Frustrated Achievers: Winners, Losers and Subjective Well-Being in New Market Economies

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To date the literature on subjective well-being has focused on the developed economies. We provide empirical evidence from two emerging market countries, Peru and Russia. Our results – and in particular a strong negative skew in the assessments of the respondents with the greatest income gains – support the importance of relative rather than absolute income differences. Among other factors, we attribute our results to shifts in reference norms and to macroeconomic volatility. Relative differences seem to matter more for those in the middle of the distribution than for the very wealthy or the very poor. Our respondents were more critical in assessing their progress vis-à-vis *others in their country versus those in their community. The large and consistent gap we find between objective income trends and the subjective assessments of the upwardly mobile may have implications for the future economic and political behaviour of a group that is critical to the sustainability of market policies.*

'Mill wrote: "men do not desire to be *rich*, but to be richer than other men".'
Pigou [*1920*]

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The Journal of Development Studies, Vol.38, No.4, April 2002, pp100–140
PUBLISHED BY FRANK CASS, LONDON

INTRODUCTION

A number of recent studies evaluating individuals' subjective well-being, or – broadly speaking – 'happiness' suggest that we should at least revisit our standard assumptions about the role of rational, material self-interest in determining economic behaviour.[1] These studies, which concentrate primarily on the developed economies, find little correlation between aggregate economic growth and 'happiness'. While they find that, on average, the wealthy are happier than the poor within individual societies, they find no evidence that happiness increases as societies grow wealthier over time, nor evidence of differences in levels of happiness between wealthier and poorer societies (above a certain absolute minimum level of income).[2]

The effects of wealth on people's happiness within developed economies, meanwhile, are far less important than those of other factors such as employment, health, marriage, and age.[3] Macroeconomic variables other than income growth, such as inflation, unemployment and volatility, seem to have strong effects on happiness.[4] Blanchflower and Oswald find that in most countries in Europe and in the US – including those where unemployment benefits are very generous – being unemployed is equivalent in what they call 'life dissatisfaction units' to dropping from the top to the bottom income quartile.[5] Our analysis of a regionwide opinion survey for Latin America, the *Latinobarometro*, finds that, controlling for other variables, both inflation and unemployment have negative effects on happiness.[6]

These findings by no means discount the tremendous importance of economic growth as a necessary condition for achieving a wide range of fundamental societal objectives, including economic development, enhanced social welfare, and the reduction of poverty.[7] Yet they do suggest that factors other than income growth affect individuals' assessments of their own welfare, and that these same factors may also influence individuals' responses to economic incentives and policies.[8] Economists have traditionally measured preferences by looking at behaviour (revealed preferences). The use of survey data on subjective well-being or happiness is a relatively new approach which some economists are now using to capture individual preferences with respect to macroeconomic and microeconomic variables. While not without flaws, the approach has the potential to contribute to our understanding of seemingly 'non-rational' economic behaviour.[9]

Under certain circumstances, concern for relative income differences can lead individuals to opt for conspicuous consumption – rather than investing in their children's education, for example – to demonstrate wealth

status. Alternatively, such concerns can motivate risky behaviour, such as gambling, to enhance status via wealth gains at the margin.[10] Our understanding of the role of relative differences and of non-income determinants of economic behaviour is limited, yet could have important implications for the future direction and sustainability of market economies in both developed and developing countries.

To date research on happiness has focused on the developed economies, due in large part to the better availability of adequate data, particularly panel data. Yet some of the factors that influence individual assessments of well-being, such as income inequality, macroeconomic volatility, and occupational status, fluctuate more in the developing countries, and no doubt have implications for the happiness of individuals within those countries.

We have three related objectives in this study. The first is to bring some new empirical evidence from the emerging market economies to bear on the debate over the effects of income versus non-income determinants of economic behaviour. The second is to provide a developing country perspective to the subjective well being literature. The third is to introduce the concept of mobility, that is, *income change*, into these debates and literature, as until now they have primarily focused on income levels.

We posit that, along with the already identified individual and within-country variables that influence happiness – such as marital status, employment, and inflation – a number of variables related to international economic integration – such as exogenously driven macroeconomic volatility, the globalisation of information, increasing income mobility (both upward and downward), and inequality driven by technology-led growth – also have important effects on how individuals perceive their well-being. And the effects of these variables may be stronger in developing economies in the process of integrating more fully into the international economy – with the consequent effects on distribution and social mobility – than they are in the advanced industrial economies.[11]

We explore three propositions, using panel data from Peru and Russia. The first is that in developing economies – as in advanced industrial ones – – relative income differences affect subjective well being or happiness more than absolute ones do, at least above a certain absolute level of income. The second proposition, related to the first, is that those in the middle of the income ladder are more likely to be dissatisfied with their status than are those at the bottom.[12] The third is that changes in status – conceptualised here as income mobility – have significant effects on happiness, although they do not always run in the expected direction.[13] Our brief review of the literature on subjective well-being highlights the importance of relative income differences and non-income determinants of well-being. It also shows how, until now, studies of happiness have focused on advanced

industrial rather than on developing economies, and on income levels rather than on mobility or income change.

HAPPINESS: THE LITERATURE

Richard Easterlin was a pioneer of the economics of 'happiness'.[14] In a cross-country study using 30 surveys from 19 countries, including developing countries, he found that in all cultures the way that most people spend their time is similar: working and trying to provide for their families. Thus the concerns that they express when asked about happiness are similar. His findings – that wealthy people tend to be happier than poorer ones within countries, but that there is no such relationship among countries or over time – have since been supported by a number of subsequent studies.[15]

Easterlin posited that absolute income levels matter up to a certain point, after which relative income differences matter more. Later empirical studies support this proposition, showing a much stronger relation between income and happiness at the lower end of the income scale.[16] Decades earlier, Pigou had reasoned that, because the rich derive much of their satisfaction from their relative rather than absolute income, satisfaction would not be reduced if the incomes of all the rich were diminished at the same time, justifying redistributive taxation.[17]

The importance of relative differences depends in part on social norms, which vary among societies. Due to such norms, some societies – such as the United States – are more willing to tolerate higher levels of inequality in exchange for benefits (real or perceived), such as greater freedom or opportunity.[18] Psychologist Ed Diener and his colleagues, meanwhile, find that it is perceptions of differences rather than objective differences in circumstances that have negative effects on happiness.[19]

Easterlin notes that while the aspirations of higher-income people probably exceed those of lower-income people, this dispersion in reference norms is smaller than is the dispersion in the actual incomes of the rich or poor. Thus, those at the bottom tend to feel less well off. And, as economic conditions improve over time, so do the reference norms, so that the positive correlation that shows up within countries appears only weakly, if at all, in comparisons among societies in time or space.[20]

Supporting these findings, Diener and Biswas-Diener find that while there are large correlations between the mean wealth in countries and the mean reports of subjective well-being in them, economic growth in developed countries has not been accompanied by any increase in subjective well-being, and increases in individual income do not lead to more happiness.[21] Indeed, they also find that people who prize material goals more than other values tend to be substantially less happy.

Easterlin's findings on the changing nature of norms and aspirations are supported by the work of Robert Merton, who introduces the concept of reference groups in his 1957 analysis of Stouffer's *American Soldier*.[22] Merton finds that people's aspirations – and therefore their satisfaction or happiness – are very much determined by the reference group that they compare themselves to. Infantrymen, whose cohorts were rarely promoted, reported higher scores of self-satisfaction than did their more upwardly mobile counterparts in the air force. Because promotion and upward mobility were the norm for air force men, and they assessed their own progress according to that of their peers, a higher percentage were dissatisfied with their own progress – even when they were upwardly mobile – than were infantrymen.[23]

Other studies of happiness support the proposition that relative income differences and reference groups have stronger effects than absolute income. Clark and Oswald calculate 'comparison incomes' for British workers: the average incomes of those with the same jobs, education, and so on. They found that while incomes had small effects on satisfaction, comparison income had a correlation of –0.25 to –0.30: the lower their comparison income, the more satisfied employees were. They also find that satisfaction with pay was lower if spouses or other household members earned more.[24]

The importance of relative income and reference groups can lead to an ever-rising bar of perceived needs. In the *Overspent American*, Juliet Schor [*1998*] cites surveys that show that over half of the population of the United States, the richest population in the world, say they cannot afford everything they really need. In a classic work written much earlier, *The Theory of the Leisure Class*, Thorstein Veblen [*1967*] posits that in affluent societies, spending – and in particular conspicuous consumption – becomes the vehicle through which people establish social position.[25]

Albert Hirschman's important insight – the tunnel effect hypothesis – also focuses on relative differences. Hirschman begins with the assumption that an individual's welfare depends on his present state of contentment (income is a proxy), as well as on his expected future contentment (or income). Thus in certain circumstances – such as early on in countries' development paths – individual A's perceived welfare or utility is enhanced by the advancements of B, as these advancements supply positive information about what the future might be like for A. In an undefined short term, these positive effects on expectations are stronger than feelings of envy. Yet if, over time, A does not realise income gains or other advancements, then these feelings can result in strong frustration.[26]

David Blanchflower and Andrew Oswald compare happiness in the United States and in Britain, and then also examine effects of

macroeconomic variables on happiness.[27] They find that unemployment and poor health have negative effects on happiness, while marriage has a strong positive effect. Indeed, the single greatest depressant on happiness is the variable 'separated', closely followed by 'widowed', and then by 'unemployed'. Education, independent of income, has a positive effect on happiness. And while income also has positive effects, these are not as large as those of these non-income variables. DiTella, MacCulloch, and Oswald find that inflation has very strong negative effects on happiness, and that people are willing to undergo very costly recessions (and thereby implicitly forego considerable income) to get rid of inflation.

