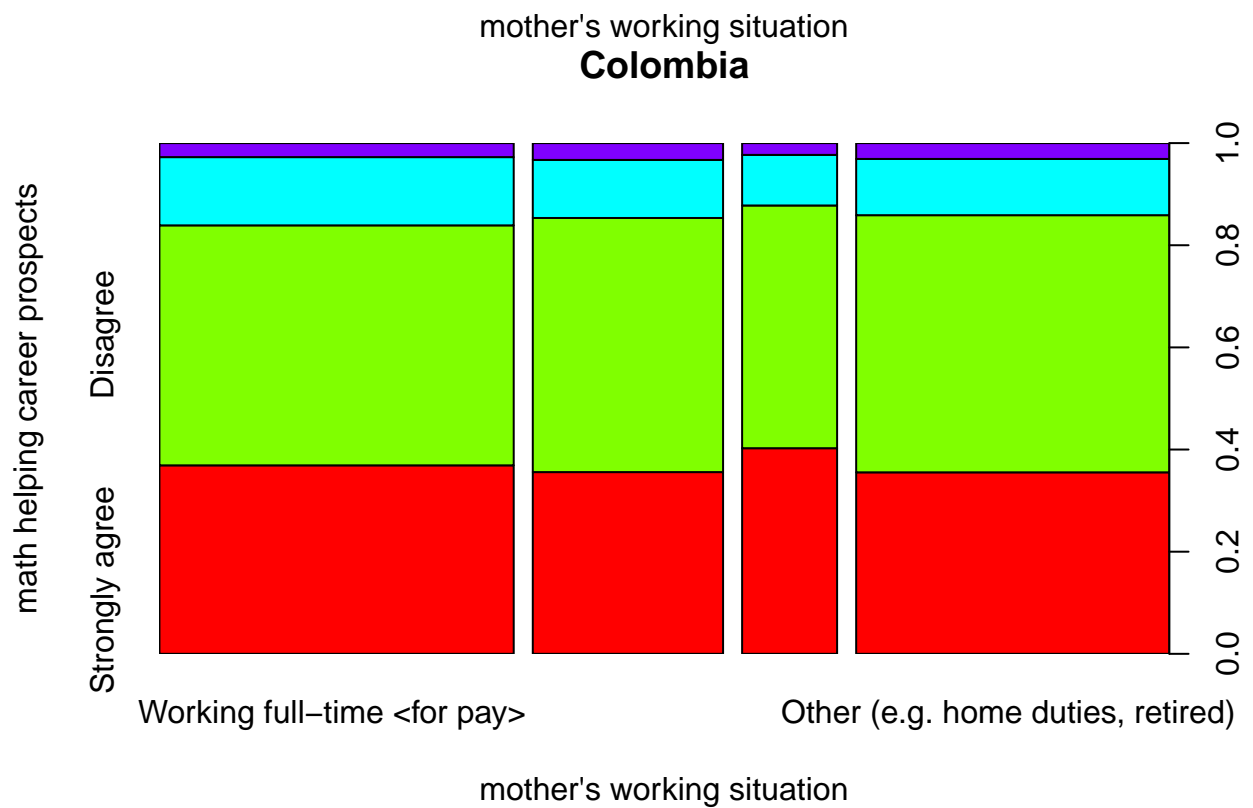
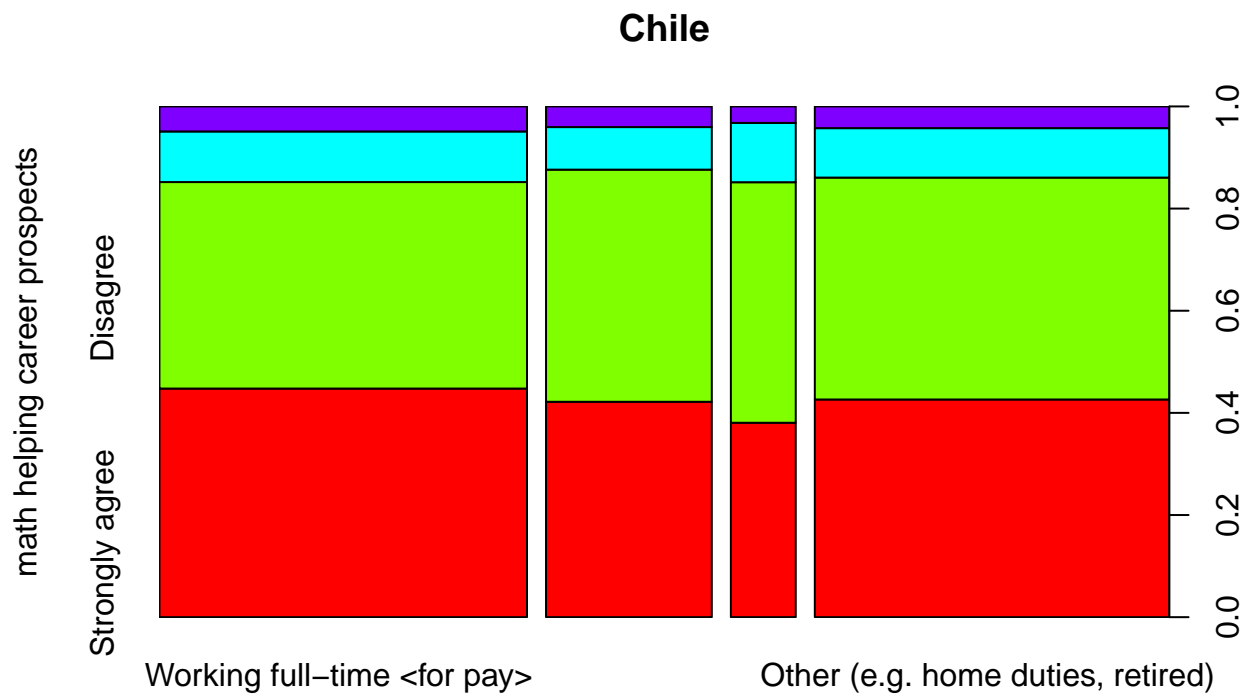


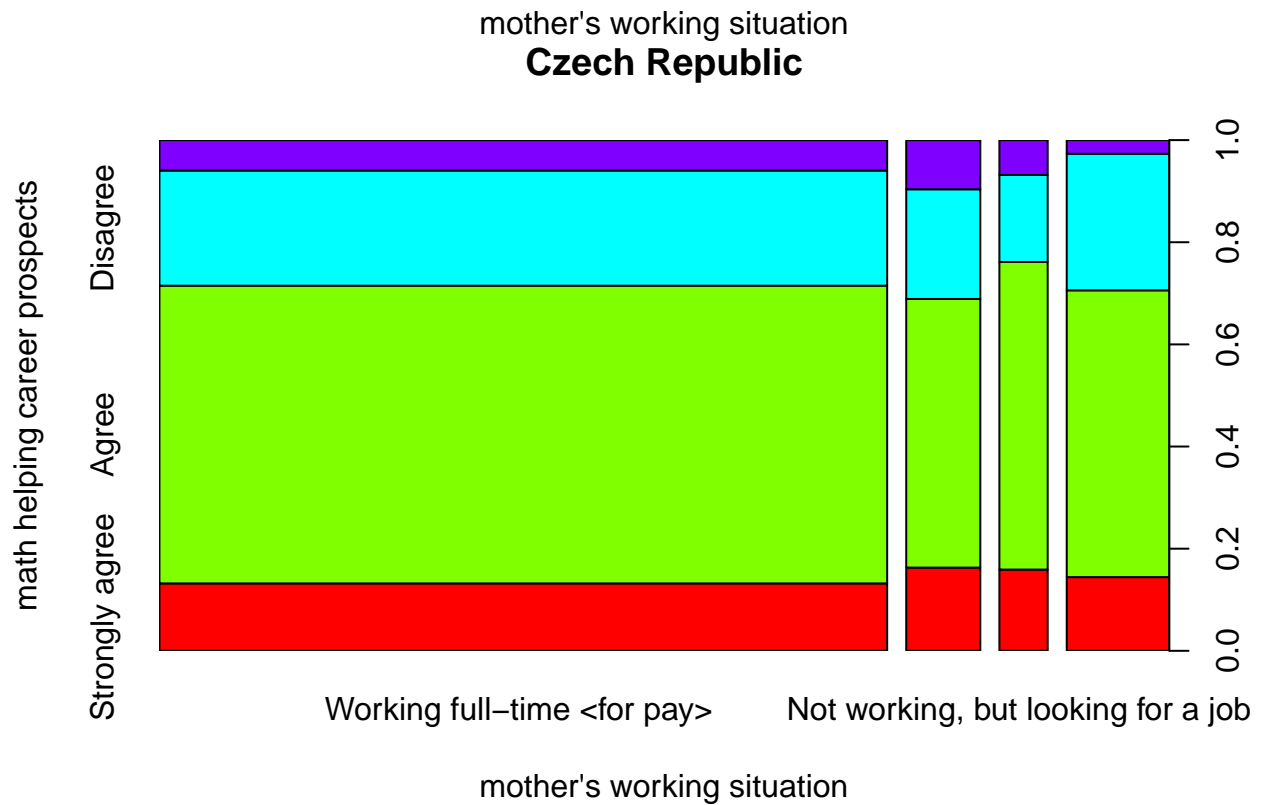
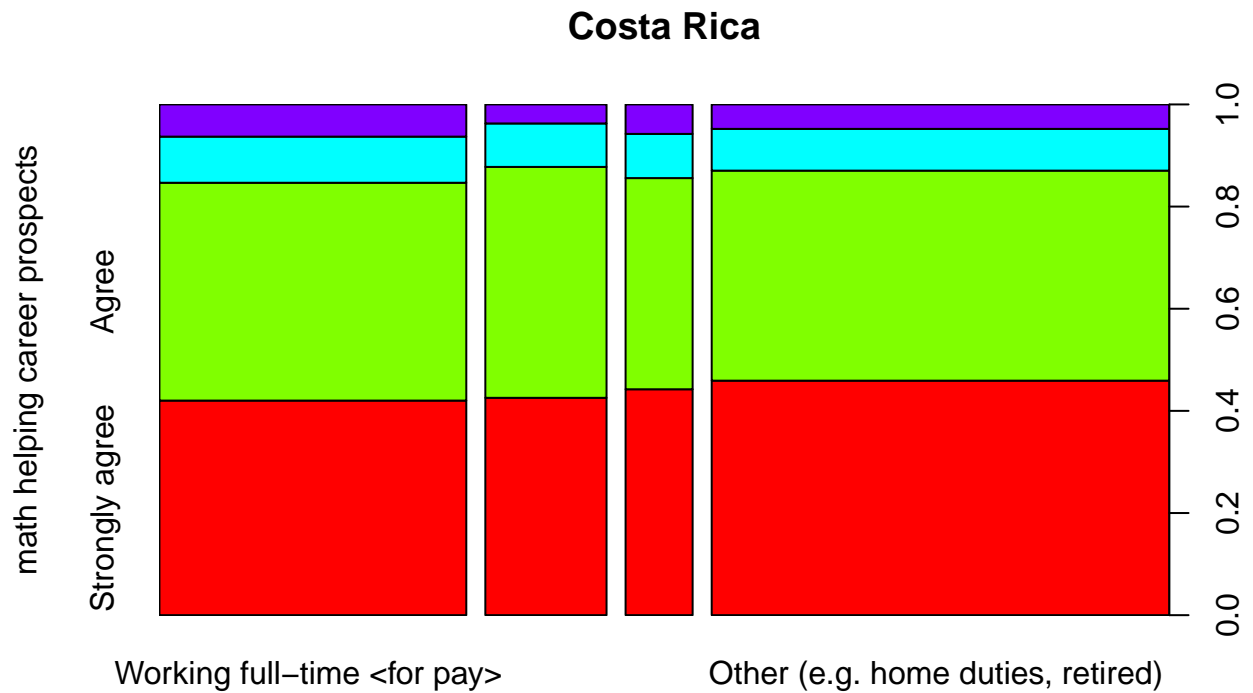
mother's working situation



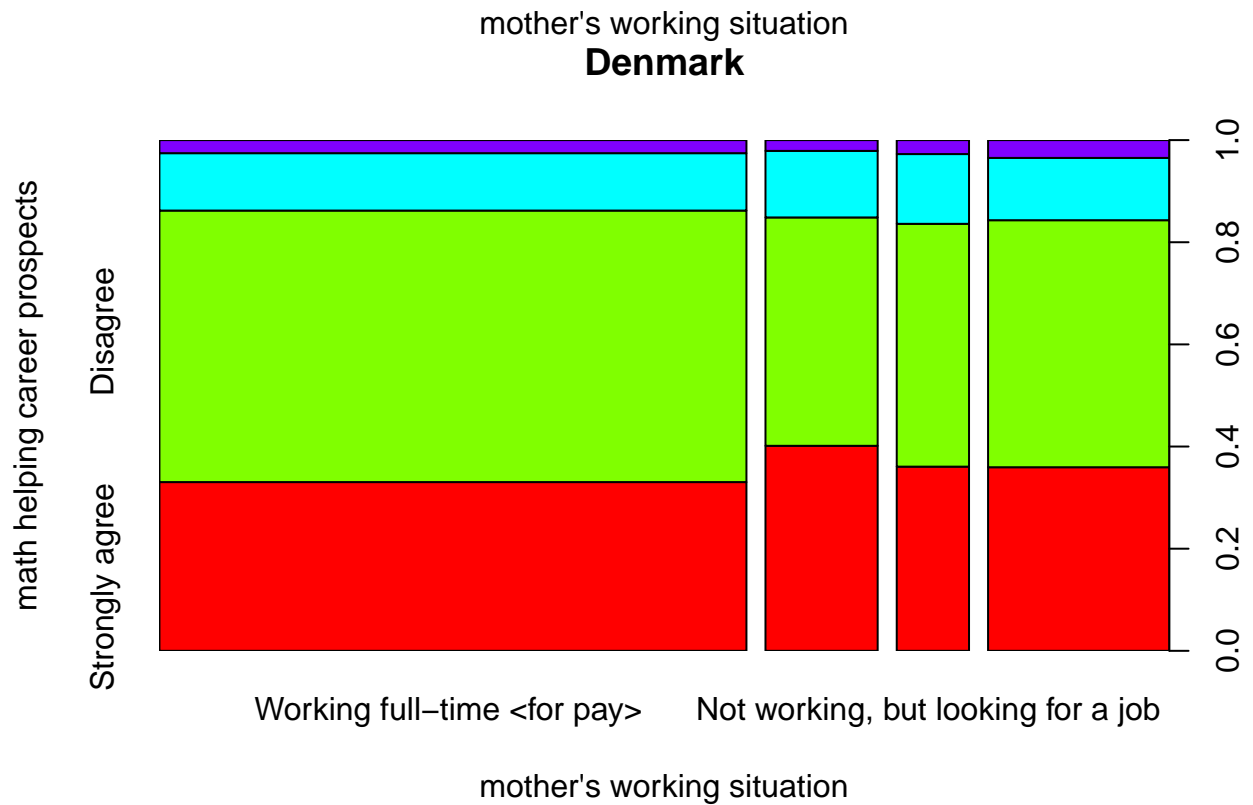
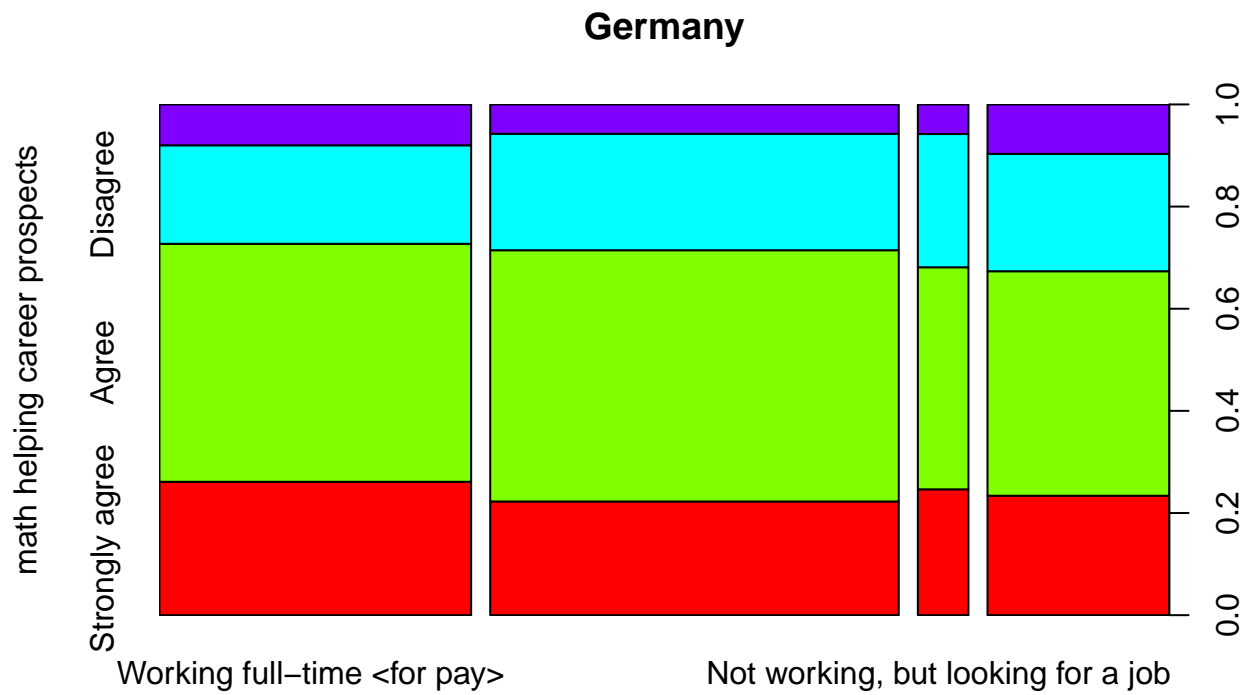


