Poverty traps, economic growth and the advancement of doomsday

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This paper demonstrates how a self-reinforcing poverty trap can arise within a standard macroeconomic growth model, solely by recognizing the fact that some goods, such as for example food, are essential to human life. By imposing this trivial assumption, two resource dependent regimes arise, where in the first regime, resources remain so scarce that even with investment capabilities; the planning horizon cannot be extended so as to ensure the survival of all distant future generations. In the second regime, initial resources are larger implying that with sufficiently high investments, planning for the well-being of the infinitely living generation is possible. However, if we further relax the assumption of a predetermined time horizon and let the planning horizon become an endogenous decision variable, it can also be shown that even for societies living in the second regime, there exists regions close to the first regime where a welfare maximizing social planner would choose a trajectory leading into the first regime which hence traps society in definite poverty. The reason for this behaviour is that given these assumptions regarding minimum subsistence needs and endogenous preferences, the model states that it is no longer merely quantity of life that matters, but also quality, where the higher quality achieved for a short time span overweighs the value of long term but poor conditions. This is in agreement with much literature on development economics that have recognized how societies living close to subsistence needs are unable to invest themselves out of poverty.

The two main findings are thus; 1) the introduction of subsistence food requirements in a two sector macroeconomic framework leads to the emergence of a poverty trap. 2) endogenous preferences further implies that optimal decision making might induce a regime-shift, which will depend on whether initial resources are smaller or larger than some Skiba/Indifference point where the planner is indifferent between two equally optimal solutions.

These results are of importance for a wide branch of economic growth papers that have been exploring how subsistence agriculture impacts the transition path to modern economic growth. Our results suggest that when preferences are non-homothetic, as is the case when a subsistence consumption requirement is introduced, this effectively restricts the amount of admissible solutions. Further, the existence of an indifference points also poses a question as to whether the calculated optimal paths, if admissible, are actually maximizing social welfare or are just second best alternatives.