Bruno Frey and Alois Stutzer explore the relationship between income and happiness among 6,000 residents in Switzerland's cantons. They find that at low and medium levels of income (for Switzerland), higher income has no effect on happiness, while above a particular income level, it has some effect. They find, like Blanchflower and Oswald, that unemployment and poor health have clear negative effects on happiness. Self-employed people are happier than employees. Inflation has a negative effect on happiness. Frey and Stutzer also explore the role of direct democracy. All residents in Swiss cantons receive public goods, but only Swiss nationals can participate politically. Controlling for differences in quality of public goods among the cantons, they find that happiness levels are higher among the Swiss nationals that take part in direct democracy than in the foreign residents that only benefit from the public goods it provides.[28]

Our own work on Latin America corroborates the negative effects of unemployment and inflation on happiness.[29] However, we get slightly different findings for self-employment. Using data from a 17-country survey, the *Latinobarometro*, we found that, controlling for other variables, being self-employed had no significant effects on happiness for those in the wealthiest socioeconomic category, but a significant and *negative* effect for those in the middle and poor categories. This is not surprising, as those who are self-employed in developed economies usually have chosen to be, while most of those who are poor and self employed in developing countries are in the informal sector due to lack of other alternatives (Table 1).[30]

Charles Kenny explores the links between happiness and growth.[31] Like Easterlin, he notes the importance of relative rather than absolute income differences in people's self-assessments. He finds that, at least in wealthy countries, if there is a link between growth and happiness, it is from happiness to growth rather than the other way around. This linkage may be due to a social interactions effect: trust and social capital seem to be greater in 'happier' societies, and a number of studies have found positive associations between these two variables and growth.

TABLE 1
LATIN AMERICA, 2000: HAPPINESS, BY SOCIO-ECONOMIC STATUS GROUP*

(Ordered Logit Estimations)

	Entire Sample		Rich		Middle		Poor	
	coeff.	z-stat	coeff.	z-stat	coeff.	z-stat	coeff.	z-stat
age	–0.014	–2.610	–0.011	–0.499	–0.147	–2.402	–0.010	–0.837
age^2	0.000	1.454	0.000	0.360	0.000	1.330	0.000	0.322
male	0.084	2.750	0.031	0.258	0.105	2.958	0.054	0.763
married	0.057	1.733	0.009	0.064	0.034	0.877	0.168	2.339
self-employed	–0.163	–4.584	–0.065	–0.434	–0.129	–3.086	–0.288	–3.681
unemployed	–0.321	–5.238	–0.305	–1.034	–0.306	–4.252	–0.366	–2.814
years of educ.	–0.032	–7.880	–0.019	–1.046	–0.035	–7.151	–0.038	–4.246
wealth level	1.683	23.060	0.659	2.042	1.438	15.969	2.020	11.850
inflation rate**	–0.006	–4.921	–0.013	–1.985	–0.008	–5.962	0.004	1.459
N	14990		930		11061		2994	
Pseudo-Rsq	0.017		0.004		0.013		0.023	

Source: calculations based on *Latinobarometro*, 2000.

* Socio–Economic Status (SES) groups obtained from interviewer's assessment of the respondent:
- Rich ('very Good' assessed SES)
- Middle ('Good' or 'Average' assessed SES)
- Poor ('Bad' or 'Very Bad' assessed SES)

** Inflation rate serves as a proxy for fixed–effects

A few economists have attempted to develop measures of individual welfare which capture its subjective and non-income components. Bernard Van Praag's measure – now known as the Leyden approach – captures the interaction between individual preferences and the effects of social norms and the incomes of others. It also captures the effects of changes over time, showing that ex ante income gains have larger effects on utility than *ex post* gains do. In other words, individuals anticipate gains and then are often disappointed at the size or effects of the gains in retrospect.[32]

Empirical research, based on cross-country surveys and using these measures, finds that individual welfare functions differ among individuals, depending on their stage in the life cycle.[33] There is a similar subjectivity affecting individuals' evaluations of age and education. People's definition of 'young', for example, tends to change as they age. Other research on assessments of quality of life, meanwhile, finds that as people age and their reference norms are others in their age cohort, their reference norms for health status bias downward. People with illnesses tend to adapt their quality of life assessments upwards, as their reference norms become either others with the same illness, or a particular stage in their illness that was more critical.[34]

Another measurement issue in assessing subjective well being is the direction of causality: are people happy because of their economic conditions, or do happy people assess their economic conditions more favorably?[35] Respondents' assessments are often affected by the momentary mood at the time of interview: the fate of the national football team or a recent election may sway a response as much as economic factors. The same factors can affect recall, and people often recall past events in a manner that supports their current assessments.[36]

Finally, there is also the question of how 'happiness' affects economic behaviour and future income. Diener and Biswas-Diener report that findings from a panel survey from Australia: high subjective well-being (SWB) scores at an earlier time period precede increasing income, with one standard deviation increase in SWB producing two to three percentage point increases in income, and two standard deviations resulting in 8 to 12 per cent greater income increases in the next time period. Studies in the US find that there are positive effects of cheerfulness on later incomes, but that they are moderated by respondents' parents income: the effects were greater for individuals from economically advantaged backgrounds.[37]

The effects of happiness or subjective well-being on future economic – and possibly also political – behaviour is an area where much more theoretical and empirical work is needed and will ultimately determine the importance of the study of subjective well-being to future social science research and policy.[38]

To date, the literature on happiness has primarily focused on developed economies. Our effort is distinct in its focus on the emerging market countries, and on the effects of globalisation related trends and their interactions with demographic variables, such as age, education, and occupation, as well as in its focus on changes or trends in income in addition to levels.[39]

In a separate paper, based on the data for Latin America discussed above, we find that wealthier individuals assess their past progress and future prospects more positively than poorer ones, and have more positive views about the market.[40] In a related paper, we find that income has a positive effect on happiness for all groups, but the effect is stronger for poor respondents than it is for wealthier ones, supporting Easterlin's point that absolute income gains matter more for those with less wealth.[41] We also found that the effects of demographic variables – age, marital status, and education levels – on happiness are the same for Latin America as they are in the advanced industrial economies.

In this article we focus on the effects on perceived well being of relative income differences, economic status, and income change, with empirical evidence from Peru and Russia. We also provide some very initial evidence of the effects of those patterns on future economic behaviour.

HAPPINESS AND HARDSHIP: EVIDENCE FROM PERU AND RUSSIA

Both Peru and Russia have been affected by the broader trends affecting most emerging market economies. Market reforms – which are part and parcel of globalisation – have brought economic growth and created new opportunities for many individuals. Yet another part of the same story is new vulnerability and the threat of falling into poverty for many others, including those that were traditionally securely in the middle class, due to macroeconomic volatility related to greater engagement in the global economy.[42]

In Peru, as in much of Latin America in the 1980s and 1990s, a significant number of people were able to exit poverty. Yet a similar number of people fell into poverty at some point. It tends to be the workers who are most integrated into the formal economy and whose wages are pro-cyclical to shock-related fluctuations – not the poorest workers – that are most vulnerable.[43] In Russia in the 1990s, downward mobility into poverty was the norm rather than the exception for large numbers of people, and poverty increased at an unprecedented rate. In both contexts, high rates of mobility and volatility have been coupled with the globalisation of consumption standards and a scaling back of public social insurance.

There are also large and growing changes in the distribution of income in many emerging market countries, and in particular large gains at the top.

Traditional measures of income inequality such as the Gini coefficient do not capture the dynamic elements of trends in inequality and mobility. They do not even capture the entire static picture fully: the 90/10 ratio focuses on the tails of the distribution, while the Gini focuses more on the middle, but tells us little about the distribution of the middle *vis-à-vis* that on either end of the tail.[44] It is precisely these uncaptured and dynamic trends that may have the most effects on perceptions of well being, as our survey results for Peru and Russia suggest.

From the mid-1980s to late 1990s, inequality as measured by the Gini increased for the former communist countries – particularly for Russia. For Peru, as for other strong market reformers in Latin America, it decreased slightly.[45] Polarisation – defined as a thinning of the middle of the distribution *vis-à-vis* the bottom tail – first fell markedly in Peru from 1985–94 and then increased slightly from 1994–97. Middle income stress (MIS), a measure which captures the income share of the top versus that of the middle, displayed similar trends.[46] In Russia, where reforms were far less complete, there were significant increases in polarisation and in MIS.[47]

Data: Panel Studies in Peru and Russia

Measuring dynamic trends in inequality – income mobility – requires panel data.[48] Yet panel data – as well as sound data on perceptions – are scarce in the developing economies. We have both kinds of data for Peru and Russia.[49] Those data reveal a tremendous amount of movement up and down the income ladder. This suggests that many people in these countries – and particularly those in the middle – experience vast fluctuations in economic welfare, with consequent effects on perceptions of well-being.

In Peru, we were able to collaborate with the Instituto Cuánto to re-interview a subset of households in a 1985–2000 nationally representative panel and thus were able to compare respondents' subjective assessments of their well-being with objective trends.[50] The panel surveys were taken in 1985 (Lima only); 1991, 1994, 1996, and 2000. The perceptions study was conducted in 1998, 1999, and 2000.[51] For the year 2000, in order to increase the sample size and to avoid the attrition bias that could result from such a long panel, we increased the original 152 household panel to 500 households.[52] The original 152 household panel for 1985–2000 is included, while the additional households are in a panel that begins in 1991 (Table 2). Thus for the 500 household sample we have objective data for 1991–2000, and subjective data for 2000.[53] Household income levels for the panel are, on average, slightly higher than those of the nationally representative sample.