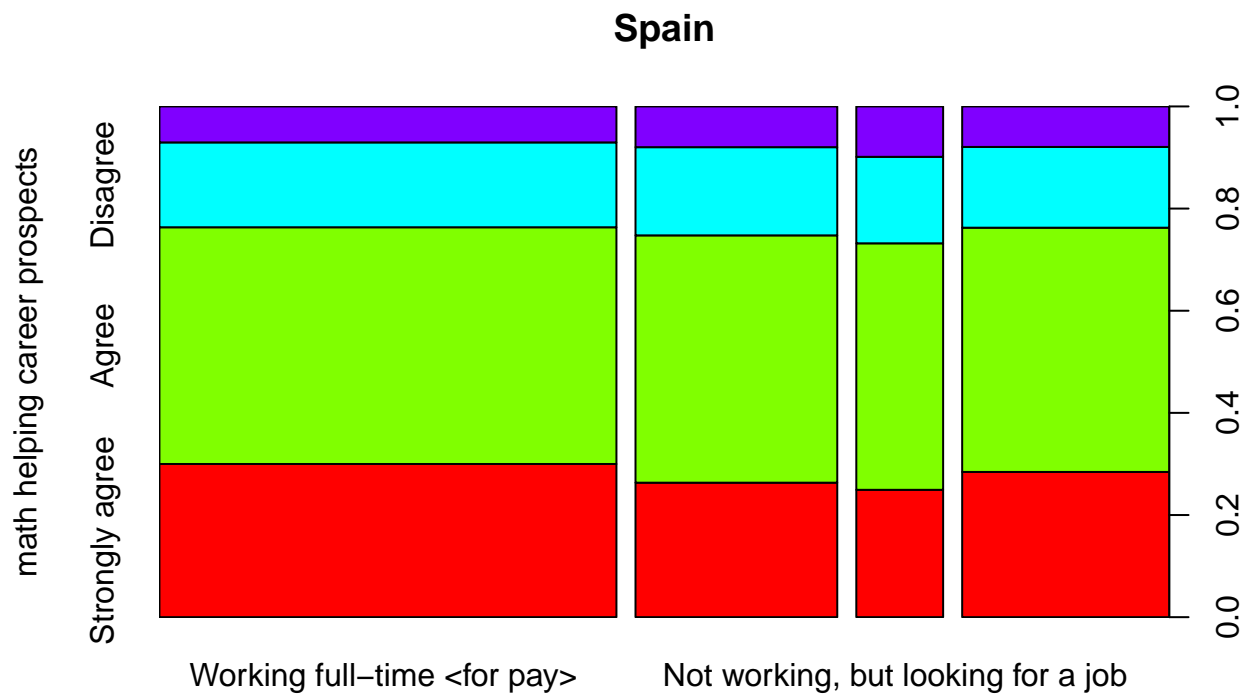


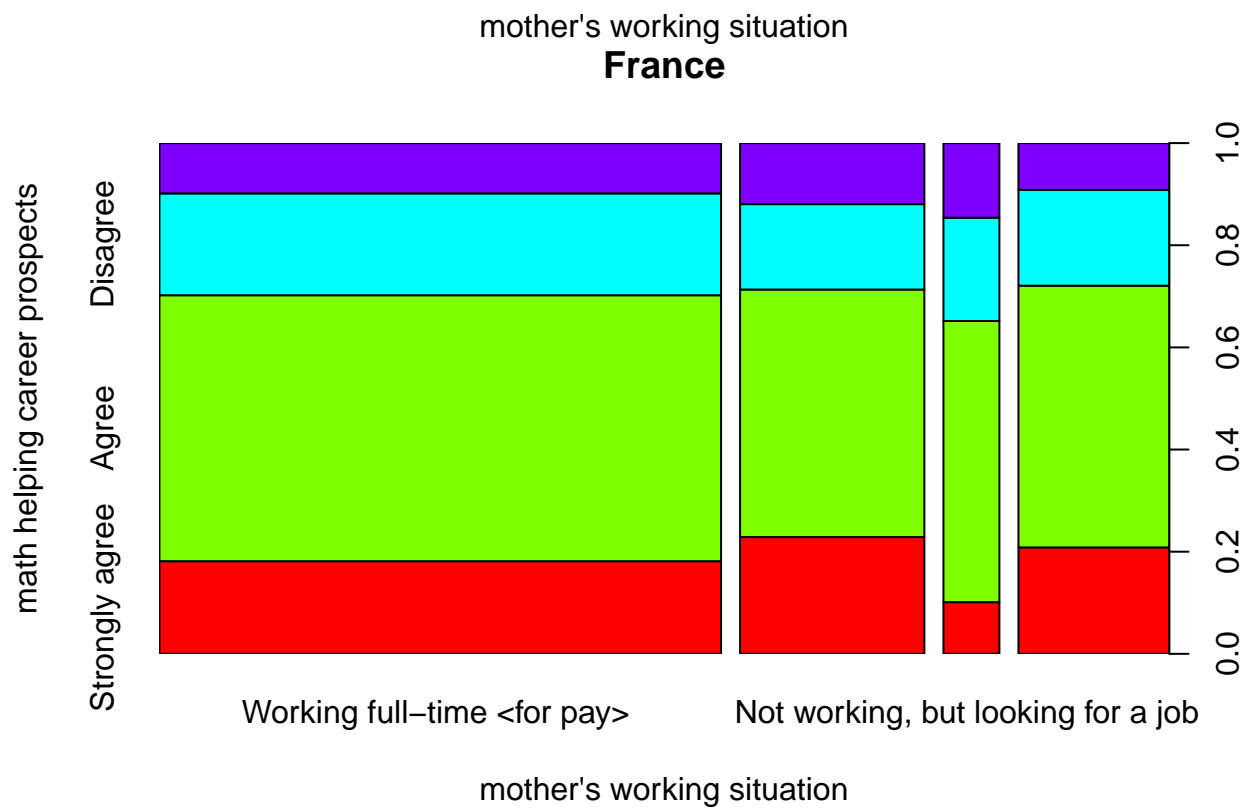
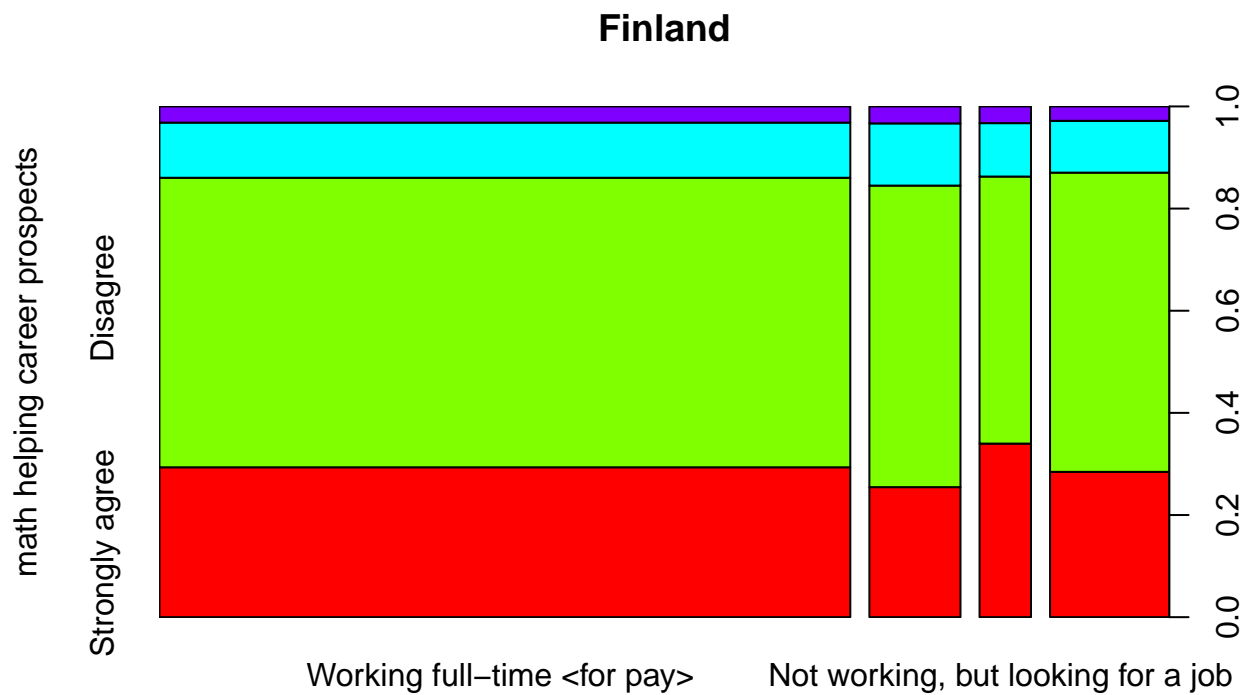


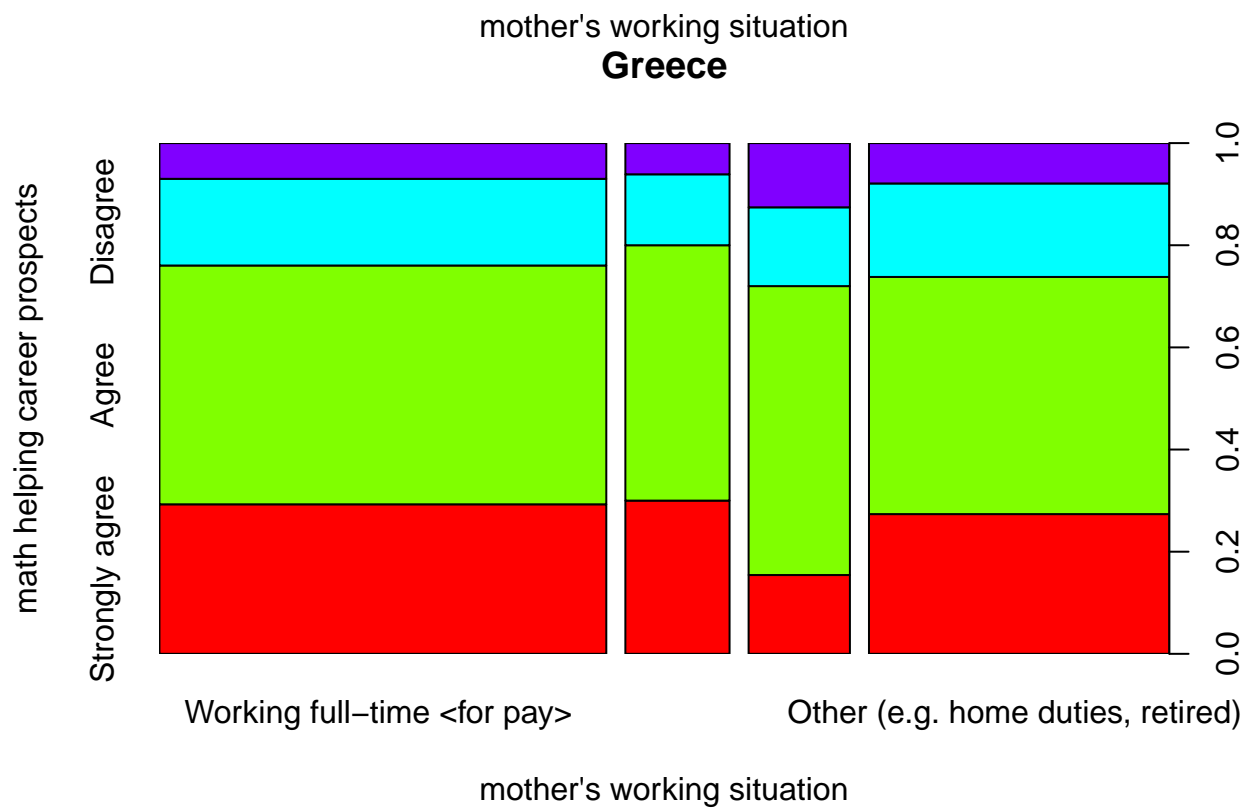
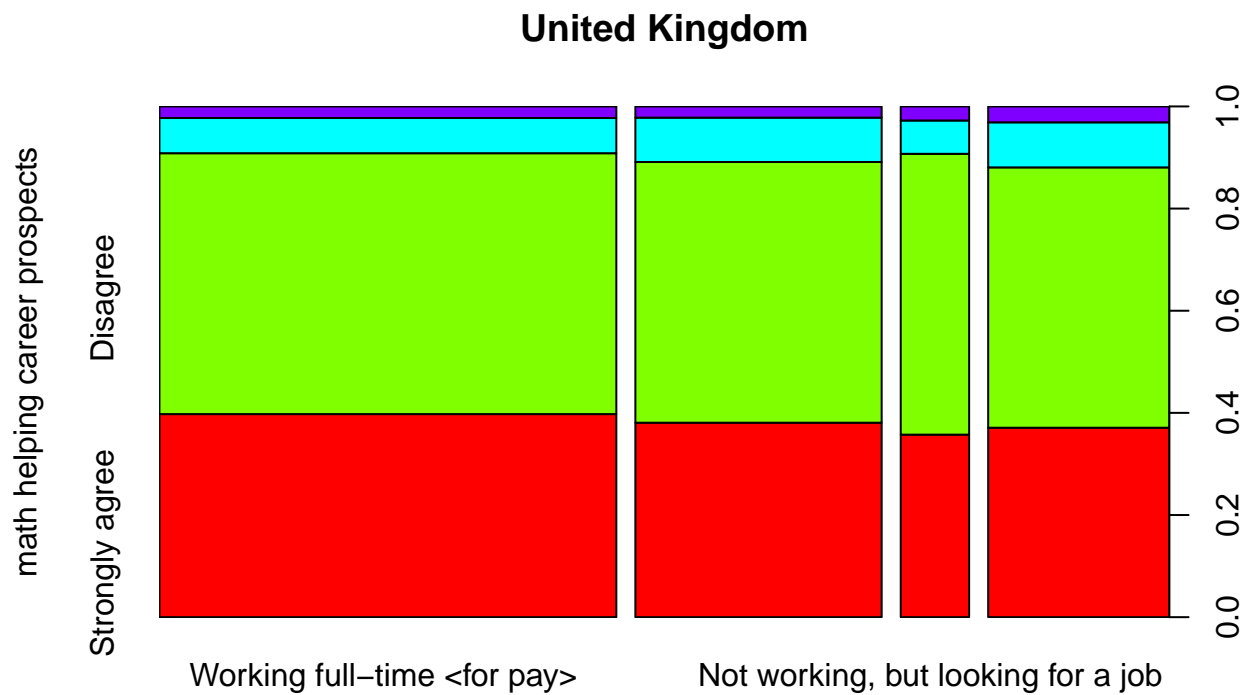




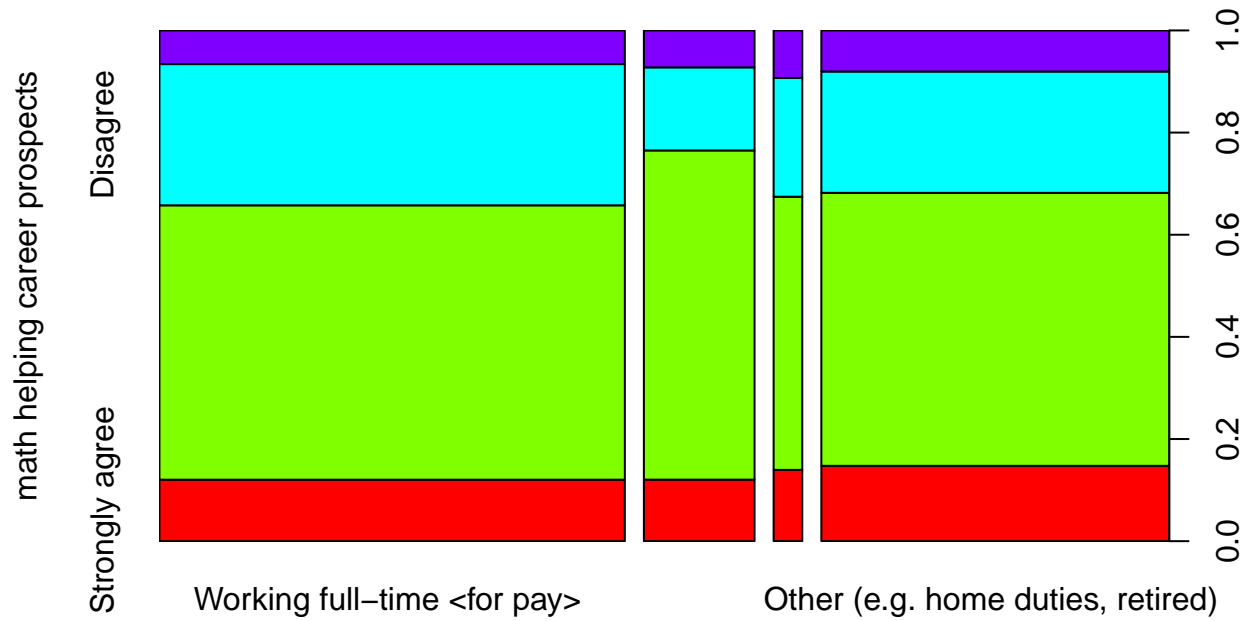




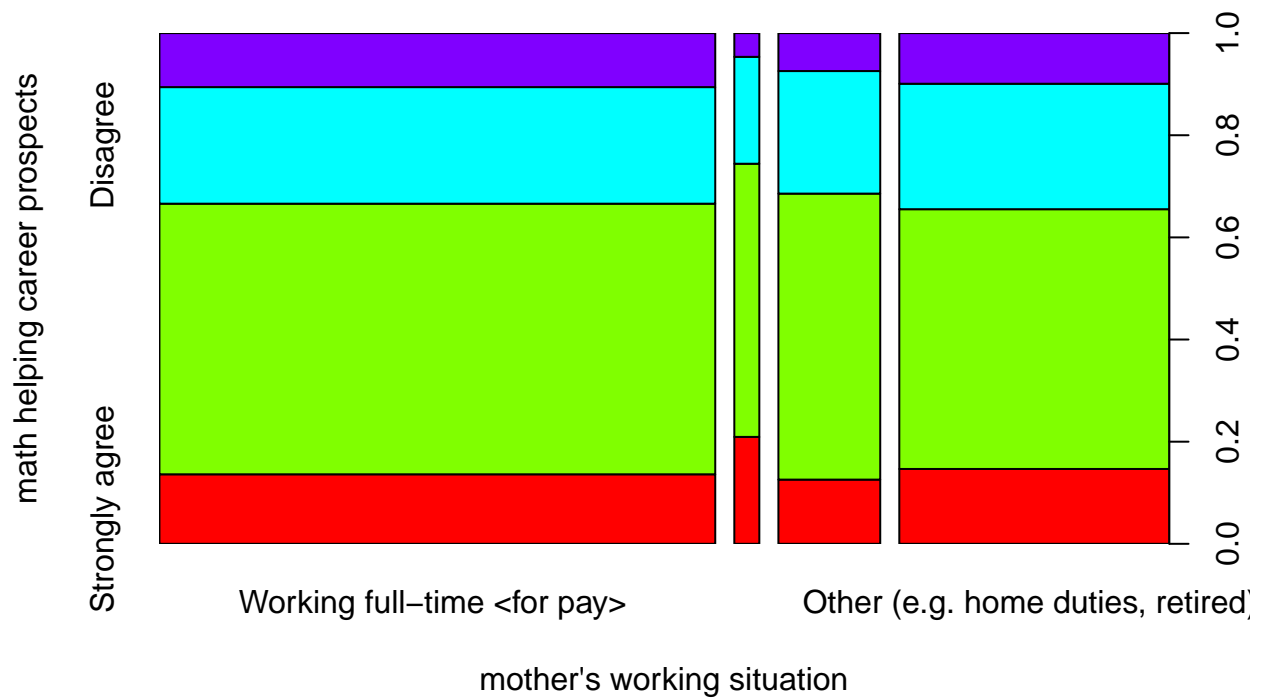


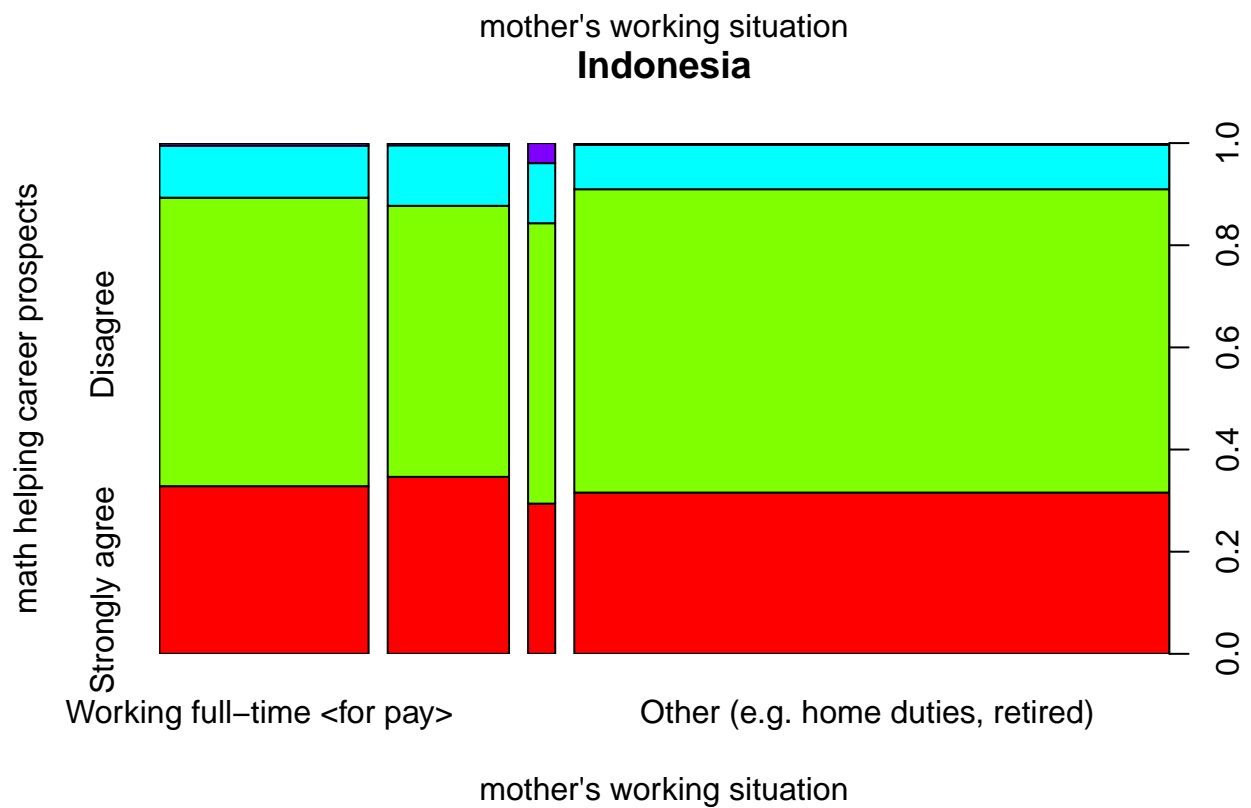
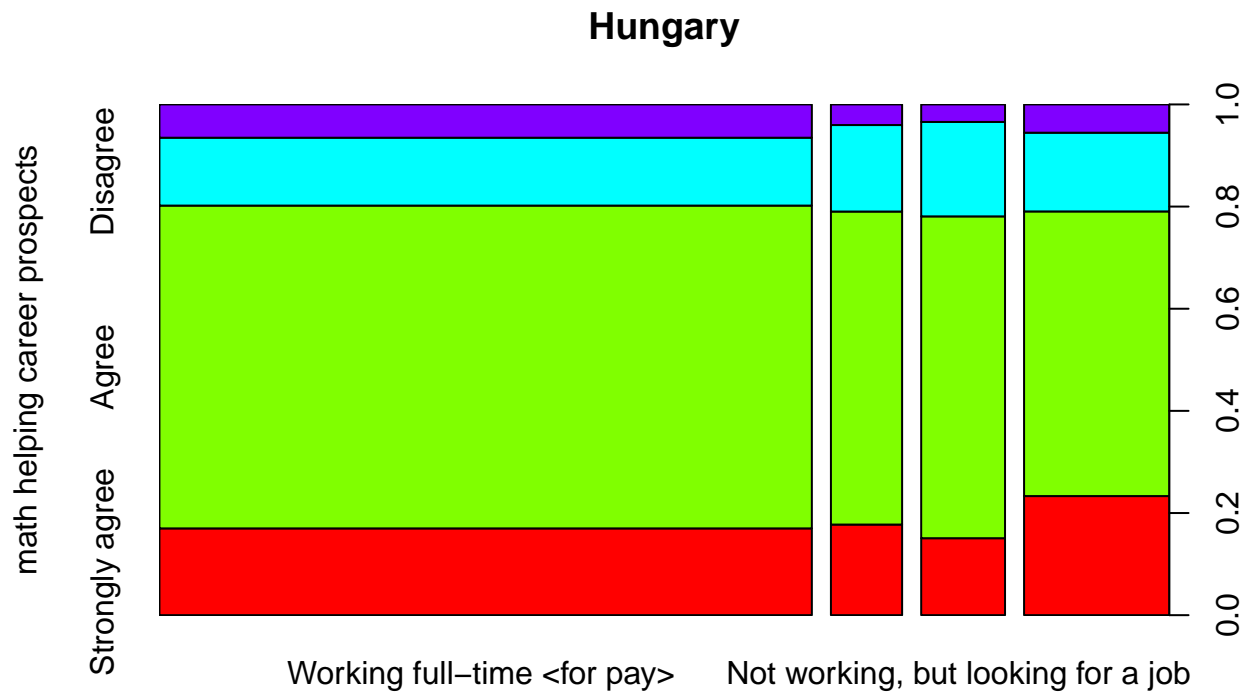


