

KEYWORDS

Economic conditions

Employment

Income

Income distribution

Data analysis

Econometric models

Economic indicators

Social indicators

Argentina

Distributive effects during the expansionary phase in Argentina (2002-2007)

Fernando Groisman

This article analyses developments in the labour market and income distribution in Argentina between 2002 and 2007, using data from the Permanent Household Survey and econometric estimates. Following the 2001 crisis the employment situation improved in the aggregate and there was initially a marked decline in income concentration. This reduction later tailed off, however, apparently because of differences in the opportunities for different types of households to reap the benefits of growth. Members of resource-poor households had less chance of finding work and faced disadvantages in terms of pay and labour market participation. The isolation and social homogeneity of the neighbourhoods in which these households were located appear to have influenced the distributive outcome.

Fernando Groisman

Researcher with the National

Council of Scientific and

Technical Research (CONICET),

the University of Buenos Aires (UBA)

and the General Sarmiento

National University (UNGS)

✉ fgroisman@tutopia.com

I

Introduction

Following the great crisis of 2001 and the change of macroeconomic regime, Argentina experienced a steady and lasting economic recovery.¹ Developments in the labour market were likewise encouraging. Employment and the purchasing power of earnings grew substantially, the proportion of registered workers increased and labour underutilization diminished overall, i.e., unemployment and time-related underemployment decreased. Meanwhile, the demand for labour was stronger for more highly educated workers, even though pay rose by slightly more for workers less endowed with human capital. The corollary of these income distribution trends has been a sharp reduction in absolute poverty, although this remained high in 2007, and a moderate decline in income concentration (see section III below).

Economic developments in Argentina have paralleled those in most other Latin American countries, and indeed it has outperformed the rest of the region on many fundamental macroeconomic measures.² Annual gross domestic product (GDP) growth has been high in many of the region's countries by past standards, while they have also run current-account surpluses and built up their international reserves; investment too has been fairly dynamic.³ However, income distribution has not improved to a degree commensurate with the favourable evolution of the economic cycle.⁴ This means there is a need to pay close attention to the labour market. Because the bulk of households' income is generated by the work of their members, what happens in that market will be one of the factors most influencing future trends in income concentration.

The traditional interpretation of this equity deficit as being largely due to low relative levels of job creation was consistent with the evolution of numerous employment indicators. However, the new labour market situation in Argentina since 2002 is different from those of earlier periods. Although levels of informal and unprotected employment remain high, the rapid drop in unemployment and the increase in registered jobs (which are better paid and more stable than unprotected jobs)⁵ have been a force for equity that distinguishes the 2002-2007 phase from other phases of economic recovery.

In part, the modest distributive response to this recovery is undoubtedly due to a historical deficit. The structural heterogeneity of the production system and recurrent uncertainty about macroeconomic sustainability, combined with certain limitations on the labour supply that are essentially skills-related, have contributed to the high level of income concentration seen in Argentina over the last three decades. Albeit to varying degrees, these factors have re-emerged regularly in the economic dynamic and are difficult to eradicate. Other factors also seem to have had noticeable effects, not least the difficulty of incorporating extra household members into economic activity when the earnings of the household head are low. This limitation has arguably become more severe because of the cumulative disadvantages suffered by resource-poor sectors over time. The consolidation of a situation of increasing social segmentation appears to be making economic growth less liable to feed through directly into lower inequality.

The rigidity of the social structure has led to, and at the same time been heightened by, the segmentation of the urban space. Residential segregation, which in Argentina is eminently socio-economic in nature, has exacerbated social isolation and made social boundaries more unyielding.⁶ Consequently, disparities in access to economic, financial and social assets have been widening and

¹ See Beccaria and Groisman (2008) for an analysis of the earlier period.

² See Frenkel and Rapetti (2008) for a description of the macroeconomic regime in Argentina from 2001.

³ See ECLAC (2007a).

⁴ It has been pointed out that poverty has displayed an inverse relationship with growth throughout history and the same has been true of inequality in income distribution, but to a lesser extent. There have generally been a time lag and marked asymmetry resulting in persistently high levels of inequality (Tokman, 2007).

⁵ In Argentina, a "registered" job is one that is registered with the social security system and therefore protected by employment laws.

⁶ See ECLAC (2007b), Kaztman (2001), Wilson (1997), Roberts and Wilson (forthcoming) and Hutchens (2004), among others.

their adverse effects on household well-being have increased accordingly.

While there have been numerous diagnostic studies based on these interpretations, there is still a lack of empirical work on the issue. The present investigation aims to produce some findings on the situation in Argentina and its primary goal is to obtain information on the factors influencing income differences between households. Constituted as a unit of analysis, households were classified into two socio-economic strata (higher and lower) by the education level of the household head. Employment and distribution indicators for the two groups of households were contrasted and the dynamic of

the labour market was then assessed. Using this approach, estimates were arrived at to provide a picture of the role of employment demand and the influence of social isolation or the possession of more limited social assets on the occupational status and earnings of households.

This article contains six sections. Section II describes the methodology and data employed, section III examines the evolution of the main employment indicators and the distribution of income in the period considered, section IV conducts an analysis by household stratum, section V introduces the econometric analysis and section VI presents the conclusions.

II

Methodology and data source

1. Methods of analysis

To analyse the overall labour market situation in the period studied, the evolution of employment and earnings was examined by occupational category, sector of economic activity and education level. Income distribution was studied using a set of standard indicators. The household-level analysis was conducted by analysing the level and quality of employment and earnings in each of the two socio-economic strata indicated. Some of the factors influencing the ability of households to respond to signals in the economic environment were also reviewed. Events over the period were explored within that framework, differentiating between the behaviour of household heads and that of other members. The universe considered was that of households with heads aged under 65, i.e., the set of families whose income derives essentially from the earnings of their members in their respective occupations. This universe includes about 79% of all households across all urban areas. The criterion used to classify households is a proxy for socio-economic stratification, with education levels being recognized as the exogenous variable that most influences income levels. Only the education level of the household head was considered, and two household strata were distinguished: (i) the lower stratum (household head with incomplete secondary

education or below) and (ii) the upper stratum (household head with complete secondary education or above). Just over half of all households are in the lower stratum.

The econometric estimates used were of two kinds. The first included multinomial logistic regression models while the second were based on income functions.

Multinomial logistic regression models are a variant on conventional logit estimates and are appropriate for evaluating the factors that determine occupational status. The dependent variable contains a set of categories that in this case were as follows: working in a non-wage occupation, working in an unprotected job, working in a registered job, and not working. This last category was the base against which the parameters were estimated (appendix, table A.1). Three models were used. In the first of them, the independent variables taken were: the stratum (higher or lower) of the household (defined by the education level of the head), household size, employment status of the household head, education level, age, age squared, sex, position in the household and region of residence. Dummy variables were also included for each of the periods (or waves) included in the data used (see section 2 below). In the second model, interactions between stratum and education level and between stratum and occupational category were introduced. In the third

model, lastly, a constructed variable was included to capture households' degree of social isolation. This variable took as its value the proportion of lower-stratum households in each set of dwellings making up each of the sample points in the survey. This last procedure, which is only possible with the survey in use since 2003, allowed each household to be rated by a characteristic encapsulating the social composition of the neighbourhood of residence. This variable proved to be a useful proxy for neighbourhood. The average number of dwellings per territorial unit thus defined was 28. Given the way the micro database is designed, the decision was taken to apply it in Greater Buenos Aires only.

The earnings models, which were of the Mincer type, used the log of hourly earnings as the dependent variable. Ordinary least squares and quantile methods were used, these being part of the standard battery of techniques applied to income analysis. The difference between the two is that quantile regression is semiparametric and can be used to estimate the desired variables for different sections of the conditional income distribution. The independent variables were the same as those used in the multinomial models, supplemented by hours worked and economic sector. The regressors included a variable to correct sample selection bias. To carry out this correction, use was made of the standard procedure proposed by Heckman, which consists first of all in estimating a probit function of employment participation. The independent variables in this case were position in the household, household size and occupational status of the head. Once the equation had been estimated, its remainders were used to calculate the inverse Mills

ratio, which was included as an extra regressor in the income functions (appendix, table A.2).

The universe of analysis comprised individuals aged 15 to 64 who were not household heads. In the earnings models, naturally, working non-heads of households were the universe of analysis.

2. Data used

The data used in this study come from the micro databases of the Permanent Household Survey (EPH) conducted regularly by the National Institute of Statistics and Censuses (INDEC).