The perceptions questionnaire addressed: perceptions of and satisfaction with changes in the household's economic welfare over the last 10-15 years;

TABLE 2
PERU, 2000: HOUSEHOLD PANEL SUMMARY INFORMATION

variable	freq.	mean	std.dev.	min	max
Age	500	52.95	15.29	18	93
Gender (male=1)	500	0.53	0.50	0	1
Household expend. (soles*, 2000)	500	18,892	14,544	2,790	132,202
Number of household members	500	4.98	2.21	1	14
Years of education	500	8.02	4.66	0	18
Area (urban=1)	500	0.86	0.35	0	1

* August 2000, US$ 1 = S/. 3.48

perceptions and changes in the availability and quality of public services used by the household (health, schools, security, water, sanitation, municipal government); respondents' assessments of future economic prospects; and presence and participation in community organisations.[54]

Perceived Past Mobility (PPM) was based on respondents' answer to a question which asked them to compare the economic situation of their household to that of 10–15 years ago, with the possible responses being: much worse, worse, same, better, much better. This question is distinct from more general life satisfaction questions, which ask respondents how satisfied they are with their lives in general. Thus it is not a substitute for a general life satisfaction question, which we do not have for our Peru survey. However, analysis of other survey data, including our own work on the Latinobarometro, finds a fairly high correlation between such economic satisfaction questions and life satisfaction questions.[55] Other questions in the survey asked respondents to compare their family's job situation with 10 to 15 years ago; their situation to how their parents lived; and their degree of satisfaction with their standard of living, among others.[56]

For Russia, we have data from a recent household survey for years 1995 to 1998, a period of extensive macroeconomic volatility. This survey, the RLMS, interviews over 10,000 individuals (or around 3,800 households) each year, and many are re-interviewed in the following years. When we identified the households that were also asked questions about subjective well-being (in this case there was an additional life satisfaction question) and perceptions of past progress in addition to objective income data, we ended up with a panel of over 2,000 households.[57]

Results: Peru

We demonstrate trends in relative income mobility using a Markov transition matrix (Table 3). The panel is divided into income quintiles, with

TABLE 3
MARKOV TRANSITION MATRICES OF RELATIVE INCOME MOBILITY

a. No Income Mobility

		Quintile in T1					
Quintile in	T_0	1	2	3	4	5	Total
	1	**100**	0	0	0	0	100
	2	0	**100**	0	0	0	100
	3	0	0	**100**	0	0	100
	4	0	0	0	**100**	0	100
	5	0	0	0	0	**100**	100
	Total	100	100	100	100	100	

b. Complete Income Mobility

		Quintile in T1					
Quintile in	T_0	1	2	3	4	5	Total
	1	**20**	20	20	20	20	100
	2	20	**20**	20	20	20	100
	3	20	20	**20**	20	20	100
	4	20	20	20	**20**	20	100
	5	20	20	20	20	**20**	100
	Total	100	100	100	100	100	

c. Income Mobility in Peru, 1991–2000

		Quintile 2000					
Quintile 1991		1	2	3	4	5	Total
	1	**45**	25	19	6	5	100
	2	25	**25**	23	14	13	100
	3	16	23	**22**	20	19	100
	4	11	18	18	**32**	21	100
	5	3	9	18	28	**42**	100
	Total	100	100	100	100	100	

the rows being the quintile of origin in 1991 and the columns being the quintile of destination in 2000. Quintile one is the poorest; five is the wealthiest. The figures are in percentages; thus 100 per cent in a same row and column would imply complete immobility and 20 per cent would be evenly distributed mobility (Tables 3a/3b).

The matrix shows substantial mobility for those in our panel – both upward and downward. Those in the third and fourth quintiles clearly experienced the most downward mobility, with 39 per cent of those in the third and 47 per cent of those in the fourth moving to lower quintiles

between 1991 and 2000. Those that experienced the most and most intense upward mobility were in quintiles 1 and 2 (the poorest), with 55 and 50 per cent respectively moving up, and a significant percent of these moving up two and even three quintiles.[58] In addition to the effects of demographics, education and individual effort, and stochastic factors such as luck, these trends reflect the benefits for the poor of stabilising hyperinflation, the government's targeting public expenditures to the poorest groups, and changes in opportunity generated by the high post stabilisation growth.

In terms of absolute mobility, the majority of households in the panel – 58 per cent – had income (expenditure) increases of 30 per cent or more from 1991–2000.[59] Thirty per cent were only marginal income changes, and 12 per cent had income drops of 30 per cent or more. To gauge the importance of these movements in absolute terms, we analysed these changes logarithmically, a measure which reflects the greater proportional importance of changes in income for those with lower levels of income. We find that our mobility trends had greater significance for those at the bottom end of the income ladder, that is, the positive changes that occurred in 1996–2000 were more significant for households in the lower part of the distribution. Trends in poverty support this: extreme poverty fell from 1994–2000, while non-extreme poverty increased.[60]

In contrast to these positive objective results, however, there was a negative skew on perceptions. Forty-five per cent of households had very negative or negative views of their own economic experiences, while 24 per cent were indifferent and 31 per cent were positive.

The asymmetry between reported income changes and perceived economic status was even more marked in the 1998 survey, when the period over which income was measured was longer (1985–97), and the objective data on income change was from 1997, introducing a longer recall period and higher margin of error. Fifty-eight per cent of household had negative views, 28 per cent were indifferent and 12 per cent were positive. We attribute this difference to recall problems, as well as what we term a time-log effect. In other words, any given income gain or loss will have more impact – real and perceived – if it occurs over a shorter period of time, say, six years (1994–2000) versus 12 years (1985–97).[61]

The negative skew on economic assessments contrasts with a fairly positive one on self-assessments of housing improvements: in the 2000 survey 44 per cent said that their housing quality was 'better' while only 14 per cent said 'worse'. This may reflect the difficulty in making accurate economic assessments over time, particularly for the self-employed who do not earn regular wages. Housing changes are more concrete in nature.[62]

Those with the most absolute gains show a strong negative skew on perceptions of economic progress in spite of their favourable economic

performance. Of the high performers in the sample (those with expenditure improvements of 30 per cent or more from 1991–2000) 44 per cent said they were worse off and only 30 per cent said better. Of the worst performers (those with declines of 30 per cent or more), 55 per cent stated, accurately, that they were worse off, yet 21 per cent said that their situation had not changed and 23 per cent saw themselves as better off (Table 4).

TABLE 4
PERU, 2000: PERCEIVED PAST MOBILITY VERSUS 1991–2000 ABSOLUTE INCOME MOBILITY

2000 Perceived mobility	Objective mobility 1991–00 (% income change)			
	100+	99 to 30	30 to –30	–30 to less
Very Negative	19.0	19.4	19.3	20.7
Negative	23.9	24.0	25.3	36.2
Indifferent	24.5	27.9	22.7	19.0
Positive	26.4	26.4	27.3	19.0
Very positive	6.1	2.3	5.3	5.2
Total	100.0	100.0	100.0	100.0

Our regression analysis of the determinants of PPM found that many of our demographic variables – gender, education, and marital status – did not have significant effects (Table 5). Age had a significant and negative correlation with PPM, without the quadratic effect usually found on perceptions variables. In other words, assessments of PPM become monotonically less positive with age, and do not have the U-shaped quality – where there is first a decrease in optimism or happiness, and then an increase – that we find in studies of both past progress and happiness for our larger, region-wide sample.[63] Living in an urban area had a negative and significant correlation with PPM. Income level (as measured by log of equivalised expenditure) had a positive and significant correlation with PPM.

Income change, meanwhile, when measured by changes in log-expenditure, had no effects on PPM when changes over the 1991–2000 time period were used, but had a positive and significant correlation when changes over a shorter time period, 1994–2000 were used. This is most likely due to recall issues, as well as the possible 'time-log' effect that we note earlier: the same percentage change in income has more impact if it occurs in a shorter period of time (see Table 5). Related to this, we found that short-term fluctuations in income (as opposed to income levels) have stronger effects on the subjective assessments of the poor than of wealthier groups, as the former have less of a margin to absorb such fluctuations.[64]

TABLE 5
PERU, 2000: PERCEIVED PAST MOBILITY

(Ordered Logit Estimations)

Independent Variables	1	2	3
Age	–0.026	–0.023	–0.023
	–4.771	–4.302	–4.336
Male dummy	–0.190	–0.163	–0.185
	–1.090	–0.935	–1.062
Years of education	0.003	0.022	0.021
	0.178	1.204	1.154
Married	0.119	0.086	0.118
	0.694	0.506	0.686
Urban	–0.664	–0.494	–0.454
	–2.801	–2.142	–1.969
log-Expenditure	0.420		
	2.772		
Mobility 91-00		0.789	
		0.754	
Mobility 94-00			2.647
			2.205
N	500	500	500
Pseudo Rsq.	0.024	0.020	0.023

z-stats below coefficients

TABLE 6
PERU, 2000: ECONOMIC SATISFACTION

(Ordered Logit Estimation)

Independent Variables	
Age	–0.013
	–2.132
Male dummy	0.160
	0.826
Education	0.033
	1.533
Married	0.009
	0.046
Urban	–0.830
	–3.096
log-Expenditure	0.756
	4.452
N	500
Pseudo Rsq.	0.036

z-stats below coefficients

TABLE 7
PORTRAIT OF THE FRUSTRATED ACHIEVERS IN PERU AND RUSSIA

PERU, 2000

	Whole Sample (N=500)		Frustrated Achievers (N=128)		Non-Frustrated Achievers (N=160)		Difference FAs and NFAs
	Mean	Std. Dev.	**Mean**	Std. Dev.	**Mean**	Std. Dev.	
Age	**52.95**	15.29	**55.67**	15.09	**49.49**	14.90	**
Area (Urban=1)	**0.86**	0.35	**0.93**	0.26	**0.78**	0.42	**
Gender (Male=1)	**0.53**	0.50	**0.51**	0.50	**0.57**	0.50	
Years of Education	**8.02**	4.66	**8.03**	4.52	**8.12**	4.68	
Equivalence Household Expenditure 2000	**8922**	7314	**9885**	6144	**10809**	9957	
Coefficient of Variation (91, 94, 96, 00)	**0.42**	0.19	**0.43**	0.19	**0.48**	0.19	**
Economic Satisfaction	**2.91**	0.80	**2.53**	0.78	**3.21**	0.64	**
Job Satisfaction	**2.58**	1.16	**1.88**	0.90	**3.15**	1.03	***
Perception of Economic Opportunities	**3.03**	0.75	**2.74**	0.71	**3.28**	0.65	***
Economic Ladder Question	**3.82**	1.52	**3.73**	1.47	**3.98**	1.59	*
Prospect of Upward Mobility	**3.29**	1.03	**3.03**	1.13	**3.54**	0.89	**

TABLE 7 (cont.)