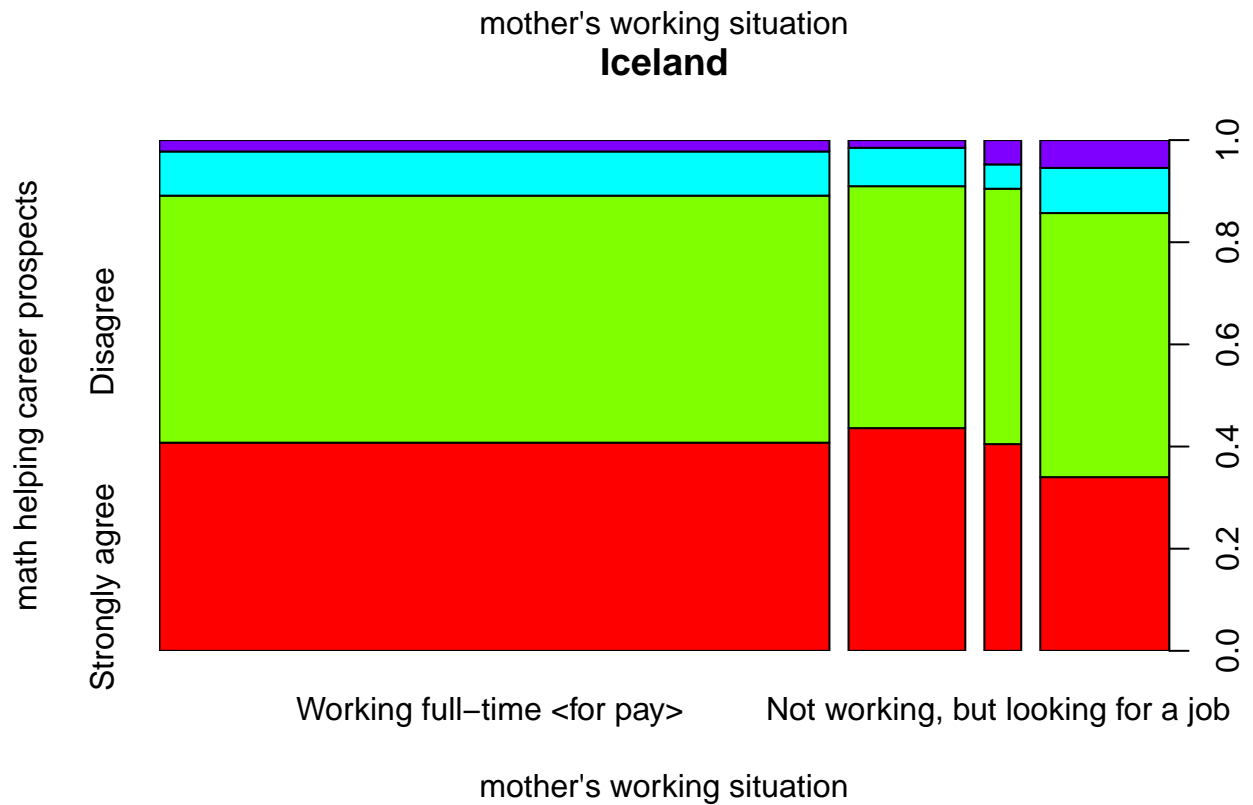
## Hong Kong–China

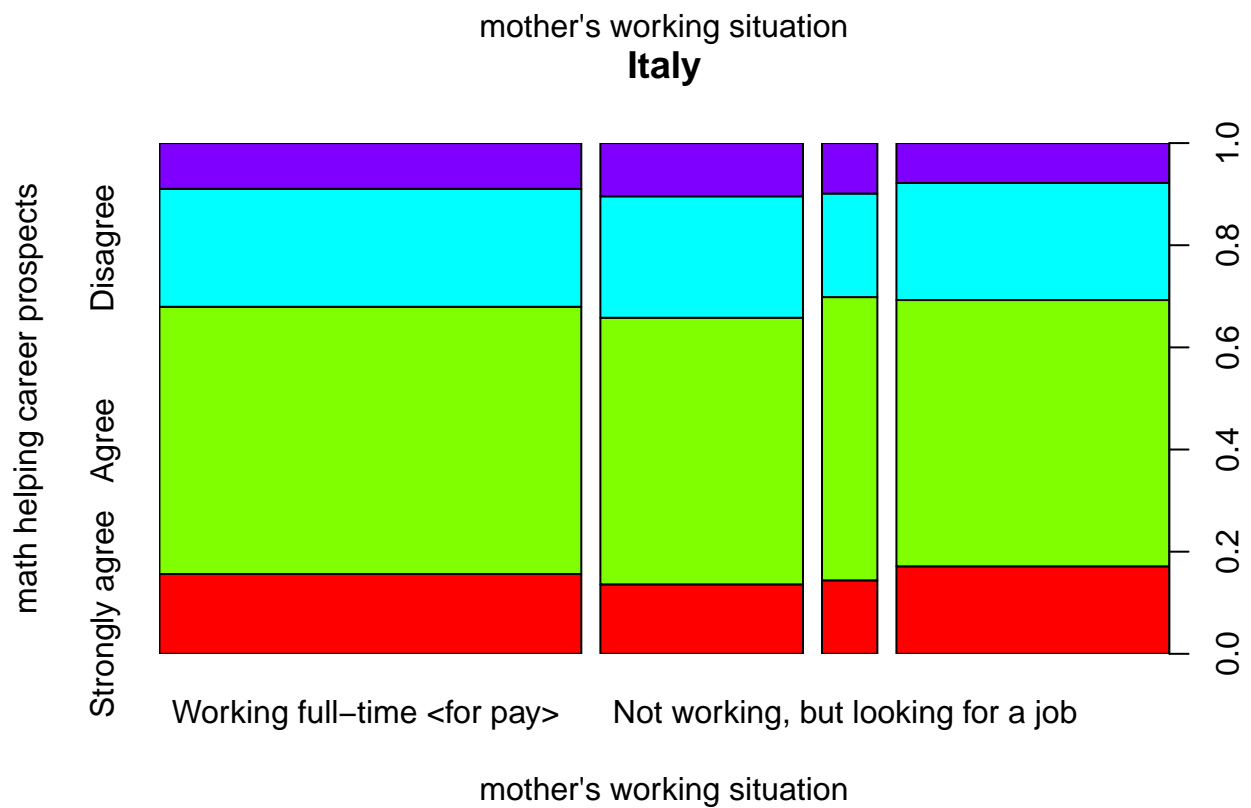
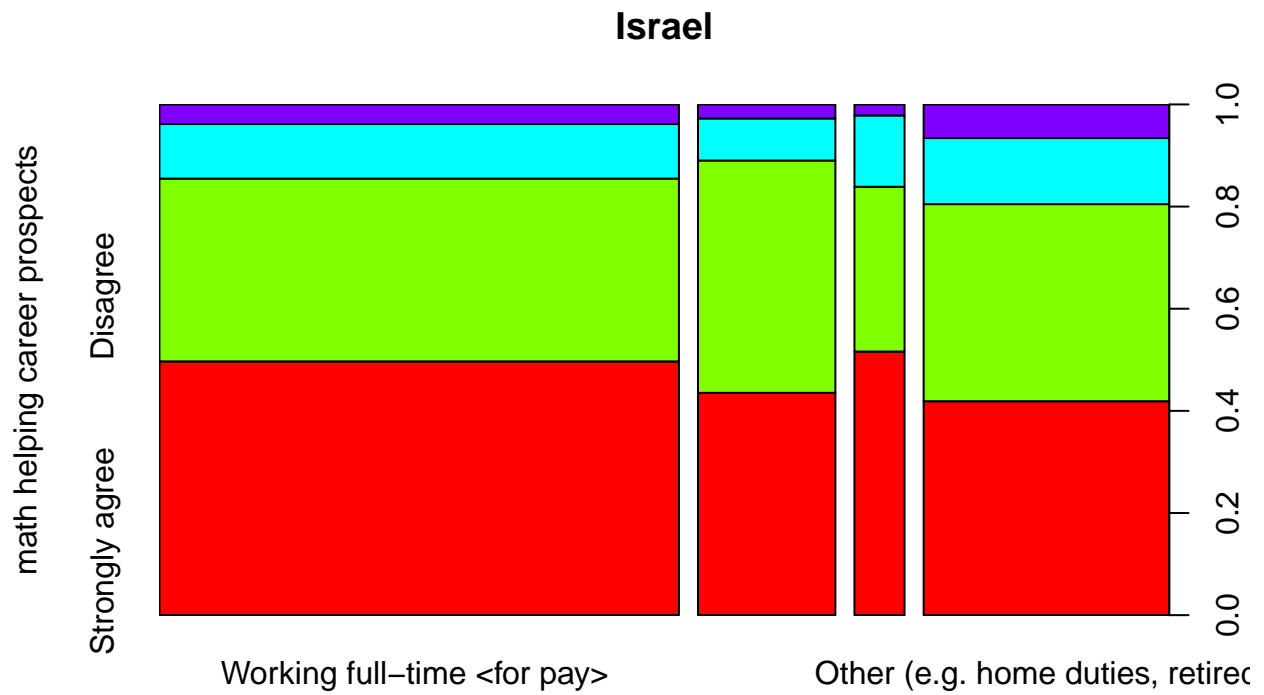


## Croatia

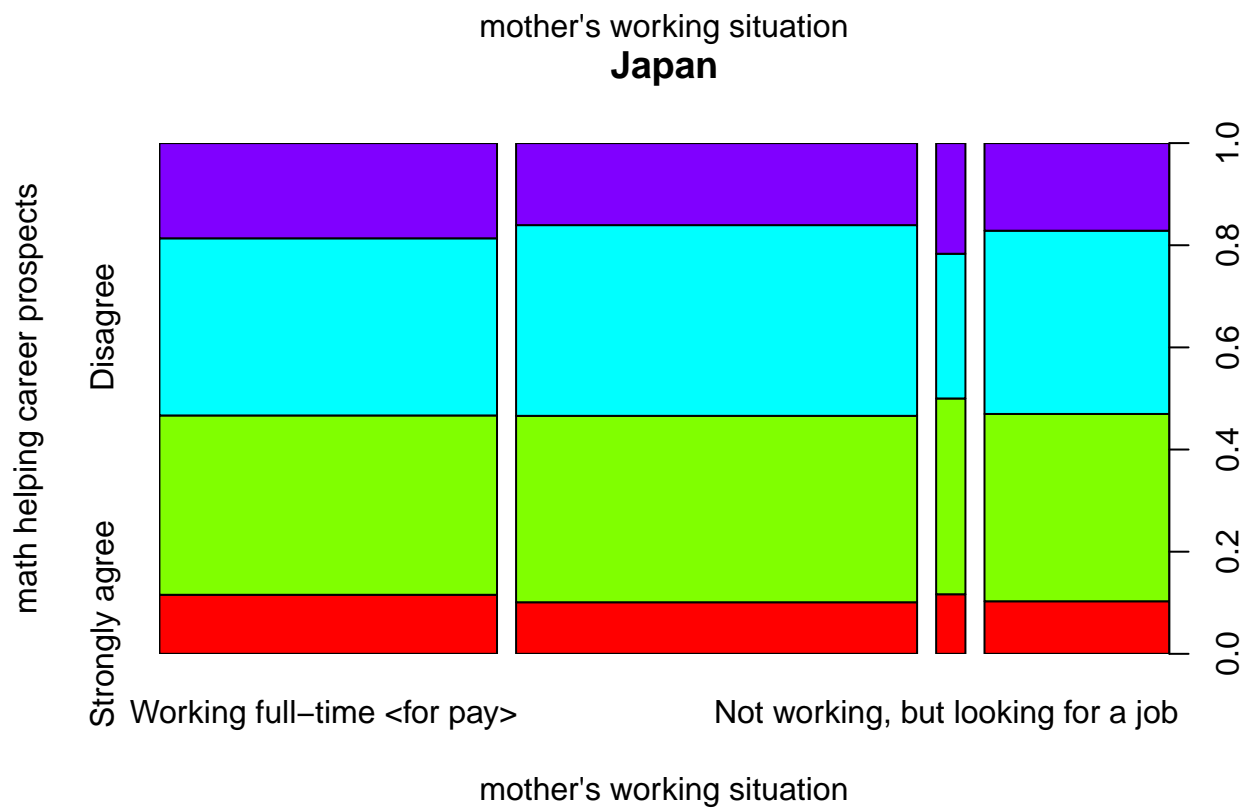
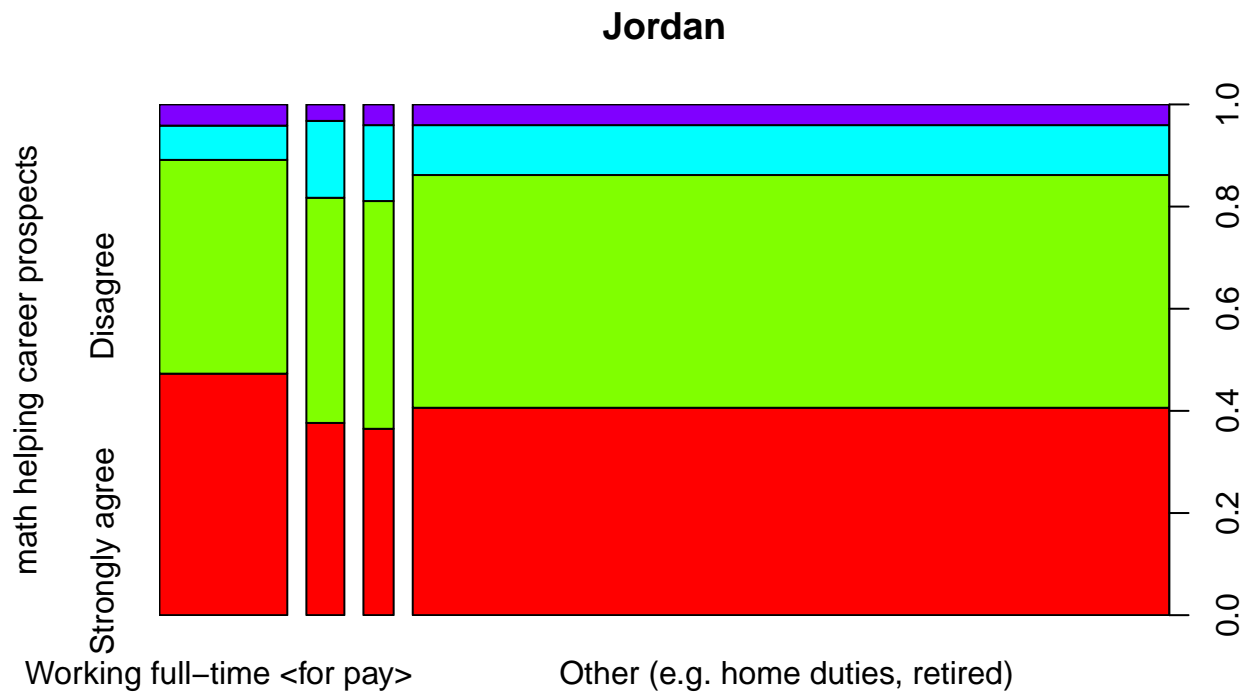


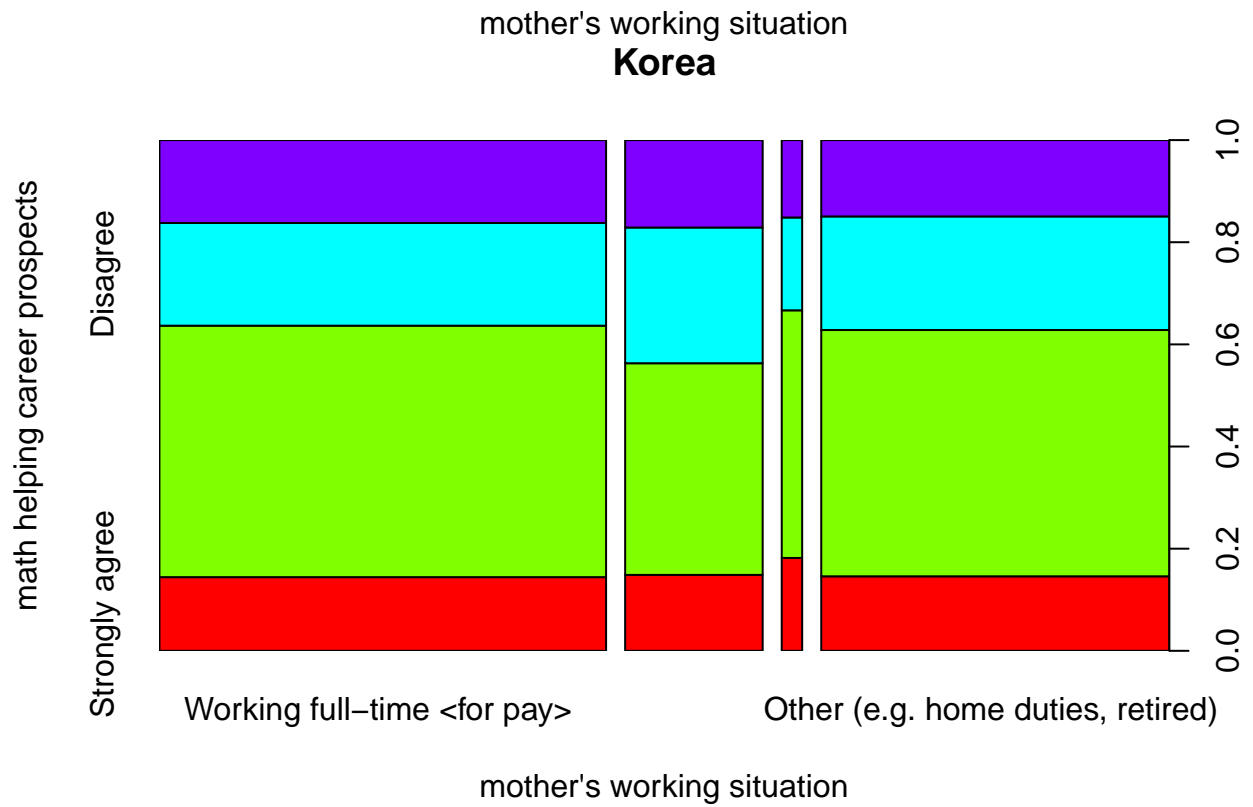
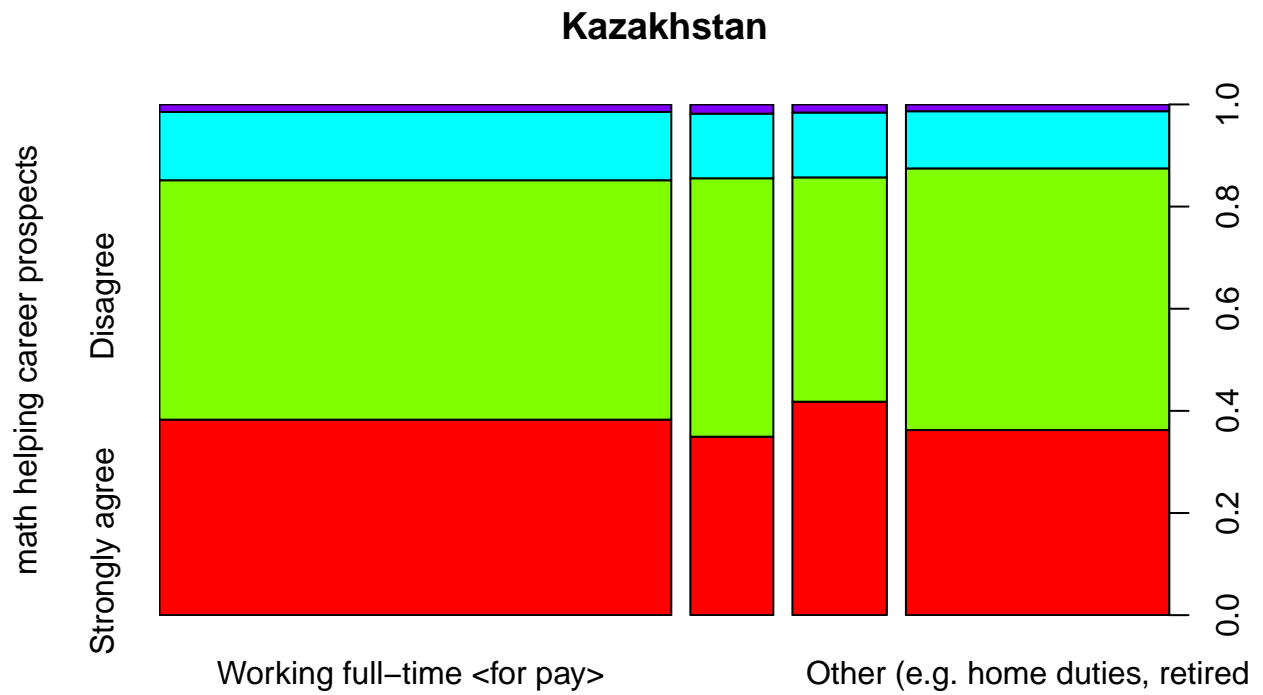


