Explaining the two-way causality between inequality and democratization through corruption and concentration of power

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ABSTRACT

Corruption increases inequality in the society (Gupta et al, 1998) by reducing economic growth, biasing the tax system, reducing the amount and the efficiency of spending on key areas for human capital formation. Mohtadi and Roe (2002) and Mohtadi and Agarwhal (2002) argue that democracy first increases corruption due to the newly introduced freedom and rights, and then as democracy grows corruption decreases. The purpose of this paper is to examine the relationship between inequality and democracy in two directions, both the effect of democracy on inequality and the effect of inequality on democracy. It will help to establish a more direct link than explaining inequality indirectly through corruption. It follows from the existing literature on democratization and inequality that higher level of inequality brings decrease in democratization, since inequality increases the incentives of the elite class to limit the democratic rights of the rest of the population in order to avoid any uprisings. (Acemoglu, 2001) The causality may be thought to run from the other direction, too; that is, from the effect of democracy on inequality: Democracy first increases, then decreases corruption (Mohtadi and Roe, 2002) So, at the beginning, the increased corruption due to democratization would be expected to increase inequality (Gupta et al, 1998).Then at the later stages democracy lowers the inequality since it lowers corruption, rent seeking agents would be high in number and the average rent would decrease.

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I. Introduction

Economic growth is perhaps the most challenging subject in economic analysis both in national and the international level. The overall benefits and consequences have yet to be made clear by detailed studies. In general economic growth is viewed as a positive and desirable phenomenon since it is associated with more wealth for the individuals of the society, better functioning of the institutions, more just distribution of the resources and wealth, less corruption and a more democratic environment. The extent to which these propositions reflect the actual developments in an economy are subject to test and criticism.

The link between economic growth and corruption is of crucial importance to researchers since today many developing countries are suffering from draining of valuable economic resources due to misuse by the government agents. Corruption is a key determinant of economic growth in the sense that corruption hinders investment in effective areas which could promote growth, like education and health, by diverting capital into other sectors. Corruption is found to slow down economic growth by reducing investment. (Mauro, 1995)

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key areas for human capital formation. Mohtadi and Roe (2002) and Mohtadi and Agarwhal (2002) argue that democracy first increases corruption due to the newly introduced freedom and rights, and then as democracy grows corruption decreases.

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II. Links Between Growth, Technology, Corruption, Inequality and Democracy

A. Overview of Growth Literature

Growth literature has emerged through distinct approaches to the subject. Distribution played a significant role for Kaldor (1956-7) in economic growth. Capital labor ratio

comes to its steady state value by different savings rates of capitalists and workers according to Kaldor. Rate of capital accumulation depends on the savings made by the capitalist class, not by the working class. Therefore whenever the savings made by workers (savings out of wages) exceed the savings made by capitalists (savings made out of profits), the rate of capital accumulation decreases. This gives an important role to the capitalist class to generate economic growth.

Inequality is linked to growth by the well known work of Kuznets (1955) in which he argued that inequality will first rise and then fall as the economy grows. If the inequality between the two main sectors of the economy were more dominant than the inequality within a sector, then as the economy grows people would move to the other sector. Additionally, if the second sector experiences greater intra-sectoral inequality, then it causes an increase in the inequality at first, and later on as they settle and establish long term links in the new sector, it causes a decrease in inequality. This is known as the Kuznets' inverted-U.

Another very famous name in growth literature is Solow. In his 1956 paper Solow showed that saving and population growth determine the steady state level of per capita income. He assumed saving, technological change and population growth to be exogenous. He showed that a stable growth path could be generated in the steady state. He didn't require any distributional mechanism to generate that stable path. He used a Cobb Douglas type of production function, which has constant returns to scale and diminishing returns to each factor.

Later in 1970s endogenous growth theories objected the Solow Model on the grounds that technology cannot be considered as exogenous to the system. It must be determined by forces within the economy.

