

Heterogeneous Consumers and Social Welfare

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Abstract

This paper derives the duality social welfare function which clarifies the relationship between social welfare and heterogeneity of consumers. Two types of agents consume two goods. The *social status weight* of a type of consumer is the income that the type of consumer requires in order to obtain the unit utility. The *degree of heterogeneity* between two types of consumers is expressed as the *relative social status weight* which is the ratio of the social status weight of one type of consumer to another. If the relative social status weight equals to one, two types of consumers belong to the same class. As the relative social status weight diverges from one, the degree of heterogeneity becomes larger. The duality social welfare function depends on relative social status weight as well as total consumption of two goods. This paper shows that an increase in the relative social status weight of a type of consumer increases price of the goods that the type of consumer consumes intensively and decreases price of another goods. At the same time, an increase in the total demand for goods that one type of consumer consumes intensively increases the utility of the type of consumer but decreases the utility of another type. Moreover, we show that an increase in the relative social status weight of one type of consumer always increases the utility of the type of consumer but decreases the utility of another type.

Keyword: *Duality social welfare function; Heterogeneous consumers; Intensity of consumption; Relative social status weight; Degree of heterogeneity*

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