NDK_GLM_PARAM

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- [C/C++](C/C++)
- [.Net](.Net)

```
int __stdcall NDK_GLM_PARAM ( double *    Y,
                              size_t      nSize,
                              double **   X,
                              size_t      nVars,
                              double *    betas,
                              size_t      nBetas,
                              double *    phi,
                              WORD        Lvk,
                              WORD        retType,
                              size_t      maxIter
                            )
```

Returns an array of cells for the initial (non-optimal), optimal or standard errors of the model's parameters.

Returns

status code of the operation

Return values

NDK_SUCCESS Operation successful

NDK_FAILED   Operation unsuccessful. See **Macros** for full list.

Parameters

[in]	**Y**	is the response or the dependent variable data array (one dimensional array)
[in]	**nSize**	is the number of observations
[in]	**X**	is the independent variables data matrix, such that each column represents one variable
[in]	**nVars**	is the number of independent variables (or columns in X)
[in,out]	**betas**	are the coefficients of the GLM model (a one dimensional array)
[in]	**nBetas**	is the number of the coefficients in betas. Note that nBetas must be equal to nVars+1

[in,out] **phi**		is the GLM dispersion parameter. Phi is only meaningful for Binomial (1/batch or trial size) and for Gaussian (variance).

- Binomial : phi = Reciprocal of the batch/trial size.
- Gaussian : phi = variance.
- Poisson : phi = 1.0

[in]　　**Lvk**　　is the link function that describes how the mean depends on the linear predictor (see **GLM_LINK_FUNC**).

1. Identity (default)
2. Log
3. Logit
4. Probit
5. Complementary log-log

[in]　　**retType** is a switch to select the type of value returned: 1= Quick Guess, 2=Calibrated, 3= Std. Errors (see **MODEL_RETVAL_FUNC**)

[in]　　**maxIter** is the maximum number of iterations used to calibrate the model. If missing, the default maximum of 100 is assumed.

Remarks

1. The underlying model is described **here**.
2. GLM_GUESS returns an array of size equal number of betas plus one (Phi).
3. The number of rows in response variable (Y) must be equal to number of rows of the explanatory variables (X).
4. For GLM with Poisson distribution,
   - The values of response variable must be non-negative integers.
   - The value of the dispersion factor (Phi) must be either missing or equal to one.
5. For GLM with Binomial distribution,
   - The values of the response variable must be non-negative fractions between zero and one, inclusive.
   - The value of the dispersion factor (Phi) must be a positive fraction (greater than zero, and less than one).
6. For GLM with Gaussian distribution, the dispersion factor (Phi) value must be either missing or positive.

Requirements

Header

SFSDK.H

References

Hamilton, J .D.; [Time Series Analysis](), Princeton University Press (1994), ISBN 0-691-04289-6

Tsay, Ruey S.; [Analysis of Financial Time Series]()John Wiley & SONS. (2005), ISBN 0-471-690740

See Also

[template("related")]