〈Research Note〉

Education and Social Mobility in Latin America :

How Perceptions and Incentives Matter

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I Social Mobility and Demand for Investment in Education[1)]

The conventional wisdom says that education is perhaps the most expeditious way to enhance equality of opportunities. Globalization and growth of knowledge economy have further increased the importance of highly-skilled, good quality workers, thus further emphasizing the need for good education. The human capital development has also been widely recognized as one of the key contributing factors in the high economic performance of East Asian countries. Latin American countries have also made a significant progress in this respect in recent years. However, inadequate human resources continue to be a major impediment for further growth of Latin American economies, and the gap in the average years of schooling of the labor force continues to be wide between Latin America and East Asia.

The outcome of human capital development is influenced by both supply-side and demand-side factors. In terms of the supply of education, the access has been expanding significantly in most countries in Latin America where even those children living in remote areas now have access to primary schools and possibly secondary schools in many cases. The need to improve quality, therefore, is now recognized as the main challenge for the

education sector in the region. On the demand side, the problem of opportunity costs of sending children to school has been addressed through programs of targeted conditional cash transfer, such as *Progresa* in Mexico and *Bolsa Escola* and *Bolsa Família* in Brazil. Although these programs have not yet been expanded and replicated widely in other countries of the region, the success of such programs clearly provides a good model for addressing the issue of demand constraints for many poor households.

This research note considers another important aspect that would influence demand for education by parents in poor families, namely, expected returns from investing in education. The note reviews empirical evidence on social mobility in the region, and suggests a game theoretic framework of analysis on how the undesirable equilibrium of low social mobility and high inequality may be shifted to a more desirable equilibrium, focusing on parents' incentive to invest in education. The decision of parents whether or not to send their children to school will be influenced, among other things, by how they perceive the returns from education to be. In this sense, perceived (not necessarily real) inter-generational mobility is expected to influence family's decision on investing in education, in addition to the opposite direction of causality where education influences the mobility. Estimated returns to education are usually sufficiently high to warrant investment in schooling, even after controlling for other observable factors, including family income. Therefore, whatever the level of household income, education of the children would be considered a good investment. However, our conjecture is that perceived (and possibly real) returns to education could be significantly lower for the poor who may have internalized the apparently unfair distribution of life opportunities.

Studies have found that high levels of inequality negatively affect economic growth. One of the channels that inequality negatively affects growth

is through its impact on political instability, which again negatively affects investment[2]. However, we would expect that individuals' responses to a same level of inequality would be different depending on whether they consider it to be fair and temporary, or unfair and unchangeable. As Esping-Andersen (2007) argues, an understanding of the welfare of individuals over the course of life involves more than indications of their incomes. To attain a more comprehensive sense of human welfare, we need to examine people's social mobility and the opportunities they face throughout their lifetime. Early childhood experiences profoundly affect people's life chances. Along the household income and expenditure on children, "family cultural capital" primarily determines early childhood experiences. Availability and quality of education received is one of the most important factors there. However, the decision to pursue such education in itself may be a reflection of the "family cultural capital". If people do not believe that their effort would make any difference in the outcome, we can expect that their choices would be greatly influenced by such perception, whether true or not.

Low intergenerational social mobility, in addition to a high level of distributional inequality, would discourage families to invest in children's education, often despite observed high returns to education. We may observe high returns to education because only those who can expect to receive higher returns would pursue investment in higher levels of education. If those who are destined (or perceived to be destined) to be stuck in poverty under-invest in their education, this would have a longer-term repercussion on the growth prospects of Latin American economies. We may be able to hypothesize that the difference in social mobility between countries in Latin America and East Asia has resulted in different attitudes toward investing in children's education, which led to different growth performance in these two regions. In order to take advantage of the human resource potential, which

is seriously under-utilized at present, and to realize a dynamic economic growth in the long run, addressing inequality in a static sense would not be enough. A more fundamental change would be necessary in the way societies are organized, removing existing barriers (institutional or cultural) for the realization of a fairer society where people's socio-economic outcome is the reflection of their effort and ability, not of the initial conditions unrelated to their own doing.