Up until May 2003, the data were collected in May and October. Since then this has been done continuously every week of the year, giving rise to quarterly and half-yearly estimates. Data collected in both ways have been used for this article, with a standard splicing procedure employed to make them comparable: the data for the second quarter of 2003 were adjusted for fluctuations in the relevant variables between May 2002 and May 2003. Use has also been made of all available continuously collected data up to the first quarter of 2007. The Permanent Household Survey is urban in coverage and is conducted in 31 urban areas.

The econometric models were applied to pooled data in order to increase the number of cases and improve the estimates. The waves included were those of the first and third quarters of 2004, 2005 and 2006 and the first quarter of 2007 (the only one available for that year). The 2004-2007 period was chosen because of its distributional characteristics, as income concentration was relatively stable during that time.

III

Employment, earnings and equity

1. Employment and earnings

Employment and earnings grew by similar amounts between the beginning and end of the period from May 2002 to the first quarter of 2007. The number of people in work increased by 31%, while the purchasing power of earnings grew by 29% (table 1).

Both variables were already recovering steadily by the second quarter of 2003, albeit at differing

rates in certain subperiods. Only in the period immediately following the 2001 crisis (between May 2002 and the second quarter of 2003), in fact, did they follow different paths: real earnings fell by 11% while employment expanded by 5.8%. During the second half of 2003 and up to the second quarter of 2004, employment and earnings grew at a similar pace. In the last three quarters of 2004, earnings were stable while employment continued

TABLE I

**Argentina: employment and real earnings,^a
quarterly figures between May 2002 and the first quarter of 2007**

Employment	Total	Non-wage	Registered	Unregistered	Industry	Construction	Domestic service	Trade	Transport and communications	Modern services	Social and personal services	Public sector	Low education level ^b	High education level
May 2002	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
II-2003	105.8	109.5	100.4	111.0	100.2	120.0	97.8	108.0	101.1	108.0	101.1	115.9	104.3	111.1
III-2003	110.9	110.4	105.2	120.3	116.0	126.2	101.6	109.9	99.0	109.8	113.0	116.6	115.6	118.8
IV-2003	113.7	112.0	108.6	123.6	113.9	139.1	98.5	117.0	103.6	112.2	109.4	125.0	117.2	123.1
I-2004	113.6	108.6	111.5	122.6	114.0	151.8	96.8	118.0	101.2	111.1	103.1	128.2	122.4	125.5
II-2004	116.7	110.5	114.3	127.3	125.6	142.4	104.1	117.7	100.2	122.7	110.4	120.8	122.7	133.4
III-2004	119.0	114.9	117.0	126.8	123.4	153.5	103.2	123.2	111.0	117.7	118.1	116.2	126.3	135.1
IV-2004	120.5	114.5	116.2	133.6	128.8	154.4	105.4	125.7	111.9	115.7	107.1	130.2	128.2	137.6
I-2005	117.4	108.2	116.3	128.9	126.3	151.3	103.9	117.1	106.5	116.0	105.9	136.7	127.4	129.4
II-2005	119.9	111.9	119.0	130.0	123.5	159.9	106.3	115.7	107.6	125.0	115.6	137.1	132.2	147.3
III-2005	124.2	116.4	124.2	132.9	127.5	168.5	108.4	124.2	112.5	123.0	118.4	136.9	134.1	148.8
IV-2005	125.7	114.8	127.5	134.9	127.8	179.4	111.6	124.9	111.2	129.6	115.8	135.0	132.2	152.8
I-2006	124.2	109.1	130.4	131.3	127.7	172.1	113.1	121.5	109.9	124.9	118.1	139.7	135.6	152.5
II-2006	128.4	113.8	134.3	135.6	134.9	172.4	110.5	126.3	107.6	128.0	125.5	151.8	142.9	161.6
III-2006	128.8	110.3	137.3	136.1	130.4	176.3	115.1	129.2	109.8	128.2	122.7	150.5	142.6	163.7
IV-2006	131.4	115.3	138.5	138.4	132.5	193.4	118.7	131.4	109.1	132.1	123.6	146.7	142.2	164.3
I-2007	130.8	112.3	141.7	134.8	129.6	193.2	117.9	129.1	113.0	127.8	120.9	157.6	140.6	158.4
Monthly earnings from main occupation	Total	Non-wage	Registered	Unregistered	Industry	Construction	Domestic service	Trade	Transport and communications	Modern services	Social and personal services	Public sector	Low education level ^b	High education level
May 2002	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
II-2003	88.9	94.6	87.9	92.2	90.2	103.8	82.3	80.8	94.2	99.4	88.8	82.7	90.3	87.3
III-2003	95.9	106.3	95.0	104.6	98.4	116.2	96.5	92.3	98.1	112.1	91.7	83.3	93.5	93.9
IV-2003	98.7	105.4	97.6	108.1	103.8	121.2	92.7	88.3	113.7	113.1	90.7	90.0	98.5	94.2
I-2004	101.9	109.2	100.5	112.3	114.4	120.3	95.7	94.7	120.5	113.8	99.5	84.3	104.1	98.6
II-2004	101.4	115.4	97.9	107.5	107.6	119.2	89.4	99.4	118.9	112.2	97.0	87.4	103.4	95.7
III-2004	100.3	114.2	97.2	104.8	108.7	118.8	80.9	93.8	114.9	113.2	97.5	90.3	101.6	97.0
IV-2004	101.7	117.0	97.8	110.4	108.4	132.2	85.8	95.8	117.3	123.5	97.3	82.2	104.4	98.1
I-2005	105.7	116.0	102.7	119.2	116.2	127.0	89.6	99.5	117.0	126.5	104.3	85.1	109.5	102.0
II-2005	108.4	126.9	103.7	116.3	119.5	135.5	85.9	105.5	113.4	113.2	98.7	101.0	109.4	101.8
III-2005	111.6	128.2	107.1	119.1	119.1	129.1	89.5	108.7	126.6	120.8	110.2	98.7	108.4	107.7
IV-2005	113.1	126.3	111.2	120.6	119.3	139.4	86.3	109.9	124.9	128.7	116.6	93.8	113.8	108.0
I-2006	116.8	129.7	113.7	120.6	127.7	143.3	90.6	112.7	140.8	128.7	114.1	96.0	121.5	109.6
II-2006	118.1	130.3	115.5	122.3	120.3	151.0	90.2	118.5	136.0	136.5	113.6	94.9	121.4	109.5
III-2006	120.8	132.2	119.9	120.4	131.7	149.6	87.0	120.5	133.6	136.8	117.6	98.0	124.4	112.5
IV-2006	124.6	137.1	122.3	126.7	136.3	161.8	95.9	118.8	150.1	131.3	123.5	102.7	125.4	117.4
I-2007	129.1	146.1	124.2	129.2	140.3	168.0	93.4	118.9	160.5	151.4	130.3	99.4	133.2	121.1

Source: prepared by the author using data from the Permanent Household Survey.

^a All urban areas, excludes job creation schemes.

^b Education level: a low education level is incomplete secondary education or below and a high education level is complete secondary education or above.

to grow. Lastly, earnings grew more strongly than employment from 2005 onward.

Employment growth was concentrated in wage-paying jobs. Once again, except between May 2002 and the second quarter of 2003, when non-wage employment increased strongly, the characteristic feature of the period was the greater dynamism of wage employment, both registered and unprotected. There were differences between the two, however. During 2003 it was unprotected employment that grew more strongly, but thereafter, and up to the third quarter of 2004, growth rates were similar for both. From then on, and until the second quarter of 2005, the number of registered jobs remained virtually unchanged while unregistered jobs continued to grow, albeit with greater variations. From the second half of 2005, registered jobs were created steadily and at a faster rate than unregistered jobs, although the latter did continue to expand in absolute terms. By the fourth quarter of 2006, registered and unregistered employment had accumulated similar increases (around 38%) on May 2002. Non-wage employment, meanwhile, had experienced almost no growth from its 2003 level.

The evolution of employment just described is much as would be expected in the aftermath of a crisis as deep as the one Argentina went through. Improving economic conditions usually impact the demand for labour, with the effects being felt first in unprotected and non-wage jobs, chiefly in the form of longer working hours. If the expansionary phase persists or is expected to do so, the number of wage-paying jobs, including protected jobs, will then expand. However, the salient feature here is the persistence of high levels of unprotected employment at the end of the period, apparently sustained in part by the sectoral dynamic and the large share of jobs created by smaller businesses. As will shortly be seen, the growth of sectors where there is a large proportion of unprotected jobs (such as construction, the textile industry and the retail trade) seems to account for the persistence of these in the employment structure.