RUSSIA, 1998

	Whole Sample (N=500)		Frustrated Achievers (N=217)		Non-Frustrated Achievers (N=90)		Difference FAs and NFAs
	Mean	Std. Dev.	**Mean**	Std. Dev.	**Mean**	Std. Dev.	
Age	**54.47**	15.40	**51.58**	13.97	**50.37**	16.09	
Gender (Male=1)	**0.21**	0.41	**0.24**	0.43	**0.25**	0.43	
Education Level	**8.41**	2.35	**8.62**	2.13	**8.91**	1.97	
Equivalence Household Income '98	**2698**	2935	**4753**	5964	**6114**	5574	***
Coefficient of Variation (95, 96, 97, 98)	**0.56**	0.38	**0.64**	0.62	**0.55**	0.23	**
Life Satisfaction	**1.91**	1.00	**1.82**	0.88	**2.45**	1.25	**
Economic Ladder Question	**2.93**	1.48	**3.00**	1.56	**3.72**	1.52	**
Prospect of Upward Mobility	**2.06**	1.00	**2.07**	1.02	**2.58**	0.97	**
Pro-Democracy Attitude	**0.53**	0.54	**0.45**	0.53	**0.70**	0.51	***
Satisfaction with Market Reform Process	**0.74**	0.55	**0.65**	0.59	**0.96**	0.57	***
Fear of Unemployment	**3.96**	1.37	**4.15**	1.22	**3.57**	1.56	**
Restrict the Rich	**3.22**	0.79	**3.16**	0.82	**2.89**	0.94	**

Significance: * at the 10%, ** at the 5%, *** at the 1% level.

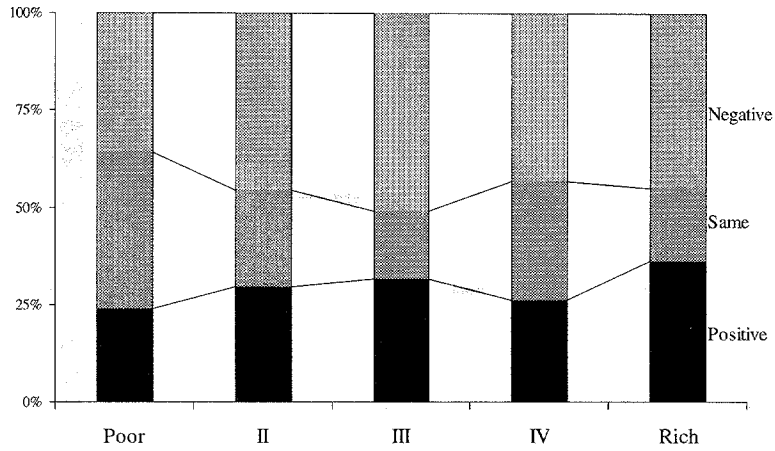
Relative income differences are, no doubt, influencing these assessments of well being, as in the case of Easterlin's studies. Non-income forces may also be at play. Hirschman noted many years ago that, for the upwardly mobile, while 'the economist, with his touching simplicity, would tend to think there was no problem: being better off than before, these people are also likely to be more content ... , social history has taught us that it is much more complicated'.[65] Even though the upwardly mobile might have advanced in income terms, other obstacles, rigidities, and discriminatory practices might still block their continued ascent, particularly along non-income dimensions, thus preventing them from feeling as though they had really 'made it'.

The differences in responses are also the result of cultural differences, as well as higher expectations and more experience answering surveys among urban respondents. As in the earlier surveys, in the year 2000 urban (and more educated) respondents were more likely to use extreme responses (much worse rather than worse, for example) than were rural ones. When we look at our upwardly mobile respondents – those that had income gains of 30 per cent of more – we find that 49 per cent of urban respondents assessed their past progress negatively, while only 20 per cent of rural respondents did so. In contrast, 51 per cent of upwardly mobile rural respondents said their situation was the same, while only 21 per cent of urban ones did so. Our 'frustrated achievers' – defined as those respondents that were upwardly mobile from 1991–2000, yet reported negative PPMs – are clearly more prevalent in urban areas (see Table 7).

When we analyse our sample by income group, we find that the negative skew in perceptions was higher for the middle quintile than for either poorer or richer respondents. While 51 per cent of those in the middle quintile that experience upward mobility assessed their past economic progress as negative or very negative, 36 per cent of respondents in the lowest income quintile assessed their situation negatively. Meanwhile, 45 per cent, 43 per cent, and 45 per cent of those in quintiles 2, 4 and 5 respectively were negative.[66] Poor respondents were much more likely than wealthy ones to assess their situation as the 'same': 41 per cent of those in the first quintile answered 'same', while only 19 per cent of those in the fifth did so (Figure 1). This supports our earlier point that poor – and particularly rural – respondents are less likely to opt for extreme responses, and have lower reference norms.

Economic trends in the past years in Peru, as in most emerging market countries, have played out differently among income groups. The wealthy have and will continue to benefit from the rewards that the market is yielding for skills and education, while the poor benefited from a significant expansion of transfers and public expenditures.[67] Those in the middle had

FIGURE 1
PERU, 2000: PPM AMONG UPWARDLY MOBILE, BY EXPENDITURE GROUP



*Perceived Past Mobility, as reported by respondents.

more differential rewards, depending on their skill and education levels. They are also more likely to rely on the wealthy as a reference group than are the very poor, and thus even some upward mobility can still result in frustration or stress.[68] Our results suggest that these differences lead to the 'middle income stress' (MIS) that we report above.[69] In contrast, absolute income gains among the poorest sectors have a consistent and positive impact on life satisfaction.[70]

Looking more closely at our 'frustrated achievers', we found that their mean education and expenditure levels were virtually the same as those of their non-frustrated counterparts. Rather surprisingly the frustrated achievers experienced *less* volatility in income than the non-frustrated group.[71] Yet despite the absence of major income differences, the frustrated achievers had much lower scores on virtually all of our perceptions variables. Frustrated achievers had lower mean POUM scores, and much lower mean scores for economic satisfaction, for job satisfaction, and on a 'prospects for improving future standard of living' question (Table 7).

On average, the frustrated achievers were seven years older (56) than the non-frustrated group (49) – a statistically significant difference. Age or life cycle effects may have a role in explaining our negative perceptions. Van Praag and colleagues, for example, find that middle-aged respondents give a greater weight to present and anticipated income than do either the young or the old, who place greater importance on past income.[72] Middle-aged respondents are more likely to have immediate expenditure needs due to the

likelihood of having one or more dependents than are the young or the old, and at the same time, they are better able to estimate their future incomes than are younger respondents who have not yet established an earnings trajectory.

Our regressions on the Peru sample as a whole found a significant and negative relationship between age and PPM, and between age and economic satisfaction (Tables 5 and 6). As in the case of PPM, we did not get the usual quadratic relation with age. In larger samples, life satisfaction usually first decreases with age and then increases monotonically at a certain point: somewhere in the mid-forties for the advanced industrial economies and Latin America, and slightly later for Russia.[73] This may be explained by small sample size and/or by the slightly different phrasing of the question in Peru, which is 'how satisfied are you with your present standard of living' rather than the usual 'how satisfied are you with your life'. The economic element in the question may dominate the usual demographic effects on life satisfaction.

The negative skew on perceptions was not as evident in respondents' evaluations of their satisfaction with their current standard of living. Only 23 per cent of respondents evaluated their current standard of living as 'bad' or 'very bad', while 58 per cent said it was 'regular', and 19 per cent said 'good' or 'very good'. And the majority of households (68 per cent) were confident that their children would do better than they; only 14 per cent thought their children would do worse. Future expectations, even more than subjective assessments, are affected by non-economic factors such as hope and determination. In contrast, however, only 21 per cent of respondents thought that they lived better than their parents, while 61 per cent thought that their parents had lived better than they did.

Respondents were also asked to assess their opportunities to improve their standard of living in the future, as well as how their opportunities compared to those their parents had had and that their children would have. Seventeen per cent of respondents thought that their future opportunities for improvement were bad or very bad, 61 per cent thought they were 'regular', and 22 per cent thought they were good or very good. A striking 49 per cent thought that their parents had had better opportunities to enhance their standards of living, 22 per cent felt they had the same chances, and 29 per cent felt they had greater opportunities than their parents. Expectations for children remained higher, however: 59 per cent expected greater opportunities, and only 13 per cent thought that their children would have less opportunities.

A remaining question is the implications of these negative perceptions for future economic and political behaviour. We cannot answer this definitively, but some of our results are suggestive. Using the region-wide

Latinobarometro data we find that having a positive assessment of one's present economic situation versus one's past situation (PPM), controlling for other variables, has a positive (significant) correlation with happiness, suggesting that our frustrated achievers are less happy than other respondents.[74] Similarly, for our Peru sample, having a positive PPM was correlated positively with economic satisfaction. Our analysis of data from Russia yields a similar correlation between PPM and happiness (discussed below).[75]

Recent theoretical research on ego and identity suggests that assessing one's situation positively can lead to a bias in processing information, in which individuals reject or ignore information that could change their positive self-image. Those with negative self-images, meanwhile, are more likely to seek out new information and to take risks.[76] With this logic, one could posit that our frustrated achievers would continue to seek out new opportunities, despite their negative assessments of the past.