Inequalities in the distribution of income and wealth in itself may not be desirable from an ethical point of view. However, a moderate degree of inequality may be necessary to motivate risk-taking and entrepreneurship. It is more the lack of social mobility that hinders the dynamic economic development and improvement of the living conditions of the poor in the long run, wasting human capital of both the poor and marginalized, and the rich and privileged. Distributional outcomes do matter, but we are concerned with them mainly for their influences on absolute deprivation on one side, and their role in shaping opportunities on the other. As the World Bank (2006) points out, rather than directly concerned with the distribution of income, public actions should focus on the distribution of assets, economic opportunities, and political voice.

While education is of great intrinsic value, it is also an important asset and determinant of individuals' income, health (and that of their children), and capacity to interact and communicate with others. Thus, inequalities in education would contribute to inequalities in other important dimensions of well-being. Using country-level data, Araujo, Ferreira, and Schady (2004) find pronounced inequality of adult education, measured by years of schooling, across 124 countries they studied. Furthermore, they find that inequality in education is strongly negatively correlated with mean years of schooling. In those countries where education attainment is more equally distrib-

uted among the population, the overall education level also tends to be higher.

Investment in education is unique in that those making investment decisions are different from those who receive the benefit of such investment. Furthermore, since parents cannot use children's future human capital as collateral for borrowing, investment decisions in human capital may be driven as much by parents' sense of what is the right thing to do, as by any calculation of costs and benefits. In this sense, children's human capital may be considered simply as a regular consumption good (rather than an investment good), and wealthier families may tend to spend more on their children's education. Despite this caveat, it seems reasonable to consider that a significant part of education is investment for the future returns. Much of such returns are realized in adulthood through participation in the labor market.

In the labor market, discrimination based on gender, caste, religion, or race violates the market principle and the allocation of reward is dictated, not by the amount and quality of human capital supplied, but by attributes of the persons who are providing the human capital. People's perception of discrimination in the labor market affects investments in human capital. Those who expect to be discriminated against in a particular labor market will under-invest in acquiring the type of human capital that the market rewards, thus generating self-reinforcing behavior. Discrimination can be self-fulfilling not only because it influences people's perception about the target of the discrimination, but also because it influences the behavior of the individuals who are discriminated. As Appadurai (2004) states, beliefs underlying the stereotypes, if deeply internalized, can affect early decisions about prospective careers and attitudes toward society, by changing a person's "capacity to aspire". By extension, we may expect that the poor and the marginalized people would internalize their perception of highly unequal and un-

fair society, unconsciously constraining their capacity to aspire.

Since social mobility is very low in many of Latin American countries, as indicated in the following sections, there is little incentive for the poor and the marginalized to invest in their and their children's human capital. The returns to education may be high for the upper strata of the population, but could be much lower for the poor, due both to lower quality of education and limited labor market opportunities for the poor. Thus, parents would rationally invest less on their children's education, which result in the sub-optimal level of human capital and slower economic growth for the economy as a whole in a long run.

In a simplified cross-regional comparison, we can note that in East Asian economies, social mobility appears higher than in many Latin American economies, perhaps due to historical or cultural reasons. People, including the poor seem to have more incentive to invest in their education in Asian countries, and this may have resulted in creating more dynamic economies with higher growth in labor productivity and output.

Ⅱ Social Beliefs and Perception of Fairness in Latin America

What evidence do we have on the perception of fairness in different countries? Quadros (2007) analyzed the role social beliefs play on the choice of public policies. Using data from the World Values Survey, he found that the level of redistribution in public policy is directly correlated with the social beliefs about the determinants of poverty and success. As Quadros states, "if individuals believe that success does not depend on their efforts but is due to connections, corruption or luck, then they will demand more income redistribution to compensate them for this distortion in meritocracy" (Quadros 2007 : 55). Similarly, we can expect that, if people believe that success in life does not depend much on their effort, then they would be less in-

clined to hope for economic success through investment in education, and rather demand compensations through government redistribution programs.

Tables 1, 2 and 3 presented below demonstrate people's perception of fairness of the societies they live in, each reporting responses to a question posed in the World Values Survey.