Earnings by occupational category evolved in a way consistent with employment. Wages recovered strongly from early 2003 to the first quarter of 2004, with somewhat larger increases for unregistered wage earners, something that can be put down to their low starting level. In the last three quarters of 2004, the recovery in wages came to a halt for both unregistered and registered wage earners even

though, as mentioned above, employment carried on expanding. Real wages began to rise again in 2005, with those of registered workers showing greater dynamism.

Some of the improvement in incomes for wage earners in unprotected jobs was due to an increase in working hours.⁷ Government incomes policy, meanwhile, operating through measures such as fixed-sum allowances during 2003 and 2004 and a higher minimum wage, was instrumental in increasing wages for registered workers. In the expansionary climate of the time, furthermore, these instruments also drove up earnings for workers in unprotected jobs. The conjunction of the factors described seems to account for the increase in wages in 2003 and for their stability during part of 2004.

From 2005, on the other hand, it was the wages of registered workers that rose by most, apparently thanks to union negotiations that secured substantial real wage increases which made up some of the ground lost in the crisis and subsequent devaluation of 2001.

There was a very marked and sustained recovery in the earnings of non-wage workers from 2003 onward, contrasting with stability in the volume of employment. Two factors appear to have played a part in the trend. First, one segment of these workers, the least skilled, moved into wage-paying jobs; the proportion of non-wage workers who had not completed secondary education fell from 59% in 2002 to 55% in 2007, while the total number in work remained virtually unchanged. This indicates that those who continued in non-wage work were people with a higher level of education. Second, the general rise in prices favoured goods and services produced by own-account workers while, on the demand side, the recovery in household incomes appears to have worked in the same direction. The two factors seem to have come together to restore earnings in this group more quickly.

The sectoral dynamic of employment showed a degree of heterogeneity. Construction drove private-sector employment growth throughout the period and industry did so in certain subperiods. The rate of job creation in the construction sector was so strong and sustained, in fact, that by the end of the first quarter of 2007 it was employing twice as many workers as in 2002. Employment in industry,

⁷ There tends to be more time-related underemployment among these workers.

meanwhile, increased by a cumulative 29.6% between the beginning and end of the period (growth was much higher in the initial stage, as cumulative growth was already 26% by the second quarter of 2004); in the following two years it held steady at around this level, before rising again in 2006. The initial reaction seems to have been the response of the sector to the spur of an exchange rate that was competitive for industrial import-substituting goods. There were also sharp increases in employment in trade and modern services (29.1% and 27.8%, respectively), and employment in the public sector, including State enterprises, was very dynamic. Below-average employment growth was seen in social and personal services, domestic service and transport and communications, the last two of which saw rises of 18% and 13%, respectively.

The behaviour of domestic service employment was not systematic over the period. It appears to have risen in parallel with recovering wages, especially from 2005, which indicates how dependent it is on improvements in household income.

Earnings by sector show a rather different pattern from employment, since only in construction is a close association observed between the two. With regard to the scale of the recovery in earnings, the largest increases occurred in construction, transport, modern services and industry, while the smallest ones were in the public sector and domestic service, in that order.

A review of these indicators makes it possible to conclude that economic growth was matched by a gradual improvement in the level and quality of employment and wages. The new configuration of relative prices in the period, which is key to this performance, thus had a potentially progressive effect on income distribution. Within this general framework, sectoral developments were consistent with the new “industrialist” orientation of economic growth and reinforced this characteristic via the expansion of labour-intensive activities. This is why some of the economic benefits went to resource-poor households, since about a third of these households’ heads work regularly in industry and construction, two of the most dynamic sectors.⁸

However, this information needs to be supplemented by data on other developments whose effects on inequality have also been significant. The

discontinuity of income policies like those applied in 2003 and 2004, the tailing-off of the rise in industrial employment and the sluggishness of employment and earnings in sectors largely employing low-skilled workers (such as domestic service) would appear to have limited the scale of improvements in distribution. Already by 2004, the number of jobs was increasing more slowly for people with a low education level (incomplete secondary education and below) than for those with a high education level (complete secondary education and above). These two sets of data are indicative of limits on the further recovery of earnings for resource-poor households.

2. Inequality

Turning to distribution, the empirical evidence for the improvement in absolute poverty indicators is overwhelming. Absolute poverty diminished by more than 20 percentage points between the beginning and end of the period. The reduction in the percentage of people living in poverty was somewhat greater among households headed by someone with a high education level than among those headed by someone with a low education level: 38% and 35%, respectively (table 2).

This performance indicates that the overall redistributive effect of economic growth in the period was modest. In other words, income concentration proved more resistant to reduction than the poverty rate. Evaluation of different indicators of per capita household income distribution confirms that there was a marked improvement in equity at the start of the expansion phase (2002-2003), but that this then tailed off (table 3).

To gauge the improvement in equity over a longer time horizon, it is worth looking at its evolution in the 1990s. In the first half of that decade the level of income concentration fell, after reaching very high levels because of the hyperinflationary episodes at the end of the previous decade. By contrast, in the second half of the 1990s distribution worsened again, first in the context of the so-called Tequila crisis (1995) and then persistently between 1998 and 2001. Considering these developments, it needs to be emphasized that, notwithstanding six years of strong GDP growth, inequality in 2007 was only slightly less pronounced than in 1995, and similar to the level of the early 1990s.

The effect of labour market developments on inequality can be appreciated more directly if the

⁸ Data from the Permanent Household Survey, first quarter of 2007.

TABLE 2

**Argentina: poverty level,^a half-yearly figures between
the second halves of 2003 and 2006**

	Total		Households whose head has a low education level ^b		Households whose head has a high education level		Households whose head has a low education level and is under 65		Households whose head has a high education level and is under 65	
	People	Households	People	Households	People	Households	People	Households	People	Households
II-2003	48.0	36.5	60.7	24.7	48.0	18.7	65.8	25.7	57.0	20.0
I-2004	44.4	33.5	57.7	22.1	45.6	16.5	62.5	23.0	53.5	17.8
II-2004	40.2	29.8	53.1	18.9	41.5	13.7	58.3	20.1	49.6	15.0
I-2005	38.9	28.8	51.4	18.4	39.8	13.7	56.7	19.6	47.5	15.0
II-2005	33.8	24.7	46.5	13.9	36.0	9.9	51.8	14.7	43.3	10.7
I-2006	31.4	23.1	42.7	13.8	32.9	10.3	47.2	14.7	39.3	11.3
II-2006	26.9	19.2	38.3	10.2	28.7	7.6	42.9	10.8	34.9	8.3

Source: Prepared by the author using data from the Permanent Household Survey.

^a All urban areas.

^b Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

TABLE 3

**Argentina: household per capita income inequality,^a
quarterly figures from May 2002 to the first quarter of 2007**

	Households with heads under 65									
	All households				Decomposition of the Theil index			Confidence interval of the Gini coefficient		
	Ratio between quantiles 90/10	A (1)	Theil index	Gini coefficient	Theil index	Theil index within	Theil index between	Gini coefficient	Lower limit	Upper limit
May-02	24.3	0.638	0.652	0.567	0.687	0.560	0.125	0.585	0.580	0.598
II-2003	18.0	0.513	0.579	0.543	0.589	0.460	0.123	0.554	0.545	0.570
III-2003	17.7	0.511	0.570	0.541	0.579	0.458	0.122	0.552	0.536	0.568
IV-2003	13.6	0.486	0.522	0.524	0.557	0.442	0.114	0.539	0.521	0.557
I-2004	13.5	0.451	0.476	0.510	0.499	0.407	0.092	0.522	0.507	0.536
II-2004	11.7	0.447	0.492	0.509	0.500	0.402	0.098	0.518	0.505	0.531
III-2004	13.3	0.448	0.525	0.516	0.477	0.364	0.113	0.515	0.500	0.529
IV-2004	12.0	0.435	0.492	0.501	0.516	0.413	0.102	0.518	0.501	0.536
I-2005	12.3	0.432	0.475	0.505	0.520	0.419	0.101	0.526	0.509	0.543
II-2005	11.4	0.418	0.455	0.495	0.495	0.393	0.102	0.516	0.503	0.529
III-2005	12.5	0.434	0.482	0.506	0.511	0.403	0.108	0.523	0.506	0.540
IV-2005	11.1	0.385	0.428	0.483	0.444	0.337	0.107	0.497	0.487	0.507
I-2006	12.0	0.427	0.462	0.497	0.479	0.380	0.099	0.511	0.497	0.525
II-2006	10.7	0.390	0.415	0.475	0.431	0.344	0.086	0.488	0.476	0.500
III-2006	12.0	0.401	0.414	0.480	0.433	0.343	0.089	0.495	0.484	0.505
IV-2006	10.4	0.392	0.469	0.487	0.440	0.346	0.094	0.492	0.480	0.505
I-2007	10.6	0.391	0.423	0.480	0.456	0.365	0.091	0.501	0.487	0.515

Source: Prepared by the author using data from the Permanent Household Survey.

