On Likelihood Ratio and Stochastic Order

for Skew-symmetric Distributions

with a Common Kernel


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We refer to [21] W. Hürlimann, Higher-degree stop-loss transforms and stochastic orders (I) Theory, Blätter der DGVM 24(3), (2000), 449-463. As pointed out by F. Belzunce and C. Martínez-Riquelme, the proof of Theorem 2.1 in [7] is not valid but it statement is true. The conditions (2.7) and (2.9) in Section 4 should be removed. Required modifications are stated below. Theorem 2.1 in [7] is the case $n = 0$ of Theorem 5.1 in [21].

**Definition 4.2** One has $G_Y \preceq_\mathbb{d} G_X$, if and only if, the following conditions hold:

**Case 1:** The first sign change of the difference $G_X(t) - G_Y(t)$ occurs from $-$ to $+$, there is an even number of crossing points $n = 2m$, and one has the inequalities $\pi_y^0(t_{2j-1}) \leq \pi_x^0(t_{2j-1})$, $j = 1,...,m$.

**Case 2:** The first sign change of the difference $G_X(t) - G_Y(t)$ occurs from $+$ to $-$, there is an odd number of crossing points $n = 2m + 1$, and one has the inequalities $\mu_y^0 \leq \mu_x^0$ and $\pi_y^0(t_{2j}) \leq \pi_x^0(t_{2j})$, $j = 1,...,m$. In case $n = 1$, the condition of Definition 3.2 holds.

The corrected proof of **Theorem 4.1** follows the proof of Theorem 5.1 in [21].

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