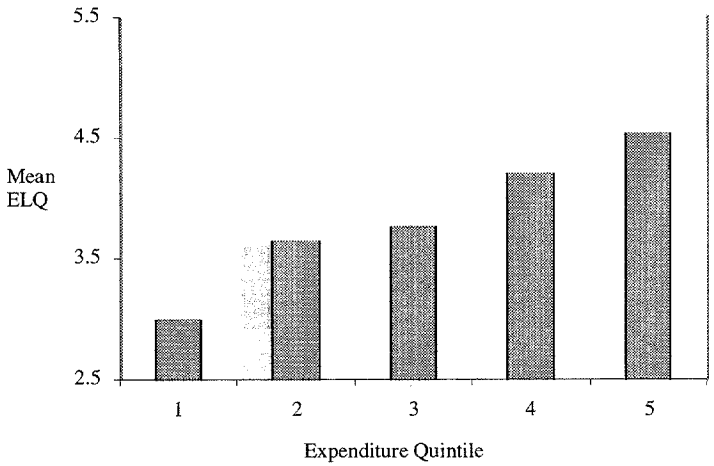
Reference Groups

Research on savings suggests that having a higher reference norm or comparison income can lead to conspicuous consumption and lower savings rates. A study in the Netherlands, for example, finds that, on average, more educated and wealthier people save more. Yet controlling for income and education, those that have wealthier friends and neighbours save less.[77] This implies that our frustrated achievers may opt for immediate consumption rather than saving to 'keep up with' the reference groups they aspire to be in. This behaviour could also be motivated by the wide availability of imported consumer goods.

We posited that differences between the reference groups of our frustrated achievers and those of the non-frustrated ones might yield some insights into the effects of frustration on future behaviour. For the year 2000 survey, we included an Economic Ladder Question (ELQ), a question which has been used in other surveys to gauge the influence of reference norms, that is, how people compare themselves to others in their country. The question is phrased: 'on a ladder of nine steps, where the poorest are on the first step and the richest are on the ninth step, where would you place yourself?' At our request, this question was also included in the 2000 version of the region-wide *Latinobarometro* survey.[78]

The *Latinobarometro* results show that as people assess their position on the economic scale, there is, not surprisingly, a clustering around the middle, with the majority of respondents in the sample placing themselves in the middle categories, even if they are slightly above or below them according to an objective index of wealth. Average ELQ responses for those in the lowest income decile were 3.42, just above the third rung of the

FIGURE 2
PERU, 2000: ECONOMIC LADDER QUESTION AVERAGES, BY QUINTILE

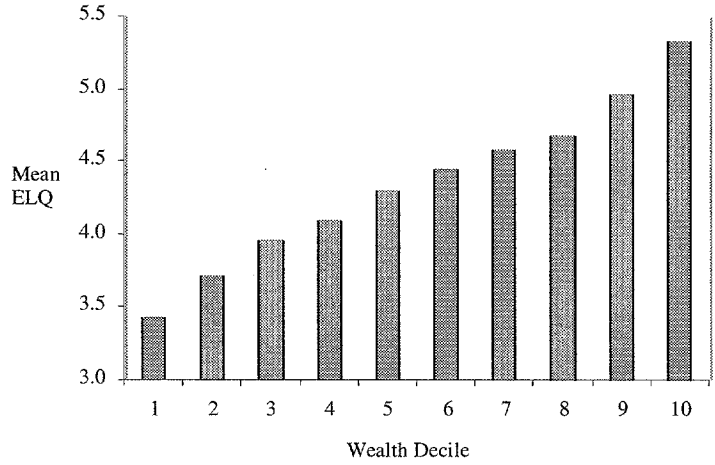


* Quintiles constructed using household expenditure adjusted for economies of scale in household size using a single-parameter equivalence of 0.5.

ladder, while average responses for those in the wealthiest decile were 5.33, just above the middle of the ladder. In Peru mean responses for the lowest quintile are 3.0, and for the wealthiest are 4.5. This regression towards the mean suggests that reference norms are at play, as in much of the other literature on happiness. We also note a very slight downward dip for quintile three in Peru suggesting a higher comparison group for those in the middle of the distribution (Figure 2).

When we look at the mean ELQ responses by decile for Latin America, we get a fairly even monotonic increase (Figure 3). Looking at the determinants of ELQ responses for Peru, we found that years of education, being married, and wealth levels (log expenditure) were all positively correlated with ELQ responses. Rather surprisingly, age and changes in income (regardless of whether measured using changes in logs or not) were insignificant, as was our urban dummy, after controlling for income levels (Table 8). Our frustrated achievers, meanwhile, had slightly lower mean ELQ scores than did their non-frustrated counterparts. When we analyse the determinants of ELQ in Latin America, we get a similar positive correlation of ELQ responses with education, wealth, and marital status. We also get a quadratic age effect.[79]

FIGURE 3
LATIN AMERICA, 2000: ECONOMIC LADDER QUESTION AVERAGES, BY DECILE



* Deciles constructed using a wealth index, based on household possessions and standard of living

We also explored differences in how individuals evaluated their economic situation over the past ten years *vis-à-vis* their community and *vis-à-vis* their country. We found that people were more optimistic when they assessed themselves *vis-à-vis* their community than their country. Only 15 per cent of respondents said they had fared worse than others in their community, while 24 per cent said they have fared worse than others in their country; 25 per cent said that they have fared better than those in their community, while only 16 per cent said they have fared better than those in their country.

These results suggest that reference norms at the community level are lower than those outside the community. It seems plausible, therefore, that the frustrations of our achievers are driven by national (and possibly global) rather than by community level trends, particularly as the difference between community level and national level assessments of upwardly mobile respondents was remarkably similar to that for the sample as a whole.[80]

Interestingly, our frustrated achievers (those with upward mobility and negative assessments) were much more negative in their comparisons to their respective reference groups than were the non-frustrated upwardly mobile respondents. Far fewer frustrated achievers (14.8 per cent) said that

TABLE 8
PERU, 2000: ECONOMIC LADDER QUESTION

(Ordinary Least Squares Regression)

Independent Variables	1	2
Age	0.000	0.004
	–0.101	0.863
Male dummy	–0.166	–0.147
	–1.201	–1.028
Education	0.032	0.068
	2.066	4.577
Married	0.290	0.258
	2.124	1.818
Urban	0.179	0.460
	0.900	2.264
log-Expenditure	0.748	
	6.293	
Mobility 91–00		1.528
		1.551
Constant	–3.291	2.604
	–3.329	8.397
N	500	500
Rsq.	0.142	0.078

t-stats below coefficients

they had done *better* than those in their community than did non-frustrated achievers (36.9 per cent). And, similarly, a far smaller percentage of frustrated (9.4 per cent) than non-frustrated achievers (20.0 per cent) believed that they had done better than those in their country (Table 9).

Finally, we developed two additional perceptions variables which suggest differences in perceptions about economic *change* and about economic *status*. The Mobility Assessment Discrepancy (MAD) is the ratio between subjective and objective income mobility.[81] When MAD is equal to 1 the respondent was accurate in his/her perception of mobility. A large MAD ratio (>1) implies that the respondent assesses his or her situation more positively than it actually is, and is 'mad' in the British sense, that is, a pollyanna. A low MAD (<1) suggests the respondent is 'mad' or frustrated in the American sense of the word. The Perceptions Gap (PG) is the ratio between the respondents' ELQ response and his or her actual income decile. A high PG suggests overstating one's perceived income status, and a low PG suggests the opposite. When we apply our perceptions variables to our frustrated achiever category, not surprisingly, we find that the frustrated achievers have, on average, lower PG ratios, meaning that they were more likely to assess their position on the economic ladder lower than the income decile they actually were in.

TABLE 9
PERU, 2000: FRUSTRATED ACHIEVERS AND REFERENCE GROUPS

Personal situation compared to...

... the rest of your local community

	FA's	Non-FA's	Total
worse	23.4	8.1	14.9
same	61.7	55.0	58.0
better	14.8	36.9	27.1
Total	100.0	100.0	100.0

... the rest of your country

	FA's	Non-FA's	Total
worse	33.6	13.8	22.6
same	57.0	66.3	62.2
better	9.4	20.0	15.3
Total	100.0	100.0	100.0

Our regressions with PG as the dependent variable yield significant and negative effects for age (no quadratic), education, and living in an urban area. This latter finding is not surprising, as reference norms are higher in urban than in rural areas. The only significant coefficient on MAD, meanwhile, was age, which came in strong and negative, supporting other findings that frustration increases monotonically with age for our sample. The PG seems more sensitive to stable norms and reference groups than is the MAD, which is driven by changes (and perceived changes) in status. We also looked at mean MAD responses by income quintile, that is, how perceptions accord with actual trends in absolute income, and how or if discrepancies vary according to where the respondent was in the income distribution. We get a negative correlation for the MAD, with mean responses lower (and therefore greater frustration) for the top quintiles. This suggests that the MAD is affected by norms shifting upward with income gains, and is a variable that is more sensitive to income dynamics.

Russia

In terms of objective mobility in Russia, as in Peru, we see extensive movements both up and down the income ladder, although downward trends were more dominant in Russia. Incomes declined by an average of 10 per cent, for 77 per cent of the household sample over the period.[82] In terms of positional movement, 48 per cent of those in the fourth quintile experienced downward mobility, with 11 per cent ending up in the bottom quintile and

TABLE 10
RUSSIA 1995–98: POSITIONAL MOBILITY (MARKOV MATRIX)

	1998 quintile					
1995 quintile	1	2	3	4	5	Total
1	**39.3**	26.4	15.5	9.8	9.0	100.0
2	24.7	**28.4**	21.8	15.5	9.6	100.0
3	16.4	20.7	**24.7**	22.5	15.7	100.0
4	10.9	14.9	21.8	**26.4**	26.0	100.0
5	9.2	9.6	15.8	25.8	**39.6**	100.0
Total	100.5	100.0	99.6	100.1	99.9	

15 per cent in the second quintile (Table 10). Of those in Russia that started the period in the top income quintile, only 40 per cent retained their position in that quintile, while nine per cent fell to the bottom income quintile. (In Peru only three of those at the top fell to the very bottom during a much longer – nine years – period.)

The results on perceptions were similar in both countries, although the negative skew was stronger for Russia: 72 per cent of those with income gains of 100 per cent or more had negative assessments, and 76 per cent of those with income losses accurately assessed their trajectories. In Peru, there were a number of respondents who fared very poorly yet assessed their situation positively (pollyannas), but in Russia there were very few (Tables 4 and 11).