^a All urban areas.

analysis is confined to households whose income derives mainly from the labour market (those with heads aged under 65). When this is done, the same pattern of distribution is confirmed. Indeed, estimating the statistical confidence intervals of the Gini coefficient reveals that there are no differences between the 2004 measurements and subsequent ones.⁹

The picture is completed by a further two elements characterizing the distribution trend. The first is the fact that indicators providing a more sensitive gauge of the changes which have taken place at either end of the distribution (for example, the income ratio and the Atkinson and Theil indices) threw up a rather larger reduction in inequity than the Gini coefficient. This suggests that the small overall improvement was due to a diminution in income differences between the two ends of the distribution, which is confirmed when income distribution is evaluated by quintile. It transpired, in fact, that between the beginning and end of the period analysed the poorest 20% of households increased their income share by 20% and that the increase tailed off up the quintiles so that the share of the richest 20% declined. This finding is consistent with some of the employment trends already referred to, such as the evolution of the wages of the least skilled workers. The fact is that by early 2004, workers with a low education level were earning more in real terms than they had been

in 2002, something that did not happen for highly educated workers until 2005. Again, the purchasing power of earnings grew more strongly from 2005 for less educated workers. The role of the unions in this outcome should not be overlooked, since their negotiating capabilities are usually reflected in even greater improvements in the pay of the lowest earners than in that of more highly skilled registered workers. As mentioned earlier, furthermore, both the State policy of raising wages by means of fixed-sum allocations and the rise in minimum wages seem to have made a real contribution.

Despite this, there was no reduction in the differences between the higher and lower household strata. Indeed, and this is the second element that needs to be considered, a breakdown of the Theil index into a component capturing how much inequality is due to differences between strata and another one expressing intra-stratum dispersion shows that the latter accounts for approximately 80% of inequality and that this percentage did not change greatly over the period (see table 3 again). In summary, the overall distribution outcome was that inequality in household income distribution declined moderately, while remaining at critical levels throughout the period.

As was pointed out in section I, the distribution picture is enhanced by including events at the household level in the analysis, and these will be examined now.

IV

The household-level analysis

The distribution outcome discussed in section III can be evaluated in different ways. It is possible to argue that the scale of the redistributive effect seen in the expansionary stage, obviously excluding the large initial reduction in inequality, was due to changes in the economic participation patterns (i.e., decisions) of household members. Since developments at the household level are a synthesis of the actions of individual household members, the latter's decisions about entering or leaving the

labour market can influence household income levels.¹⁰ The literature on the subject is extensive and generally indicates that these changes tend to be associated with the working patterns of the main income provider. Indeed, changes in the latter's earnings and employment opportunities have major effects on the economic participation of the other members. If the earnings of the household head, usually the main income provider, fall or rise, the

⁹ Obtained using the statistical technique of "bootstrapping".

¹⁰ It has often been pointed out that the family is an institution which is also associated with social inequalities (Arriagada, 2004).

other members will be motivated in some degree to enter or leave the labour market. While all sorts of factors influence these effects and the relationship is far from linear, it can be assumed that the kind of behaviour described will occur.

The case of Argentina is indicative of this. In line with the overall picture, employment growth in Argentina has been lower for members of resource-poor households which, it will be recalled, are those whose heads have a low education level (table 4).

From 2004 and especially 2005 onward, employment grew more strongly for members of households whose heads had a high education level. Furthermore, this widening of the employment gap was even greater for other household members. Between the beginning and end of the period, employment in households headed by someone with a low education level rose by a cumulative 16%, as against 41% in households headed by someone with a high education level. For members other than household heads with a low and high education level, the increases were 18% and 53%, respectively.

Conversely, the unemployment rates of the two groups of households fell at about the same rate; indeed, that of residents of households with a lower level of education declined somewhat faster. This reflects different activity rate trends.¹¹ Economic participation rates fell slightly for members of households headed by someone with a low education level, including beneficiaries of job creation schemes, but increased for members of households headed by people with a high education level.¹² Once again, it must be stressed that this outcome was the result of differences in the behaviour of household heads and non-heads. The relative rise in economic participation in upper-stratum households was caused by the greater dynamism of non-heads. It was this group that benefited most from the expansion of employment, helping to widen the social divide between the two household strata.

The second element to be considered is the evolution of earnings, which improved more for members of households with less educated heads

(33%) than for working members of households with highly educated heads (18%) between the beginning and end of the period. The earnings of heads increased faster and by a somewhat greater amount (table 5).

The contrast in the evolution of employment and earnings has generated some controversy about the motivations underlying the working behaviour of household members other than the main income provider. Some analysts argue that the withdrawal of labour by resource-poor households may be an expression of discouragement in the face of the weak demand experienced by this group. Given the high levels of poverty that still persisted in Argentina around 2007, this interpretation seems well-founded. Others maintain, on the other hand, that the rise in the earnings of household heads in the lower stratum contributed to the withdrawal of other members' labour. If this is so, the net effect on current household income must necessarily be indeterminate. Furthermore, if what predominated within households was a substitution effect and the net change in incomes was not very pronounced, the situation would be compatible with a moderate improvement in distribution like the one observed. More evidence is required to support the theory that the supply of labour from resource-poor households shrinks as the occupational position of the head improves.

One direct way of evaluating this hypothesis is to find out whether the distribution of employment within households altered and whether higher wages for household heads changed the pattern of contributions by different household members to the family budget. Table 6 shows that if relative changes caused by the scaling-back of job creation schemes are discounted, employment increased by more among the spouses and particularly among the children of household heads than among the heads themselves. Much the same happened with contributions to household income: the relative household income contribution of heads fell by some 10 percentage points. Thus, the work and earnings of other members in resource-poor households continued to be very important and their contribution, far from diminishing, tended to increase.

The theory that the above is due to weak demand for low-skilled labour seems more consistent and is supported by other evidence. One piece of evidence is the high unemployment rate affecting households headed by people with a low education level: after

¹¹ See Altimir and Beccaria (2000) on changes in the activity rate in earlier periods.

¹² Even if beneficiaries of job creation schemes are excluded from the "active" category, swelling the inactive population, in relative terms the economic participation rate rose by less in resource-poor households than in households headed by someone with a high education level.