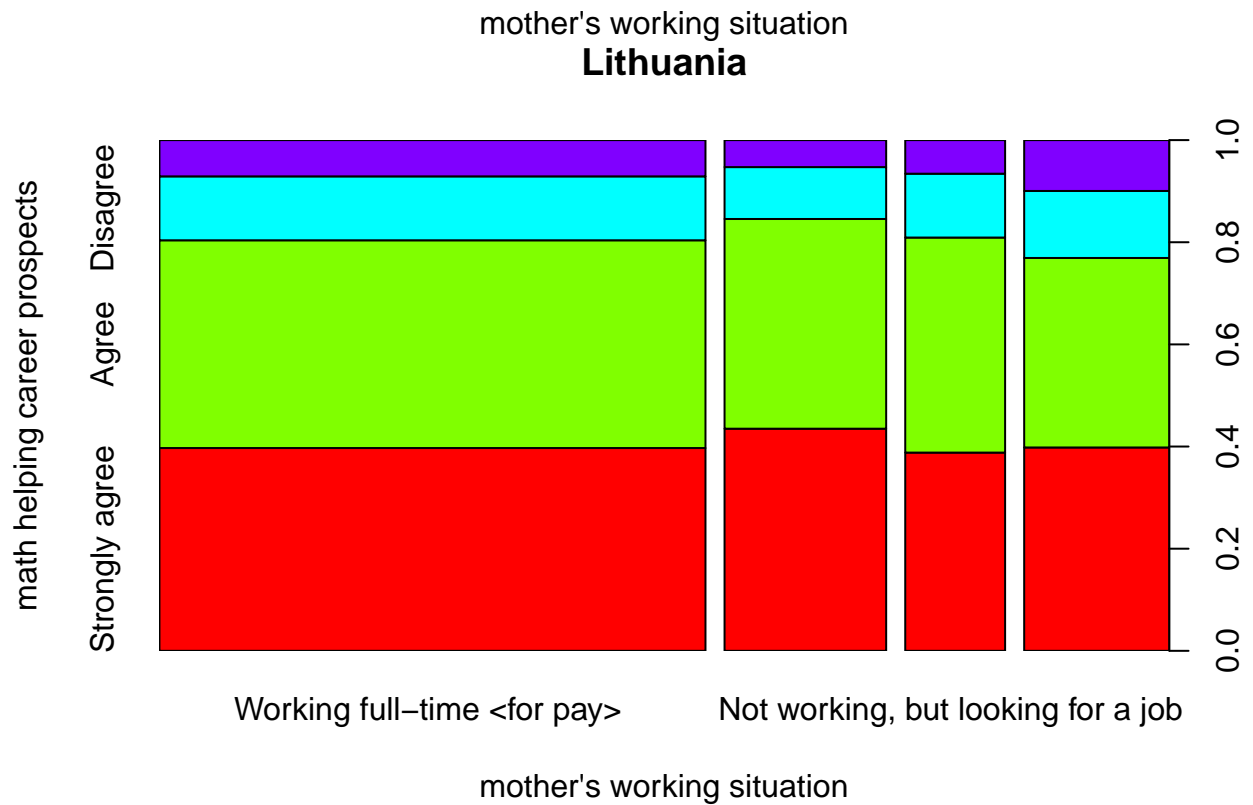
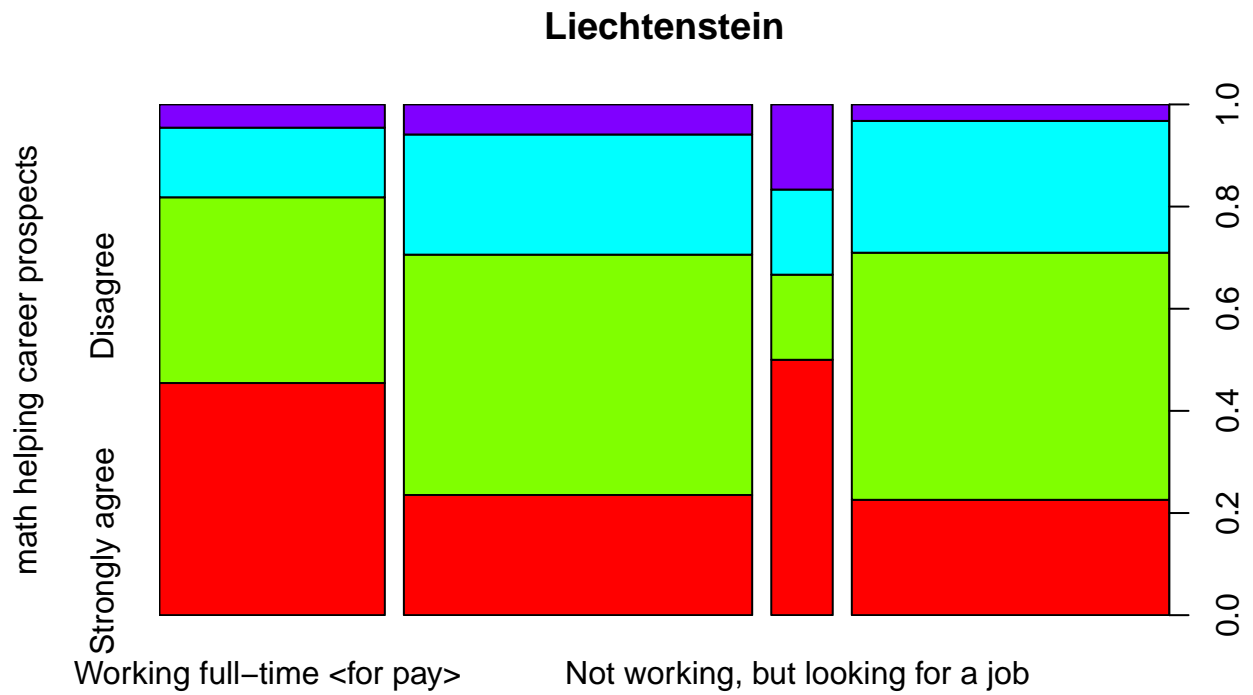


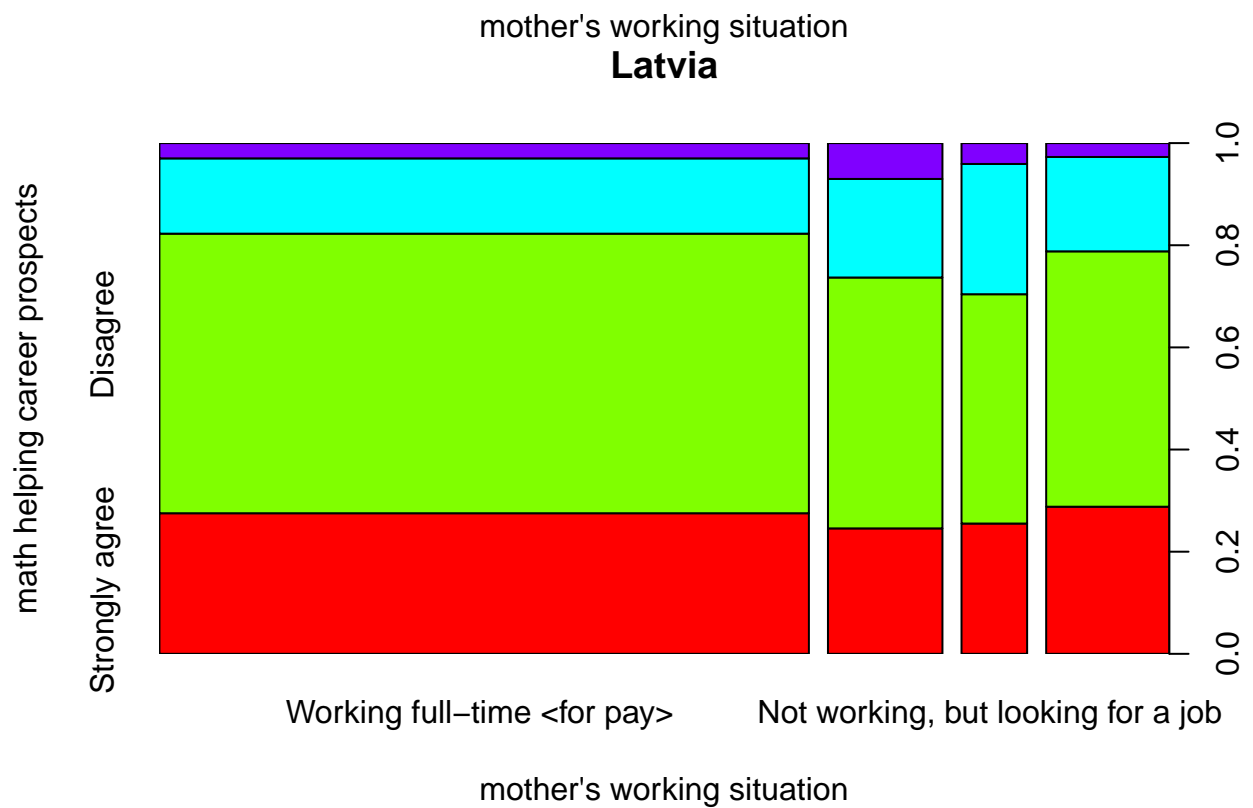
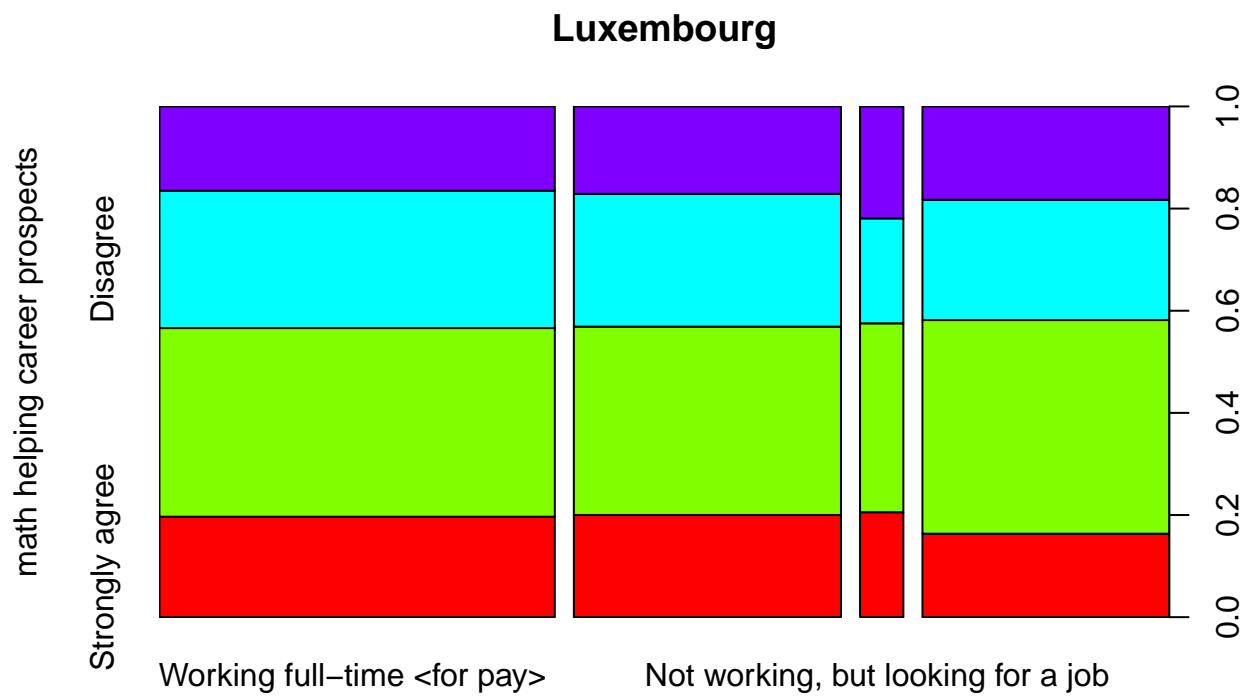


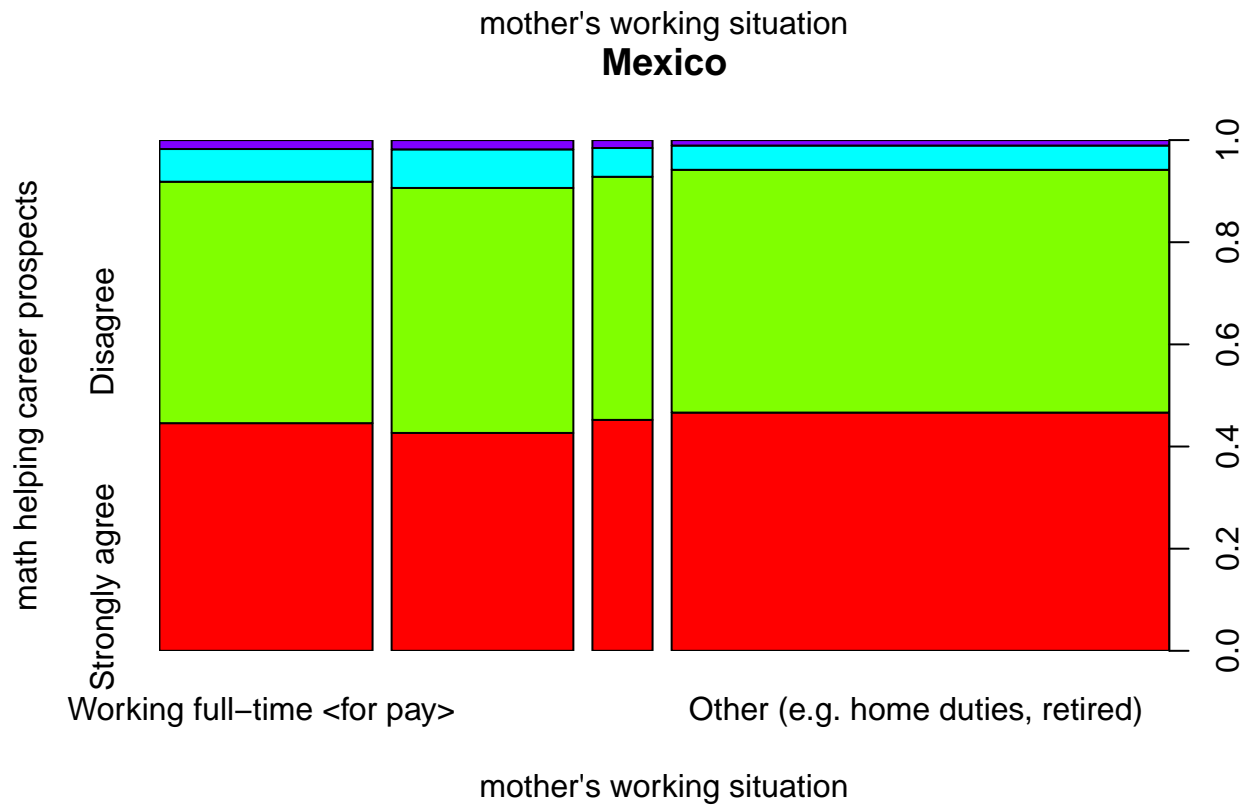
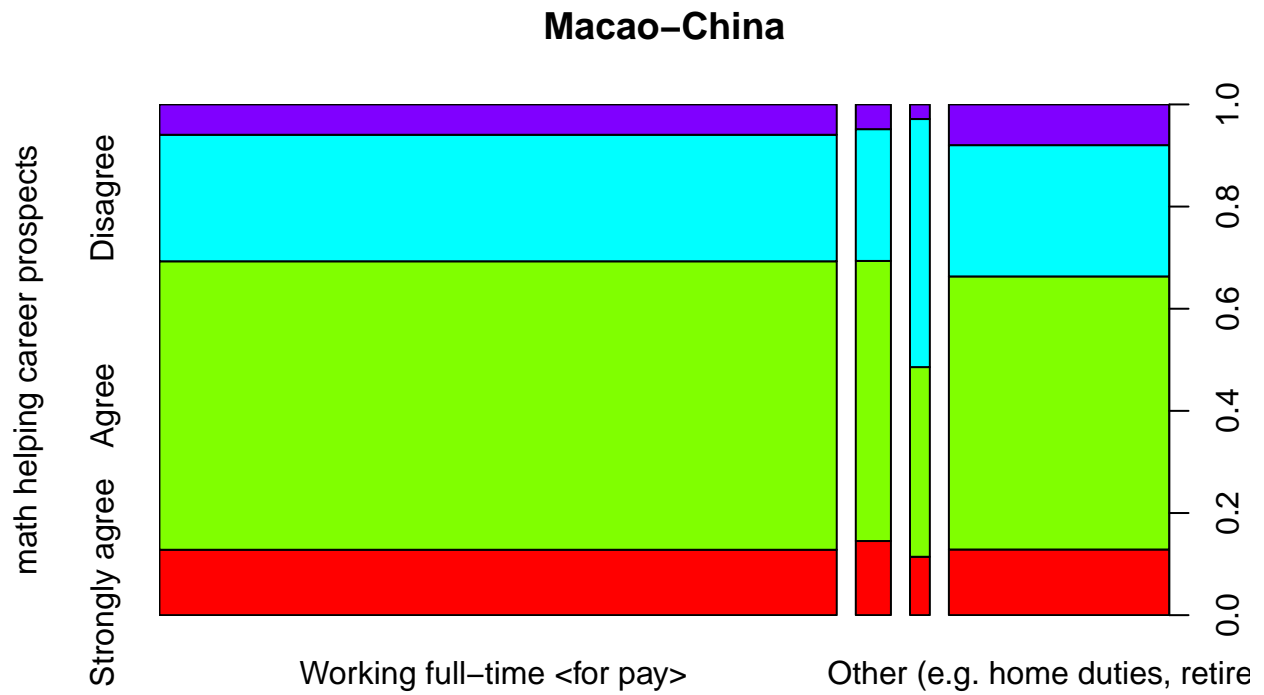


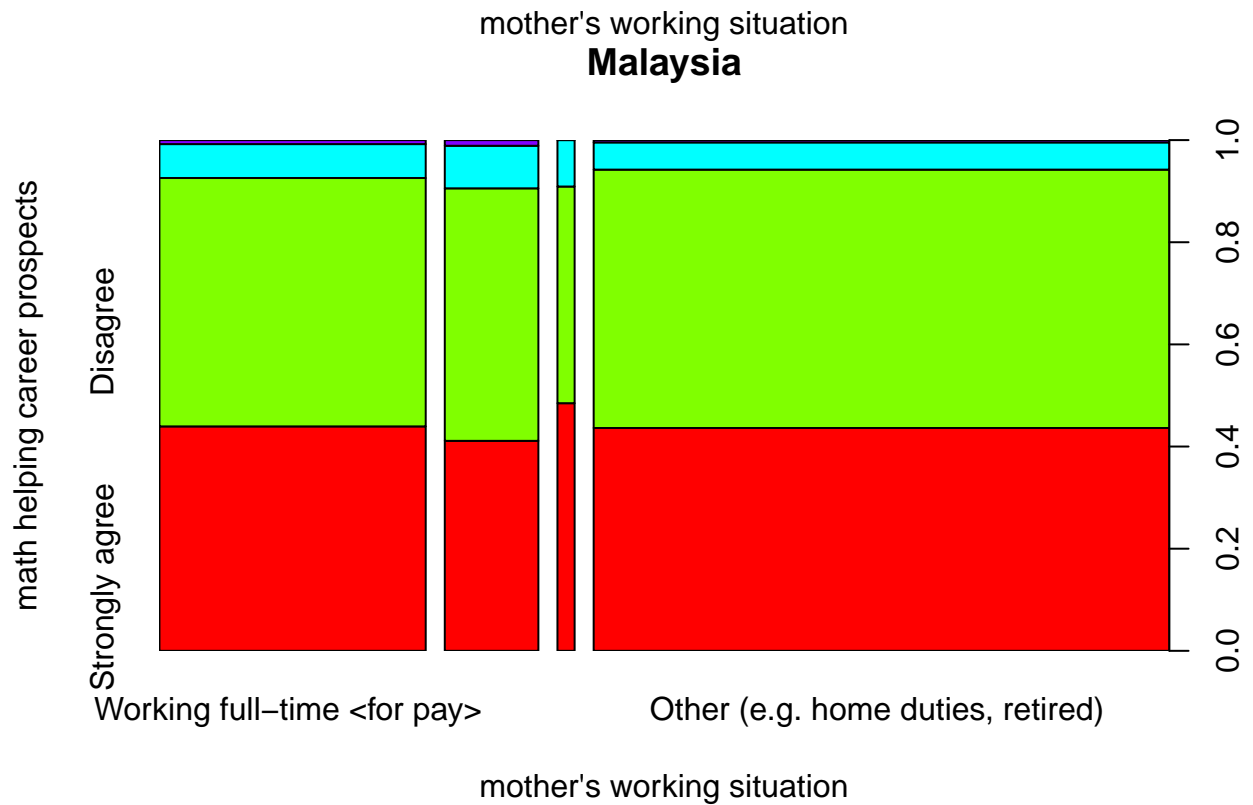
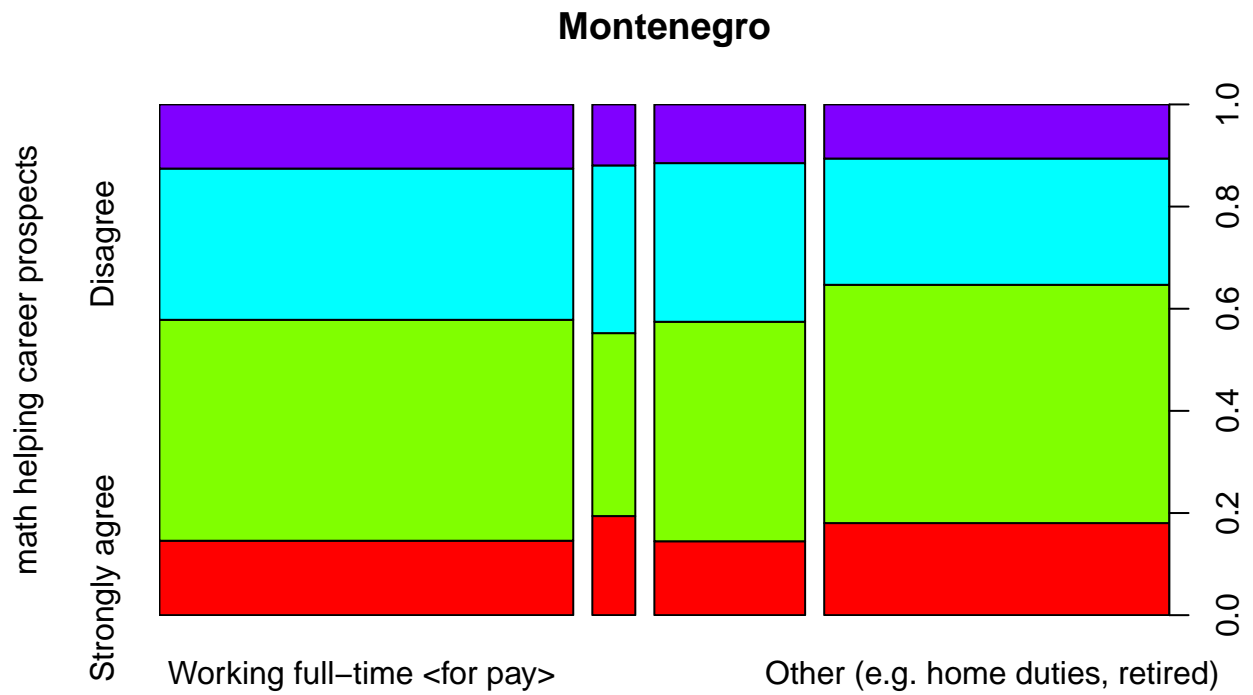