In Russia, the 'frustrated achievers' and their non-frustrated counterparts had virtually identical education profiles.[83] We found that age had a quadratic effect, with the probability of being frustrated first increasing with age, and then decreasing at age 54. In contrast to Peru, there were significant differences in the income trajectories of the frustrated achievers in Russia: they had lower mean incomes than the non-frustrated groups, and also experienced more income volatility (Table 7).[84] In Peru the effects of age seem to dominate over those of income as plausible explanations for the frustrations of the achievers. In Russia, both age and income matter. The 'frustrated achievers' were, on average, more concerned about unemployment, less favourable towards the market, and less positive about democracy than the non-frustrated group.

High levels of economic volatility in Russia affected subjective assessments. When we look at the determinants of happiness, perceived past mobility (PPM), and prospects of upward mobility (POUM), controlling for mean income levels, income volatility has negative effects on all three. Not surprisingly, our frustrated achievers experienced more volatility than their non-frustrated counterparts in Russia. In Peru, in contrast, volatility had no

TABLE 11
RUSSIA: PERCEIVED MOBILITY VERSUS 1995–98 INCOME MOBILITY

Objective mobility 1955–98/99

	(% income change)			
1998 Perceived mobility	100+	99 to 30	30 to –30	–30 to less
Very Negative	33.1	35.1	40.0	44.2
Negative	39.1	35.7	34.1	34.6
Indifferent	21.8	18.7	16.0	12.9
Positive	4.5	5.9	5.5	3.4
Very positive	1.5	4.7	4.4	4.8
Total	100.0	100.0	100.0	100.0

significant effects on any of these three variables.[85] This difference has two related plausible explanations. Volatility in Russia was slightly higher than in Peru for the periods observed.[86] And for Peru we rely on household expenditure rather than income, which varies more than expenditure.

We found that happiness – that is, satisfaction with life – in Russia had a quadratic relationship with age, first falling until age 49 and then increasing, similar to our results for Latin America, but not for Peru. Mean happiness levels are strongly and positively correlated with income in Russia (Table 12). Controlling for age, happiness increases with working and having been paid in the past month, but decreases for 'working' in a broad sense. Being an employer has a positive effect on happiness, while being owed money by one's employer had the strongest negative effect on happiness of any variable. The owner of one's place of employment (government, foreign company, etc.) has no significant effect on happiness, while concern for losing one's job has a strong negative effect. Unemployment had a strong negative effect, similar to Latin America.

When respondents were asked whether they thought the government should restrict the incomes of the rich, those who disagreed were more educated, had higher incomes, and had high assessments of their future chances of getting ahead. Again, there was a quadratic relationship with age, but in this case an inverted-U, with middle aged respondents more in favour of restricting the rich. Those in favour of restricting the incomes of the rich were more likely to be receiving pensions and employed by the government. Our frustrated achievers were also more likely to favour restricting the rich.

When respondents were asked whether or not market reforms should continue, support for the market had a similar quadratic relation with age as did happiness (U-shaped, with support initially decreasing and then at a certain point increasing with age). Support for the market was higher for

TABLE 12
RUSSIA, 1998: DETERMINANTS OF HAPPINESS

(Ordered Logit Estimation)

Independent Variables	
Age	–0.069
	–3.579
Age^2	0.001
	3.368
Male dummy	0.365
	3.647
Education	0.048
	2.131
Married	0.001
	0.006
log-Income	0.498
	9.237
N	2030
Pseudo Rsq.	0.028

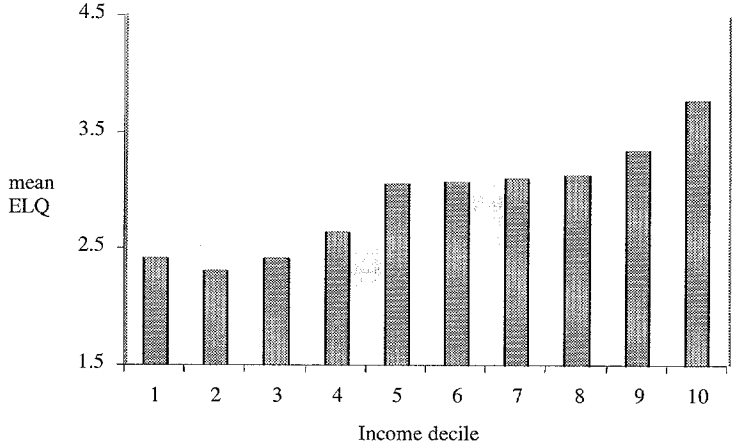
z-stats below coefficients

women than men, for those that were employed and receiving wages on time, and for those that were employed by a foreign firm. There was a negative correlation between support for the market and being employed by a Russian firm.

The ELQ question was also included in the RLMS in 1998. Average ELQ responses are slightly higher in the bottom than in the second decile, and at the third decile begin to increase again (Figure 6). A plausible explanation for this result may be the extent to which those at the lowest income levels are not integrated into the modern, 'market' economy, and the 'virtual economy': operating at a subsistence and barter level, working in enterprises that pay wages in kind if at all.[87] This makes it difficult to make accurate assessments about income or status.

This contrasts with Latin America and Peru, where average ELQ levels increase monotonically with income (Figures 3 and 4). There is a higher percentage of rural respondents in the Russia sample, and in general rural respondents tend to have lower reference norms than their urban counterparts. In Peru we found that rural respondents were less likely to place themselves on the extremes (high or low) of a perceived income ladder.[88] In Russia, people outside modern urban areas are also more likely to be in the 'virtual economy'. Finally, as in the case of happiness and assessments of past and future economic progress, income volatility (as opposed to income level) had negative and significant effects on ELQ

FIGURE 4
RUSSIA, 1998: MEAN ELQ BY INCOME DECILE



* Deciles constructed using household income adjusted for economies of scale in household size using a single-parameter equivalence elasticity of 0.5.

responses in Russia. And, as in Peru, frustrated achievers had a lower mean ELQ than did their non-frustrated counterparts.

The dramatic increases in poverty that occurred during the transition years in Russia have shifted reference norms downward. Milanovic and Jovanovic find that subjective perceptions of the minimum income required for a family to live – the subjective poverty line – actually fell from 1993 to 1996, and by the end of the period closely approximated the official minimum income level.[89] This latter level, initially was well below the subjective level, and remained the same throughout the period.

CONCLUSIONS

At the beginning of this study, we posited that relative income differences matter more to happiness or to subjective well-being than do absolute ones; that respondents' positions on the income ladder matter; and that change in status – measured by income mobility – has strong effects (although not always necessarily in the expected direction).

Most studies of subjective well-being find that – after a certain absolute level of basic income – relative income differences matter more than absolute ones.[90] Our results – and in particular the very negative skew in the assessments of the most upwardly mobile respondents – clearly reflect the importance of relative income differences. Upwardly mobile individuals are

most likely look beyond their original cohort for reference groups. And in very unequal societies that have adopted international consumption standards, the reference point for the upwardly mobile may seem unattainable regardless of absolute income gains. The respondents in our sample tended to be much more critical when assessing their progress *vis-à-vis* their country than they were vis-à-vis their community, and our frustrated achievers were far more critical than the average respondent.

Our results also suggest that these differences are more important for those in the middle of the distribution than for either the very wealthy or the very poor. It was those in the middle and not the poor in our Peru sample that are the most frustrated in spite of their absolute gains. For our Latin America sample, the effects of wealth gains on happiness were of a logarithmic nature, and were stronger for the poor than they were for those in the middle or at the top.

Income mobility also had effects on 'happiness', with greater objective gains often associated with increased frustration rather than increased subjective well-being. One factor here is, no doubt, reference groups. Another is that both the Peru and Russia surveys were conducted at times of high levels of macroeconomic volatility, with related high levels of mobility, in which there were very few guarantees income gains were of a stable or permanent nature. We found that volatility had a clear negative effect on life satisfaction in Russia, and that it increased the probability of belonging to the frustrated achiever group. And regardless of the explanation of these negative perceptions, all of our data suggest that they have negative effects on happiness.

Beyond these propositions, there are several plausible additional explanations for the frustrations of our 'achievers'. These include recall problems in assessing past earnings, particularly for non-salaried workers, and differences among rural and urban respondents, with the latter much more willing to make extreme statements. Behavioural traits may also play a role. While we know that our frustrated achievers are less 'happy' than our non-frustrated respondents, we do not know the direction of causality. To answer this question, we need new data as well as the tools available to psychologists.

These are preliminary findings in a research area that is fairly new, at least for the developing economies. Accepting these limitations, we feel that our results make three general contributions. First, they support the findings in the literature on happiness in the developed economies which highlight the importance of variables other than absolute income gains in enhancing welfare: relative differences, changes in employment and other status (uncertainty), and age, among others. Second, our analysis links the findings in the happiness literature – as well those in our own surveys – to

the broader debates on the effects of increasing international economic integration on social welfare within countries. They highlight the effects of volatility and of distributional shifts, which seem to have the strongest effects on the attitudes of lower and middle-income urban groups.

Finally, the large and consistent gap we find between objective income trends and subjective assessments of the upwardly mobile may have implications for the future economic and political behaviour of precisely the group that is critical to the sustainability of market policies.[91] Exploring the feedback effects of this perceptions gap is the subject of a next stage of this research.