TABLE 4

**Argentina: employment, unemployment and economic participation,^{a b}
quarterly figures**

Employment (excludes job creation schemes)	Whole population			Heads of household			Non-heads of household		
	Total	Head with low education level	Head with high education level	Total	Low education level	High education level	Total	Head with low education level	Head with high education level
May-02	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
II-2003	103.8	97.7	108.1	102.0	99.2	105.2	102.3	96.0	112.0
III-2003	108.9	105.7	112.2	107.8	107.1	108.7	109.1	104.2	116.7
IV-2003	110.9	106.7	115.1	111.7	108.8	114.9	108.6	104.5	114.9
I-2004	111.8	109.2	114.4	111.1	109.3	113.1	111.7	109.0	115.9
II-2004	114.3	108.4	121.1	113.0	109.0	117.4	114.9	107.7	125.9
III-2004	116.9	110.4	124.4	115.6	112.0	119.6	117.4	108.6	130.9
IV-2004	118.1	112.5	124.5	116.9	111.6	122.8	118.6	113.3	126.6
I-2005	115.0	110.9	119.6	115.4	113.2	117.7	113.7	108.4	121.7
II-2005	117.5	109.6	126.7	114.5	109.3	120.2	120.0	109.8	135.6
III-2005	121.7	111.0	134.6	120.6	113.3	128.6	122.0	108.6	142.6
IV-2005	122.7	116.3	130.0	120.6	116.5	125.1	124.2	116.1	136.7
I-2006	121.1	113.6	129.8	118.5	112.9	124.6	123.1	114.2	136.8
II-2006	125.7	116.3	136.7	121.6	114.7	129.1	129.4	117.9	147.1
III-2006	126.2	114.4	140.4	124.0	115.0	133.9	127.7	113.7	149.1
IV-2006	127.6	115.7	141.9	122.8	113.9	132.6	132.1	117.3	154.6
I-2007	127.2	115.6	141.1	122.4	113.3	132.3	131.8	117.8	153.1
Unemployment rate (excludes job creation schemes)	Total	Head with low education level	Head with high education level	Total	Low education level	High education level	Total	Head with low education level	Head with high education level
May-02	24.2%	28.1%	18.5%	15.4%	19.0%	10.9%	32.2%	34.8%	27.5%
II-2003	18.7%	22.6%	13.7%	10.7%	13.3%	7.9%	26.5%	30.5%	20.5%
III-2003	17.1%	20.6%	12.4%	9.8%	12.4%	6.9%	24.2%	27.7%	18.8%
IV-2003	15.2%	18.6%	10.7%	8.0%	9.8%	5.9%	22.6%	26.2%	16.9%
I-2004	15.2%	17.9%	11.5%	7.7%	9.3%	5.8%	22.6%	25.2%	18.4%
II-2004	15.6%	19.3%	10.9%	9.0%	11.6%	6.2%	22.1%	26.0%	16.4%
III-2004	13.8%	17.4%	9.2%	7.5%	9.2%	5.6%	20.1%	24.7%	13.5%
IV-2004	12.5%	15.8%	8.3%	6.5%	9.0%	3.9%	18.6%	21.7%	13.8%
I-2005	13.4%	16.5%	9.3%	7.1%	9.2%	4.7%	19.9%	23.2%	15.0%
II-2005	12.3%	15.0%	9.1%	7.4%	9.3%	5.4%	17.2%	20.1%	13.3%
III-2005	11.2%	14.6%	7.3%	5.7%	7.7%	3.8%	16.9%	21.0%	11.6%
IV-2005	10.2%	12.6%	7.2%	5.5%	6.8%	4.1%	15.1%	17.9%	11.1%
I-2006	11.9%	14.7%	8.5%	6.7%	8.6%	4.8%	17.1%	20.1%	12.9%
II-2006	10.6%	12.5%	8.4%	5.7%	6.8%	4.6%	15.4%	17.5%	12.6%
III-2006	10.4%	12.6%	7.9%	5.4%	6.8%	4.0%	15.5%	17.9%	12.4%
IV-2006	8.9%	10.8%	6.8%	4.2%	5.3%	3.2%	13.5%	15.7%	10.8%
I-2007	10.0%	12.2%	7.6%	4.9%	6.1%	3.8%	15.1%	17.6%	11.9%
Activity rate (includes job creation schemes)	Total	Head with low education level	Head with high education level	Total	Low education level	High education level	Total	Head with low education level	Head with high education level
May-02	58.9%	57.9%	60.5%	88.8%	87.4%	90.6%	44.3%	45.0%	43.2%
II-2003	59.6%	58.4%	61.5%	88.7%	87.5%	90.2%	45.4%	45.6%	45.0%
III-2003	60.3%	59.4%	61.6%	88.5%	87.7%	89.6%	46.0%	46.4%	45.2%
IV-2003	59.6%	58.2%	61.7%	89.2%	88.1%	90.6%	44.6%	45.0%	43.9%
I-2004	59.4%	58.0%	61.3%	88.2%	87.4%	89.2%	45.0%	45.2%	44.6%
II-2004	60.2%	58.5%	62.5%	88.7%	87.6%	90.0%	45.6%	45.5%	45.9%
III-2004	60.2%	58.3%	62.8%	88.9%	87.5%	90.6%	45.4%	45.1%	45.9%
IV-2004	59.7%	58.2%	61.8%	89.2%	88.0%	90.7%	44.8%	45.1%	44.4%
I-2005	59.1%	57.7%	61.1%	88.6%	87.8%	89.6%	44.1%	44.3%	43.8%
II-2005	58.8%	56.1%	62.5%	87.6%	85.8%	89.8%	44.2%	42.8%	46.3%
III-2005	59.6%	57.0%	63.1%	88.4%	87.3%	89.6%	44.7%	43.3%	46.8%
IV-2005	59.4%	57.1%	62.6%	88.2%	87.0%	89.4%	44.6%	43.6%	46.0%
I-2006	59.6%	57.2%	62.9%	88.4%	87.1%	89.8%	44.9%	43.9%	46.4%
II-2006	60.4%	57.9%	63.6%	88.2%	86.8%	89.6%	46.0%	44.8%	47.7%
III-2006	60.3%	57.6%	63.6%	88.3%	86.7%	89.9%	45.5%	44.1%	47.3%
IV-2006	59.5%	56.2%	63.6%	87.2%	85.2%	89.3%	45.2%	43.3%	47.9%
I-2007	59.8%	57.0%	63.5%	87.2%	85.0%	89.6%	45.8%	44.4%	47.7%

Source: prepared by the author using data from the Permanent Household Survey.

^a All urban areas, households with heads aged under 65.

^b Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

TABLE 5

Argentina: real earnings,^{a b} quarterly figures

Monthly earnings from main occupation	Members			Heads		Non-heads	
	Total	Low education level	High education level	Low education level	High education level	Low education level	High education level
<i>May 2002</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0
II-2003	88.0	87.8	86.8	89.1	91.3	86.2	84.4
III-2003	94.1	91.4	93.2	93.9	97.2	88.0	97.2
IV-2003	97.1	97.0	94.2	99.9	96.0	95.7	93.1
I-2004	103.1	101.8	102.2	103.4	98.7	98.7	102.3
II-2004	99.3	101.0	94.6	105.0	98.2	96.9	97.8
III-2004	98.3	98.5	94.1	103.0	98.8	91.8	94.4
IV-2004	101.1	102.0	96.9	107.3	98.7	96.4	94.3
I-2005	105.3	108.9	100.5	109.0	102.2	104.8	101.5
II-2005	106.5	107.0	101.9	110.1	108.3	103.1	101.6
III-2005	114.7	109.4	110.8	111.2	108.9	106.9	104.8
IV-2005	111.3	112.6	106.4	114.2	109.8	113.4	109.8
I-2006	117.5	121.5	110.8	122.2	109.5	119.5	116.8
II-2006	116.2	119.8	109.1	123.1	111.8	120.2	114.5
III-2006	119.3	123.4	110.4	127.1	113.6	118.8	114.9
IV-2006	121.9	124.6	113.5	126.7	117.9	125.1	120.7
I-2007	127.6	132.6	118.2	135.0	122.5	133.9	119.6

Source: prepared by the author using data from the Permanent Household Survey.

^a Excludes job creation schemes. Households with heads aged under 65.

^b Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

six years of expansion, 12% of these households' members were unemployed, including 17% of non-heads (see table 4 above). Meanwhile, although registered employment among heads increased, it did so more slowly than in households headed by people with a high education level. In 2007, over 50% of lower-stratum households still did not have a registered worker among their members, which is a proxy for the health-care coverage deficit.

In this situation, it is worth asking whether there are other constraints preventing members of these

households from obtaining better jobs and higher earnings; in other words, whether the mobilization of assets (essentially labour) in resource-poor households is coming up against impediments associated with the social isolation believed to affect the poor. The specialist literature has often sought to identify these obstacles, but the empirical evidence is still limited. The next section will examine the role played by social ties and interactions within each household stratum and the social homogeneity of residential environments.