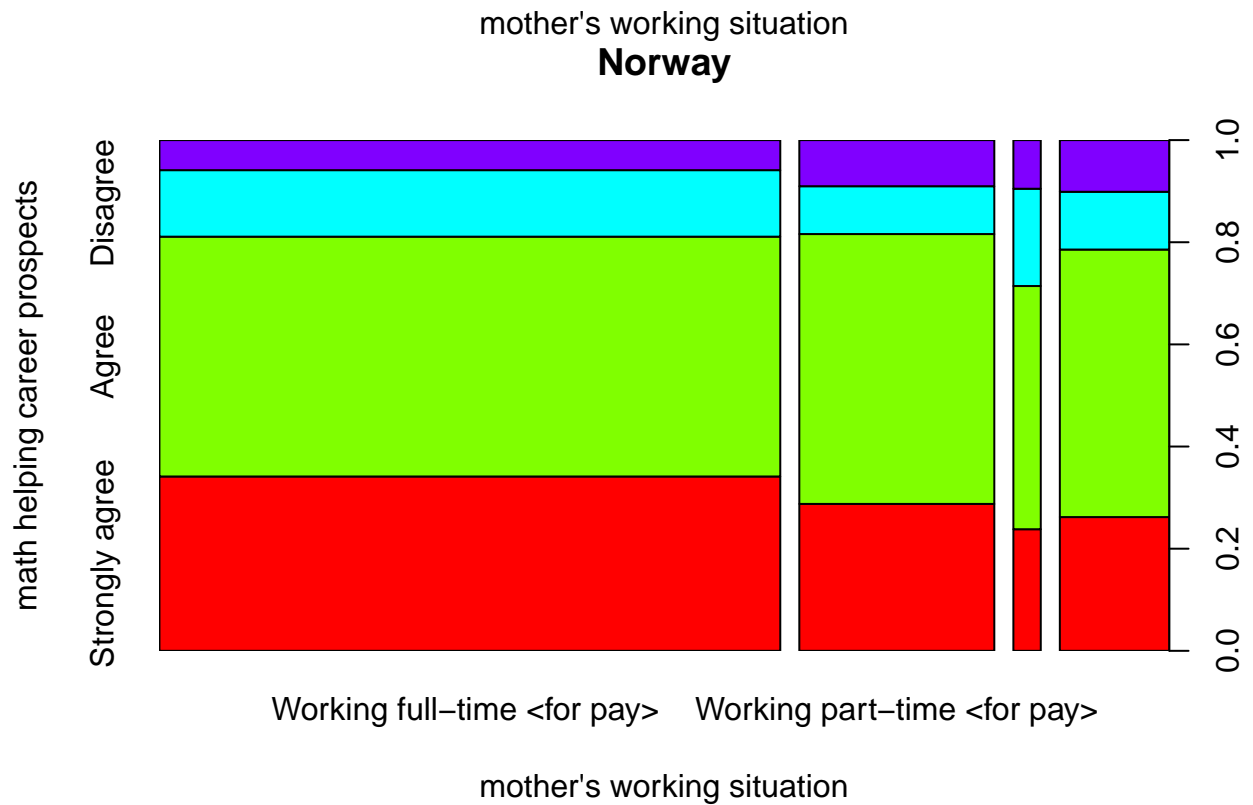
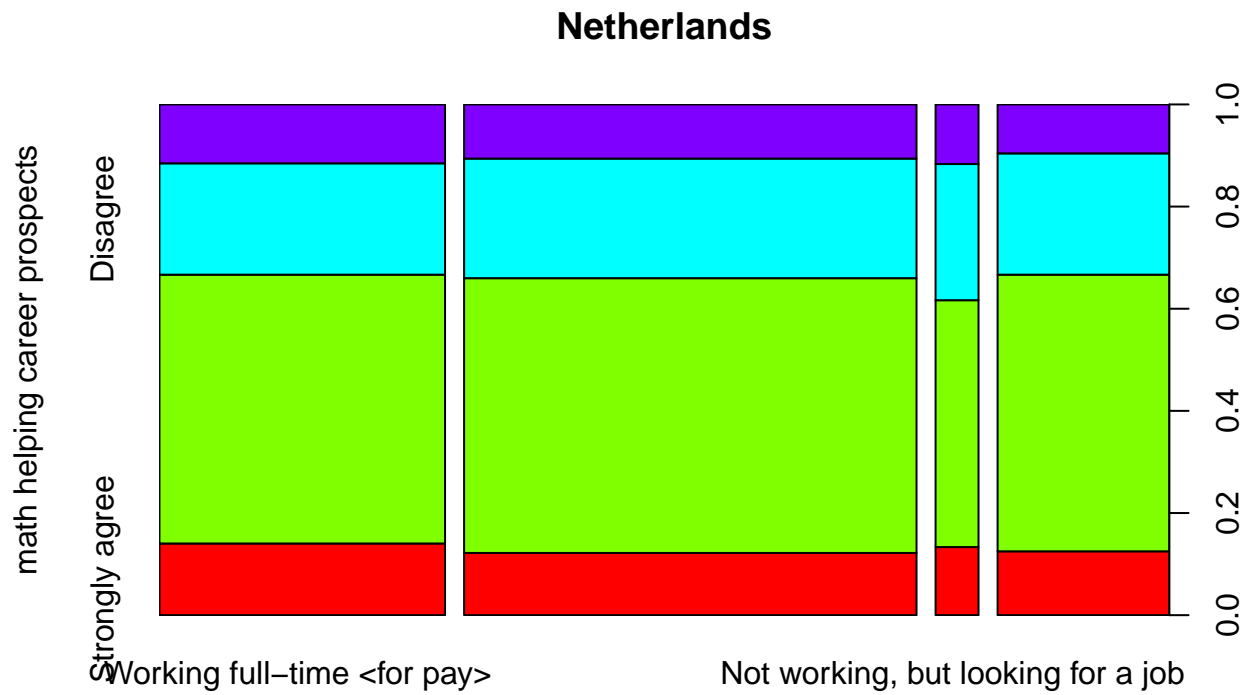


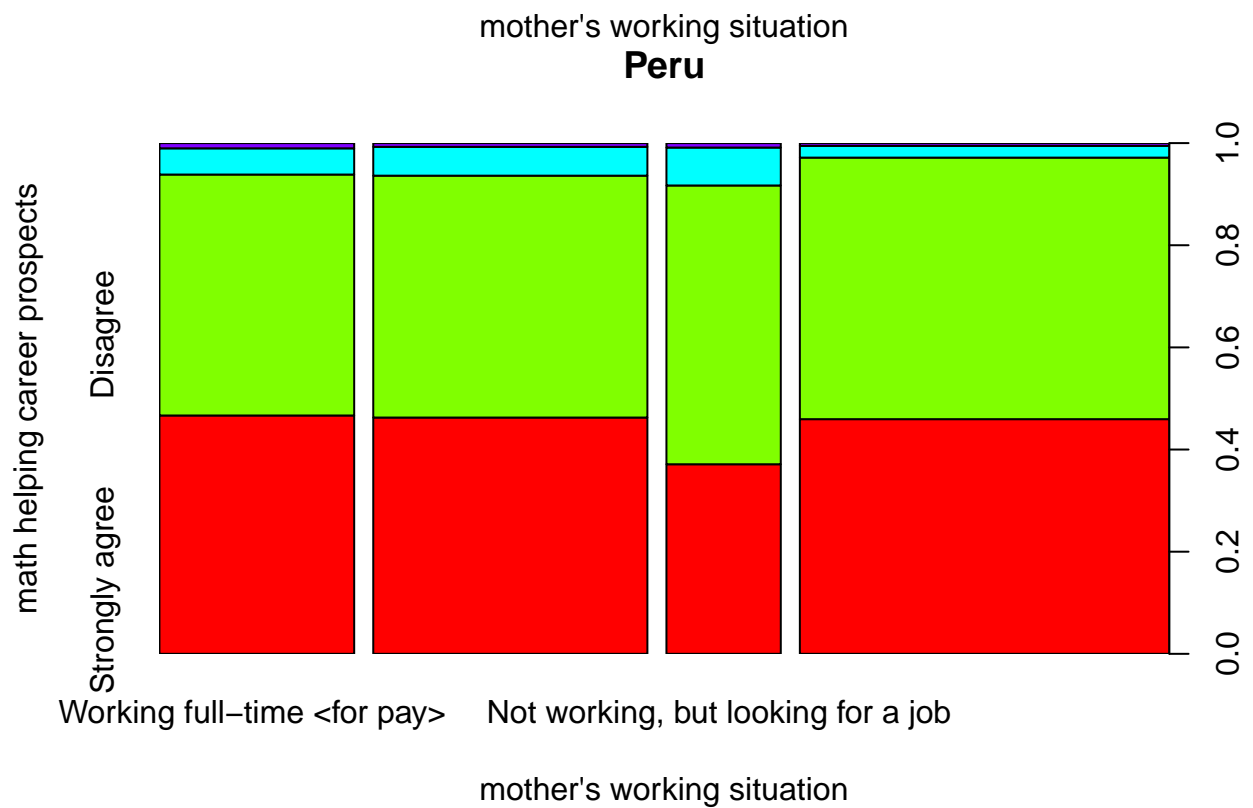
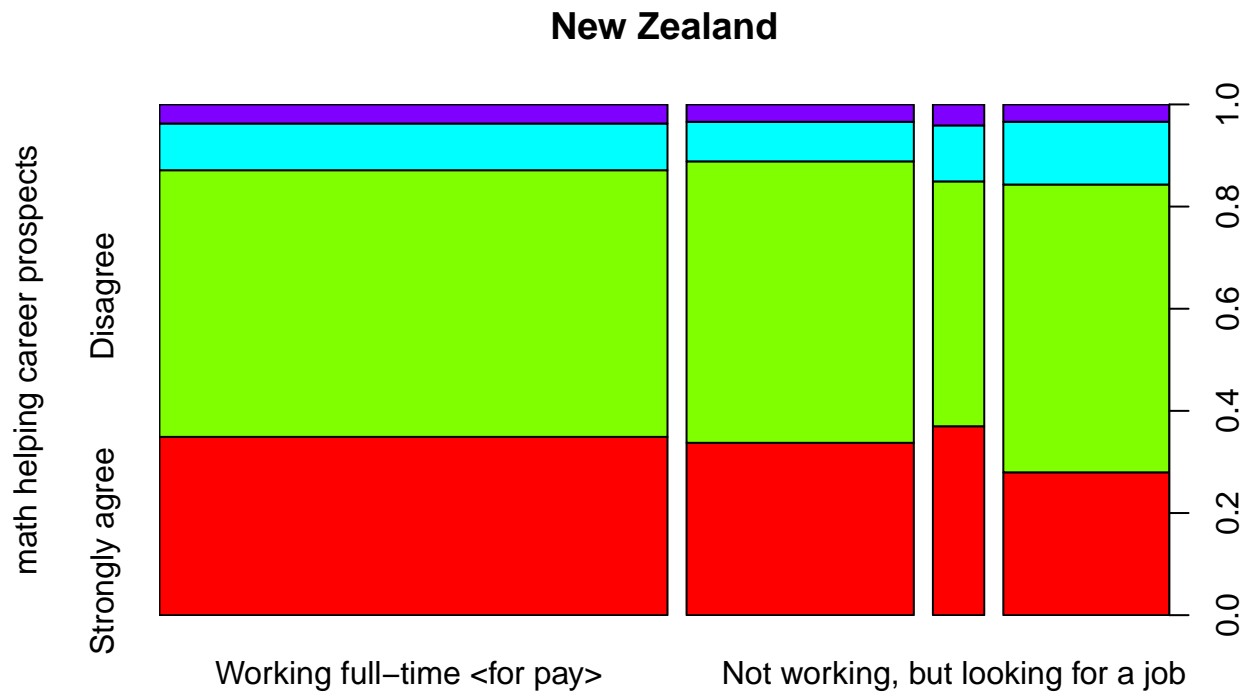




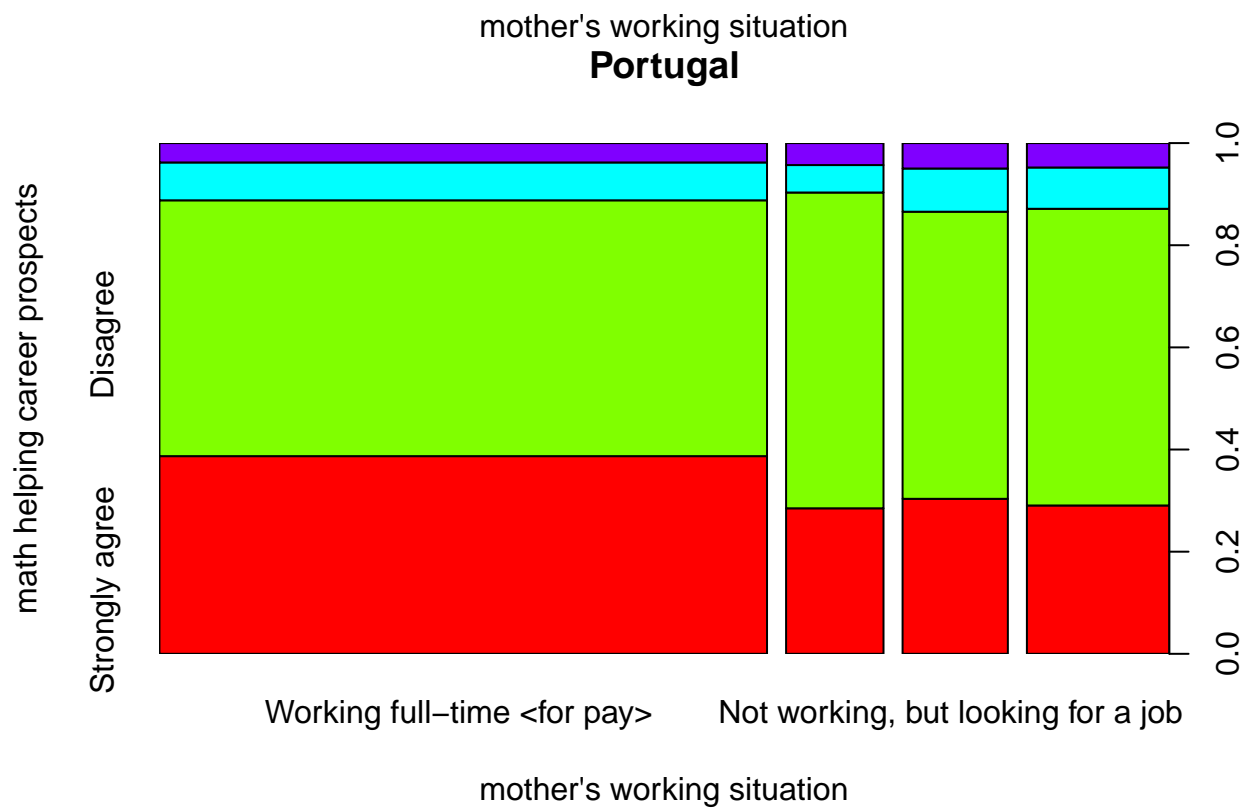
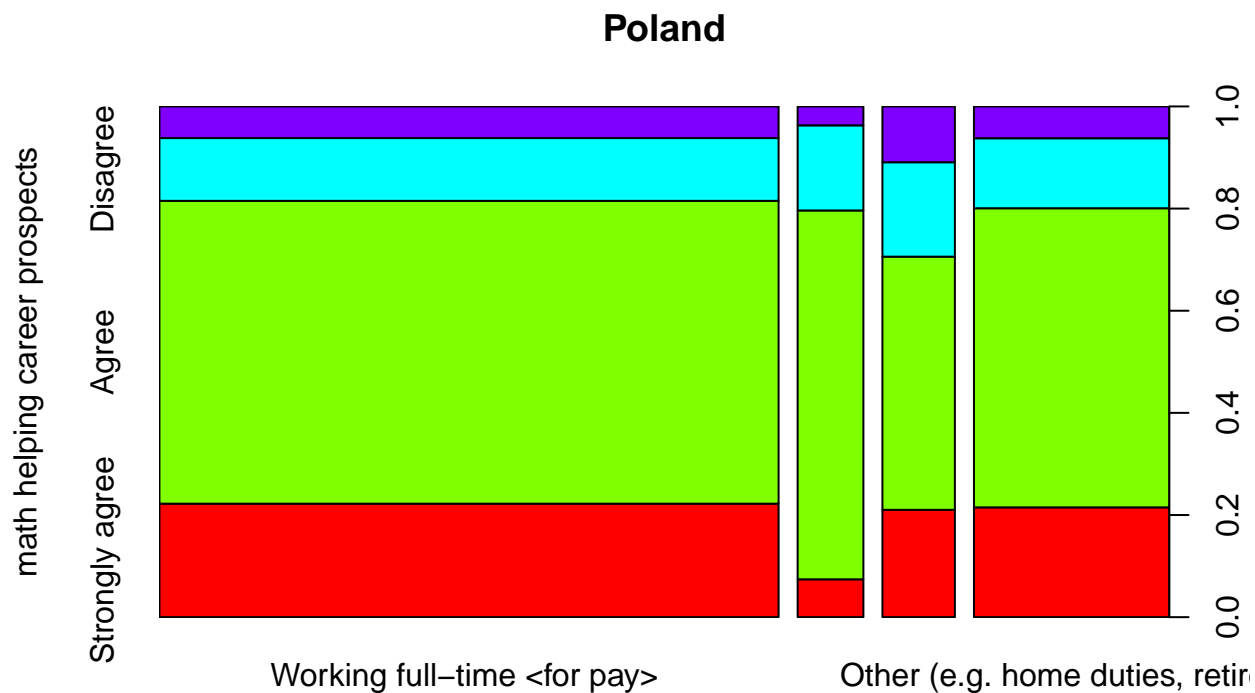


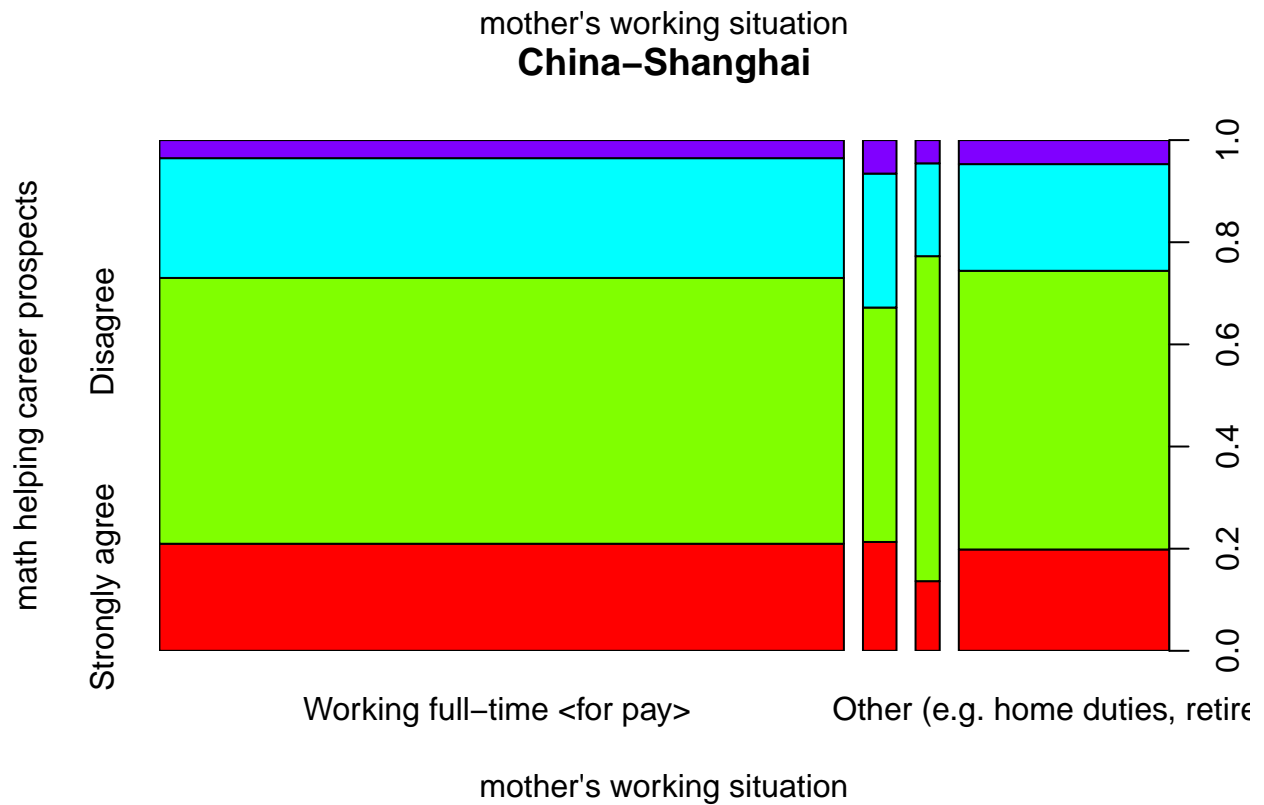
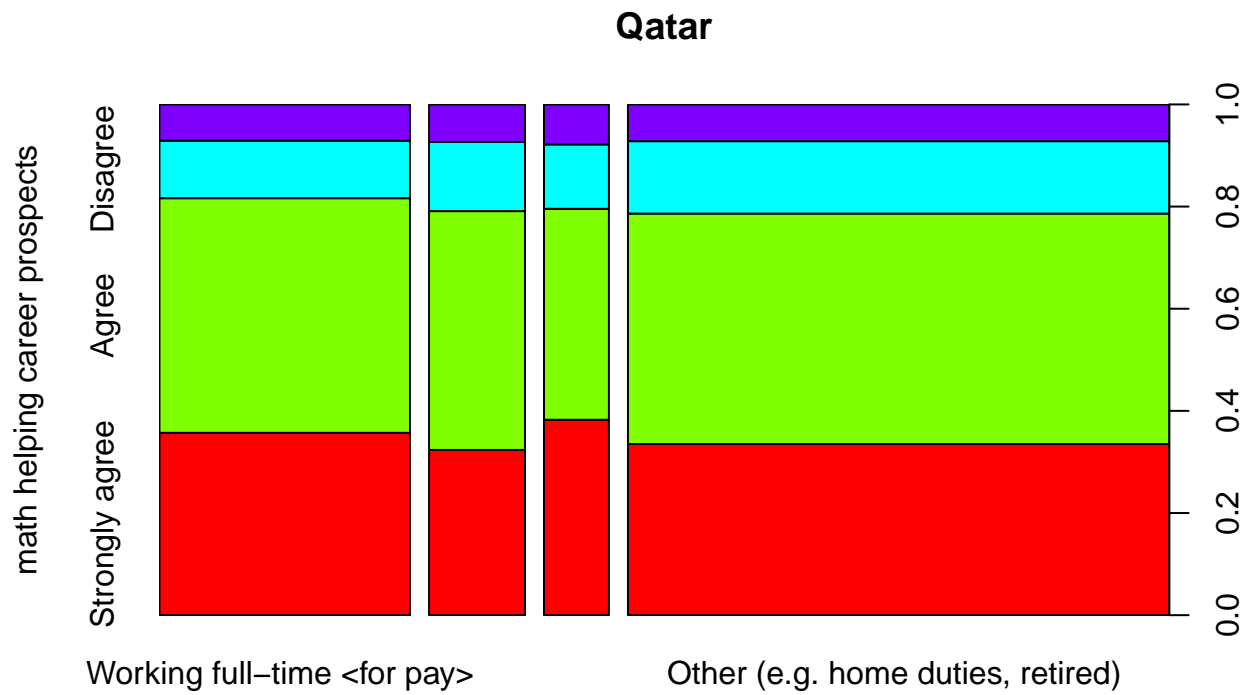