While there are some variations across countries within Latin America or within Asia, we can identify, from these tables, a clear pattern of much lower perceived social mobility in Latin American countries. For the first

Table 1 : Hard Work Brings Success

(%)

	Argentina (1995)	Brazil (1997)	Chile (1996)	Mexico (1996)	Peru (1996)	Uruguay (1996)	Venezuela (1996)
1	21.1	14.4	14.2	18.2	34.6	16.2	32.5
2	7.3	3.7	5.9	5.7	11.3	7.0	6.4
3	7.5	3.2	9.2	9.8	8.9	9.3	5.2
4	6.4	3.7	11.1	10.4	9.1	8.5	4.3
5	16.9	8.7	16.8	14.9	10.7	13.8	17.7
6	4.3	5.0	14.2	7.7	4.4	7.2	5.7
7	7.9	7.7	9.8	7.4	3.6	8.6	3.8
8	7.7	9.1	10.3	9.9	5.1	9.4	3.3
9	5.1	6.8	3.3	6.2	2.3	3.6	3.0
10	14.1	36.9	4.9	6.9	5.9	13.2	12.8
No Ans.	1.8	0.6	0.3	3.0	4.1	3.2	5.3
Mean	5.06	6.82	4.98	4.91	3.60	5.21	4.32

	China (1995)	Taiwan (1994)	India (1995)	Japan (1995)	Korea (1996)	Philippines (1996)
1	34.1	12.1	57.6	12.1	25.5	29.0
2	15.5	12.7	9.0	11.4	11.2	9.7
3	10.1	15.5	5.7	18.0	14.7	10.2
4	6.7	10.9	2.9	12.7	8.5	9.9
5	9.8	15.4	6.3	20.5	13.2	21.3
6	3.7	13.1	0.8	10.5	7.1	5.2
7	3.5	5.9	0.8	3.2	5.7	4.5
8	4.7	7.9	1.3	2.2	6.2	4.2
9	2.7	2.4	1.7	1.2	2.4	1.9
10	5.9	3.2	4.9	2.0	5.2	3.9
No Ans.	3.4	0.9	9.0	6.1	0.3	0.2
Mean	3.50	4.46	2.42	4.00	3.99	3.79

Source : World Values Survey

Question : Which of the following statements do you agree? Rate your view.

1 – In the long run, hard work usually brings a better life

10 – Hard work does not generally bring success – it is more a matter of luck and connections

Table 2 : Why Are People in Need ?

(%)

	Argentina (1995)	Brazil (1997)	Chile (1996)	Colombia (1998)	Mexico (1996)	Peru (1996)	Uruguay (1996)
Laziness	21.6	20.5	36.9	18.4	22.7	34.2	12.4
Unfair Society	61.5	75.7	55.6	79.2	67.5	56.5	77.2
Other	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Don't know	16.9	3.0	7.4	2.4	9.7	9.3	10.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

	Venezuela (1996)	Taiwan (1994)	India (1995)	Japan (1995)	Korea (1996)	Philippines (1996)
Laziness	41.1	64.2	34.0	38.3	48.4	63.3
Unfair Society	46.1	29.1	46.8	28.7	50.2	34.8
Other	0.0	0.0	0.0	0.0	0.0	0.0
Don't know	12.8	6.7	19.2	33.1	1.0	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source : World Values Survey

Question : Why are people in need?

- They are poor because of laziness and lack of will power
- They are poor because of an unfair society

question, greater shares of respondents in Asian countries considered that hard work would bring success (Table 1). It is interesting that the belief in the benefit of hard work is particularly high in China and India, where high rates of economic growth in recent years are apparently providing much (perceived and most likely real) opportunities for an increasing segment of the population. For the second question, the pattern is clear that a majority of the respondents in Latin America think that the poor people are poor because of the unfair society, not because of their own fault (Table 2). In Asian countries on the other hand, the fault of the poverty tends to be placed much more on the poor themselves. Lastly, while a large portion of the respondents considered that the poor have a good chance of escaping poverty in Asia, we see very different answers from the Latin American respondents (Table 3).

