much better result if they are free to make their own purchase decisions. The significance of the *second welfare theorem* is that the issue of equity in distribution is logically separable from the issue of efficiency in allocation. As the nineteenth-century British economist John Stuart Mill saw clearly, society can redistribute incomes in accordance with whatever norms of justice it deems fitting, at the same time relying on market forces to assure that those incomes are spent to achieve the most good.

Efficiency in Production

In our simple model, the total supply of each good was given externally. In practice, however, the product mix in the economy is the result of purposeful decisions about allocation of productive inputs. Suppose we now add a productive sector to our exchange economy, one with two firms, each of which employs capital and labour in production to produce either of two products - food or clothing.



Recall from Chapter 9 that the slope of an isoquant at any point is called the MRTS at that point and this is the rate at which capital can be exchanged for labour without effecting the total level of production. Note that the MRTS between K and L must be the same for both firms at every point along the contract curve.

Suppose the equilibrium food and clothing prices are PF* and PC*, respectively. Suppose also that the two firms hire labour and capital in perfectly competitive markets at the hourly rates of w and r, respectively. If the firms maximize their profits, is there any reason to suppose that the resulting general equilibrium will satisfy the requirements of efficiency in production? That is, is there any reason to suppose that the MRTS between capital and labour will be the same for each firm? If both firms have conventional, convex-shaped isoquants, the answer is yes. If we assume that the two firms hire labour and capital in perfectly competitive markets at the hourly rates of w and r then remember that:

Since both firms pay the same prices for K and L this equation, which is the same for both firms, tells us that the MRTS for the two firms will be equal in competitive equilibrium (the ratio of marginal