1 Introduction

In the last decades, economists have been increasingly concerned with the issue of growing personal income inequality. Strong emphasis has been laid on measuring the latter, assessing its causes, and discussing the implied redistributive policies.[1] As to the economy-wide implications of inequality, income distribution has been shown to affect growth performance, through such channels as political and institutional mechanisms (e.g., Persson and Tabellini, 1994; Benabou, 1996), capital market imperfections (e.g., Piketty, 1997; Aghion *et al.*, 1999), or the structure of aggregate demand (e.g., Echevarria, 2000; Zweimuller, 2000).

This paper focuses on the relationship between personal income distribution and the behaviour of micro and macro markets, within a different perspective – namely, that of market competitiveness as measured by the degree of monopoly power. In particular, we study how distributive shocks on the degree of income dispersion affect the equilibrium of a monopolistic competitive market *à la* Dixit and Stiglitz (1977). We can think of two reasons why modeling income distribution shocks within this framework may prove useful. In a micro perspective, it allows to establish a well defined connection between income dispersion, firms' profitability and product differentiation, as measured by the equilibrium number of varieties. On the other hand, the popularity of the the Dixit-Stiglitz model in the macroeconomics of imperfect competition may suggest interpreting our results in terms of a link between personal distribution of income, aggregate demand, and the cyclical behaviour of aggregate mark-up.

Our discussion is organized as follows. In Section 2 we re-cast the Dixit-Stiglitz approach to product differentiation into a non-homothetic structure of preferences, which allows introducing income heterogeneity in a meaningful way; we then build the demand side of the model, by parametrizing income dispersion through a mean preserving spread. In Section 3 we consider the effects of changes in income dispersion on the short and long run equilibria of the model, under the standard negligibility assumption that each firm neglects the external effects of its own price decision on the aggregate price – income dispersion turns out to influence only the degree of product differentiation. In Section 4 we show that removing the negligibility assump-

[1] Recent comprehensive discussions of these issues are provided by Champernowne and Cowell (1998) and Lambert (2001).

tion results in income dispersion affecting also the firms' price and quantity choices, through changes in the equilibrium mark-up. Concluding remarks are gathered in Section 5.

2 Market demand and income dispersion

We consider a population of consumers who differ only in their income I. The latter is distributed according to a continuous, differentiable, unimodal density $f(I, \theta)$, defined over the positive interval $[I_{\min}, I_{\max}]$. In order to focus on the effects of income inequality, in the sequel we interpret the parameter $\theta \in \Theta$ as a mean preserving spread, so that an increase in θ can be seen as an increase in income dispersion which leaves average income unchanged.

Consumers' preferences are identical and represented by the following utility function:

$$U = U\left(x_0, \left(\sum_{i=1}^{n} x_i^{\frac{\sigma-1}{\sigma}}\right)^{\frac{\sigma}{\sigma-1}}\right) \tag{1}$$

where x_0 is a numéraire homogeneous commodity and x_i , $i = 1, ..., n$, are the different varieties of a CES composite differentiated good $y = \left(\sum_{i=1}^{n} x_i^{\frac{\sigma-1}{\sigma}}\right)^{\frac{\sigma}{\sigma-1}}$, where $\sigma > 1$ is the constant elasticity of substitution across varieties. We depart from the standard specifications of this Dixit-Stiglitz framework, by assuming that (1) is non-homothetic, in order to generate Engel's curves which are not unit-elastic in income. Clearly, the strict proportionality between demand and income associated to homothetic preferences would not leave any role to income distribution in the analysis of demand, the only relevant parameter being the income mean (aggregate) value.

Each consumer maximizes (1), given the linear budget constraint

$$x_0 + \sum_{i=1}^{n} p_i x_i = I$$

Through a two-stage budgeting procedure, the solution of this maximization problem yields the following demand function for each variety x_i:

$$x_i^d = \left(\frac{p_i}{q}\right)^{-\sigma} \frac{s}{q} \tag{2}$$