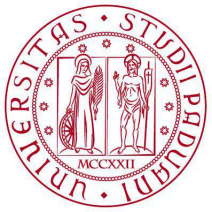

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DEGLI STUDI
DI PADOVA

Università degli Studi di Padova

Dipartimento di Scienze Statistiche

Corso di Laurea Triennale in
Statistica per le Tecnologie e le Scienze

Relazione finale

Akaike's Information Criterion in Generalized Estimating Equations

Relatore: Prof. Alessandra Salvan

Dipartimento di Scienze Statistiche

Laureando: Francesco Ignazio Re

Matricola: 1149556

Abstract

— Draft — Generalized linear models are a powerful tool in statistical analysis for modeling data whose distribution belongs to the exponential family. However, even though they widen the class of doable problems, overcoming the necessity of normally distributed observations, they still set a few limitations, being themselves based on the maximum likelihood method, and hence, on the specification of an a-priori settled model.These constraints may present an obstacle when working with data whose variability is not well represented by the one assumed in model.

Sommario

Contenuto del sommario.

Dedication

Acknowledgements

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Main contributions of the thesis

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1.2 Title of section

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1.2.3 Title of subsection

1.3 Title of section

TABLE 1.1: ML fit of the Gamma regression model with log-link and Wald 0.95 confidence intervals for the parameters.

	Estimate	Estimated Standard Error	0.95 Confidence Interval
β_1	0.361	0.250	(-0.128, 0.851)
β_2	1.507	0.170	(1.174, 1.839)
β_3	1.859	0.165	(1.535, 2.183)
ϕ	0.223	0.079	(0.069, 0.377)

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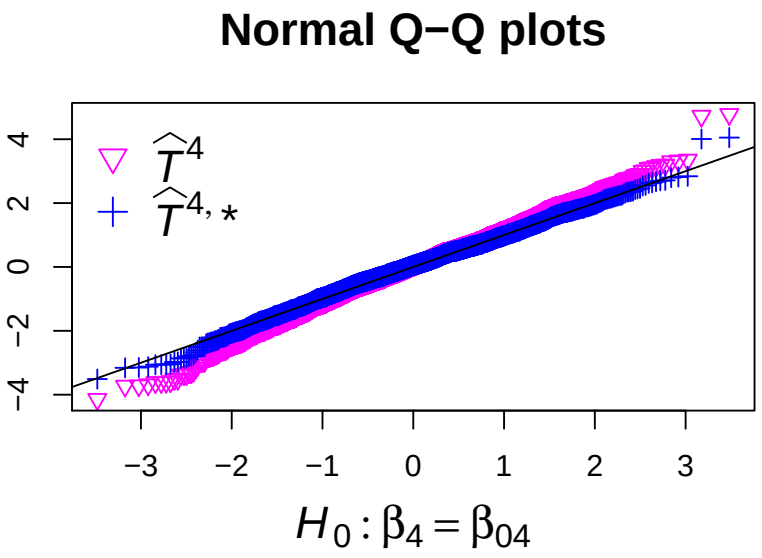

FIGURE 2.1: Normal Q-Q plots based on 2000 values of $\widehat{T}^4$ and $\widehat{T}^{4,*}$ computed under the null hypothesis $H_0 \colon \beta_4 = \beta_{04}$ in the *clotting* example.

Chapter 3

Title of chapter

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Azzalini (2001)

3.2 Title of section

Bartlett (1953)

3.2.1 Title of subsection

Kosmidis (2016)

3.2.2 Title of subsection

Stafford (1992)

3.2.3 Title of subsection

DiCiccio and Stern (1993)

3.3 Title of section

Appendix

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Stafford, J. E. (1992) *Symbolic Computation and the Comparison of Traditional and Robust Test Statistics* (unpublished doctoral dissertation). University of Toronto, Canada.

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