Similar results of the perception of low social mobility and unfairness of

Table 3 : Chance to Escape from Poverty

(%)

	Argentina (1995)	Brazil (1997)	Chile (1996)	Colombia (1998)	Mexico (1996)	Peru (1996)
They have a chance	24.6	28.9	40.0	43.7	38.8	47.5
There is very little chance	72.1	70.5	58.5	55.8	57.4	47.1
Other	0.0	0.0	0.0	0.0	0.1	0.0
Don't know	3.3	0.6	1.6	0.5	3.6	5.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

	Uruguay (1996)	Venezuela (1996)	Taiwan (1994)	India (1995)	Japan (1995)	Philippines (1996)
They have a chance	21.9	38.5	85.6	44.9	69.6	72.9
There is very little chance	73.5	56.8	9.6	39.4	17.4	24.8
Other	0.0	0.0	0.0	0.0	0.0	0.0
Don't know	4.6	4.8	4.6	15.7	13.1	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source : World Values Survey

Question : Do you think the poor have a chance to escape from poverty?

- They have a chance
- There is very little chance

Table 4 : Perception of Social Mobility in Latin America

(%)

	2000	1998	1996
Success depends on personal connections			
Yes	71.5	71.3	76.4
No	28.5	28.7	23.6
Hard work leads to success			
Yes	46.2	45.1	44.4
No	53.8	54.9	55.6

Source : Gaviria (2005) using data from "Latinobarometro" surveys.

the society in Latin America are also reported by Gaviria (2005) using data from *Latinobarometro* surveys. As shown in Table 4, those who thought that "success depends on personal connections" remained high in 2000 at 71.5%, despite a slight decline from 76.4% in 1996. More than half the respondents thought that "hard work does not lead to success".

Ⅲ Empirical Evidence on the Social Mobility in Latin America

Having reviewed people's "perception" on social mobility, what then is

the evidence on actual mobility in the region? In the existing research, the debate on social justice in Latin America has mostly been concerned with inequality. The main reason why the mobility issue has not received more attention in the research until recently is the difficulty of collecting data to measure mobility. The need for panel data which cover a sufficiently long period has prevented researchers from attempting a rigorous analysis of social mobility that would cover two generations and more (intergenerational mobility). Hertz et al. (2007) argue that it is practically impossible to estimate trends in the intergenerational persistence of permanent income for developing countries, and they recommend using education as a proxy for socioeconomic status, as it is more or less a permanent characteristic in adulthood, and follows a readily identifiable trajectory during childhood. Recent studies on social mobility in Latin America have tried to circumvent the problem of data by proposing indices of mobility which do not require a long panel. Behrman, Birdsall and Szekely (2000), Dahan and Gaviria (2001), and Andersen (2001) all used measurements of the importance of family background in children's education outcome as an index of social mobility. If higher proportion of children's educational outcome differences is explained by their family background, then it would imply a lower social mobility.

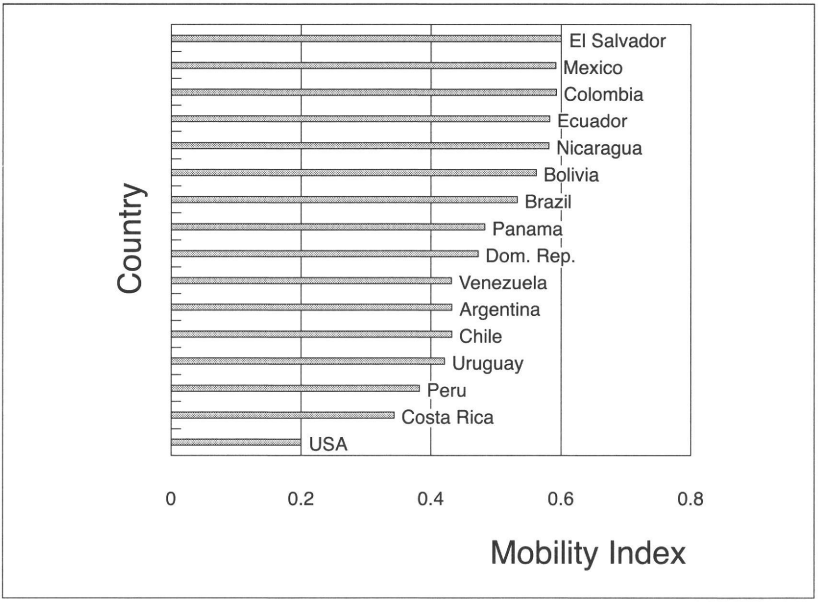
For example, Dahan and Gaviria (2001) used correlation of schooling among siblings as an index of intergenerational mobility in 16 Latin American countries. They find that social mobility is highly correlated with country-wide education levels, and that countries with higher schooling levels and less inequality of schooling allow greater mobility. They also find that social mobility is not correlated with public expenditure on education (as a share of GDP) and is only tenuously correlated with GDP per capita. The indices of social mobility they calculated are reproduced in Figure 1 (with the index for the USA as comparison). We can observe that there are significant differ-