B. Technology Diffusion and Growth

Democracy is often effective when the participants are knowledgeable and informed. This thesis has been at the root of the Jeffersonian concept of democracy in the United States. But the role of knowledge in economic development has been subject to intense scrutiny in recent past, and in particular has been the subject of many studies that focus on diffusion of technology.

Thus to study democracy's role in economic growth and in the patterns of corruption, one has compelled to also consider the role of education, knowledge and technology.

Proponents of free markets in developing countries argue that "free market and investment generate growth and hence alleviate poverty and social unrest in their countries" (Broad, Robin ed. "Global Backlash", (2002))]

http://www.fntg.org/news/index.php?op=view&articleid=472

Their basic argument for explaining the economic growth of the economically backward countries is the help of the aid that these countries receive from the developed countries,

either in the form of direct investment or more indirectly in the form of technology diffusion.

'Technology' in growth literature is mostly used as a term to define technological knowledge. It's the seeds of investment, which would enable the country to increase its per capita GDP and living standards. Knowledge is accumulated in developed countries where Research and Development investment is done extensively. If the underdeveloped country receives part of this knowledge through foreign direct investment, it would have a chance to benefit from its yields. In the course of time the increased well being of the society would allow the underdeveloped country to initiate national entrepreneurships in order to pursue its development goals.

If the knowledge spillover is in the form of ideas or blueprints, it creates an opportunity to track the inherent theory or method, therefore brings about the development of the country's own knowledge stock. The ideas are transmitted through the intermediate products in which the technology is "embedded". The receiving country works through them in order first to understand and next to build similar structures.

Increasingly we may be observing that the Research and Development is getting concentrated in the developed countries, but little basic research is taking place in the developing countries. This might be worrying to some extent. However, developing countries certainly do benefit from the research and development done in the developed countries since they are importing intermediate products that embody technological

knowledge. (Coe, Helpman, Hoffmaister, NBER Working Paper No.5048) International trade plays an important role in transferring knowledge to the developing countries. Trade affects growth rate by changing the domestic resource allocation, and also international trade is a mechanism through which technological knowledge is transmitted. The transfer of technology would increase productivity and therefore help growth. Coe, Helpman and Hoffmaister argue that the developing country has higher total factor productivity the greater is the foreign R&D capital stock, the more open it is to trade, the larger is import share with the industrialized countries.

But a country that receives knowledge spillovers does not necessarily use it efficiently and direct it into economic growth channels. This puzzle can be solved by analyzing the quality of social, economic and political institutions and especially the corruption that is retarding economic growth by altering key investment decisions.

In real world transmission of knowledge may face physical barriers like geographical locations. If the knowledge spillovers cannot reach beyond a certain local area their effectiveness also stay limited. There's a very interesting argument of Wolfgang Keller about this: He argues that if the technology spillovers are global, this brings convergence of per capita income, but if these spillovers are geographically limited then regional clusters of countries with persistently different per capita income levels may arise. (Keller, NBER Working Paper No. 8150)

The crucial point addressed in this paper is that one must be careful when defining the term "technology spillover". Today there's no single country where technology doesn't

"spill over". But we can't say all of them are certainly benefiting from this and starting to grow faster. The country's scientific base to absorb and utilize this incoming knowledge and the country's need for this knowledge are the two challenges when one wants to measure the effects of technology spillovers on growth.

If the country is scientifically not capable to adopt this new information coming through imported intermediate goods, then the scope of the benefits from these transactions would be limited to private profit gains but no significant social gains. But if there is a reasonable amount of human capital that can make use of the technology embodied in the intermediate goods, then we might call it a technology spillover, and safely can argue that the technology spillover helps economic growth.

