1 Introduction

In his 1986 paper, Esteban suggests that for many applications the size distribution of income may be usefully described by the *income share elasticity*, as an alternative to the conventional density representation. This notion is put forward as a convenient way to impose stylized-fact restrictions to be tested against the empirical evidence, and to provide criteria for identifying different classes of distributions.

On the other hand, in many economic applications the interesting feature to be studied is income dispersion, usually measured by indices of (first or second order) stochastic dominance. In this note we draw a link between the two, by providing sufficient conditions on the shape of the income share elasticity which support (first or second order) stochastic dominance – that is, such that a given shock to the income share elasticity has dispersion effects as measured by stochastic dominance.

The paper's main results are presented in the next section, while concluding remarks are gathered in section 3.

2 Income share elasticity and income dispersion

Income is distributed over some support (y_m, y_M), $y_M > y_m \geq 0$, according to the density $f(y, \theta) > 0$ for all $y \in (y_m, y_M)$, such that the distribution of income is defined by $F : (y_m, y_M) \times \mathbb{R} \to [0, 1]$. The real parameter θ measures a shift of the distribution which may be thought of as an index of dispersion, to be made more precise below. Letting subscripts denote derivatives, Esteban's income share elasticity is defined as

$$\pi(y, \theta) = \lim_{h \to 0} \frac{d \log \left(\frac{1}{\mu} \int_y^{y+h} x f(x, \theta) dx \right)}{d \log y} = 1 + \frac{y f_y(y, \theta)}{f(y, \theta)} \tag{1}$$

and measures the relative marginal change in the share of income accruing to class y, brought about by a marginal increase in y. A one-to-one relationship exists between π and the conventional density representation of the size distribution of income. Esteban (1986, p.443) identifies three restrictions which seem well supported by empirical evidence, and can be formalized using (1): (*i*) the weak-weak Pareto Law, according to which π approaches some constant value $-\alpha < 0$ as y tends to infinity; (*ii*) the existence of at least one mode, which implies that $\pi(y, \theta) = 1$ has at least one solution over