

Examples with TIMSS 2023

```
library("devtools")
install_github("eldafani/intsvy")
library("intsvy")

## -- Attaching core tidyverse packages ----- tidy
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2    3.5.1      v tibble    3.2.1
## v lubridate  1.9.2      v tidyr     1.3.0
## v purrr      1.0.1
## -- Conflicts ----- tidy
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

Grade 8

Read data

The object `dir` specifies the directory path where the TIMSS 2023 data is located (eg. `"/home/data"`). Variable selection can be done with aid of `timssg8.var.label(dir)`

```
timss <- timssg8.select.merge(folder= dir,
  student= c("ITSEX", "BSDGSLM", "BSDGSVM", "BSDGEDUP"),
  school= c("BCBG05A", "BCDGSEC"),
  countries = c("ARE", "CHL", "GEO", "SGP"))
```

Calculate mean math performance by education system

```
timss.mean.pv(pvlabel=paste0("BSMMAT0", 1:5), by= "IDCNTRYL", data=timss)
```

	IDCNTRYL	Freq	Mean	s.e.	SD	s.e
## 1	Chile	4478	415.97	3.21	83.71	2.11
## 2	Georgia	4872	466.75	3.22	92.08	2.13
## 3	Singapore	4772	605.32	6.05	96.98	3.55
## 4	United Arab Emirates	32740	488.51	1.73	103.86	1.39

Calculate mean math performance by education system and student's sex

```
timss.mean.pv(pvlabel= paste0("BSMMAT0", 1:5), by= c("IDCNTRYL", "ITSEX"),
  data=timss %>% drop_na(ITSEX))
```

	IDCNTRYL	ITSEX	Freq	Mean	s.e.	SD	s.e
## 1	Chile	1	2218	404.71	3.47	82.06	1.95
## 2	Chile	2	2260	426.85	3.67	83.84	3.00
## 3	Georgia	1	2389	462.61	3.47	89.88	2.25
## 4	Georgia	2	2483	470.82	3.86	93.99	2.60
## 5	Singapore	1	2305	601.87	6.91	93.51	3.74

```
## 6          Singapore      2 2467 608.45 8.26 99.92 4.10
## 7 United Arab Emirates    1 16662 482.13 1.89 99.46 1.42
## 8 United Arab Emirates    2 16077 494.70 2.18 107.61 1.75
```

International benchmarks by education system

```
intsvy.ben.pv(pvnames= paste0("BSMMATO", 1:5), cutoff = c(400, 475, 550, 625),
  by= c("IDCNTRYL", "ITSEX"), data=timss %>% drop_na(ITSEX),
  config = timss8_conf)
```

##	IDCNTRYL	ITSEX	Benchmark	Percentage	Std. err.
## 1	Chile	1 At or above 400	50.93	1.96	
## 2	Chile	1 At or above 475	19.22	1.21	
## 3	Chile	1 At or above 550	4.32	0.61	
## 4	Chile	1 At or above 625	0.60	0.25	
## 5	Chile	2 At or above 400	62.43	1.90	
## 6	Chile	2 At or above 475	28.15	1.52	
## 7	Chile	2 At or above 550	7.20	0.84	
## 8	Chile	2 At or above 625	0.85	0.25	
## 9	Georgia	1 At or above 400	73.86	1.58	
## 10	Georgia	1 At or above 475	45.62	1.96	
## 11	Georgia	1 At or above 550	17.14	1.42	
## 12	Georgia	1 At or above 625	2.89	0.53	
## 13	Georgia	2 At or above 400	76.28	1.90	
## 14	Georgia	2 At or above 475	47.67	1.90	
## 15	Georgia	2 At or above 550	21.39	1.45	
## 16	Georgia	2 At or above 625	4.73	0.93	
## 17	Singapore	1 At or above 400	96.68	0.80	
## 18	Singapore	1 At or above 475	89.37	1.70	
## 19	Singapore	1 At or above 550	74.20	2.50	
## 20	Singapore	1 At or above 625	44.84	3.20	
## 21	Singapore	2 At or above 400	96.88	0.82	
## 22	Singapore	2 At or above 475	89.31	1.83	
## 23	Singapore	2 At or above 550	74.08	2.89	
## 24	Singapore	2 At or above 625	47.70	3.45	
## 25	United Arab Emirates	1 At or above 400	78.02	0.76	
## 26	United Arab Emirates	1 At or above 475	52.71	0.88	
## 27	United Arab Emirates	1 At or above 550	25.47	0.75	
## 28	United Arab Emirates	1 At or above 625	7.74	0.47	
## 29	United Arab Emirates	2 At or above 400	79.13	0.85	
## 30	United Arab Emirates	2 At or above 475	57.25	0.91	
## 31	United Arab Emirates	2 At or above 550	32.12	0.91	
## 32	United Arab Emirates	2 At or above 625	11.67	0.67	

International benchmarks by education system and student's sex

```
intsvy.ben.pv(pvnames= paste0("BSMMATO", 1:5), cutoff = c(400, 475, 550, 625),
  by= c("IDCNTRYL", "ITSEX"), data=timss %>% drop_na(ITSEX),
  config = timss8_conf)
```

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