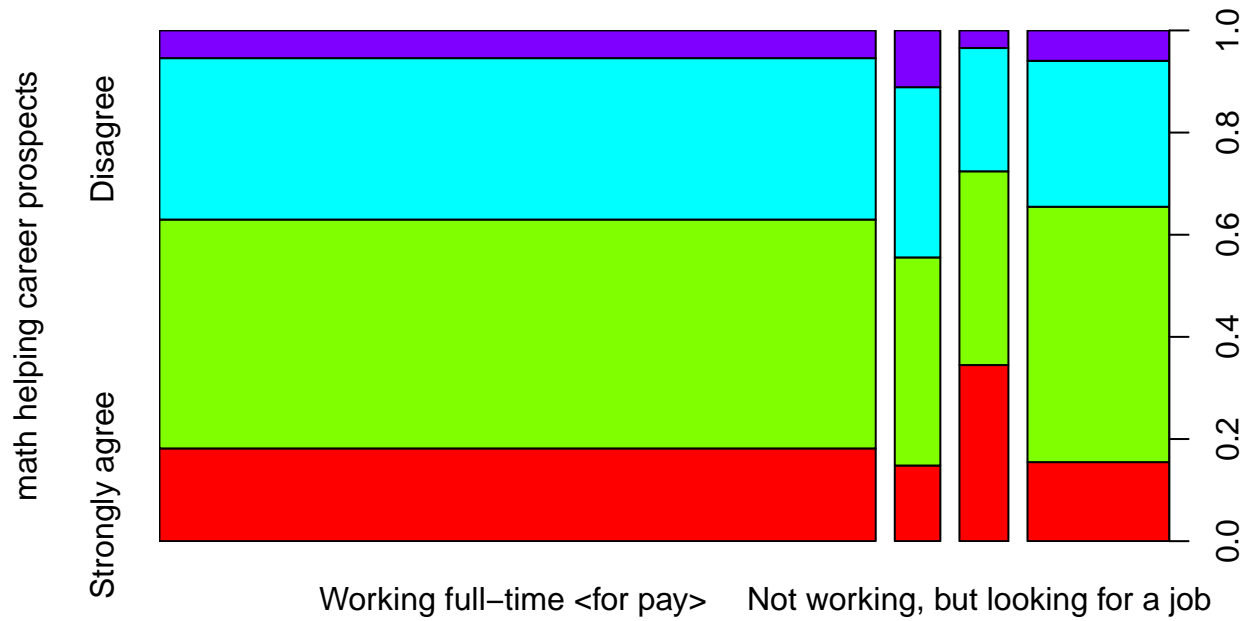








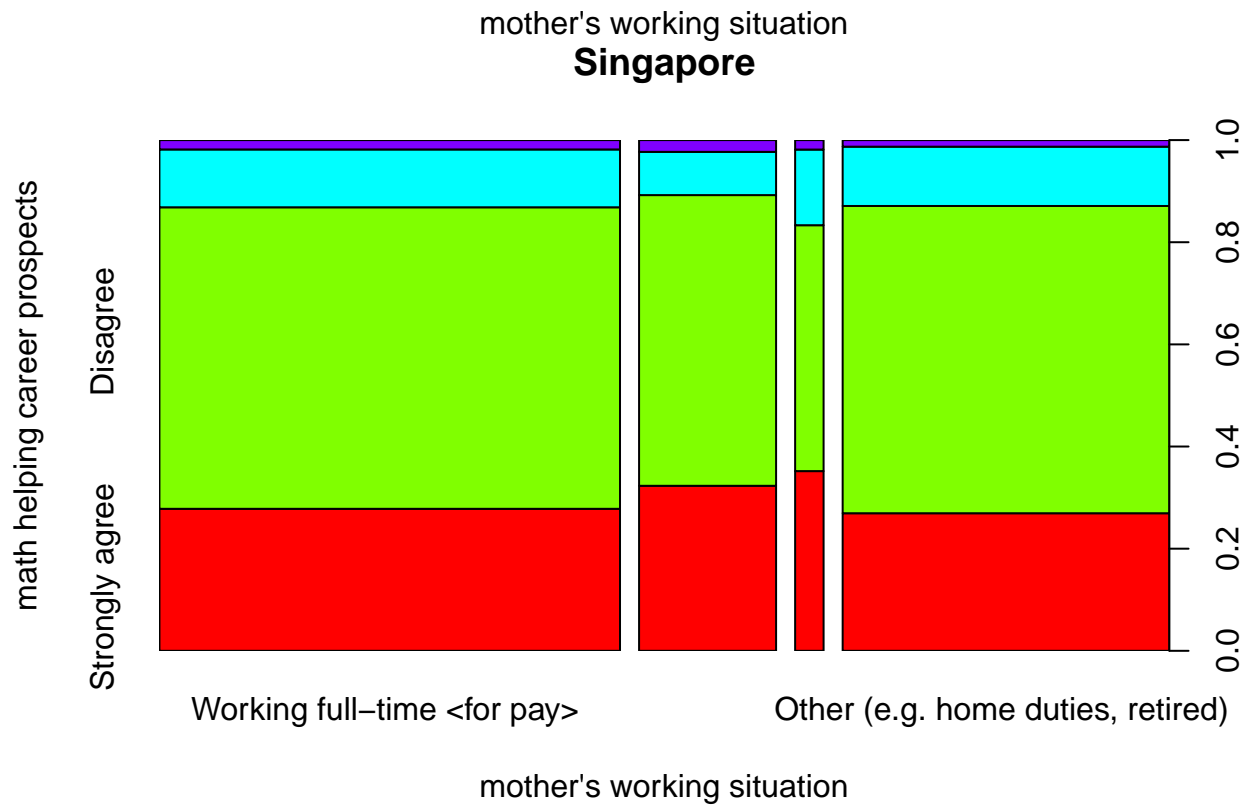
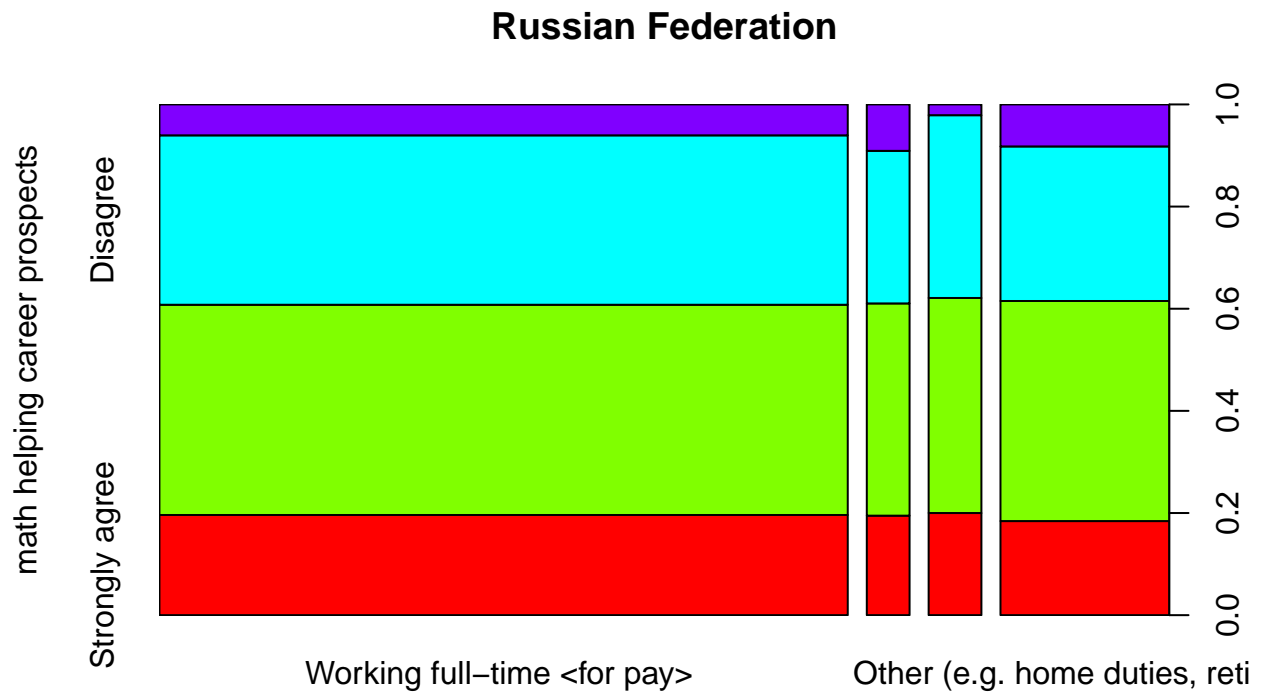
## Perm(Russian Federation)

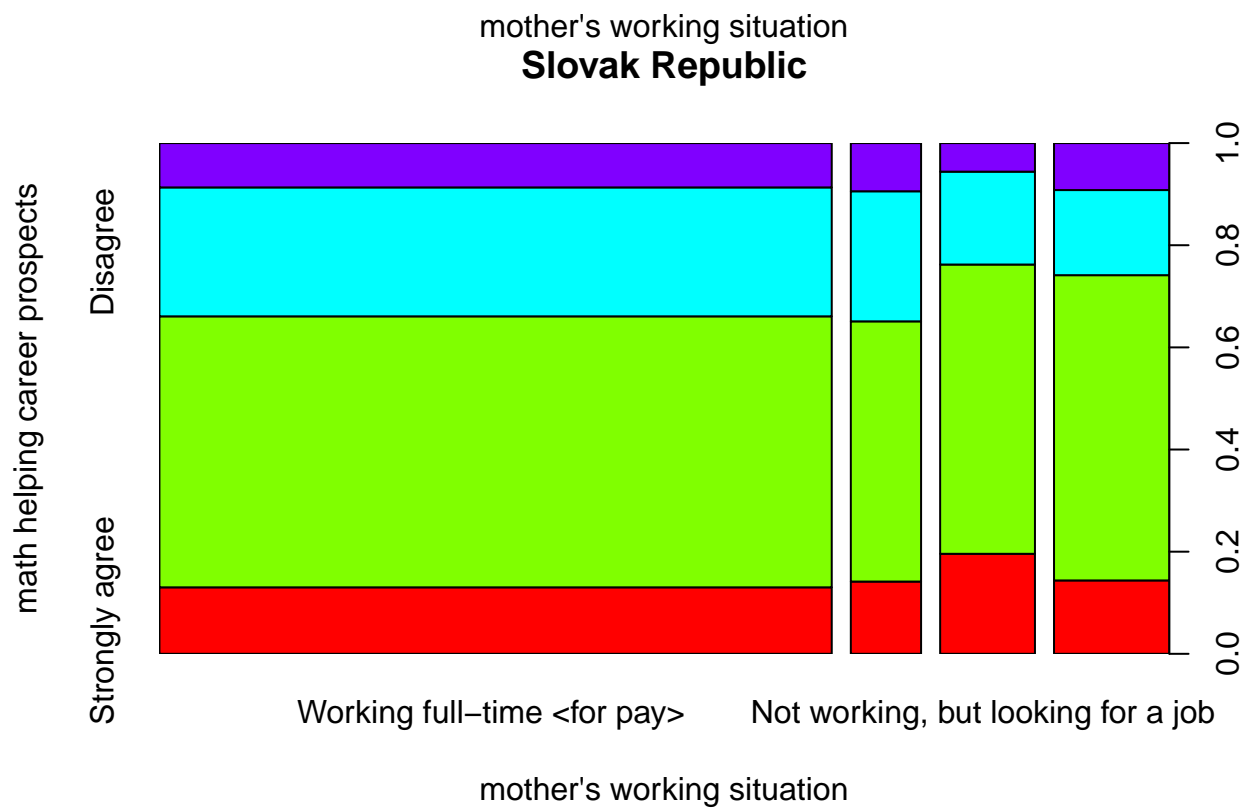
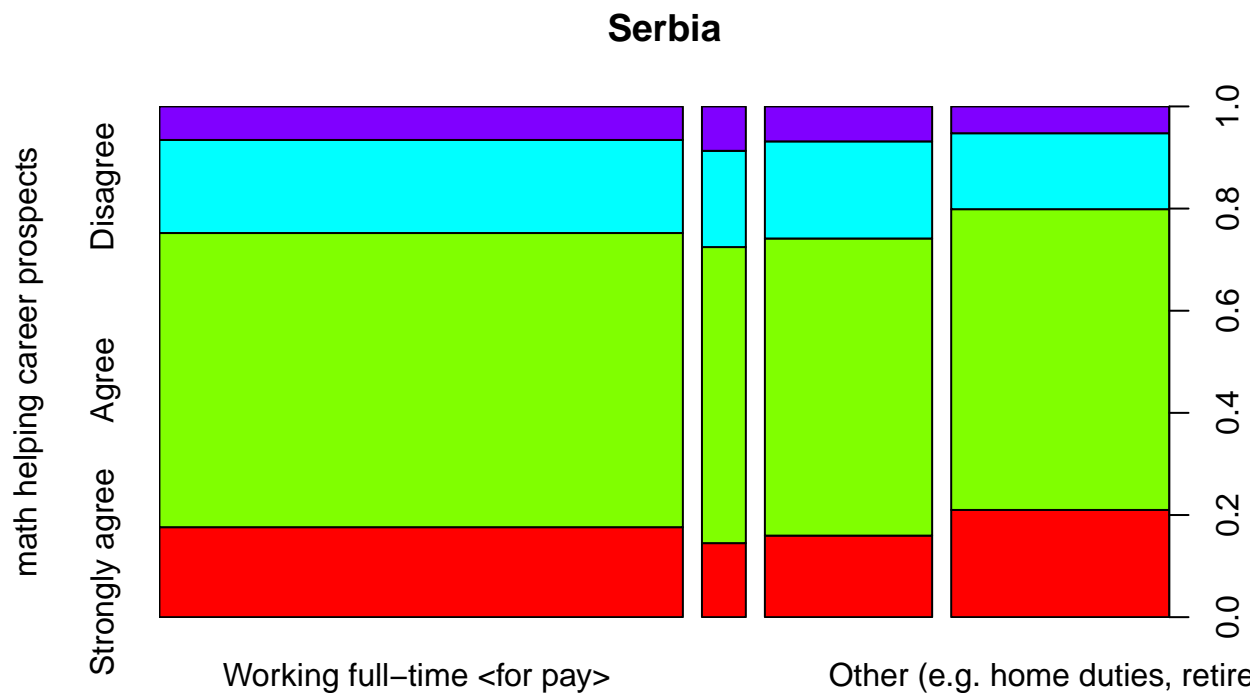


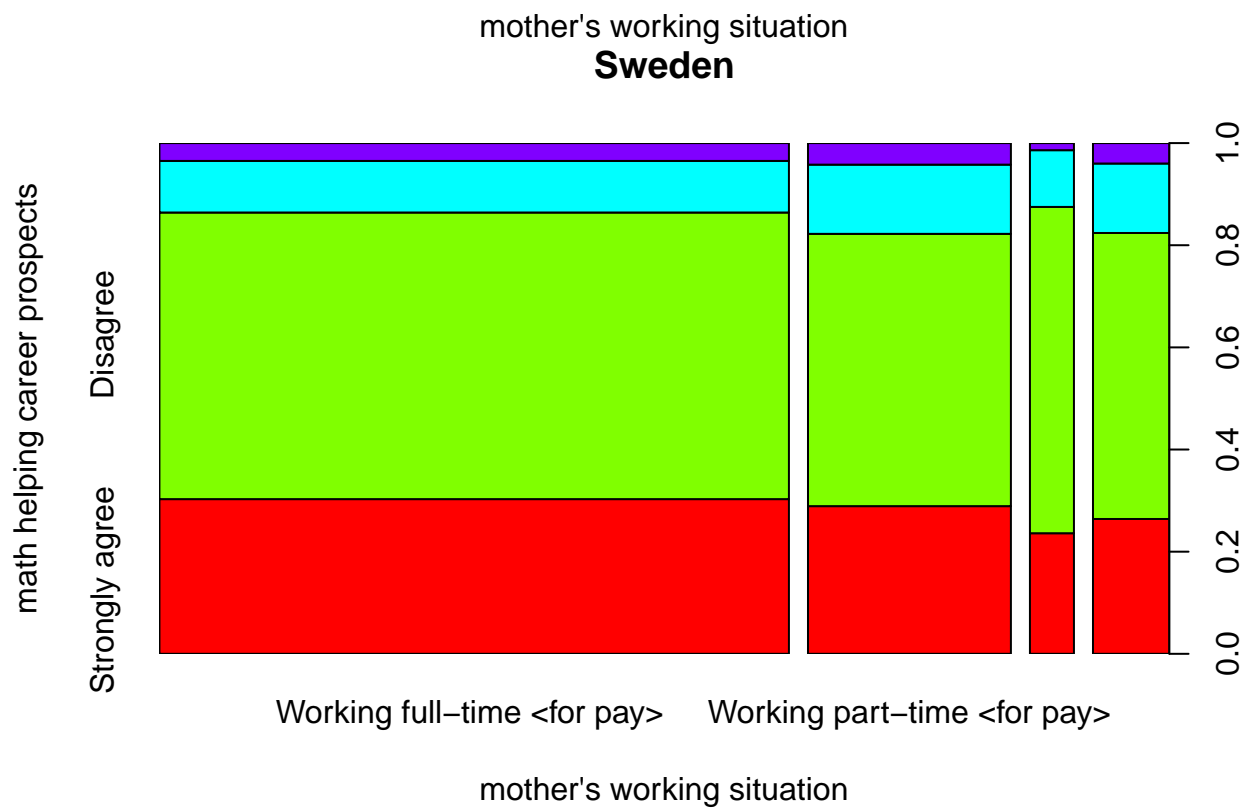
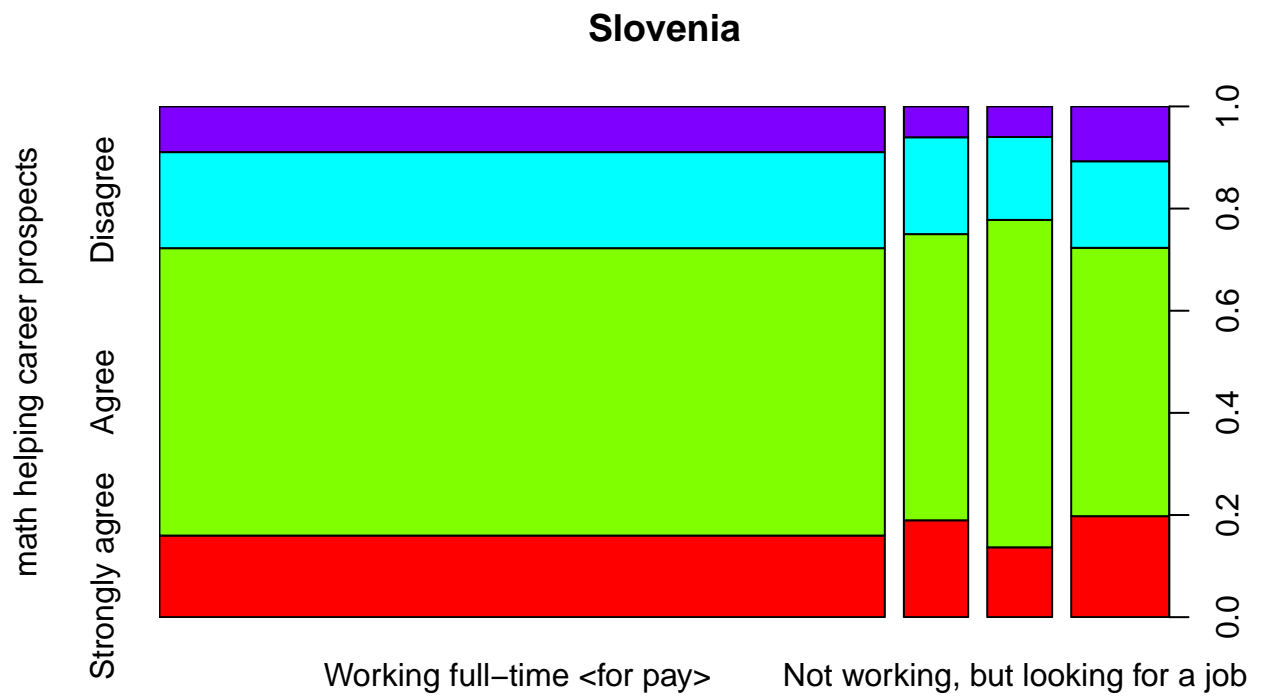
## mother's working situation Romania

