KTH Engineering Sciences
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Typographical errors in Bruce Hansen's course notes.

p.20 Exercise 3: $P(y_i = k \mid \ldots)$ should be $P(y_i = j \mid \ldots)$

p.25 The numerator in the formula at the top should be $\sum_{i=1}^{n}(\hat{y}_i - \bar{y})^2$.

p.42 Markov's inequality: What has the function g got to do with anything? For any random variable $Y \geq 0$ it holds that $P(Y > \alpha) \leq \alpha^{-1}\mathrm{E}[Y],\ \alpha > 0$.

p.44. Bottom of page: log should be ln

p.45 The line after the formula in the Proof should start "where θ^*_{nj} lies ...". (Furthermore, the proof has holes.)

p.68 The formula on the middle of the page should be

$$W_n = n\Big(\frac{\tilde{\sigma}^2}{\hat{\sigma}^2} - 1\Big) = 528$$

p.69 The minus sign in the expression for h_θ is wrong; $h_\theta = \begin{pmatrix} 1 \\ 2\theta \end{pmatrix}$

p.90 For the question to make sense β_i should be replaced by a_i for $i = 1, \ldots, 5$ in (7.18)

p.108 The formula at the top lacks a square root sign: the second parenthesis should be $\Big(\frac{1}{\sqrt{n}}X'e\Big)$

p.108 Somewhat below the middle of the page: G in the expression $(G'\Omega^{-1}G)^{-1}$ is not defined. (It is defined later on p.110.)

p.108 Close to the bottom at the very right on the line: what does w_i stand for in the expression $g(w_i, \hat{\beta})$?

p.109 Middle of the page: *"There is little point in using an inefficient GMM estimator as it is easy to compute."* It sounds very strange to me that we should avoid using a method merely because it is easy. I suppose he means "... as it is easy to compute an efficient estimate."

p.110 The first formula of section 9.6: I don't understand what w_i stands for.

p.114 Exercise 4: this is not an error, but the suggested proof seems to me unnatural. Here is how I would do it: Define $A = WQ(Q'WQ)^{-1}$ and $B = \Omega^{-1}Q(Q'\Omega^{-1}Q)^{-1}$ and $R = A - B$. Note that $Q'R = Q'A - Q'B = I - I = 0$. It follows that $B'\Omega R = 0$ (and hence that $R'\Omega B = 0$.)

Now $V = A'\Omega A = (B' + R')\Omega(B + R) = B'\Omega B + R'\Omega R \geq B'\Omega B = V_0$, *Q.E.D.*

p.115 There is a prime missing in formula (9.5): the last part of it should read $X'(y - X\beta)$ Furthermore, in part (b) there is a "= 0" missing under the "argmin".