Statements
accompanying the thesis
Outlier Robust Unit Root Analysis
by
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I

The first order asymptotic distribution theory of robust estimation and testing procedures in a context with nonstationary variables is in most cases a bad approximation to the distribution theory in finite samples. The results in this thesis can, therefore, only be viewed as a first step towards an adequate distribution theory for these estimation and testing procedures in finite samples.

II

Robust estimation of the parameters in a model is only one step in the whole modeling process of empirically observed quantities. Robust testing of the model specification and a closer investigation of the outliers that are found, is at least as important.

III

Consider the linear model $y_t = x_t^\top \beta + \varepsilon_t$, with the vectors $(\varepsilon_t, x_t^\top)$, $t = 1, 2, \ldots$, independently and identically distributen. The assumption that the median of $x_t \varepsilon_t$ equals zero is *per se* an equally valid alternative for the more commonly used assumption that the mean of $x_t \varepsilon_t$ equals zero. If a reviewer of a scientific journal rejects an article on the sole ground that the first instead of the second assumption is used, then this rejection is more based on tradition than on scientific insight.

IV

Robust estimation of the parameters of linear dynamic panel-data models with error components can provide valuable information in addition to the information provided by nonrobust estimates of the same parameters. This statement remains valid if the nonrobust estimation method is extended with a procedure that removes univariate outliers from the data, beforehand. [see: Lucas, A., R. van Dijk en T. Kloek (1994): "Outlier Robust GMM Estimation of Leverage Determinants," Tinbergen Institute discussion paper TI 94-132.]

V

Let $\{\varepsilon_t\}_{t=1}^{\infty}$ be an independently and identically distributed stochastic process with a Student t distribution with three degrees of freedom. Then for $n \geq 1$, one has

$$E\left(\left|\sum_{t=1}^{n} \varepsilon_t\right|\right) = \frac{2\sqrt{3}}{\pi}\left(n - (n-1)\sum_{k=0}^{n-2} \frac{(n-2)!\,n^{-k}}{(n-2-k)!(k+1)(k+2)}\right),$$

and

$$\lim_{n\to\infty} \frac{\ln E\left(\left|\sum_{t=1}^{n} \varepsilon_t\right|\right)}{\ln n} = \frac{1}{2}.$$

[see: Groenendijk, P.A., A. Lucas en C.G. de Vries (1995): "Absolute Moment Ratio Testing with Unbounded Variance," mimeo.]

VI

Many computer programs that display a message of the type *"Press any key to continue,"* don't do what they say, as the do not continue upon pressing the <CTRL>-key, the <ALT>-key, or the <SHIFT>-key.

VII

The restricted use of the term fundamentalists, encountered in contemporaneous articles, to indicate groups in society that are associated with violence and terror, has the unjust side effect that having a fundamental view on life is suspect, or even bad.

VIII

Evolution, just like creationism, is not based on facts that can(not) be disproved. This deep common characteristic of both visions/beliefs ask for a more symmetric treatment of both views in the contemporary education in biology in Dutch secondary education, as opposed to the proposed asymmetric treatment.

IX

The bible clearly states in several places that man, after this life, awaits an eternal existence, be it near to God and happy, be it far from God and unhappy. Furthermore, the bible states that Jesus Christ is the only way to a life near God. The implications of not believing these statements if they are true, are far different from the implications of not believing them in case they were not true.

X

On themselves, statements like Statement IX will never convince people

to convert themselves to God. Such statements, however, can provide an impetus for people to think about the importance and the consequences of their choice in this matter.