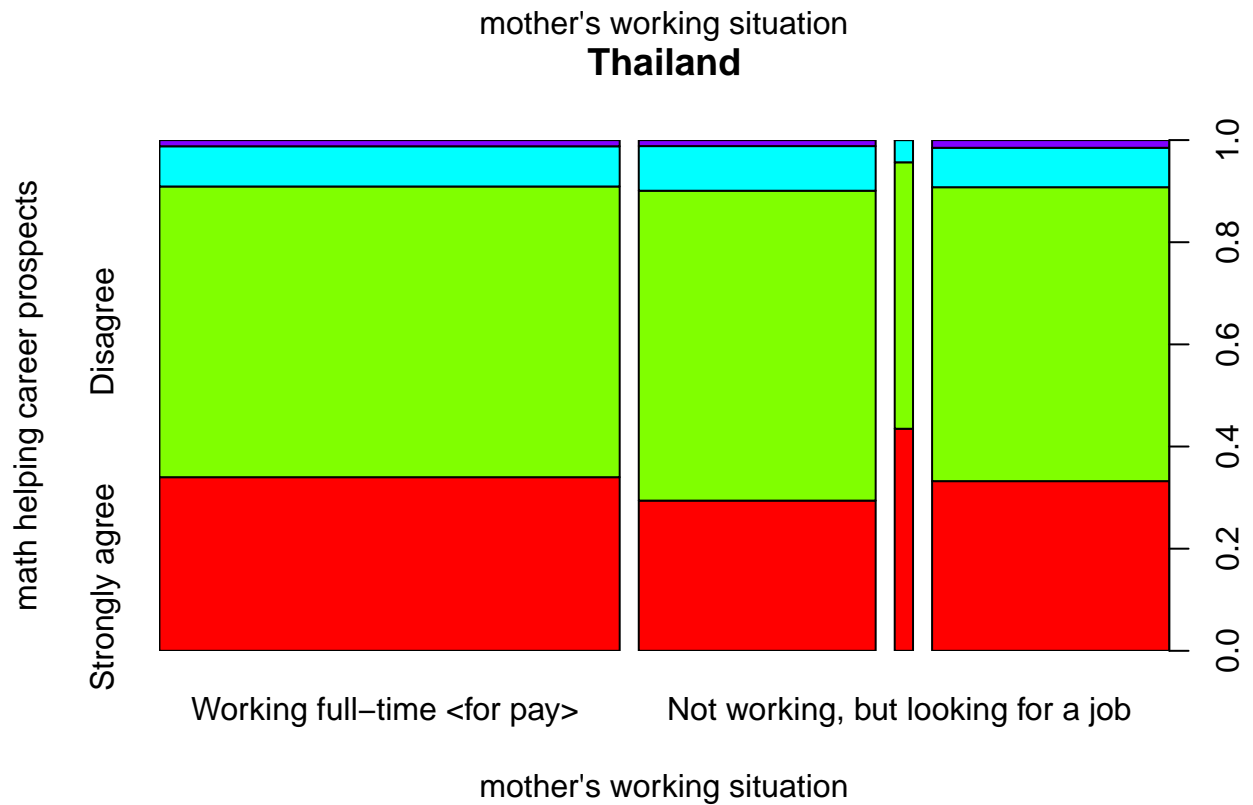
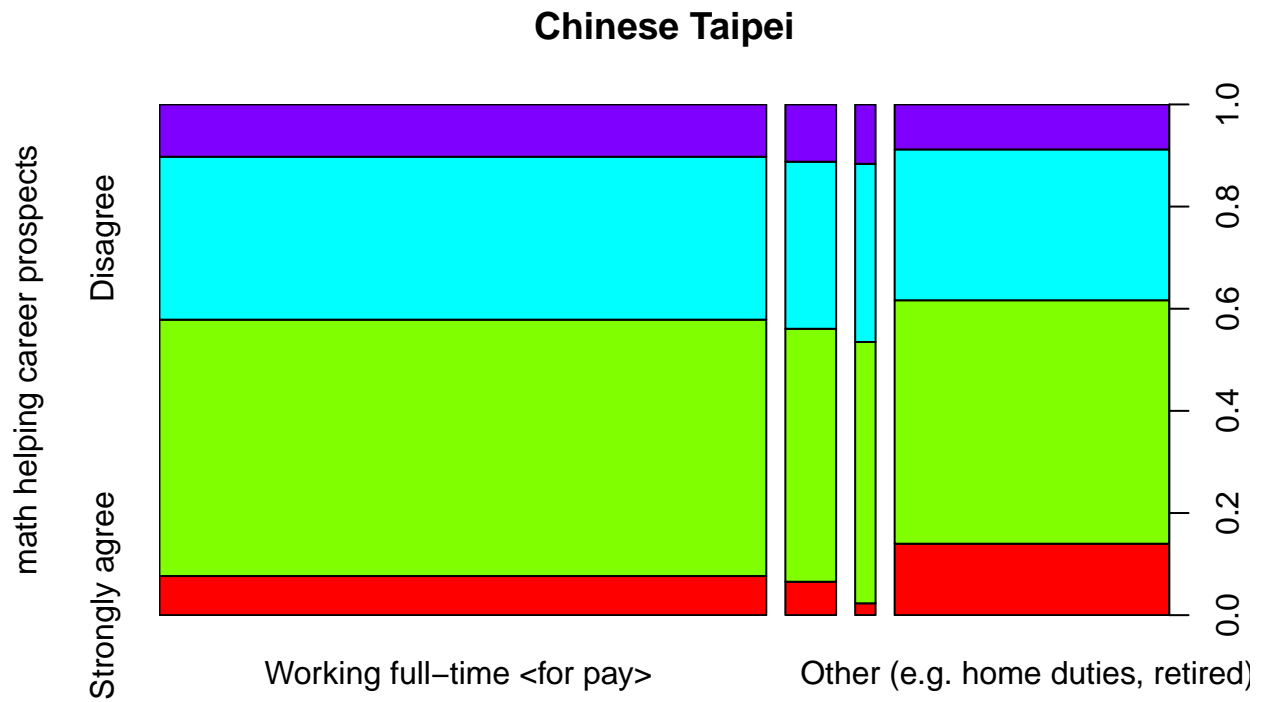


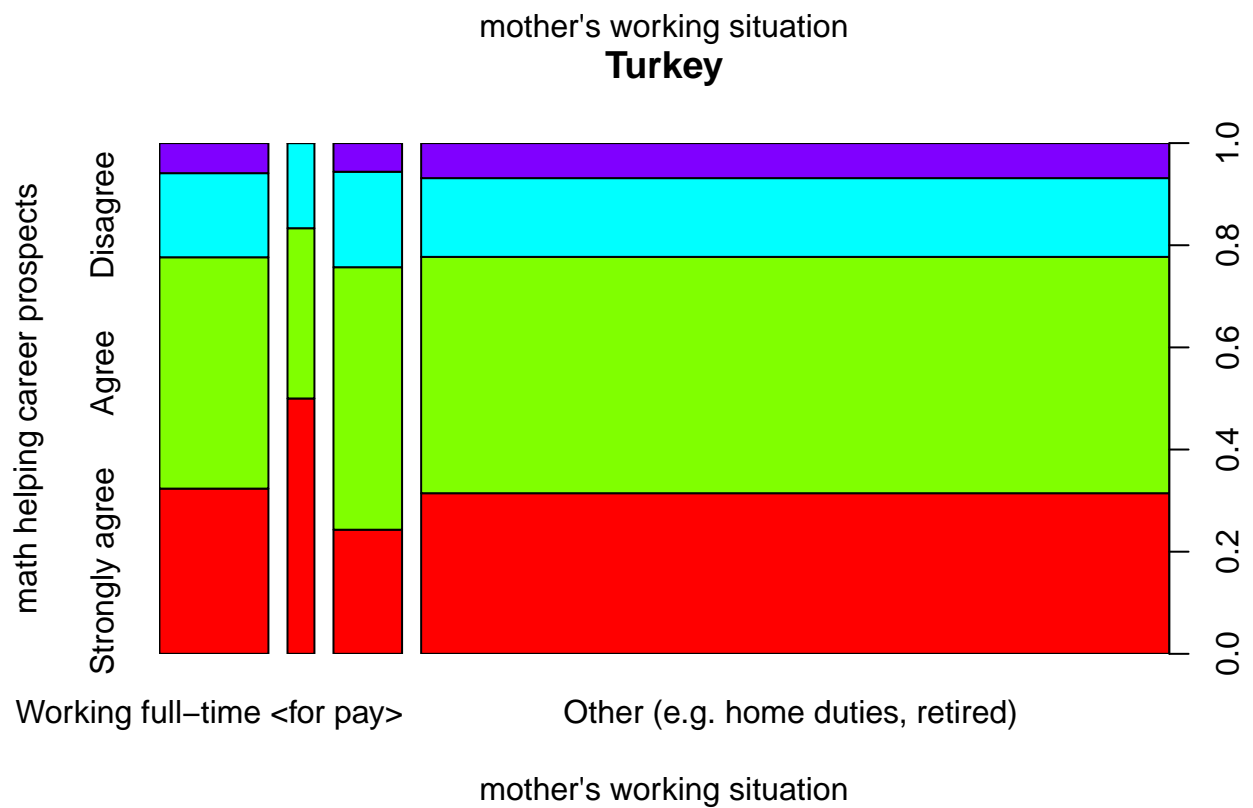
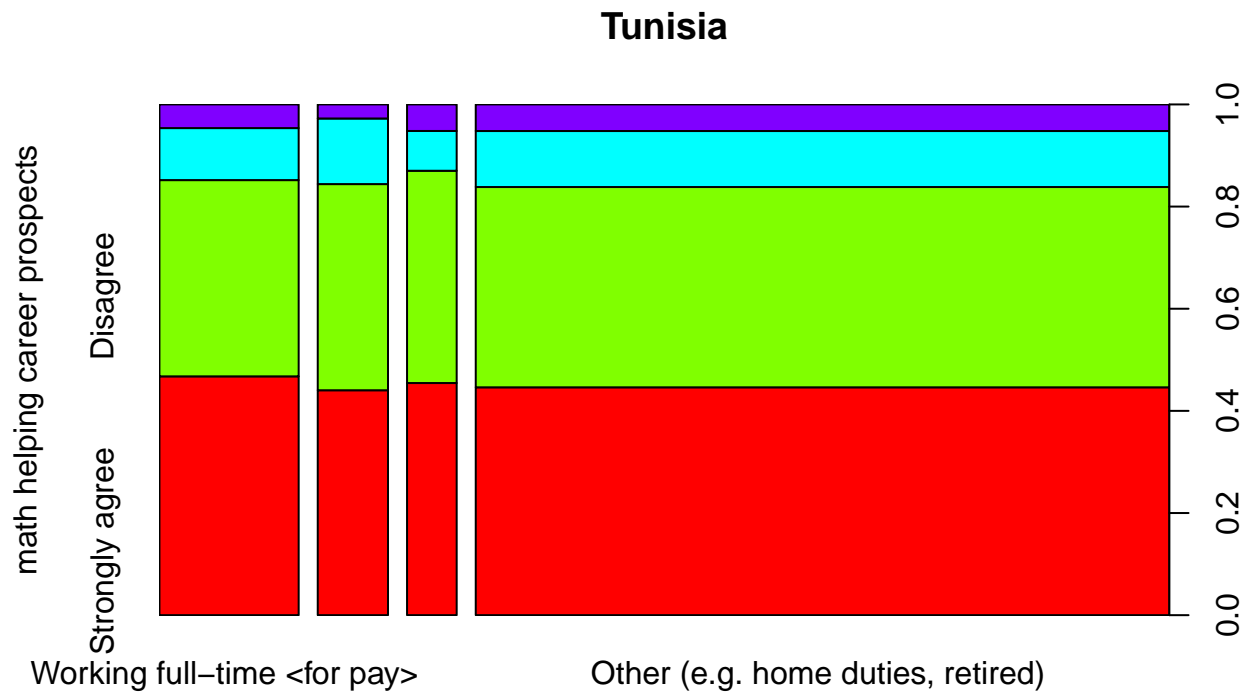
mother's working situation



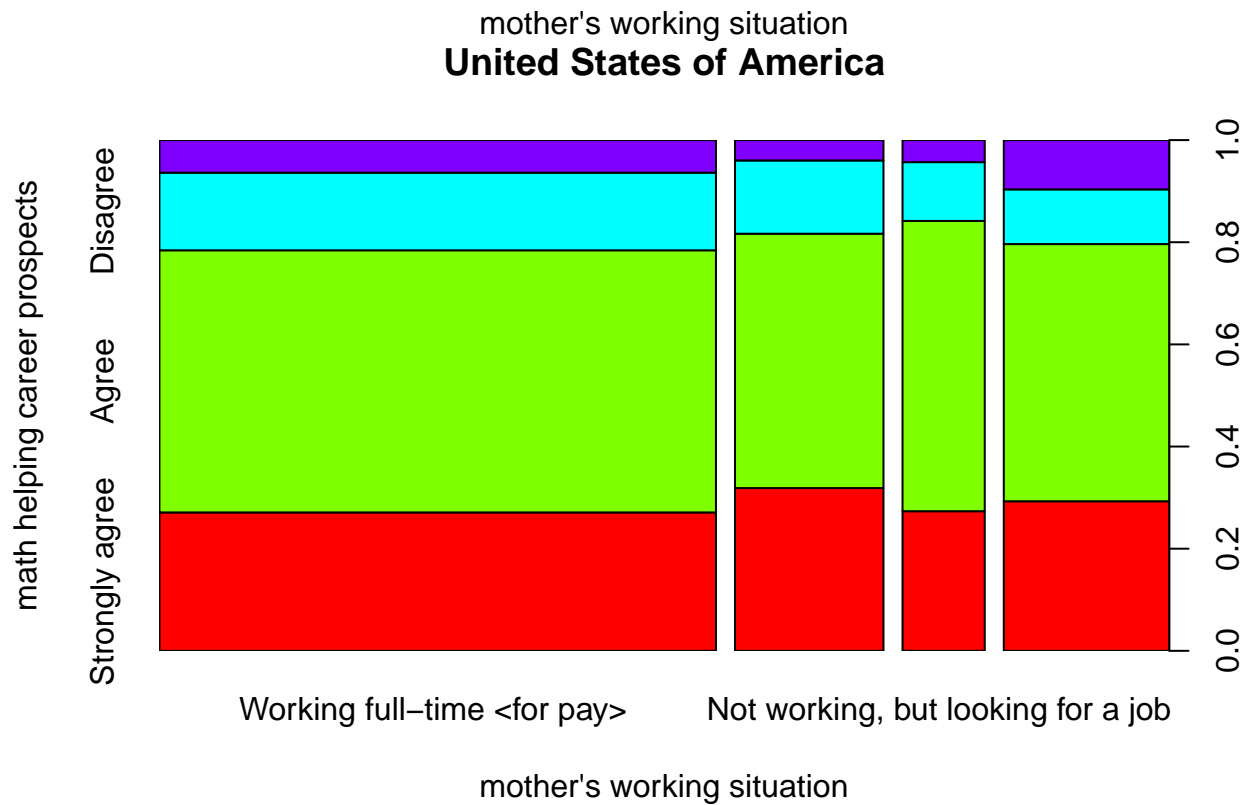
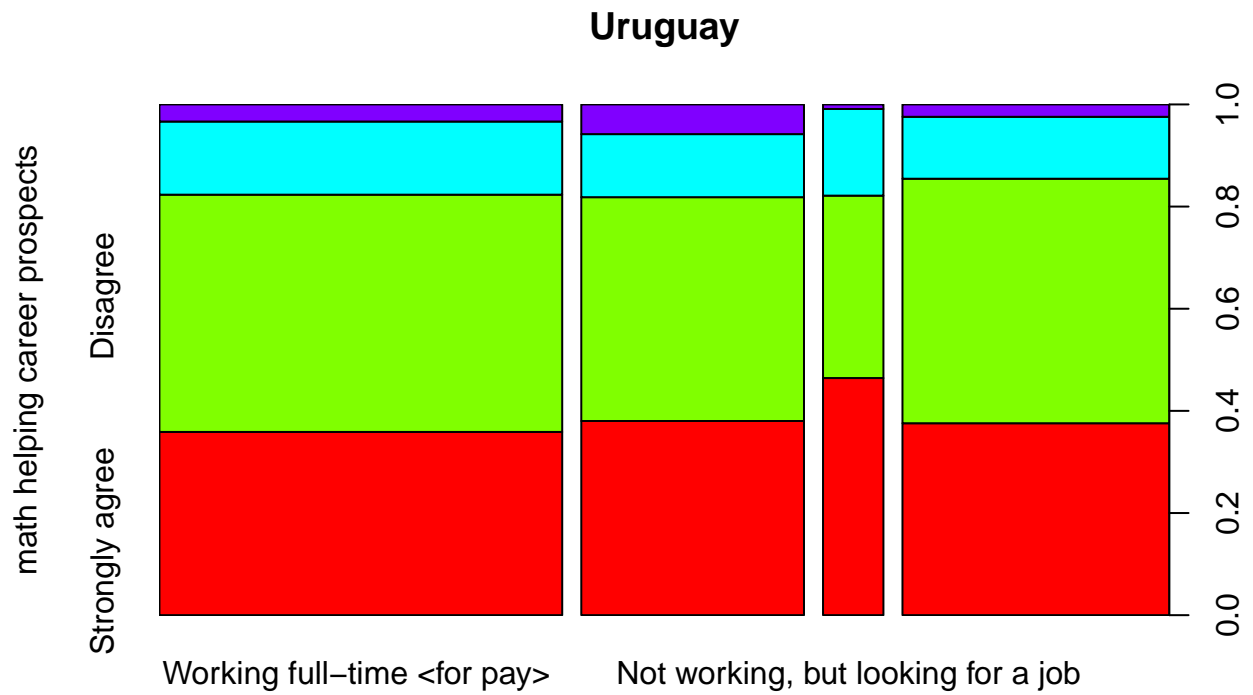


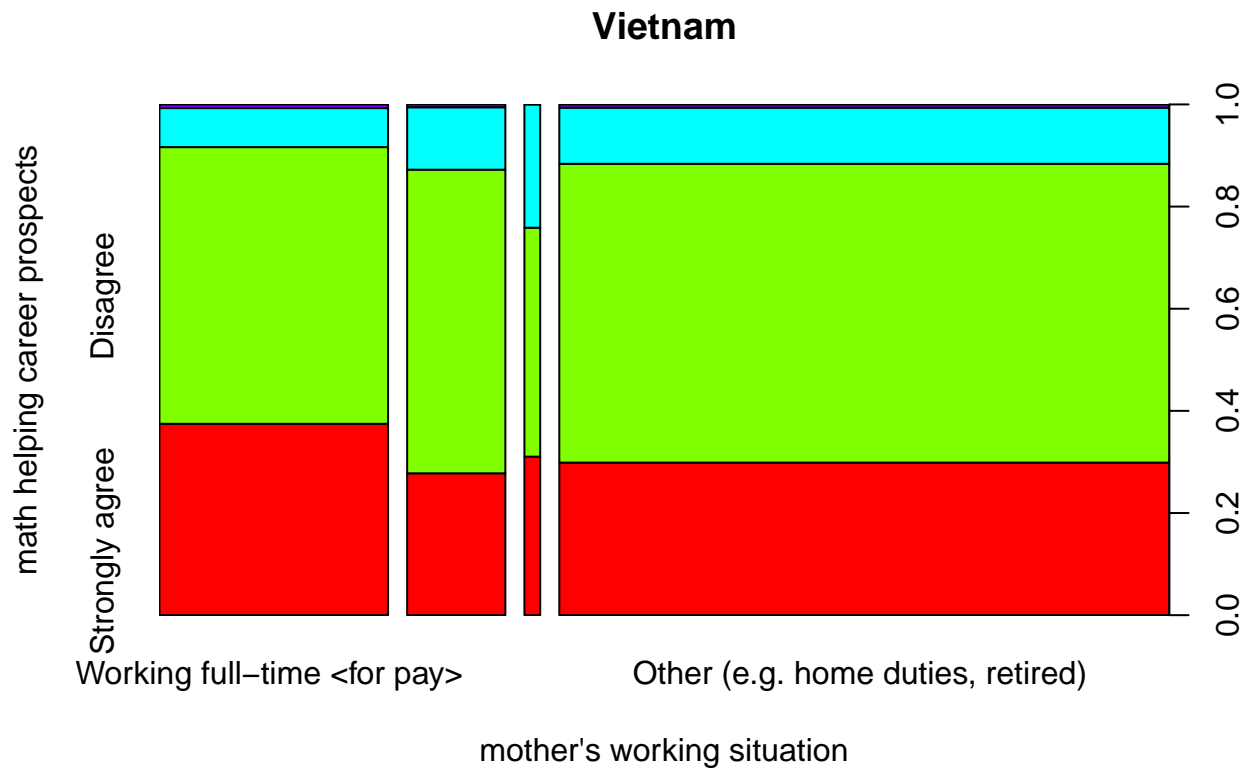












```
## [[1]]
##
## math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
## Working full-time <for pay>      211  198    29
## Working part-time <for pay>      46   39     8
## Not working, but looking for a job 87   80    13
## Other (e.g. home duties, retired) 253  253    36
##
## math helping career prospects
## mother's working situation      Strongly disagree
## Working full-time <for pay>      16
## Working part-time <for pay>      3
## Not working, but looking for a job 4
## Other (e.g. home duties, retired) 9
##
## [[2]]
##
## math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
## Working full-time <for pay>      331  345    79
## Working part-time <for pay>      93  110    25
## Not working, but looking for a job 104  94    29
## Other (e.g. home duties, retired) 979 1097   303
##
## math helping career prospects
## mother's working situation      Strongly disagree
## Working full-time <for pay>      37
## Working part-time <for pay>      7
## Not working, but looking for a job 14
## Other (e.g. home duties, retired) 97
##
## [[3]]
```

```

##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      207   271   56
##   Working part-time <for pay>      127   233   49
##   Not working, but looking for a job    83   109   25
##   Other (e.g. home duties, retired)  244   342   49
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>        30
##   Working part-time <for pay>        20
##   Not working, but looking for a job   11
##   Other (e.g. home duties, retired)   30
##
## [[4]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      660  1238   290
##   Working part-time <for pay>      317   536   122
##   Not working, but looking for a job   56   100    22
##   Other (e.g. home duties, retired)  278   499   120
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>       108
##   Working part-time <for pay>       55
##   Not working, but looking for a job    8
##   Other (e.g. home duties, retired)   43
##
## [[5]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>       73   233   217
##   Working part-time <for pay>       55   188   216
##   Not working, but looking for a job    8    10    15
##   Other (e.g. home duties, retired)   35    94    73
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>       145
##   Working part-time <for pay>       101
##   Not working, but looking for a job     5
##   Other (e.g. home duties, retired)   43
##
## [[6]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      158   575   382
##   Working part-time <for pay>      108   383   224
##   Not working, but looking for a job   17    68    37
##   Other (e.g. home duties, retired)   76   200   118
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>       197
##   Working part-time <for pay>       91
##   Not working, but looking for a job   21
##   Other (e.g. home duties, retired)   58

