btable

Extensive Summary Tables in Stata

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Why to use it

- Easy-to-use: simple basic syntax

- Flexible: variable-specific statistics and formatting

- Type-specific defaults for continuous, categorical, count and time-to-event variables

- Extensive: more than 15 descriptive statistics, 10 effect measures (with 25 confidence interval methods) and 10 tests

- Customizable: user-specific descriptive statistics, effect measures and tests

- Two-stage approach: keeps analysis and formatting separated

How to get it

- **btable** is available from GitHub:
  https://github.com/CTU-Bern/btable

- For installation the github-package is required:

```
1  net install github, from("https://haghish.github.io/github/")
```

- **btable** can then be installed via:

```
1  github install CTU-Bern/btable
```

Basic syntax

```stata
1  use "auto3", clear
2  btable price weight repbin, saving("btab1") ///
3    conti(price weight) cat(repbin)
4  btable_format using "btab1", clear
5  list, ds
```

```
    | variable                 out_t      desc_info |
    |-----------------------------------------------|
 1. |               Total (N = 74)   Descriptives   |
 2. |             mean (sd) or n (%)                |
 3. | Price               6194 (2960)     mean (sd) |
 4. | Weight (lbs.)        3019 (777)      mean (sd) |
 5. | Repair record                                 |
 6. |     Poor             40 (54%)           n (%) |
 7. |     Good             29 (39%)           n (%) |
    +-----------------------------------------------+
```

Choice of descriptives

```stata
1  btable_format using "btab1", clear    ///
2    descriptive(conti "mean ± sd" price "median (lq, uq)" ///
3                cat "nlev (perc%, perclci-percuci%)") ///
4    format_desc(conti "%8.4g" cat "%8.1f") ///
5    design(row) drop(info)
6  list, ds
```

```
     | variable                                      out_t |
     |------------------------------------------------------|
  1. |                                        Total (N = 74) |
     |                                                       |
  2. | Price - median (lq, uq)                 5079 (4296, 6342) |
     |                                                       |
  3. | Weight (lbs.) - mean ± sd                   3019 ± 777.2 |
     |                                                       |
  4. | Repair record - n (percentage, 95% CI)               |
     |                                                       |
  5. |     Poor                           40 (54.1%, 42.8-64.9%) |
     |                                                       |
  6. |     Good                           29 (39.2%, 28.9-50.6%) |
     +------------------------------------------------------+
```

More than one row of descriptives

```stata
1  btable_format using "btab1", clear ///
2    desc(conti "mean (sd)" | conti "median [min, lq-uq, max]") ///
3    design(row) drop(info)
4  list, ds
```

	variable	out_t
1.		Total (N = 74)
2.	Price	
3.	mean (sd)	6194 (2960)
4.	median [min, lq-uq, max]	5079 [3291, 4296-6342, 15906]
5.	Weight (lbs.)	
6.	mean (sd)	3019 (777)
7.	median [min, lq-uq, max]	3190 [1760, 2240-3600, 4840]
8.	Repair record - n (%)	
9.	Poor	40 (54%)
10.	Good	29 (39%)

Missings

```
1 btable_format using "btab1", clear ncol(non-missing)
2 list, ds
```

	variable	ns_t	out_t	desc_info
1.		Total (N = 74)	Total (N = 74)	Descriptives
2.		non-missing	mean (sd) or n (%)	
3.	Price	73	6194 (2960)	mean (sd)
4.	Weight (lbs.)	74	3019 (777)	mean (sd)
5.	Repair record	69		
6.	Poor		40 (54%)	n (%)
7.	Good		29 (39%)	n (%)

```
1 btable_format using "btab1", clear design(missing)
2 list, ds
```

	variable	out_t	desc_info
1.		Total (N = 74)	Descriptives
2.	Price		
3.	mean (sd)	6194 (2960)	mean (sd)
4.	missing - n (%)	1 (1.4%)	n (%)
5.	Weight (lbs.) - mean (sd)	3019 (777)	mean (sd)
6.	Repair record - n (%)		
7.	Poor	40 (54%)	n (%)
8.	Good	29 (39%)	n (%)
9.	missing	5 (6.8%)	n (%)