TABLE 6

Argentina: distribution of employment and contribution to household earnings,^a quarterly figures

Employment	All households					Households whose head has a low education level ^b				
	Total	Job creation scheme	Heads	Spouses	Other members	Total	Job creation scheme	Heads	Spouses	Other members
III-2003	100	8.4	49.6	18.7	23.3	100	11.8	44.8	15.4	28.0
IV-2003	100	8.1	50.8	17.8	23.3	100	11.7	45.4	14.9	28.0
I-2004	100	7.9	49.7	18.8	23.5	100	11.4	44.7	15.2	28.7
II-2004	100	6.6	50.9	19.2	23.3	100	10.0	45.8	15.8	28.4
III-2004	100	6.8	50.7	18.8	23.7	100	9.9	45.9	15.4	28.8
IV-2004	100	6.3	50.5	18.8	24.4	100	9.2	45.3	16.2	29.3
I-2005	100	5.9	51.5	18.7	23.9	100	8.6	47.2	16.0	28.3
II-2005	100	5.4	50.0	19.2	25.4	100	8.1	45.8	16.1	30.0
III-2005	100	4.5	51.8	19.2	24.5	100	6.7	47.4	15.6	30.2
IV-2005	100	4.0	51.1	19.5	25.4	100	5.9	46.9	15.9	31.4
I-2006	100	4.1	50.8	19.2	25.9	100	6.1	46.3	15.7	31.9
II-2006	100	3.6	50.2	19.6	26.6	100	5.4	46.1	16.4	32.0
III-2006	100	2.9	51.7	19.9	25.4	100	4.5	47.5	16.7	31.3
IV-2006	100	2.3	51.2	19.6	26.9	100	3.7	47.1	16.1	33.2
I-2007	100	2.0	51.3	19.7	27.0	100	3.0	47.1	16.8	33.0
Earnings	Total	Job creation scheme	Heads	Spouses	Other members	Total	Job creation scheme	Heads	Spouses	Other members
III-2003	100	2.1	72.0	17.1	8.8	100	4.8	69.8	11.7	13.6
IV-2003	100	1.9	73.3	15.6	9.2	100	4.4	69.0	11.6	15.0
I-2004	100	1.9	66.6	17.9	13.6	100	4.2	60.1	13.1	22.6
II-2004	100	1.6	66.9	18.0	13.6	100	3.5	61.0	13.5	22.0
III-2004	100	1.6	67.5	17.4	13.6	100	3.5	62.3	12.1	22.1
IV-2004	100	1.4	66.9	17.1	14.5	100	3.1	60.4	13.4	23.1
I-2005	100	1.3	66.8	17.2	14.7	100	2.8	61.1	13.8	22.3
II-2005	100	1.1	65.9	17.1	15.9	100	2.5	59.4	13.4	24.6
III-2005	100	0.9	67.0	17.2	15.0	100	2.0	60.3	12.1	25.6
IV-2005	100	0.8	65.6	18.2	15.4	100	1.7	59.0	13.3	26.0
I-2006	100	0.8	64.6	17.9	16.8	100	1.6	58.8	13.2	26.4
II-2006	100	0.6	64.2	17.9	17.2	100	1.4	58.5	13.3	26.8
III-2006	100	0.5	65.2	18.1	16.2	100	1.1	60.0	13.7	25.2
IV-2006	100	0.4	64.5	18.2	16.9	100	0.9	58.5	13.1	27.4
I-2007	100	0.3	65.4	17.8	16.4	100	0.7	58.9	14.1	26.3

Source: Prepared by the author using data from the Permanent Household Survey.

^a All urban areas, households with heads aged under 65.

^b Low education level = incomplete secondary education and below.

V

Social segmentation and isolation

The case of Argentina is illustrative of the widening differences between social strata.¹³ This is directly reflected in the situation of households within the per capita income distribution by socio-economic stratum. The fact is that less educated household

heads (who, as already mentioned, account for just over half of all domestic units with heads aged under 65) are found mainly in the lowest quintiles. In the first quarter of 2004, these households accounted for over 83% of the poorest quintile but for less than 29% of the highest quintile. Concentration had intensified by the end of these years of expansion. In dynamic terms, it transpired that these households

¹³ See Beccaria and Groisman (2006) and Cortés and Groisman (2007) for an analysis of the earlier period.

TABLE 7

Argentina: wage earners by education level and skill category^{a b}
(Percentages)

	Skill category				Total
	Professional	Technical	Operational	Unskilled	
High education level	14.3	25.2	44.2	16.3	100
Low education level	0.6	4.6	50.4	44.4	100
2004 (quarters 1 and 3)	8.1	15.8	47.0	29.0	100
High education level	12.6	24.6	46.4	16.4	100
Low education level	0.4	3.3	51.8	44.6	100
2006 (quarters 1 and 3) and 2007 (quarter 1)	7.4	15.4	48.7	28.6	100
Wage earners with a high education level, by category					
2004 (quarters 1 and 3)	96.5	87.0	51.5	30.7	54.7
2006 (quarters 1 and 3) and 2007 (quarter 1)	97.9	90.9	54.1	32.7	56.9
Wages of workers with a high education level compared to wages of those with the same education level in jobs categorized as professional					
	Professional	Technical	Operational	Unskilled	
2004 (quarters 1 and 3)	100	64.1	43.8	31.1	
2006 (quarters 1 and 3) and 2007 (quarter 1)	100	68.8	46.9	30.3	

Source: prepared by the author using data from the Permanent Household Survey.

^a Pooled data, households with heads under 65.

^b High education level = complete secondary education and above. Low education level = incomplete secondary education and below.

were increasingly falling out of the higher quintiles and being relegated to the least favoured positions in the distribution. In the first quarter of 2007, the relative shares of this group of households had diminished by 3% and 20% in the bottom and top quintiles, respectively. In a context of economic recovery, this tendency for resource-poor households to cluster increasingly in the lowest positions of the income distribution is evidence of their worsening social isolation.

As was mentioned in the previous section, one of the greatest factors in social segmentation is the lack of demand for less educated labour, and this is aggravated if, in addition, jobs traditionally done by low-skilled workers go to people with greater educational credentials. While these processes are gradual and need to be observed over periods longer than the one taken here, events in Argentina over the period studied do point in this direction. As table 7 shows, while the skill structure of wage employment was maintained, there was a growing tendency for more educated workers to be employed in low-skilled jobs, something that was not fully reflected in pay differences. In other words, highly educated workers doing lower-skilled jobs were paid in accordance with the characteristics of the

job they did and not of their education level. This is what might be expected to happen in episodes where education is devalued as an attribute, the main victims (via expulsion from employment or a reduction in job opportunities) being individuals with a low education level.

Diminished employment opportunities for the less educated may also have been associated with other changes that would tend to compound their employment problems. One of these changes concerns the social networks through which information about job vacancies circulates.¹⁴ These networks, which have become quite important both in publicizing information about job opportunities and as a source of demand, often effectively act as employment exchanges. Since contacts and networks are highly correlated with the socio-economic level of households, it is fair to say that people from lower-stratum households will have had greater difficulty finding higher-quality jobs. It is in this stratum that certain households are most likely to

¹⁴ Numerous studies deal with the question of what may be included in the concept of "social capital". See Durlauf and Fafchamps (2004) for an analysis of the way this concept is applied in research.

be excluded from these networks and circuits of information and social relationships.

The descriptive information points in this direction. Table 8 reveals that heads, spouses and their children in households where the head has a low education level earn less than their counterparts in households with highly educated heads. In other words, not only do lower-skilled working people earn less than the more highly educated, but the fact of belonging to a household with a less-educated head would appear to result in lower pay than is earned by other workers of a similar education level and position in the household. The descriptive information provided also shows that spouses living in lower-stratum households earn less per hour than those in higher-stratum households, the difference being 18% and 35% for those with a low and high level of education, respectively. In the case of their children, the disparity is 13% and 25% for those with a low and high level of education, respectively.

These differences in earnings may be influenced by an unequal sectoral composition of employment or by the occupational position of those in work. Table 8 shows the prevalence of employment in both social and public-sector services for working people with a high education level and, particularly, for those from households with a highly educated head. At the other extreme, spouses with a low education level are more concentrated in domestic service and their children, if they have a low education level, in construction. Where occupational category is concerned, a smaller proportion of wage earners with a low education level are registered.

These data indicate the existence of a segment of working people who appear to have benefited relatively little from the economic expansion and of whom a very large proportion (42.7%) have remained in poverty (see table 2 above).