Secondly, if the country doesn't need that type of technology then the increase in the import shares with the industrialized countries may not necessarily lead growth. How could one measure whether or not a country "needs" that knowledge? The most reasonable approach is, paradoxically though, to look at the level of human capital in that country, especially education, or better, the quality of education. If the quality of education is above average, then this indicates that most probably the newly arriving knowledge will not add much, at the margin, to the existing knowledge stock of the country. Therefore it's not easy to comment on what the role of human capital is with regards to the technology absorption of one country. The two contradicting arguments above (that human capital helps to better use of technology spillovers and that human capital in fact indicates that the country has enough domestic knowledge to generate

economic growth, therefore its growth won't depend much on the foreign knowledge.) show that it's hard to establish the link between economic growth and technology spillovers, mainly because of the ambiguous role of the human capital in this framework. Then, how is it possible that a country with a fair endowment of human capital might still be lagging behind the industrialized countries? The answer lies in the quality of institutions and especially corruption in that country which prevents efficient allocation of its resources and thus hinders its growth.

C. Corruption

Corruption is the generally used term for the misuse of bureaucratic power by the government agents in order to get private benefit. Conventional view is that corruption lowers economic growth. In endogenous growth theory it is assumed that corruption could affect growth both directly and indirectly: indirectly by lowering the investment rate and directly by misallocation of investment among sectors. In neoclassical growth theory corruption could affect the steady state level of income and lower the growth.

Before starting to analyze the effects of corruption, it's worthwhile to pause to think "What could the causes of corruption in a society be?"

Corruption can be viewed as both a cause and a result. Now, if we view it as a result of other phenomena we can say that government involvement in the economy can be a source of corruption. We see cases of corruption whenever government wants to make an investment, or allocate economic resources between groups or sectors, or wants to purchase large amounts of goods. In a private market there can be misuse of power, too,

but the marginal benefit that the agents would extract from corruption is lower than in the public sector, since in a private market every other agent is also free to act in ways to maximize her own benefit. The agents optimally may decide not to defect. Plus, the cost of committing corruption in a private market could possibly be higher because the private sector generally works relatively more efficiently and faster than the public sector. In public sector due to policy and implementation lags, it could be argued that the corruption takes more time to be discovered, thus giving an incentive for agents at least some extent of misuse. The above statement regarding the higher cost of corrupt activities in private markets can be made only if competition is assumed, which guarantees informational symmetry. Informational asymmetries are increasingly being discussed as the sources of corruption in the private sector, especially after the recent incidence of corruption in the US.

If corruption is viewed as a cause by itself, the following impacts may be foreseen: corruption lowers investment, which is discussed in the literature by Mauro (1995). Also corruption might change the contents of government expenditure, shifting investments from growth promoting sectors like education to more capital intensive sectors like construction, where private rents could be more. (Mauro, 1995) Mauro found a significant negative relationship between corruption and investment spending; and again negative but less significant and less robust relationship between corruption and growth. His reasoning is that corruption affects the economic growth indirectly through lowering the investment level. Moreover, corruption may decrease the reliability of the government, therefore may cause foreign capital flights out of the country.

One interesting aspect of corruption that requires closer look is that it increases inequality in the incomes.

D. Inequality

The relationship between corruption and inequality is examined in detail in Gupta et al, (1998). They argue that corruption increases the income inequality and poverty by reducing economic growth, by reducing the effectiveness of government's spending decisions, and by distorting the tax system. Mauro was relatively more reluctant to put the link between corruption and growth, though stating that there's a negative relationship. Gupta et al, (1998), on the other hand, take the link between corruption and growth for granted in order to explain the higher levels of inequality and poverty associated with highly corrupt governments. Here another question arises: "What is the connection between economic growth and inequality?"

The well-known Kuznets Hypothesis states that as the economy grows, the inequality first rises then falls. This describes the effect of growth on inequality. The empirical study done by Deininger and Squire (1998) has little support for the Kuznets' inverted-U.

As to the effect of inequality on growth, the countries with initial (en-ante) inequality are found to be growing more slowly than the others. Oded Galor and Joseph Zeira (1993) in their study "Income Distribution and Macroeconomics" conclude that distribution of income affects the macroeconomic variables, output and investment, in short and long run, and the pattern of adjustment to exogenous shocks.

The effect of inequality on growth is also explained by using the median voter theorem. The conventional mechanism in the literature is that inequality makes the median voter poorer, and this affects the tax rates provided that tax preferences vary monotonically across the distribution of income. Distorted tax rates then reduce economic growth.

