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Competitive pressures on China: Income inequality and migration

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Abstract

How would perfect competition affect the distribution of income in China? To answer this question, we integrate the two main streams of income distribution theory, namely the functional and the personal income approaches. First, using a general equilibrium model of China comprising 30 sectors and 27 provinces, marginal productivities are used as competitive commodity prices and factor rewards. Second, the rewards are imputed to households using their compositions in terms of persons and factor endowment entitlements. The ensuing distribution is contrasted with the status quo. Less skilled labor would stand to lose and, therefore, inequality would mount. Skilled workers, managers and technicians would move from Western and Central China to Eastern China. These flows would be more than offset by a flow of unskilled labor from Eastern China to Central China. Our finding that Eastern China has too many unskilled workers, relative to the competitive benchmark, suggests that the Harris–Todaro mechanism operates in China. Competition would change the predominant nature of inequality from the rural–urban divide to differences between the social classes. Moreover, the existing negative relationship between development and inequality would evaporate.

JEL classification: D13; D33; O15; O18; J61; R11; R23; O53
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1. Introduction

There are two strands in the theory and measurement of income distribution. Economists focus on the *functional* distribution of income, using the concept of factor productivity. Their standard model features a macro-economic production function that maps factor inputs, such as labor and capital, into national income. The factors are rewarded according to their marginal products. Scarce factors fetch a high price. Inequality issues are implicit. Basically, when labor is abundant, relative to capital, the wage rate will be low and, therefore, inequality is expected to be high. In the other "camp," statisticians focus on the *personal* distribution of income, with emphasis on the measurement of income and inequality. They consider personal income as given and analyze it directly, without the need of a production function.

In this paper, however, we are not only interested in the actual distribution of income in an economy that becomes more market oriented, but also in the distribution that would ensue under the benchmark of perfect competition. This issue suggests a two-step program. In the first step we find the marginal productivities of the factor inputs, since they determine the factor incomes under perfect competition. In the second step we reset the factor components of household incomes and reevaluate the distribution of the latter. The first step requires a general equilibrium model to determine the shadow prices of the factor inputs, while the second step requires detailed statistical information to express the rewards of factor inputs, such as the different types of labor, in terms of personal and family incomes. This integration of the functional and personal income analytic approaches seems to be novel.

We extend the model of ten Raa and Mohnen (2001) to an economy of many regions; we refer to the references given there for a review of the applied general equilibrium literature. The model comprises 30 input–output sectors, grouped in agriculture, mining, manufacturing, construction and other services. The standard convexity assumptions are fulfilled, so that the welfare theorems hold and, therefore, a scan of the interprovincial utility frontier and an evaluation of the balance of payments can be used to determine equilibrium (Negishi, 1960). More precisely, we let each province generate a domestic final demand vector (with the observed commodity proportions, assuming Leontief preferences), but multiplied by a (provincial) expansion factor. We scan in each direction in the space of provincial expansion factors by maximizing domestic final demand subject to the national material balances for the tradable commodities, the provincial material balances for the non-tradable commodities, and the factor constraints for the various types of labor and capital. The shadow prices of the tradable commodities codetermine the provincial trade balances, which are used to adjust the relative weights of the provincial expansion factors, until a full balance of payments is achieved. We follow the usual assumption that agriculture, mining and manufacturing produce tradable commodities and that construction and the other services produce non-tradable commodities.

China is perhaps the most dramatic example of a transition to a market economy. Not only is central planning replaced by entrepreneurship, trade liberalized, and are millions of workers on the move, but what makes China particularly fascinating for a case study, is its starting point of egalitarianism. The opening up to free markets of a right-wing