By group

```
1  use "auto3", clear
2  btable price weight repbin, by(foreign) saving("btab2")
3  btable_format using "btab2", clear collapse(repbin)
4  list, ds
```

	variable	out_t	out_1	out_2	out_d	pv
1.		Total (N = 74)	Domestic (N = 52)	Foreign (N = 22)	Mean or risk difference (95% CI)	P-value
2.		mean (sd) or n (%)	mean (sd) or n (%)	mean (sd) or n (%)		
3.	Price	6194 (2960)	6111 (3115)	6385 (2622)	-274 (-1788 to 1241)	0.72
4.	Weight (lbs.)	3019 (777)	3317 (695)	2316 (433)	1001 (682 to 1321)	<0.001
5.	Repair record (Good)	29 (39%)	11 (21%)	18 (82%)	-0.61 (-0.80 to -0.41)	<0.001

	desc_info	effect_info	test_info
1.	Descriptives	Effects	Tests
2.			
3.	mean (sd)	mean difference (95% CI)	Student's t-test
4.	mean (sd)	mean difference (95% CI)	Student's t-test
5.	n (%)	risk difference (95% CI)	Fisher's exact test

Effects and tests

```
1  btable_format using "btab2", clear  ///
2    desc(price "median [lq, uq]") ///
3    effect(price "mws (mws_lci-mws_uci)" cat "or (or_lci; or_uci)") ///
4    test(price "ranksum" cat "chi2") ///
5    collapse(repbin) design(row) drop(total) abbreviation
6  list, ds
```

```
     | variable                              out_1              out_2                out_d         pv |
     |-------------------------------------------------------------------------------------------------|
  1. |                             Domestic (N = 52)   Foreign (N = 22)   MD, MWS or OR (95% CI)   P-value |
  2. | Price - median [lq, uq]     4816 [4187, 6303]   5759 [4499, 7140]      0.43 (0.30-0.57)      0.33 |
  3. | Weight (lbs.) - mean (sd)         3317 (695)          2316 (433)      1001 (682 to 1321)    <0.001 |
  4. | Repair record (Good) - n (%)       11 (21%)           18 (82%)         0.06 (0.02; 0.21)    <0.001 |
     +-------------------------------------------------------------------------------------------------+
```

```
     |      desc_info                    effect_info   abbr_effec~o                   test_info |
     |------------------------------------------------------------------------------------------|
  1. |    Descriptives                        Effects        Effects                       Tests |
  2. | median [lq, uq]   Mann-Whitney statistic (95% CI)   MWS (95% CI)   Wilcoxon-Mann-Whitney test |
  3. |        mean (sd)         mean difference (95% CI)    MD (95% CI)             Student's t-test |
  4. |            n (%)            odds ratio (95% CI)      OR (95% CI)              chi-squared test |
     +------------------------------------------------------------------------------------------+
```

Further variable types

```stata
1  use "auto3", clear
2  btable price repbin n_checkups time_to_accident, ///
3    count(n_checkups) exp_time(age) ///
4    tte(time_to_accident) fail(accident) ///
5    by(foreign) saving("btab3")
6
7  btable_format using "btab3", clear collapse(repbin) ///
8    drop(total) abbreviation design(row)
9  list, ds
```

	variable	out_1	out_2	out_d	pv
1.		Domestic (N = 52)	Foreign (N = 22)	HR, IRR, MD or RD* (95% CI)	P-value
2.	Price - mean (sd)	6111 (3115)	6385 (2622)	-274 (-1788 to 1241)	0.72
3.	Repair record (Good) - n (%)	11 (21%)	18 (82%)	-0.61 (-0.80 to -0.41)	<0.001
4.	Number of checkups - n/person-time (incidence)	177/521 (0.34)	74/159 (0.47)	0.73 (0.55 to 0.97)	0.025
5.	Accident - failures (person-time at risk)	31 (200)	10 (97)	1.5 (0.72 to 3.1)	0.28

	desc_info	effect_info	abbr_effec~o	test_info
1.	Descriptives	Effects	Effects	Tests
2.	mean (sd)	mean difference (95% CI)	MD (95% CI)	Student's t-test
3.	n (%)	risk difference (95% CI)	RD (95% CI)	Fisher's exact test
4.	n/person-time (incidence)	incidence rate ratio (95% CI)	IRR (95% CI)	Poisson exact test
5.	failures (person-time at risk)	hazard ratio (95% CI)	HR (95% CI)	log-rank test

Further options (see help files)

`btable`:

- User-specific descriptives and effect measures: **`user_command`**(*function*) and **`user_var`**(*varlist*)

- Alternative confidence intervals for effect measures

- Subset of effects and tests: **`effects`**() and **`tests`**()

- Hierarchical clustering: **`parent`**(*varlist*) and **`kid`**(*varlist*)

- Denominator for categorical variables: **`denom`**(*nonmiss*)

`btable_format`:

- Blocks: **`block`**() and **`block_head`**()

- Formatting of p-values: **`p_digits`**() and **`p_breaks`**()