ences in mobility even among 16 Latin American countries. Here, smaller figures indicate that mobility is higher. El Salvador, Mexico, Colombia are among the most socially immobile countries according to their calculation.

Dahan and Gaviria use correlation of schooling outcome among siblings as an indicator of low degree of intergenerational mobility. Although education is not a perfect measure of children's life outcomes, the assumption seems plausible that schooling provides an early glimpse of what is to come in the person's adult life. They also find that education attainment is a powerful predictor of the importance of family background in socioeconomic performance. Their argument, therefore, is that higher education attainment would lead to higher social mobility. However, we need to note the possibility that higher social mobility also encourages a greater educational attainment, as the direction of causality may go both ways.

Andersen (2001), in another study, uses Fields decomposition to determine the importance of family background in explaining children's schooling outcomes. The order of mobility index calculated for 18 Latin American countries by Andersen does not perfectly coincide with what was reported by Dahan and Gaviria (2001). However, for example, Bolivia is shown to have a very low social mobility in both studies, third after Guatemala and Brazil in Andersen (2001). Andersen (2003) further investigates possible causes of this low social mobility in Bolivia and its implications for economic growth and poverty reduction. Measuring "education gap" of different socioeconomic groups, she finds that parents' education level is the most important explanatory factor, providing support for Esping-Andersen's argument that "family cultural capital" plays an important role in children's early experiences. It was also found that, for Bolivia, geographical factor (i.e. living in rural areas) makes significant negative impact on achieving adequate education.

Figure 1 : Social Mobility in the Americas



Source : Dahan and Gaviria (2001)
Note : Lower values indicate higher mobility.

In her cross-country analysis of social mobility indices, Andersen also finds evidence of a high correlation between the education levels of spouses, suggesting that marriage market contributes to low social mobility. The correlation of education for partners was found to be the highest in Bolivia among 18 countries she studied. Furthermore, corruption was found to be strongly negatively correlated with social mobility. In a labor market where job placement is based not on individuals' ability, but on political and familial connections, opportunities for those without any such connection are seriously limited.

The problem of low social mobility is not limited to the lack of incentives for the poor and the marginalized to invest in education, but also for the rich and privileged to aspire to be productive and be entrepreneurial, as they will

be rich regardless of their effort. We can expect that such social arrangement would have a substantial negative impact on achieving a dynamic economic growth. In effect, Andersen (2003) finds a strong positive correlation between her social mobility index and the growth rate of GDP per capita, although we have to note again that the direction of causality may go both ways. In terms of distributional inequality, there seems to be a weak negative correlation between mobility and inequality. Guatemala, Ecuador, Brazil, and Bolivia are the countries with low social mobility and high levels of income inequality. On the other hand, while Chile, Paraguay and Argentina also have high inequality, the mobility index is relatively high, suggesting a better incentive structure in those countries. For Bolivia, its poverty elasticity of growth has been estimated to be about 0.75 for the period between 1989 and 1997. (Nina and Rubio 2001) One percent increase in economic growth would only reduce poverty by 0.75 percent. This diminished impact of economic growth on reduction of poverty could at least partly be explained by the very low level of social mobility found in Bolivian society.