```

```

##
## [[7]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      304      605      149
##      Working part-time <for pay>      45      65      22
##      Not working, but looking for a job      57      92      21
##      Other (e.g. home duties, retired)      40      62      25
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      68
##      Working part-time <for pay>      8
##      Not working, but looking for a job      11
##      Other (e.g. home duties, retired)      5
##
## [[8]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      849      1244      221
##      Working part-time <for pay>      403      514      86
##      Not working, but looking for a job      388      360      63
##      Other (e.g. home duties, retired)      838      1097      152
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      47
##      Working part-time <for pay>      28
##      Not working, but looking for a job      15
##      Other (e.g. home duties, retired)      40
##
## [[9]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      1766      2140      425
##      Working part-time <for pay>      451      523      102
##      Not working, but looking for a job      105      150      33
##      Other (e.g. home duties, retired)      416      480      85
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      202
##      Working part-time <for pay>      48
##      Not working, but looking for a job      12
##      Other (e.g. home duties, retired)      48
##
## [[10]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      224      524      221
##      Working part-time <for pay>      291      770      422
##      Not working, but looking for a job      29      63      26
##      Other (e.g. home duties, retired)      155      389      175
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      122
##      Working part-time <for pay>      150

```

```

## Not working, but looking for a job 11
## Other (e.g. home duties, retired) 61
##
## [[11]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 393 355 87
## Working part-time <for pay> 167 180 33
## Not working, but looking for a job 59 73 18
## Other (e.g. home duties, retired) 361 368 82
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 43
## Working part-time <for pay> 16
## Not working, but looking for a job 5
## Other (e.g. home duties, retired) 36
##
## [[12]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 417 531 151
## Working part-time <for pay> 216 302 69
## Not working, but looking for a job 122 144 30
## Other (e.g. home duties, retired) 355 503 110
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 31
## Working part-time <for pay> 20
## Not working, but looking for a job 7
## Other (e.g. home duties, retired) 31
##
## [[13]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 200 203 43
## Working part-time <for pay> 80 85 16
## Not working, but looking for a job 46 43 9
## Other (e.g. home duties, retired) 326 292 58
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 30
## Working part-time <for pay> 7
## Not working, but looking for a job 6
## Other (e.g. home duties, retired) 34
##
## [[14]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 175 773 299
## Working part-time <for pay> 22 71 29
## Not working, but looking for a job 14 53 15
## Other (e.g. home duties, retired) 27 105 50
## math helping career prospects
## mother's working situation Strongly disagree

```

```

## Working full-time <for pay> 79
## Working part-time <for pay> 13
## Not working, but looking for a job 6
## Other (e.g. home duties, retired) 5
##
## [[15]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 111 198 82
## Working part-time <for pay> 124 274 127
## Not working, but looking for a job 17 30 18
## Other (e.g. home duties, retired) 58 109 57
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 34
## Working part-time <for pay> 32
## Not working, but looking for a job 4
## Other (e.g. home duties, retired) 24
##
## [[16]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 491 790 167
## Working part-time <for pay> 114 127 37
## Not working, but looking for a job 66 87 25
## Other (e.g. home duties, retired) 165 222 56
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 38
## Working part-time <for pay> 6
## Not working, but looking for a job 5
## Other (e.g. home duties, retired) 16
##
## [[17]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 1184 1830 656
## Working part-time <for pay> 459 844 301
## Not working, but looking for a job 187 362 127
## Other (e.g. home duties, retired) 509 856 283
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 278
## Working part-time <for pay> 139
## Not working, but looking for a job 74
## Other (e.g. home duties, retired) 142
##
## [[18]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 255 621 195
## Working part-time <for pay> 28 98 29
## Not working, but looking for a job 19 53 16
## Other (e.g. home duties, retired) 40 97 33

```

```

##                                math helping career prospects
## mother's working situation    Strongly disagree
##   Working full-time <for pay>    44
##   Working part-time <for pay>    11
##   Not working, but looking for a job    6
##   Other (e.g. home duties, retired)    14
##
## [[19]]
##                                math helping career prospects
## mother's working situation    Strongly agree Agree Disagree
##   Working full-time <for pay>    603 1165 222
##   Working part-time <for pay>    69 160 33
##   Not working, but looking for a job    52 80 16
##   Other (e.g. home duties, retired)    101 208 36
##                                math helping career prospects
## mother's working situation    Strongly disagree
##   Working full-time <for pay>    65
##   Working part-time <for pay>    9
##   Not working, but looking for a job    5
##   Other (e.g. home duties, retired)    10
##
## [[20]]
##                                math helping career prospects
## mother's working situation    Strongly agree Agree Disagree
##   Working full-time <for pay>    162 465 178
##   Working part-time <for pay>    67 142 49
##   Not working, but looking for a job    9 49 18
##   Other (e.g. home duties, retired)    50 123 45
##                                math helping career prospects
## mother's working situation    Strongly disagree
##   Working full-time <for pay>    88
##   Working part-time <for pay>    35
##   Not working, but looking for a job    13
##   Other (e.g. home duties, retired)    22
##
## [[21]]
##                                math helping career prospects
## mother's working situation    Strongly agree Agree Disagree
##   Working full-time <for pay>    773 993 134
##   Working part-time <for pay>    399 535 91
##   Not working, but looking for a job    104 160 19
##   Other (e.g. home duties, retired)    286 393 68
##                                math helping career prospects
## mother's working situation    Strongly disagree
##   Working full-time <for pay>    44
##   Working part-time <for pay>    23
##   Not working, but looking for a job    8
##   Other (e.g. home duties, retired)    24
##
## [[22]]
##                                math helping career prospects
## mother's working situation    Strongly agree Agree Disagree
##   Working full-time <for pay>    226 361 131
##   Working part-time <for pay>    54 90 25

```

##	Not working, but looking for a job	27	99	27
##	Other (e.g. home duties, retired)	142	241	95
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	54		
##	Working part-time <for pay>	11		
##	Not working, but looking for a job	22		
##	Other (e.g. home duties, retired)	41		
##				
##	[[23]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		
##	Working full-time <for pay>	84	375	193
##	Working part-time <for pay>	20	107	27
##	Not working, but looking for a job	6	23	10
##	Other (e.g. home duties, retired)	77	279	124
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	46		
##	Working part-time <for pay>	12		
##	Not working, but looking for a job	4		
##	Other (e.g. home duties, retired)	42		
##				
##	[[24]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		
##	Working full-time <for pay>	130	506	218
##	Working part-time <for pay>	9	23	9
##	Not working, but looking for a job	22	98	42
##	Other (e.g. home duties, retired)	68	236	114
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	101		
##	Working part-time <for pay>	2		
##	Not working, but looking for a job	13		
##	Other (e.g. home duties, retired)	46		
##				
##	[[25]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		
##	Working full-time <for pay>	193	718	151
##	Working part-time <for pay>	22	76	21
##	Not working, but looking for a job	22	92	27
##	Other (e.g. home duties, retired)	59	141	39
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	74		
##	Working part-time <for pay>	5		
##	Not working, but looking for a job	5		
##	Other (e.g. home duties, retired)	14		
##				
##	[[26]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		



```

## Working full-time <for pay>          129  222    40
## Working part-time <for pay>          79  121    27
## Not working, but looking for a job    15   28     6
## Other (e.g. home duties, retired)    353  664   97
##
## math helping career prospects
## mother's working situation          Strongly disagree
## Working full-time <for pay>          2
## Working part-time <for pay>          1
## Not working, but looking for a job    2
## Other (e.g. home duties, retired)    4
##
## [[27]]
##
## math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
## Working full-time <for pay>          177  373    66
## Working part-time <for pay>          139  218    33
## Not working, but looking for a job    37   56    10
## Other (e.g. home duties, retired)    164  296    43
##
## math helping career prospects
## mother's working situation          Strongly disagree
## Working full-time <for pay>          17
## Working part-time <for pay>          11
## Not working, but looking for a job    8
## Other (e.g. home duties, retired)    15
##
## [[28]]
##
## math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
## Working full-time <for pay>          311  369    66
## Working part-time <for pay>          58   63    10
## Not working, but looking for a job    17   21     2
## Other (e.g. home duties, retired)    50   76    13
##
## math helping career prospects
## mother's working situation          Strongly disagree
## Working full-time <for pay>          17
## Working part-time <for pay>          2
## Not working, but looking for a job    2
## Other (e.g. home duties, retired)    8
##
## [[29]]
##
## math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
## Working full-time <for pay>          479  345   103
## Working part-time <for pay>          111  116    21
## Not working, but looking for a job    48   30    13
## Other (e.g. home duties, retired)    191  176    59
##
## math helping career prospects
## mother's working situation          Strongly disagree
## Working full-time <for pay>          37
## Working part-time <for pay>          7
## Not working, but looking for a job    2
## Other (e.g. home duties, retired)    30
##
## [[30]]

```

```

##                                     math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
##   Working full-time <for pay>        687  2300   1015
##   Working part-time <for pay>        287  1102    502
##   Not working, but looking for a job   83   320    117
##   Other (e.g. home duties, retired)  487  1483    652
##                                     math helping career prospects
## mother's working situation          Strongly disagree
##   Working full-time <for pay>         394
##   Working part-time <for pay>         220
##   Not working, but looking for a job   57
##   Other (e.g. home duties, retired)  222
##
## [[31]]
##                                     math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
##   Working full-time <for pay>        148   131    21
##   Working part-time <for pay>         35    41    14
##   Not working, but looking for a job   27    33    11
##   Other (e.g. home duties, retired)  752   844   181
##                                     math helping career prospects
## mother's working situation          Strongly disagree
##   Working full-time <for pay>         13
##   Working part-time <for pay>          3
##   Not working, but looking for a job    3
##   Other (e.g. home duties, retired)   75
##
## [[32]]
##                                     math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
##   Working full-time <for pay>         80   243   240
##   Working part-time <for pay>         83   300   307
##   Not working, but looking for a job    7    23    17
##   Other (e.g. home duties, retired)   39   139   136
##                                     math helping career prospects
## mother's working situation          Strongly disagree
##   Working full-time <for pay>        129
##   Working part-time <for pay>        132
##   Not working, but looking for a job   13
##   Other (e.g. home duties, retired)   65
##
## [[33]]
##                                     math helping career prospects
## mother's working situation          Strongly agree Agree Disagree
##   Working full-time <for pay>        392   480   137
##   Working part-time <for pay>         58    84    21
##   Not working, but looking for a job   79    83    24
##   Other (e.g. home duties, retired)  191   270    59
##                                     math helping career prospects
## mother's working situation          Strongly disagree
##   Working full-time <for pay>         15
##   Working part-time <for pay>          3
##   Not working, but looking for a job    3
##   Other (e.g. home duties, retired)     7

```

```

##
## [[34]]
##
## mother's working situation      math helping career prospects
##                               Strongly agree Agree Disagree
##   Working full-time <for pay>      104   355   145
##   Working part-time <for pay>       33    92    59
##   Not working, but looking for a job    6    16     6
##   Other (e.g. home duties, retired)   82   271   125
##
## mother's working situation      math helping career prospects
##                               Strongly disagree
##   Working full-time <for pay>       117
##   Working part-time <for pay>       38
##   Not working, but looking for a job    5
##   Other (e.g. home duties, retired)   84
##
## [[35]]
##
## mother's working situation      math helping career prospects
##                               Strongly agree Agree Disagree
##   Working full-time <for pay>       10     8     3
##   Working part-time <for pay>        8    16     8
##   Not working, but looking for a job    3     1     1
##   Other (e.g. home duties, retired)    7    15     8
##
## mother's working situation      math helping career prospects
##                               Strongly disagree
##   Working full-time <for pay>         1
##   Working part-time <for pay>         2
##   Not working, but looking for a job    1
##   Other (e.g. home duties, retired)    1
##
## [[36]]
##
## mother's working situation      math helping career prospects
##                               Strongly agree Agree Disagree
##   Working full-time <for pay>      330   338   104
##   Working part-time <for pay>      107   101    25
##   Not working, but looking for a job   59    64    19
##   Other (e.g. home duties, retired)   88    82    29
##
## mother's working situation      math helping career prospects
##                               Strongly disagree
##   Working full-time <for pay>       59
##   Working part-time <for pay>       13
##   Not working, but looking for a job   10
##   Other (e.g. home duties, retired)   22
##
## [[37]]
##
## mother's working situation      math helping career prospects
##                               Strongly agree Agree Disagree
##   Working full-time <for pay>      131   246   179
##   Working part-time <for pay>       90   166   117
##   Not working, but looking for a job   15    27    15
##   Other (e.g. home duties, retired)   68   174    98
##
## mother's working situation      math helping career prospects
##                               Strongly disagree
##   Working full-time <for pay>      110
##   Working part-time <for pay>       77

```

```

## Not working, but looking for a job 16
## Other (e.g. home duties, retired) 76
##
## [[38]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 267 531 143
## Working part-time <for pay> 42 84 33
## Not working, but looking for a job 25 44 25
## Other (e.g. home duties, retired) 53 92 34
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 29
## Working part-time <for pay> 12
## Not working, but looking for a job 4
## Other (e.g. home duties, retired) 5
##
## [[39]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 153 675 296
## Working part-time <for pay> 9 34 16
## Not working, but looking for a job 4 13 17
## Other (e.g. home duties, retired) 50 208 100
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 71
## Working part-time <for pay> 3
## Not working, but looking for a job 1
## Other (e.g. home duties, retired) 31
##
## [[40]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 1121 1189 161
## Working part-time <for pay> 915 1029 162
## Not working, but looking for a job 321 338 40
## Other (e.g. home duties, retired) 2740 2792 279
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 44
## Working part-time <for pay> 39
## Not working, but looking for a job 11
## Other (e.g. home duties, retired) 63
##
## [[41]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 94 279 191
## Working part-time <for pay> 13 24 22
## Not working, but looking for a job 34 101 73
## Other (e.g. home duties, retired) 97 251 133
## math helping career prospects
## mother's working situation Strongly disagree

```

```

## Working full-time <for pay> 81
## Working part-time <for pay> 8
## Not working, but looking for a job 27
## Other (e.g. home duties, retired) 57
##
## [[42]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 225 249 34
## Working part-time <for pay> 74 89 15
## Not working, but looking for a job 16 14 3
## Other (e.g. home duties, retired) 483 560 59
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 4
## Working part-time <for pay> 2
## Not working, but looking for a job 0
## Other (e.g. home duties, retired) 5
##
## [[43]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 56 210 87
## Working part-time <for pay> 77 340 148
## Not working, but looking for a job 8 29 16
## Other (e.g. home duties, retired) 30 130 57
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 46
## Working part-time <for pay> 67
## Not working, but looking for a job 7
## Other (e.g. home duties, retired) 23
##
## [[44]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 325 447 124
## Working part-time <for pay> 86 158 28
## Not working, but looking for a job 10 20 8
## Other (e.g. home duties, retired) 44 88 19
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 56
## Working part-time <for pay> 27
## Not working, but looking for a job 4
## Other (e.g. home duties, retired) 17
##
## [[45]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 252 377 66
## Working part-time <for pay> 109 178 25
## Not working, but looking for a job 27 35 8
## Other (e.g. home duties, retired) 66 133 29

```

```

##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      27
##   Working part-time <for pay>      11
##   Not working, but looking for a job 3
##   Other (e.g. home duties, retired) 8
##
## [[46]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      182  184    20
##   Working part-time <for pay>      254  260    31
##   Not working, but looking for a job 85  125    17
##   Other (e.g. home duties, retired) 340  379    17
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      4
##   Working part-time <for pay>      4
##   Not working, but looking for a job 2
##   Other (e.g. home duties, retired) 4
##
## [[47]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      226  603    125
##   Working part-time <for pay>      8   78     18
##   Not working, but looking for a job 25  59     22
##   Other (e.g. home duties, retired) 69  188    44
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      63
##   Working part-time <for pay>      4
##   Not working, but looking for a job 13
##   Other (e.g. home duties, retired) 20
##
## [[48]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      449  581    86
##   Working part-time <for pay>      53  115    10
##   Not working, but looking for a job 61  113    17
##   Other (e.g. home duties, retired) 79  158    22
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      44
##   Working part-time <for pay>      8
##   Not working, but looking for a job 10
##   Other (e.g. home duties, retired) 13
##
## [[49]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      317  408    100
##   Working part-time <for pay>      110  159    46

```

##	Not working, but looking for a job	88	95	29
##	Other (e.g. home duties, retired)	643	866	272
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	63		
##	Working part-time <for pay>	25		
##	Not working, but looking for a job	18		
##	Other (e.g. home duties, retired)	138		
##				
##	[[50]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		
##	Working full-time <for pay>	261	648	292
##	Working part-time <for pay>	13	28	16
##	Not working, but looking for a job	6	28	8
##	Other (e.g. home duties, retired)	76	209	80
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	44		
##	Working part-time <for pay>	4		
##	Not working, but looking for a job	2		
##	Other (e.g. home duties, retired)	18		
##				
##	[[51]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		
##	Working full-time <for pay>	77	190	134
##	Working part-time <for pay>	4	11	9
##	Not working, but looking for a job	10	11	7
##	Other (e.g. home duties, retired)	13	42	24
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	23		
##	Working part-time <for pay>	3		
##	Not working, but looking for a job	1		
##	Other (e.g. home duties, retired)	5		
##				
##	[[52]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		
##	Working full-time <for pay>	129	204	391
##	Working part-time <for pay>	20	36	50
##	Not working, but looking for a job	40	45	72
##	Other (e.g. home duties, retired)	71	126	218
##		math helping career prospects		
##	mother's working situation	Strongly disagree		
##	Working full-time <for pay>	146		
##	Working part-time <for pay>	14		
##	Not working, but looking for a job	25		
##	Other (e.g. home duties, retired)	76		
##				
##	[[53]]			
##		math helping career prospects		
##	mother's working situation	Strongly agree Agree Disagree		

```

## Working full-time <for pay>                243   510   411
## Working part-time <for pay>                 15    32    23
## Not working, but looking for a job          19    40    34
## Other (e.g. home duties, retired)          56   131    92
##
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay>                 75
## Working part-time <for pay>                 7
## Not working, but looking for a job          2
## Other (e.g. home duties, retired)          25
##
## [[54]]
##
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay>                243   516    99
## Working part-time <for pay>                 84   148    22
## Not working, but looking for a job          19    26     8
## Other (e.g. home duties, retired)          167   373    72
##
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay>                 16
## Working part-time <for pay>                 6
## Not working, but looking for a job          1
## Other (e.g. home duties, retired)          8
##
## [[55]]
##
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay>                145   474   150
## Working part-time <for pay>                 10    40    13
## Not working, but looking for a job          42   153    50
## Other (e.g. home duties, retired)          72   202    51
##
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay>                 54
## Working part-time <for pay>                 6
## Not working, but looking for a job          18
## Other (e.g. home duties, retired)          18
##
## [[56]]
##
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay>                132   538   256
## Working part-time <for pay>                 15    54    27
## Not working, but looking for a job          28    81    26
## Other (e.g. home duties, retired)          25   104    29
##
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay>                 88
## Working part-time <for pay>                 10
## Not working, but looking for a job          8
## Other (e.g. home duties, retired)          16
##
## [[57]]

```



```

##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      209   736   246
##   Working part-time <for pay>      22    65    22
##   Not working, but looking for a job 16    75    19
##   Other (e.g. home duties, retired) 35    93    30
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      117
##   Working part-time <for pay>      7
##   Not working, but looking for a job 7
##   Other (e.g. home duties, retired) 19
##
## [[58]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      312   578   104
##   Working part-time <for pay>      96   177    45
##   Not working, but looking for a job 17    46     8
##   Other (e.g. home duties, retired) 33    70    17
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      36
##   Working part-time <for pay>      14
##   Not working, but looking for a job 1
##   Other (e.g. home duties, retired) 5
##
## [[59]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      98   642   408
##   Working part-time <for pay>      7    53    35
##   Not working, but looking for a job 1    22    15
##   Other (e.g. home duties, retired) 81   276   171
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      131
##   Working part-time <for pay>      12
##   Not working, but looking for a job 5
##   Other (e.g. home duties, retired) 51
##
## [[60]]
##                                math helping career prospects
## mother's working situation      Strongly agree Agree Disagree
##   Working full-time <for pay>      393   658    91
##   Working part-time <for pay>      175   361    52
##   Not working, but looking for a job 20    24     2
##   Other (e.g. home duties, retired) 198   343    46
##                                math helping career prospects
## mother's working situation      Strongly disagree
##   Working full-time <for pay>      14
##   Working part-time <for pay>      7
##   Not working, but looking for a job 0
##   Other (e.g. home duties, retired) 9

```

```

##
## [[61]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      101      83      22
##      Working part-time <for pay>      48      44      14
##      Not working, but looking for a job      35      32      6
##      Other (e.g. home duties, retired)      480      422      118
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      10
##      Working part-time <for pay>      3
##      Not working, but looking for a job      4
##      Other (e.g. home duties, retired)      56
##
## [[62]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      55      77      28
##      Working part-time <for pay>      21      14      7
##      Not working, but looking for a job      26      55      20
##      Other (e.g. home duties, retired)      367      540      180
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      10
##      Working part-time <for pay>      0
##      Not working, but looking for a job      6
##      Other (e.g. home duties, retired)      80
##
## [[63]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      268      347      107
##      Working part-time <for pay>      157      181      51
##      Not working, but looking for a job      52      40      19
##      Other (e.g. home duties, retired)      186      237      60
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      25
##      Working part-time <for pay>      24
##      Not working, but looking for a job      1
##      Other (e.g. home duties, retired)      12
##
## [[64]]
##
## mother's working situation      math helping career prospects
##      Strongly agree Agree Disagree
##      Working full-time <for pay>      255      483      143
##      Working part-time <for pay>      80      125      36
##      Not working, but looking for a job      38      79      16
##      Other (e.g. home duties, retired)      82      141      30
##
## mother's working situation      math helping career prospects
##      Strongly disagree
##      Working full-time <for pay>      60
##      Working part-time <for pay>      10

```

```
## Not working, but looking for a job 6
## Other (e.g. home duties, retired) 27
##
## [[65]]
## math helping career prospects
## mother's working situation Strongly agree Agree Disagree
## Working full-time <for pay> 157 227 32
## Working part-time <for pay> 50 107 22
## Not working, but looking for a job 9 13 7
## Other (e.g. home duties, retired) 334 654 123
## math helping career prospects
## mother's working situation Strongly disagree
## Working full-time <for pay> 3
## Working part-time <for pay> 1
## Not working, but looking for a job 0
## Other (e.g. home duties, retired) 7
```

```
plot(girls_career$ST15Q01, girls_career$ST29Q05, par(las=2), xlab="mother's working situation", ylab="math helping career prospects")
```