NOTES

1. Most of these studies use the term 'happiness' interchangeably with the more cumbersome term 'subjective well being', accepting that the former has dimensions that go well beyond the economic ones considered by this literature. For an excellent review of these definitions and the literature, see Easterlin [*2000*]. For a review from the behavioural sciences perspective, see Diener and Biswas-Diener [*1999*]. Most recently, Krugman [*2000*] discussed the impact of the results of the happiness work on the debate on taxes and employment in the developed economies on the opinion page of the *New York Times*.
2. In the US since the Second World War, real per capita income has more than doubled. The average reported level of happiness, however, is the same as it was in the late 1940s; the story is similar for Europe. Even in Japan, which had a fivefold increase in income per capita in the three decades since the 1950s, there was no change in average happiness levels. See Easterlin [*2000*]. Blanchflower and Oswald [*1999*] actually find that average happiness levels decreased from the 1970s to the 1990s in the US and the UK.
3. In the US and Europe, the following personal characteristics are positively and significantly associated with happiness: being employed, female, young or old (not middle-aged), educated, married, with few children, or belonging to a high income quartile. See Blanchflower and Oswald [*1999*].
4. The level of inflation that is 'acceptable' to the public varies according to countries' past trajectory, as well as the extent to which there is indexation.
5. See DiTella, MacCulloch and Oswald [*1997*] for the macroeconomics of happiness in the US and UK.
6. These findings are based on responses to the 1999 *Latinobarometro* survey of over 17,000 respondents in Latin America. See Graham and Pettinato [*2000*].
7. There is a strong consensus that growth is necessary if not always sufficient for poverty reduction. See, for example, Dollar [*2000*]. And increasingly economists question the validity – or at least broad applicability across countries and time – of the Kuznet's hypothesis that growth must initially lead to higher levels of inequality. See, for example, Barro [*1999*]; Birdsall and Sabot [*1995*]; and Milanovic [*1998*]. Market-oriented macroeconomic policies and open trading regimes seem to be a basic requirement for achieving sustained growth, although there is less agreement on how to sustain such frameworks and manage exogenous shocks and volatility. See, among others, Sachs and Warner [*1995*] and Rodrik [*1999*].
8. Pigou [*1920*] wrote that what could be measured with money, economic welfare, was only one component of welfare, and the elements of this component were largely determined by our capacity to measure them.
9. For detail on the construction of welfare functions with this approach, see Frey and Stutzer [*1996b*].
10. Veblen [*1967*] argued that in affluent societies, spending increasingly becomes a means to achieve social status rather than to meet needs. Cole *et al.* [*1995*] model how concern for relative wealth can generate conspicuous consumption when wealth is not directly

observable. Katyeyn [*2000*], in empirical work in the Netherlands, finds that, controlling for other variables, savings is negatively affected by having wealthier friends and neighbours. Hojman develops a model of consumption driven by inequality – and conspicuous consumption among wealthier groups – in Chile, where poor households make non-optimal consumption decisions at the expense of long-term human capital investments. See Hojman in Birdsall and Graham [*2000*]. Robson [*1992*] develops a model of utility which is concave in wealth itself, but convex at some range when the indirect effects via status is included. Schor [*1998*] notes how American's debt service as a per cent of disposable income has increased in the past decade along with a major consumption boom.

11. For a conceptual framework and initial exploration of the possible effects of globalisation on economic and social mobility, see Birdsall and Graham [*2000*].
12. Distributional 'stress' on the middle class, related to globalisation, is discussed in Birdsall, Graham, and Pettinato [*2000*]. In a more theoretical exploration, Robson [*1992*] highlights the potential 'stress' on the middle sectors that arises when status as well as wealth is included in the utility function.
13. The few studies that there are of the effects of social mobility on happiness were conducted several decades ago and focused on social class. When social class is assessed by asking people to rate themselves, there is a correlation with happiness of about 0.25 to 0.30 in American and European studies. These correlations are much stronger in other countries. For example, in a study done in 1965, the correlation coefficient between happiness and objective social class in Israel is 0.55,0 .52 in Nigeria, and 0.44 in the Philippines, 0.42 in India, and 0.38 in Brazil. Class seems to have more effects on happiness in countries where income inequality is high and social mobility is low. The link between happiness and high social class, meanwhile, is much stronger in more unequal societies for which there is data, such as India, and lower for more equal ones, such as Australia. See Argyle in Kahneman, Diener and Schwarz [*1999*]. Therefore it is plausible to assume that significant changes in mobility rates in such contexts could have some effects on happiness.
14. He also finds that health is a demographic variable that has clear effects on happiness in all societies, a finding which later studies share. See Easterlin [*1974, 1995, 2000*].
15. See, for example, Diener [*1984*], Blanchflower and Oswald [*1999*], and Frey and Stutzer [*1999a*]. Deaton and Paxson [*1994*] highlight the role of negative shocks – such as poor health and bad luck – in determining lifetime mobility patterns. Such shocks, no doubt, also effect subjective assessments of well-being.
16. Some scholars also find an additional effect at the very top of the scale, which might be explained by greed or changing preferences resulting from high levels of wealth. See Argyle in Kahneman, Diener and Schwarz [*1999*]. Veenhoven, meanwhile, finds that the correlation between income and happiness is much greater in poor countries. Recent work in the transition economy of Kyrgyzstan confirms this. See Veenhoven [*1991*]; and Namazie and Sanfey [*1998*].
17. Pigou [*1920: 53*].
18. For a thoughtful review of different societies tolerance for inequality, see Esping-Andersen [*1990*]. For an excellent overview of trends in mobility and opportunity in the US, see McMurrer and Sawhill [*1998*].
19. They also make the point that it is possible that it is not the perceived discrepancies that drive the unhappiness, but rather that unhappy people are more likely to perceive differences. Diener *et al.* [*1993*].
20. In contrast we know very little about the effects of aggregate *declines* in income on reference norms. For an excellent account of how norms can shift downwards, see Milanovic and Jovanovic [*1999*].
21. Ed Diener and Robert Biswas-Diener, 'Income and Subjective Well-Being: Will Money Make Us Happy?', Mimeo, Department of Psychology, University of Illinois, Dec. 1999. A related finding is that winning lotteries tends to cause disruption rather than increased happiness. A plausible explanation is that such large income boosts may result in people purchasing nicer homes and other luxury goods which places them in a new reference group and among new neighbours and in the end they do not fit in. On this point, see Argyle in Kahneman, Diener and Schwarz [*1999*].
22. The authors are grateful to George Akerlof for helping them develop this line of analysis. See

the chapter on 'The American Soldier' in Merton [*1957*].

23. Similarly, Martin Ravaillion and his colleagues find that relative differences matter a great deal: controlling for income and other factors, they find that living in wealthier neighborhoods lowers perceived social welfare. See Ravallion and Lokshin [*1999a*].
24. Clark and Oswald [*1996*].
25. Schor [*1998*] and Veblen [*1967*].
26. Hirschman [*1973*] uses the analogy of a traffic jam in a tunnel, where initially those in a stalled lane gain hope from movements in other lanes. Yet if their lane never moves, then that hope turns into frustration.
27. See Blanchflower and Oswald [*1999*] and DiTella, MacCulloch and Oswald [*1997*].
28. They also find that married people are happier than single people, and that couples without children are happier than those with them; and women are happier than men. See Frey and Stutzer [*1999a*]. For the same issues in the transition economies, see Namazie and Sanfey [*1998*].
29. Moulton [*1990*] identifies a potential downward standard errors bias as a problem when estimating the effects of aggregate variables on micro units. Assuming errors on the order of those Moulton finds in his analysis, many of our results would still hold.
30. For more detail, see Graham and Pettinato [*2000*].
31. Kenny [*1999*].
32. Van Praag developed the Leyden approach in 1971. For detail, see Van Praag and Frijters [*1999*].
33. Current income has the greatest time weight, and past incomes carry more weight than incomes in the future. This varies by age, however, with the young and the old placing the greatest weight on past income, while the middle aged bracket derives its norm mostly from present and anticipated income. SeeVan Praag and Frijters [*1999*]. Lowenstein, Prelec and Weber [*1999*], meanwhile, find that people get unhappier as they anticipate retiring, but then happiness levels increase shortly after retirement.
34. Such a period could be the stage prior to a kidney transplant, for example, rather than the pre-illness stage Groot [*2000*]. Other work also suggests that poor people are much less likely to report health problems than are wealthy ones.
35. In a theoretical analysis, Koszegi [*2000*] shows that people who assess their capabilities optimistically are also likely to process information in a biased manner, that is, one which supports their optimistic assessments, and in the most extreme cases, stop seeking out information altogether.
36. For detail on measurement issues, see Diener [*1984*].
37. See Diener and Biswas-Diener [*1999*].
38. Richard Thaler [*2000*], discussing the future of economics, cited emotion as one of three areas that the profession had to incorporate into its analysis, as material self-interest is only one determinant of behaviour.
39. Diener and colleagues [*1993*] find that while there is a positive correlation between GNP and subjective well being, rapid economic growth is accompanied by more rather than less happiness, something that is certainly relevant to the rapidly changing conditions of the emerging market countries.
40. See Graham and Pettinato [*1999*]. In three separate regressions we found that there was a positive wealth effect. See also Birdsall, Graham and Pettinato [*2000*].
41. See Graham and Pettinato [*2000*]. In this paper we found – for Russia – that changes in income had no effects on happiness, while changes in log income had significant and positive effects, suggesting that changes in income were more important for those with lower absolute levels of income.
42. Pritchett and colleagues define 'vulnerability' as a probability: the risk that a household will experience at least one episode of poverty in the near future. They set a threshold level of 0.5, so that a household is vulnerable if it has a 50–50 odds or worse of falling into poverty. In a 1997–2000 study of Indonesian households, they found that even though the poverty line was 20 per cent at any given point in time, as many as 50 per cent of all households were vulnerable – that is, fell into poverty at some point – during the three year period. See Pritchett *et al.* [*2000*].
43. With capital mobility, macroeconomic risk gets shifted onto domestic factors of production

that are immobile, for example, formal sector workers. See Rodrik [*1999*].