Ⅳ Demand for Education in a Game Theory Framework

The recent IDB report on social exclusion concludes that regardless of effort or ability, most individuals in the region are unlikely to see significant improvement in their income or social position or that of their children. (IDB 2008) Incentives to work, acquire skills, or refrain from socially undesirable behavior are seriously constrained when there is no clear path out of social exclusion. At the same time, for privileged and more fully "included" citizens, there is little downward mobility, regardless of (the lack of) effort or ability. Thus, these citizens are unlikely to engage in innovation or risk taking that leads to economic growth and other forms of social dynamism, and they would be more concerned with maintaining their status rather than further-

ing the public good (IDB 2008 : 120).

Under this troubling scenario, the IDB report presents four challenges for policymakers in the region. First, they need to design policies and programs, and possibly to undertake legal reforms, that will equip individuals to participate in both the benefits and responsibilities of society. This means principally the improvements in provision of public services, such as access to quality education, health care, nutrition, and access to credit. Secondly, labor institutions, social security systems, and macroeconomic conditions need to ensure that effort, talent, and socially desirable behavior are rewarded both immediately and across generations. Thirdly, the report advises against addressing insufficient social mobility with short-term redistributions of wealth. Such policies would be initially popular, but may ultimately prove ineffective in improving the socioeconomic status of recipients in the long run. Policies must emphasize equality of opportunities through the development of human and social capital rather than short-term attempts to equalize outcomes. However, the last and most difficult challenge is to find ways to convince the people who have voice and power that these policies are ultimately in their own interest.

If people are not convinced of the benefits of change, no change in social mobility, inequality, or poverty will come about. Since this is a matter of changing people's behavior and expectations in human interactions, analyzing it in a game theoretic framework may shed some light on the problem. Traditionally, economics assumed that markets arrived at a single, efficient outcome. However, application of game theory to a wide range of economic problems in recent years has demonstrated that it is a highly useful tool for the analysis of real world human interactions where many outcomes are often possible. Multiple outcomes are possible in economic development, and some outcomes are better than others. The problem of poverty in devel-

oping countries can be interpreted as a failure of coordination among participating economic actors with the resulting outcome of poverty trap. Game theory shows that changing incentives and rules of the game by which society operates can dramatically affect the outcome of the game and the resulting welfare of its players.

In the context of Latin America, we see that absence of market discipline resulted in economic policies that stifled entrepreneurship and resulted in a stagnant economy rife with corruption. Creative people used their creativity to seek the surplus produced by others rather than creatively producing new surpluses of their own. However, each individual behavior constituted a best response to the behavior of others, and mutually reinforcing behaviors continued. This is an undesirable outcome, but a stable one nonetheless. Unless the rules of the game change, most of Latin American societies are unlikely to change.

When education investment decisions are treated in a game theoretic framework, it is usually presented as an issue of "strategic interdependence" in a coordination game. The strength of one's desire for more schooling depends on the array of employment opportunities for educated people, which depends on the number of educated employees, feedback that one gets from his social network about the costs and benefits of further education, and the norms with respect to schooling among one's peers. Your schooling decision depends substantially on what others do, and what you *think* others are likely to do. Specifically, when there are complementarities in education, where the returns to your education would be higher when others are also educated, there is a strategic interdependence, and multiple equilibria are possible. Under such circumstances, coordination and confidence among the game players matter. If everyone expects that the current situation of low education for the mass remains unchanged, no one has the incentive to

do anything different and invest in higher education. Thus coordination failure arises. An individual's choice is rational in the context of his environment, but it may not be collectively rational from the perspective of the society, since it would be better if everyone invested in more education at once.

In such a state where participants of the game are stuck in a bad equilibrium, there is potentially a strong role for the government in order to move the society from a bad to a better equilibrium. However, simply mandating a law requiring compulsory education, for example, will not be enough, as parents often ignore the laws. It is necessary not just to change educational laws, but to change the individual *perceptions* about the extent to which everybody else will actually obey the law.

In our discussion of social mobility and demand for education investment, it is not the complementarity of education that is the source of the problem, but the perception of poor parents about the future prospects of their children. How can we consider this problem in a game theory framework? In Figure 2, we show a simple two-by-two payoff diagram of some hypothetical Latin American country. There, participants in the game are represented by one parent from a rich, privileged family and another parent from a poor, marginalized family. The marginalized parent's choice is whether to invest in education of her children, represented in two strategies across horizontally. The privileged parent's choice is to do nothing and maintain the existing social structure, or to create a more dynamic and fair social system where poor families also have access to equal life opportunities. Realistically, the decision of whether or not to change the social system (rules of the game) is dictated by the choice made by the privileged parent.

