## Summary

This thesis explores the possible role of public capital on economic development. It consists of both a theoretical and an empirical part. The theoretical section develops a number of endogenous growth models that analyze the role of public capital in income inequality, economic growth, and poverty trap. The empirical section, on the other hand, consists of an analysis of a panel data from a large set of Sub-Saharan African countries to identify the nonlinear relationship between public capital and economic growth, and determine the level of public investment that maximizes growth in those countries.

A major contribution of this thesis is its analysis of the relationship between public investment and income inequality. It presents models and theories that analyze the link between public investment and income/wealth distribution, in the context of capital markets imperfection. Other contributions include its analysis of the possible role of public policy in an economy with poverty trap, and empirical determination of the level of public capital that maximizes long-run economic growth in developing countries.

The thesis extends theories of imperfect capital markets in inequality and growth to inequality, public capital and growth. According to these theories, inequality is bad to growth when imperfection in credit markets prevents the poor from undertaking the efficient amount of investment. The new theories suggest that certain public investment may relax some of their resource constraints through factor substitution and thus improve the distribution of income and hence economic growth (through an indirect channel). The thesis also reveals that the elasticity of substitution between private and public capital is the major determinant of the distributional effect of public capital. If the elasticity of substitution of a given type of public input is greater than unity, for instance, then it will have a positive impact on income distribution.

Most of the analytical literature in growth and public investment studies public capital within traditional growth models that generate a unique high-income equilibrium outcome. The thesis takes a different track from this literature by studying public investment in an environment with multiple equilibria/poverty trap. The sources of the poverty trap are negative externalities that prevail during an initial stage of economic development. The study finds that a change in public policy towards the growth-maximizing level of public investment is crucial but indeterminate with respect to poverty trap. Depending on some initial conditions, such policy change could create a threshold externality that leads economies to evade poverty trap.

The empirical side of the study addresses policy-oriented problems, taking the case of Sub-Saharan African countries: How much does public capital matter to economic growth? How big should it be? Few studies have attempted to ascertain the growth-maximizing level of public capital and to compare it with the existing public investment, particularly in developing countries. This study estimates the growth maximizing level of public investment for set of African coutries using more robust techniques than those used in previous studies. It also determines empirically the nonlinear relationship between public capital and growth.