44. Latin America's overall high inequality rates, for example, are driven primarily by gaps between the top decile and the rest of the distribution: large gaps between the 10th and 9th deciles. If one compares points other than the top tail of the distribution for Latin America to other developed countries, the region has lower inequality than much more equal developed countries. Szekely and Hilgert [*1999*].
45. For detail, see Birdsall, Graham and Pettinato [*2000*].
46. In Birdsall, Graham and Pettinato [*2000*], we developed a new measure which is designed to capture differences between the top of the distribution and the middle, for which we have adopted the term middle income 'stress' (MIS). The measure compares the median income of the population that generates the top 50 per cent of total income to the median income for the total population. The ratio captures the income difference between the wealthy and the middle sectors. We posit that stress increases as the gap between the median income and the median of the top 50 per cent increases. Another new measure, Wolfson's [*1997*] polarisation index, captures the extent to which the distribution is concentrating at the tails and thinning out at the middle, with a focus on the share of the bottom half. The Gini, for example, would not capture the difference between a three individual society where income was distributed from top to bottom as: 9 – 5 – 1 versus one which was distributed: 9 – 4 – 2. Total income would be the same in either case. A Gini would indicate a better distribution in the first society, the ratio of 90th percentile to the median would suggest the reverse. Wolfson's measure is computed as follows:

$$W = \frac{2(2T - Gini)}{Mt}$$

where $T = 0.5 - L(0.5)$, with $L(0.5)$ = the income (y) share of the bottom 50 per cent of the population, and Mt = median (y)/mean (y). The denominator is the inverse of a standard measure of inequality, the mean over the median, a ratio which increases as incomes at the top pull up the average relative to the median.

47. For detail on the limited nature of the reforms in Russia see Gaddy and Ickes [*1998*].
48. The study of mobility is an area which has been much further developed by sociologists than by economists. For a summary of new economics research in this area, see Birdsall and Graham [*2000*].
49. While the studies of the US and Europe have constructed cohort national panels, our data for these countries actually follows the same individuals across time.
50. A full national sample was not possible for the panel studies in the early 1990s, due to guerilla movement's control of some areas of the country. The perceptions study involved the collaboration of Nancy Birdsall, Carol Graham and Richard Webb of Cuánto S.A. and was undertaken with funds from IDB , Brookings Center on Social and Economic Dynamics, and the MacArthur and Tinker Foundations.
51. The results of the 1998 pilot survey are described in greater detail in the chapter by Richard Webb in Birdsall and Graham [*2000*], and the 1999 survey results in Graham and Pettinato [*1999*].
52. Carter and May [*1999*], among others, find that attrition bias tends to be at the tails of the distribution, which is not surprising: this suggests that poor households that cannot 'make it' move away, as do those who 'strike it rich'. Obviously, this introduces bias into the survey results. By adding more than double the original number of households – with the new ones from a shorter panel – we sought to eliminate as much of this bias as possible.
53. The full panel study was repeated in 1985, 1990, 1991, 1994, 1996, 1997 and 2000. The 2000 perceptions study coincided with the full panel study, which allowed us to update the objective data.
54. The questionnaire originally had questions about health, given the literature that shows that negative health shocks can have negative effects on mobility (Deaton and Paxson [*1994*]), as well as that which shows the negative effects of poor health on happiness [*Diener, 1984; Frey and Stutzer, 1999b*]. Yet problems in the definition of health victims and differences among individual respondents' interpretations of the health questions led us to drop them, at least for this stage of the research.

55. For the Latinobarometro, the correlation coefficient of happiness and financial satisfaction was 0.29 and for happiness and perceptions of past mobility (PPM) it was 0.21. The correlation between happiness and financial satisfaction for the GSS for the United States is also 0.29. Note that these coefficients are highly significant statistically. In addition, the coefficient of determination between these two variables for the US is .0857 and for Latin America (the *Latinobarometro*) is .0888.
56. The full questionnaire is available from the authors on request.
57. The survey, the Russia Longitudinal Monitoring Survey, has been conducted in Russia since 1995 by the Russian Institute of Nutrition, University of North Carolina, and the Institute of Sociology of the Russian Academy of Sciences, with support from the World Bank, US AID, and the National Science Foundation.
58. A comparison of these movements with data from the US highlights their extremity. Census data show that 81.6 per cent of those families who were in the bottom quintile of the income distribution in the US in 1985 were still there the next year, while the fraction that remained in the top quintile for that period was 76.3 per cent. About half the families that start in either the top or bottom quintile of the income distribution are still there after a decade, and only three to six per cent rise from the bottom to the top or fall from top to bottom. Krugman [*1992*].
59. This is measured on the basis of household expenditure data in Lima 2000 prices, which is adjusted for household size using a one-parameter equivalence scale with elasticity of 0.5. For details on the implications in using this or other equivalence methods, see Figini (1998).
60. In order to do this, we utilised a measure developed by Gary Fields (see Fields in Birdsall and Graham [*2000*]).

$$1/N \sum_i \ln x_i - \ln y_i ,$$

where N is the total number of households, x and y are the final and initial expenditure levels. In Peru between 1991 and 1994 log-expenditure increased by 0.339 units on average. The corresponding figure for the 1994-96 period is –0.334, while the 1996–2000 period shows a marked change in direction, with an average increase of 0.358. Using non log-expenditure we note a less dramatic reduction in the intermediate period, as well as a milder increase in the last period. This suggests more variation among the relatively lower expenditure groups.
61. For detail on the results from earlier years, see Graham and Pettinato [*1999*].
62. Assessments of the state of public services were even more optimistic: 55 per cent of respondents said the state of public education was better, 19 per cent said worse; 54 per cent said access to water and electric services were better, while 13 per cent said worse, reflecting substantial government efforts to make improvements in this arena.
63. See Graham and Pettinato [*2000*].
64. In an ordered logit estimation with economic satisfaction as the dependent variable, we find that mean expenditure per capita (1991–2000) has positive and significant effects on economic satisfaction, while in the same estimation, expenditure per capita for 2000 is insignificant. When we use the log of both these expenditure measures, which highlights the impact of these trends for those with less income, we find that the mean over time is insignificant, while expenditure levels for 2000 are positive and significant.
65. Hirschman [*1973: 550–551*].
66. Our quintiles are constructed on the basis of the respondents in the panel, using household expenditure, adjusted for household size considering economies of scale (see note 59). These quintiles are not the same as national income quintiles, as the households in our panel were, on average, slightly wealthier than those in the nationally representative sample.
67. See Graham and Kane [*1998*], and World Bank [*1999*].
68. Hirschman's 'tunnel effect' may also be at play here.
69. Birdsall, Graham, and Pettinato [*2000*] discuss the concept of middle income stress in detail.
70. *Happiness* levels clearly show a log-relationship with income (Figure 1). The decreasing impact on happiness of a marginal increase in income supports microeconomic diminishing returns assumptions. At very high levels of income, some studies find that the curve becomes convex – perhaps reflecting greed?
71. This was measured by the coefficient of variation, defined as the standard deviation for each

household divided by its mean expenditure levels for the 1991–2000 period. The coefficient for Russia was significantly higher for the frustrated than for the non-frustrated group, meanwhile. Data for Russia are income rather than expenditure based, and the former varies more.

72. Van Praag and Frijters [*1999*].
73. See Blanchflower and Oswald [*1999*] for the AICs; Graham and Pettinato [*2000*] for Latin America.
74. The phrasing of the question in the Peru survey was slightly different: 'how satisfied are you with your current standard of living?', while in the *Latinobarometro* and in the RLMS the question was 'how satisfied are you with your life?'.
75. Having a pro-market attitude also has a similar strong, positive, and consistent effect on happiness. We discuss this in detail in Graham and Pettinato [*2000*].
76. Koszegi [*2000*].
77. See Katyeyn (2000). For theoretical work on conspicuous consumption, see Robson [*1992*] and Cole *et al.* [*1995*]. On reference norms and saving, see Carroll [*1994*].
78. Unfortunately, our wealth data for the *Latinobarometro* survey is much less precise than the expenditure data we have for Peru.
79. The difference here may be explained by the difference in sample size: the 17,000 observations in *Latinobarometro*, rather than 500 in Peru, probably better capture whatever age effects there are.
80. The results of our regression analysis to identify the determinants of these responses were disappointing and not consistent. Years of education was the only variable that was significant and positively correlated to responding that one had done better than one's community. Income mobility (changes in log-expenditure from 1994 to 2000) was the only significant variable (positive) for assessments *vis-à-vis* the country.
81. This was a ratio between PPM responses (five possible categories) and objective 'mobility quintiles', which were defined according to percentage expenditure mobility in 1991–2000. We have not corrected for standard bias.
82. As in the case of Peru, we have used household income adjusted for size using a 0.5 equivalence factor.
83. For Russia we also defined frustrated achievers as those with income improvements of at least 30 per cent, and negative or very negative perceptions of mobility in the previous five years.
84. They not only had a higher mean coefficient of variation, but the coefficient was significant and positive in a logit estimation with the probability of being frustrated as the dependent variable and age, age squared, education level and the coefficient of variation on the right side. We ran similar logit estimations for each of our perceptions variables, controlling for age, education, and income. Results available from the authors.
85. We defined volatility as the standard deviation of household equivalised income for the 1995–98 period, and used ordered logit regressions (on economic satisfaction for Peru), and controlled for age, gender, education, and mean income levels. Results available on request from the authors.
86. Once Peru's economy was stabilised in 1990, while there was still quite a bit of variation in growth rates, the overall policy framework was far more stable than Russia's from 1995 to 1998. For our panels, meanwhile, the standard deviation in household income or expenditure for the periods observed was higher in Russia than in Peru.
87. For detail on the extent of Russia's barter and subsistence economy, see Gaddy and Ickes [*1998*]. Ravaillion and Loshkin also find a mismatch between actual incomes and ELQ responses. Less than half (43 per cent) of the 29.4 per cent of adults who placed themselves on the lowest two rungs of the ladder were also among the 32.7 per cent of adults living in households with incomes below the poverty line. See Ravallion and Loshkin [*1999a*].
88. In Peru, rural respondents were much less likely to opt for the extremes of any response choice.
89. Milanovic and Jovanovic [*1999*].
90. Cross-country studies conducted in the 1980s and a more recent study conducted in Switzerland find a greater importance for relative income differences, and accord little importance to absolute increases over time. See Easterlin [*1974*] and Frey and Stutzer

[*1999a*].

91. The effects of current economic outcomes on future behaviour, such as savings, provides a theoretical starting point for research in this area. On savings and anticipated income, see, for example, Carroll [*1994*]. There is also some literature which uses past mobility and perceptions of future mobility to explain voting behaviour and in particular attitudes towards redistribution. See Benabou [*1998*] and Piketty [*1995*].

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