We assign the payoff to each party in four possible outcomes. Here, our assumption is that both the privileged and the marginalized are better off in the "coordinated" outcome where the social system is changed and the poor

Figure 2 : Payoff Matrix for Education Investment and Social Change

		Marginalized	
		Invest in education	Not invest
Privileged	Create a fairer society	(10, 5)	(5, 3)
	No change	(7, 2)	(6, 3)

Note : Numbers in parentheses are (payoff to the privileged, payoff to the marginalized). Source : Author

invests in her children's education (upper left box). This is the optimal outcome for the society as a whole. However, the society is currently at the low equilibrium where both parties do nothing (lower right box).

The task for us now is to think how we can induce both participants to jump from the low to the high equilibrium. For that, several conditions are necessary : First, they have to know and believe that the payoff is better for both parties in the coordinated outcome. That is, both the poor and the rich, and particularly the rich, need to be convinced that it is in their own interest to have the poor and marginalized to have better education in a fairer social arrangement. The problem here is that most of the rich currently seem to believe that their payoff is higher under "no change" scenario. The rent they receive as a privileged class in a segmented economy appears to them to be larger than the benefit expected under alternative outcomes. Secondly, both the commitment to change the social system on the part of the privileged, and the commitment to invest in further education on the part of the marginalized have to be credible.

The above simple presentation does not immediately provide any specific solution to the problem of the low social mobility in Latin America. However, in understanding the dynamics of the problem in a framework of coordination failure among players of the development game, we will be able to explore further the importance of perceptions, expectations, and incentives, and the choices people make accordingly. Some of the potential research directions follow.

- Empirical study of the relative importance of physical demand constraint (such as inability to finance the direct cost of education, or excessive opportunity cost) versus perception of limited future returns to education investment in parents' decision on educational investment

- Case studies of examples where transfer from low to high equilibrium in education and dynamic economic transformation took place, exploring factors that contributed to such change (identifying necessary and satisfactory conditions for such changes) For example, how the high social mobility realized in Chile in recent years has changed the way people invest in education.

- Cross-country comparative analysis (within Latin America region) of the perception of the marginalized population (through a micro survey) regarding the possibility of social change, and its relationship with the expectation of returns to education, and also with their investment behavior in education.

- The effectiveness of social sector public policies and programs (such as education, health, social security, labor market policies and programs) as a complement to social change. How much have these public policies and programs been able to support a social transformation? Are gradual changes possible? If so, what kind of policies in what kind of circumstances?

- Cross-regional comparative study of social mobility, perceptions and incentives, and its impact on education investment between Latin America

and Asia and/or countries in other regions

We may not yet have sufficient information and data to convincingly analyze the social mobility-education nexus in a cross-regional perspective. It will be difficult to control for all the other factors that may influence social mobility and education outcomes. The following section reports some of the findings on the social mobility in Asian countries, simply to suggest a hint for further exploration.

V Social Mobility in East Asia

Hertz and Jayasundera (2007) document a long-run decrease in intergenerational educational persistence in Indonesia, or an increase in educational mobility, arguing that it can be explained in part by the increasing availability of primary schools. Indonesian government constructed more than 65,000 primary schools between 1973 and 1978. The authors demonstrate that, for boys, school construction raised not only educational attainment, but also intergenerational mobility, by increasing educational attainment the most for men whose parents had little or no education. They did not find the same result for girls. Their findings are similar to those of Behrman, Birdsall, and Szekely (2000), who found that for 16 Latin American countries, government expenditures on primary schooling (per student of primary age), as well as the average level of education of their teachers, have had positive effects on educational mobility. While increased educational mobility may lead to increased availability of labor market opportunities and hence increased social mobility, this latter effect has not been explicitly investigated.

