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A comparison between economic systems with an application to transition

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Abstract

This paper develops a general equilibrium theory of endogenous firm and class formation under non-contractibility with heterogeneous individuals. A collectivist economy, a private-ownership economy, and a mixed economy are compared on the basis of identical economic fundamentals (methodological symmetry). Each economic system generates specific inefficiencies so that none dominates the others in general. The main trade-off is between the welfare loss associated with risk-taking in the private-ownership economy and the informational problems in the collectivist economy. We then use this framework to study the political economy of transition between economic systems and provide detailed welfare results.

JEL classification: P51; D51; D72

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1. Introduction

The collapse of planned economies in the late 1980s led to a surge of interest for the economics of transition. A large body of literature has developed analysing many of the problems caused by these major changes in the basic rules governing economic activity.[1] Most of this literature, however, starts with the premise that capitalism is more

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[1] This large literature is summarised in Roland (2000).

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productive than socialism. While this is certainly a valid assumption for many short-run policy issues, this does not help us assess the relative merits of capitalism and socialism. Nor does it explain the enduring interest of many for alternatives to capitalism. In this paper, we take a step towards the development of a unified theory of comparative economic systems.

Our approach is guided by the principle that any analysis of comparative economic systems should proceed on the basis of *methodological symmetry* within a general equilibrium framework. By 'methodological symmetry' we understand that economic systems must be compared on the basis of the same fundamentals, i.e. their representations must rely on *identical initial* conditions regarding individual preferences, endowments, technologies and the information structure.[2] Methodological symmetry is a pre-requisite for isolating the effects of institutional variations on the economy.[3]

As, under methodological symmetry, the differences between socialism and capitalism do not lie in the fundamentals, one has to specify where they lie. We take the approach that the two systems basically differ in: (i) the allocation of property rights, and (ii) the mechanism for the allocation of goods and factors of production. In essence, capitalism is organised around private ownership of the means of production and a decentralised allocation of goods and factors of production, whereas socialism is characterised by public ownership of the means of production and a centralised allocation of goods and factors. More specifically, to compare a prototype capitalist (or, as we will call it here, 'private-ownership') economy with a prototype socialist (or 'collectivist') economy, we develop a static general equilibrium model of endogenous firm creation and class formation.

The fundamentals of the economy which are invariant across systems can be summarised as follows. At stage 1, individuals (of different risk-aversion and managerial talent) must choose between becoming a manager or a worker. At stage 2, each manager sinks her labour endowment to set up a plant. Each plant may be either productive or unproductive, whereby the probability of any plant being productive depends on its manager's talent. Each manager decides whether to learn about her plant's productive status (e.g. by undertaking a market research), or to remain uncertain. At stage 3, workers are allocated across plants. Finally output is produced and distributed. A key

[2] Textbooks on comparative economic systems typically use methodologically completely different models of socialism and capitalism; see, e.g. Gregory and Stuart (1999), part II. Note that methodological symmetry does not necessarily require individual endowments, technology or the information structure to be identical *ex-post*, but that any *ex-post* difference need to be derived endogenously. For example, in the model developed below, the number of production units as well as the information structure vary endogenously across systems. Alternatively, it might be interesting to develop a theory of the comparative evolution of endowments or technologies across economic systems, such as, e.g. Qian and Xu (1998). This, however, is not the issue in this article.

[3] The comparison of socialism and capitalism under methodological symmetry in general equilibrium goes back to the literature developed around the Lange–Lerner debate in the 1930s (see Lange, 1936, 1937; Lerner, 1936; Knight, 1936, and references therein), but it has not made very much progress in this direction since then, particularly when it comes to general equilibrium modelling. Partial equilibrium analysis of institutional variations has experienced more sustained progress with, among others, Weitzman (1974) on optimal planning, Bolton and Farrell (1990) on planned vs. decentralised investments, Dewatripont and Maskin (1995) on soft budget constraints, or Hart et al. (1997) on private vs. public ownership.