Inequality negatively affects economic growth also because of social conflict. (Alesina, A. and R. Perotti, 1996) Their hypothesis is that income inequality, by creating social discontent, increases instability. Instability could then reduce investment and, consequently, growth. Similarly, Persson, T. and G. Tabellini, (1994), found a significant negative correlation between inequality and growth due to increasing tax on growth promoting industries as inequality increases. But this relationship is only valid in democracies. The distorting effects of inequality on the economy operate also through the instability it creates. The direction that the economy takes as a consequence of this instability depends on the level of democratization in that country. If the dynamics of democracy have not developed well enough, the instability might lead to a revolt by the impoverished class. On the other hand, in more democratized societies the poor can demand more rights and more equal distribution of income, which is usually costly to the rich class. Therefore the rich would have an incentive to take over. (Acemoglu, D. and J.A. Robinson (2001, vol.91, No. 4).

E. Democracy

Democracy is a form of government in which people have their own right to decide about the key issues regarding themselves and which is often associated with freedom, equality,

openness to monitoring and feedback. In democratic societies every citizen has an equal right to affect the policies. If some groups in the society are more influential than the others, then they would divert the economic resources in a way that their own benefit is greatest. In this sense there's a possibility of increased corruption when there's inequality in the society, because the more powerful group would be trying to reach its goal of making more profit by making use of its power, often in a corrupt way. The negative effect of corruption on inequality was established by Gupta et al, (1998), but the reverse has yet to be studied. The extent to which inequality brings corruption has to be made clear by empirical studies.

III. Democracy and Inequality, The Two-Way Causality

Now, the question that this paper tries to answer is whether inequality is associated with more democracy or less democracy, and which way does the causality run from? What is the effect of democracy on inequality, and what is the effect of inequality on democracy? The effect of democracy on inequality is expected to be positive in the primitive stages of democracy, and negative in the mature stages of democracy. Therefore an inverted-U is expected to be seen. The intuition comes from the results of the studies of Gupta et al, (1998) and Mohtadi and Roe (2002). Gupta et al, (1998) show that corruption raises inequality, and Mohtadi and Roe (2002) show that democracy raises corruption first and then as democracy ages further, it decreases corruption. There's a positive relationship between democracy and corruption in young democracies, and a negative relationship between democracy and corruption in mature democracies. Thus, the first stages of

democracy are more likely to be accompanied by higher inequality, and the mature stages of democracy are likely to have lower inequality.

IV. Conclusion and Proposed Research

A. Conclusion

This paper defines and discusses two hypotheses:

The first one is that there's an inverted-U relationship between democracy and inequality, that is, inequality first rises and then falls as democracy increases. This is based on Gupta et al (1998).

The second hypothesis is that inequality reduces democratization, based on Acemoglu, D. and J. Robinson (2001, 91 [No.4])

Democracy should always be thought together with the knowledge of the voters, which links this concept also to technology spillovers. The extent to which domestic agents make use of the foreign knowledge also depends on the quality of the existing political, economic and social institutions.

B. Proposed Research

Hypothesis 1 could be formalized as:

$$Inequality_i = a_i + b_i\, Democracy_i + c_i(Democracy)_i^2 + dX_i + e_i \qquad (1)$$

Where X could be a vector that includes growth and proxies for human capital (higher/or secondary education, immunization rate), Real GDP, (Real GDP)^2 etc.

Hypothesis 2 could be formalized similarly as:

$$Democracy_i = \alpha_i + \beta_i\, Inequality_i + \gamma_i Y + u_i \qquad (2)$$

Where the vector Y possibly includes the exogenous variables: Real GDP, secondary/or higher education, education quality, indices of the freedom of media, number of independent TV channels, radio stations etc.

These hypotheses are established carefully by studying the existing literature on the relationship between corruption, democracy, inequality and growth and building the necessary links. These hypotheses could be subject to many interesting empirical tests if one can find reliable data on these variables above, especially on GINI coefficient which is the most commonly used way of measuring the inequality in the society.

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