The situation described is compatible with the existence of barriers to employment (and particularly to

TABLE 8

Argentina: some characteristics of working household members^a

	Household whose head has a low education level ^b						Household whose head has a high education level							
	Head		Spouse		Children		Head		Spouse		Children			
		Low education level	High education level	Total	Low education level	High education level	Total		Low education level	High education level	Total	Low education level	High education level	Total
Composition		71.8%	28.2%	100	51.2%	48.8%	100		12.8%	87.2%	100	15.2%	84.8%	100
Age	44	44	41		23	25		42	40	40		21	25	
Monthly earnings (2002 pesos)	515	289	506		281	415		985	412	770		294	521	
Hourly earnings (2002 pesos)	2.9	2.4	3.9		1.9	2.7		5.8	3.0	6.0		2.1	3.6	
Economic sector														
Industry (%)	18.7	12.0	11.0	11.7	18.2	17.7	18.0	15.3	16.6	8.8	9.8	17.2	13.8	14.3
Construction (%)	17.4	5.9	1.8	4.7	16.7	4.8	10.9	4.5	4.3	1.2	1.6	8.9	3.0	3.9
Domestic serv. (%)	9.1	35.0	10.1	28.0	9.6	5.0	7.4	2.2	21.0	2.8	5.1	8.7	2.0	3.2
Trade and trans. (%)	35.1	29.3	27.1	28.7	41.5	40.6	41.1	27.4	35.4	21.1	23.0	49.8	32.6	35.2
Services (%)	19.7	17.7	50.1	26.8	13.9	31.9	22.7%	50.7	22.7	66.0	60.5	15.5	48.4	43.4
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Occupational category														
Non-wage (%)	30.4	28.4	23.8	27.1	19.9	14.0	17.0	27.1	31.6	25.0	25.8	24.4	15.9	17.2
Registered wage earners (%)	37.6	19.6	53.3	29.1	17.7	45.9	31.5	56.3	26.3	59.1	54.9	15.7	47.7	42.9
Unregistered wage earners (%)	31.9	52.1	22.9	43.8	62.4	40.0	51.5	16.6	42.1	15.9	19.3	59.9	36.3	39.9
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Prepared by the author using data from the Permanent Household Survey.

^a Pooled data, households with heads aged under 65.

^b Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

more productive, more highly paid and better-protected jobs) for members of less favoured households.

Besides the factors mentioned, there are different manifestations of spatial segregation that can act in the same direction. Both the availability of jobs and their take-up can be influenced by the shortcomings of transport, security and childcare, among other things, that characterize the neighbourhoods where the poorest live. These shortcomings are compounded by others reflecting a variety of discrimination mechanisms.

In accordance with the considerations set out in the methodology section above, the independent influence of these factors was tested by estimating the determinants of the labour force participation and earnings of household members other than heads. This delimitation makes it possible to avoid potential problems of endogeneity by first using an attribute of the household head to classify households and then considering the scale of employment and the earnings contributed by other household members (see table 6 again). To estimate occupational status, use was made of multinomial logistic regression models in which non-working individuals were the reference category. Estimates were calculated for all urban areas and for Greater Buenos Aires. It will be recalled that a variable was constructed for the latter region to capture the social composition of the area of residence. The same criteria were followed in estimating pay and use was made of income functions estimated by ordinary least squares and by quantiles¹⁵ (see appendix, tables A.1 and A.2).

For all urban areas, model I shows that membership of a lower-stratum household entailed a high probability of obtaining unprotected wage-paying employment. In model II (with interactions), it can be seen that those who had a high education level but belonged to the lower stratum had much the same likelihood of being in low-quality employment as lower-stratum individuals with a low education level, while working people who had a low education level but belonged to households in the upper stratum had a negative probability of ending up in this situation. In short, when the education level of individuals is taken into account (along with the other variables included in the models), membership of a given social stratum entailed differences that

were not fully offset by the individual's education level. This highlights the pernicious effect of certain households' underendowment with social assets.

The analysis can be refined if it is expanded to accommodate the social composition of neighbourhoods (as a proxy variable for residential segregation of a socio-economic nature). It should be recalled that the constructed variable is continuous and takes as its value the proportion of households belonging to the lower stratum in each group of dwellings making up each of the sample points.¹⁶ This allows each household to be rated using a characteristic that synthesizes the social composition of the neighbourhood of residence. The finding is that the influence of the neighbourhood (social homogeneity variable) was significant and had the expected sign: the greater the social homogeneity (at a low level), the greater the likelihood of individuals ending up in unprotected employment. In short, there seems to be a significant association between living in a segregated neighbourhood and being at a disadvantage when it comes to obtaining a better job.

In the earnings models, membership of a lower-stratum household was likewise associated with lower hourly pay. Furthermore, this handicap remained when the model was expanded to include the interactions of the household's stratum with the main determinants of the model: education and employment status. In the same way as when the multinomial analysis was conducted, the handicap persisted for highly educated working people belonging to the lower stratum of households, although to a lesser extent. This indicates that individual asset endowments partially offset but do not remove this difference. No differences were observed by stratum in the handicap represented by non-registration, although there was a difference in the case of non-wage workers, whose earnings were reduced by more when they were members of the lower stratum. This latter finding is consistent with this group's more limited opportunities for self-employment.

The quantile regressions reflect the fact that the earnings handicap associated with the socio-economic stratum of a person's household was somewhat greater at the upper end of the conditional income distribution (see appendix, table A.2). This

¹⁵ It should be emphasized that in both cases the models have the expected signs for the vector of covariables that are usual in these analyses.

¹⁶ The distribution of the constructed variable was consistent with other indicators describing the social situation of households, e.g., by earnings and employment quality (estimated with correlation coefficients).

pattern of increasing constraint in the distribution (because of unobserved factors) may be indicative of disparities in the jobs taken up by people with similar personal characteristics. The way socio-economic stratum interacted with education level (models II and III) showed that individuals belonging to the lower stratum in the upper quantile experienced greater declines in their earnings.

This is consistent with a labour market still struggling to absorb the whole of the available workforce. Although it is not possible to establish causal relationships at this level of analysis, the results obtained reveal a situation in which resource-poor households are handicapped in their opportunities for social inclusion (via participation in the labour market) by a number of mechanisms. First, because

members who have a low education level have fewer job opportunities as a result, and in any event can only aspire for the most part to low-quality jobs that are also relatively badly paid. Second, because members with a higher level of education and better job prospects, given their individual attributes, do not have the same opportunities of access and are not paid as much as workers who have a similar education level but come from households whose education level is higher. Lastly, there is also found to be a disadvantage associated with the homogeneous composition of neighbourhoods, which limits and narrows people's opportunities for social interaction with other groups and inhibits access to more heterogeneous social networks that could improve their employment prospects.

VI

Conclusions

Since 2002, following the deep crisis of late 2001 and the change of macroeconomic regime, Argentina has experienced a sustained economic recovery. This expansionary phase has been accompanied by a major reconfiguration of employment and wage levels in the context of a general improvement in the workings of the labour market. The proportion of registered workers has increased and unemployment and time-related underemployment have diminished. Where distribution is concerned, absolute poverty has fallen sharply. However, the level of inequality is still high, having diminished only moderately after a rapid initial decline.

Given this distributive trend, analysis of socio-economic developments in the six years of expansion from 2002 to 2007 has made it possible to identify certain factors that appear to have had a real impact in this area. Among other things, it transpires that the dynamic of employment tended to favour those with a high education level. This relative increase in the number of employed people with greater human capital endowments does not seem to have been due to changes in the skill structure of jobs. In any event, changes in recruitment criteria led to a narrowing of the opportunities available to less educated workers; the decline in participation in economic activity by members of the poorest households

is consistent with this diagnosis. The empirical evidence analysed does not bear out the theory of a voluntary withdrawal of labour from the market (essentially spouses and sons and daughters) in the households with fewest resources. The employment and earnings of these members continued to be very important to households and, far from diminishing, their incidence tended to increase.

The analysis carried out also suggests the existence of social segmentation; the isolation and social homogeneity of the neighbourhoods where the households with fewest resources live seem to have had a bearing on the situation described. The results show that these households were limited in their opportunities to share in the benefits of economic expansion. This was partly because, as already mentioned, members who had a low education level found as a result that they had fewer employment opportunities and/or were worse-paid, and partly because members who had a high education level and individual attributes that might help them in the job market did not enjoy the same kind of employment opportunities or pay levels as similarly educated workers living in households with a high level of education. There were also found to be disadvantages associated with the homogeneity of social composition in lower-stratum

neighbourhoods, a factor that appears to have limited the scope for interaction with other groups and inhibited access to more varied social networks that might have provided greater occupational and social integration.

It should be stressed that it is not possible to establish causal relationships at this level of analysis and that more research is needed. However, the empirical evidence presented points to the need to apply specific policies in pursuit of greater equity.