Hertz et al. (2007) discuss an interesting disparity between trends in two different measures of the intergenerational persistence of educational

attainment for Indonesia. While the intergenerational regression coefficient (capturing the extent that parents' education explains education attainment of children) has declined over time, the equivalent correlation coefficient has risen. Their interpretation is that if school construction tended to raise the absolute educational attainment of boys of poorly educated parents, this represents an absolute increase in "upward mobility" for those families. The correlation coefficient, by contrast, measures the similarity in rank of parents and children. The fact that it has risen in Indonesia over the period of rapid school construction means that even though the prospects of the children of poorly educated parents have improved in absolute terms, parental education is now a better predictor of one's relative position in the educational distribution than it used to be.

Hertz et al. (2007) also find similar patterns for other Asian economies. Of ten Asian countries studied, seven experienced a decline in their regression coefficients, but only two saw the correlation coefficient fall, while four countries, including Indonesia, displayed a significant positive trend over the past 50 years. By contrast, among seven Latin American countries studied, most of which started at very high initial levels of intergenerational persistence, five experienced a significant reduction in their intergenerational regression coefficient, and a slightly different group of five countries saw reductions in the parent-child schooling correlation, but in no country did this correlation display a positive trend.

Another study on social mobility in Asia uses a unique set of household panel data covering a thirty-year-period to analyze socio-economic mobility in the rural Philippines. Fuwa (2006) finds that the size of initial endowment is closely associated with the pattern of subsequent economic mobility, which is consistent with the dynamic models of household stratification. He also finds, however, that changes in economic environments, such as the

speed of macroeconomic growth, was at least as important (and arguably more important during the 1960s and the 1970s) a source of upward economic mobility for the poor as the initial endowments. He argues that, while various theoretical models point to different mechanisms of social mobility, it is important to examine empirically the relative importance of the determinants of social mobility in a country specific context before designing policies for poverty reduction.

Fuwa also shows that the magnitude of the quantitative association between different sources of mobility and transition probability, that is, the relative importance among the sources of mobility, can change substantially over time. Among different types of assets, the importance of the returns to human capital (for irregularly-employed workers) and labor endowments (for tenants) in acquiring the regularly-employed status increased significantly due to the expansion of the international migration opportunities after the 1980s. As the policy implications of his findings, Fuwa notes that agricultural development strategy consisting of the land reform program combined with agricultural price policies is important, but such strategy alone is not likely to be sufficient. Investment in human capital and rapid expansion of economic opportunities outside agriculture are proposed as well. Fuwa states, somewhat optimistically, that the apparent lack of serious "social exclusion" (state dependence) in poverty dynamics found in the rural Philippines suggests that policy interventions addressing the observed factors (especially access to education) could go a long way in pulling the poor out of poverty.

Ⅵ Concluding Comment

The transformation of economic policies during the last two decades following "Washington Consensus" has radically transformed the policy land-

scape of Latin American countries. Growth recovered moderately in 1990s, although job creation was disappointing, and the impact of the reform on poverty and inequality is mixed. While reforms may not have worsened the situation of the poor in absolute sense, the structural causes of poverty have not really been addressed.

Faced with the disappointing results of the reforms which attempted to apply the same principles of the market-based development to all countries, development researchers and practitioners are now emphasizing heterogeneity of country environment and the need to pay more attention to dynamic forces behind the economic outcomes and to devise different sets of policy actions suited for each country context. This increased emphasis on specificity of each cases corresponds to the promising direction of applying game theory to the analysis of economic development. As a formal structure used to understand human interactions, game theory aptly demonstrates the possibility of multiple equilibria in our economic interactions. Such an approach being more humble than traditional economics, will help deepen our understanding of choices people make in their economic life.

Notes

1) As I write this research note, the latest volume of the IDB's Report on Economic and Social Progress in Latin America, titled *Outsiders? : The Changing Patterns of Exclusion in Latin America and the Caribbean* has been published (IDB 2008). The volume discusses in detail the extent, the nature, and the causes of "social exclusion" in the region. One chapter of the report is dedicated to the analysis of the relationship between "social mobility" and "social exclusion". The publication of this report reflects the increasing attention in recent years paid to the institutional factors behind persistent poverty in developing countries in general, and high inequality in Latin American countries in particular.

2) See, for example, Alesina and Peroti(1996).

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