(Original: Spanish)

APPENDIX

TABLE A.1

Argentina: multinomial logistic models, individuals aged 15 to 64 who are not household heads^a

All urban areas	Unregistered wage workers		Non-wage workers		Registered wage workers	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Model I						
Lower social stratum	0.502	0.018	0.055	0.024	-0.002	0.020
Low education level ^b	0.020	0.018	-0.420	0.024	-1.426	0.022
Household size	0.012	0.004	-0.030	0.005	-0.081	0.005
Working head	-0.140	0.019	0.195	0.027	-0.053	0.023
Spouse	-0.551	0.030	0.084	0.042	-0.349	0.034
Son or daughter	-0.090	0.027	0.235	0.041	0.059	0.032
Age	0.363	0.004	0.380	0.006	0.528	0.006
Age squared	-0.005	0.000	-0.004	0.000	-0.006	0.000
Woman	-0.728	0.019	-1.345	0.027	-1.056	0.022
Wave dummies	Yes		Yes		Yes	
Region dummies	Yes		Yes		Yes	
Constant	-6.924	0.089	-8.433	0.128	-8.049	0.108
Pseudo R ²	0.133					
Model II (with interactions)						
Lower social stratum x low education level	0.506	0.021	-0.370	0.026	-1.427	0.024
Higher social stratum x low education level	-0.091	0.031	-0.576	0.039	-1.508	0.038
Lower social stratum x high education level	0.425	0.024	-0.049	0.031	-0.050	0.023
Pseudo R ²	0.134					
No. of observations	129 708					
Greater Buenos Aires						
Model III						
Lower social stratum	0.219	0.044	-0.188	0.060	-0.035	0.046
Low education level	-0.113	0.042	-0.650	0.059	-1.551	0.050
Social homogeneity	0.349	0.104	0.193	0.148	-0.242	0.118
Household size	-0.011	0.009	-0.024	0.014	-0.146	0.012
Working head	-0.248	0.046	0.107	0.072	-0.205	0.055
Spouse	-0.657	0.072	-0.091	0.107	-0.776	0.082
Son or daughter	-0.140	0.067	0.204	0.109	0.074	0.078
Age	0.307	0.010	0.365	0.015	0.486	0.012
Age squared	-0.004	0.000	-0.004	0.000	-0.006	0.000
Woman	-0.766	0.045	-1.249	0.068	-0.967	0.051
Wave dummies	Yes		Yes		Yes	
Region dummies	No		No		No	
Constant	-5.189	0.203	-7.484	0.316	-6.793	0.247
Pseudo R ²	0.119					
No. of observations	23 095					

Source: prepared by the author using data from the Permanent Household Survey.

^a Pooled data, households with heads aged under 65. To simplify the presentation, the parameters of the wave and region dummies are not given. For the same reason, only the relevant coefficients are shown in model II.

^b Low education level = incomplete secondary education and below. High education level = complete secondary education and above.

TABLE A.2

**Argentina: income models, individuals aged 15 to 64
who are not household heads**

All urban areas	Unregistered wage workers		Non-wage workers		Registered wage workers	
			Quantile 10		Quantile 90	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Model I						
Unregistered wage worker	-0.526	0.008	-0.731	0.020	-0.382	0.010
Non-wage	-0.581	0.009	-1.086	0.024	-0.175	0.013
Low education level	-0.225	0.007	-0.223	0.013	-0.212	0.014
Age	0.046	0.002	0.049	0.003	0.038	0.003
Age squared	0.000	0.000	-0.001	0.000	0.000	0.000
Wave dummies	Yes		Yes		Yes	
Woman	-0.111	0.007	-0.101	0.011	-0.087	0.013
Hours	-0.014	0.000	-0.012	0.000	-0.016	0.000
Region dummies	Yes		Yes		Yes	
Economic sector dummies	Yes		Yes		Yes	
Correction of selection bias	-0.421	0.037	-0.366	0.077	-0.507	0.064
Constant	2.023	0.054	1.213	0.095	2.975	0.103
Adjusted R ²	0.531					
Pseudo R ²			0.337		0.330	
No. of observations	39 896					
Model II (interactions)						
Lower social stratum x unregistered wage worker	-0.538	0.009	-0.733	0.012	-0.399	0.015
Higher social stratum x unregistered wage worker	-0.540	0.011	-0.737	0.018	-0.390	0.022
Lower social stratum x non-wage	-0.700	0.012	-1.215	0.032	-0.334	0.023
Higher social stratum x non-wage	-0.420	0.013	-0.910	0.036	0.000	0.016
Lower social stratum x low education level	-0.355	0.010	-0.357	0.015	-0.393	0.017
Higher social stratum x low education level	-0.322	0.012	-0.290	0.030	-0.351	0.021
Lower social stratum x high education level	-0.176	0.010	-0.166	0.012	-0.226	0.011
Adjusted R ²	0.536					
Pseudo R ²			0.339		0.335	
No. of observations	39 896					
Greater Buenos Aires						
Model III (interactions)						
Social homogeneity	-0.250	0.039	-0.286	0.078	-0.129	0.046
Lower social stratum x unregistered wage worker	-0.444	0.021	-0.751	0.049	-0.292	0.032
Higher social stratum x unregistered wage worker	-0.444	0.024	-0.635	0.058	-0.317	0.048
Lower social stratum x non-wage	-0.610	0.029	-1.189	0.067	-0.245	0.044
Higher social stratum x non-wage	-0.284	0.030	-0.726	0.059	0.114	0.046
Lower social stratum x low education level	-0.411	0.025	-0.337	0.040	-0.513	0.040
Higher social stratum x low education level	-0.352	0.029	-0.215	0.075	-0.409	0.051
Lower social stratum x high education level	-0.221	0.022	-0.167	0.032	-0.327	0.037
Adjusted R ²	0.454					
Pseudo R ²			0.292		0.314	
No. of observations	7 378					

Source: Prepared by the author using data from the Permanent Household Survey.

Note: Pooled data, households with heads aged under 65. To simplify the presentation, the parameters of the wave, region and economic sector dummies are not given. For the same reason, only the relevant coefficients are shown in the models with interactions.

Bibliography

- Altimir, O. and L. Beccaria (2000): El mercado de trabajo bajo el nuevo régimen económico en Argentina, in D. Heymann and B. Kosacoff (eds.), *La Argentina de los noventa. Desempeño económico en un contexto de reformas*, Buenos Aires, EUDEBA.
- Arriagada, I. (2004): Estructuras familiares, trabajo y bienestar en América Latina, *Cambio de las familias en el marco de las transformaciones globales: necesidad de políticas públicas eficaces*, I. Arriagada and V. Aranda (eds.), Seminarios y conferencias series, No. 42, LC/L.2230-P, Santiago, Chile, Economic Commission for Latin America and the Caribbean (ECLAC). United Nations publication, Sales No. S.04.II.G.150.
- Beccaria, L. and F. Groisman (2006): Income instability, mobility and distribution in Argentina, *CEPAL Review*, No. 89, LC/G.2312-P, Santiago, Chile.
- (eds.) (2008): *Argentina desigual*, Buenos Aires, Universidad Nacional de General Sarmiento (UNGS).
- Cortés, R. and F. Groisman (2007): *Hogares, empleo y pobreza: Argentina 1996-1998 y 2003-2006*, Quito, at press.
- Durlauf, S. and M. Fafchamps (2004): *Social Capital*, NBER Working Paper, No. 10485, Cambridge, Massachusetts, National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w10485>.
- ECLAC (Economic Commission for Latin America and the Caribbean) (2007a): *Preliminary Overview of the Economies of Latin America and the Caribbean 2007*, LC/G.2355-P, Santiago, Chile. United Nations publication, Sales No. E.07.II.G.161.
- (2007b): *Social Panorama of Latin America 2007*, LC/G.2351-P, Santiago, Chile.
- Frenkel, R. and M. Rapetti (2008): Five years of competitive and stable real exchange rate in Argentina, 2002-2007, *International Review of Applied Economics*, vol. 22, No. 2, London, Taylor & Francis.
- Hutchens, R. (2004): One measure of segregation, *International Economic Review*, vol. 45, No. 2, Oxford, Blackwell Publishing.
- Kaztman, R. (2001): Seduced and abandoned: the social isolation of the urban poor, *CEPAL Review*, No. 75, LC/G. 2150-P, Santiago, Chile.
- Roberts, B. and R. Wilson (eds.) (forthcoming): *Urban Segregation and Governance in the Americas*, Texas, University of Texas.
- Tokman, V. (2007): Informalidad, inseguridad y cohesión social en América Latina, Políticas sociales series, No. 130, Santiago, Chile, Economic Commission for Latin America and the Caribbean. United Nations publication, Sales No. S.07.II.G.45.
- Wilson, W. (1997): *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*, Chicago, University of Chicago Press.