STILL WITH US AFTER ALL OF THESE YEARS: TRENDS IN YOUTH LABOUR MARKET ENTRY, HOME-LEAVING AND HUMAN CAPITAL ACCUMULATION IN ITALY 1993-2003

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August 2005
First Draft

Abstract

In this paper I examine a number of issues related to the Italian youth labour market and, in particular, youth labour market entry, over the last decade or so. The Italian youth labour market has a number of distinct characteristics which mark it apart from other European Countries. The analysis presented here is essentially motivated by concern with two of these:

a) the very high youth unemployment rate, and, above-all high ratio of youth to adult unemployment rates; and,

b) the strong and increasing tendency for youngish Italians to remain in the parental home.

The paper takes a broad approach to the analysis of these questions looking first at time trends in labour market entry, human capital accumulation, home leaving and family formation on the basis of information contained in the Italian Labour Force Survey using also the Bank of Italy's Survey on Household Income and Wealth. The analysis also employs a broad definition of young people which is extended to include young people up to 34 years old rather than the conventional definition using only 15-24 year olds. Reduced form panel estimates of the determinants of the behavioural variables are derived. The approach adopted is close in spirit and methodology to the work undertaken by Card & Lemieux (2000) in the North American context, O'Higgins (2003) on global trends and O'Higgins (2005) in the Italian context. It is complementary to the recent studies of home leaving and labour market entry in the Italy which tend to concentrate on single specific determinants of, for example, home-leaving such as in Becker at al. (2004) on the impact of job uncertainty or Mannacorda & Moretti (2004) on the impact of parental income.

The analysis identifies a substantial impact of labour market conditions in shaping young people's choices. The results also highlight the importance of distinguishing the effects of these aggregates by age and throw some light on the interrelationship between the phenomena under study. It may be seen as a first step in a broader research programme aimed at identifying the central factors driving young people's transition choices in recent years.

1. Introduction

This paper takes a look at developments in the youth labour market in Italy over the last decade or so. In doing so the approach taken is rather broader than is conventional in the recent literature. This is so in terms of the indicators examined: in addition to employment, unemployment (broadly defined), and educational participation the paper also looks at living arrangements and, briefly, marriage rates. The broader approach also applies to the definition of young people themselves. Rather than the conventional 15-24 year old age group, young people here are taken to include all those having completed between 15 and 34 years on this planet. This broader definition of young people is in line with the lengthening youth-adult transition process in general, and also with the generally longer transition period traditionally observable in Italy[1]. Indeed limiting the analysis of the process of the transition from the parental home to the establishment of an 'independent' residence over the last decade in Italy looking only at the under-25s would rather miss the point since the almost all of the variation in the co-residence rate over the decade has occurred amongst those aged 25 and over.

Today, young people in Italy live with their parents longer, accumulate more years of education and both get married and enter the labour market significantly later than they did a decade ago. The analysis presented here is intended to further our understanding of why this is the case. The most studied of these phenomena is of course the transition from school to work. In recent times, however, attention has increasingly focused also on the transition from the parental home to an independent residence, or rather not - as is increasingly the case in Italy. I also briefly include consideration of the declining marriage rate given its intimate connection to the home-leaving decision of young people, particularly young women.

On this basis, youth transitions are analysed in an effort to understand the extent to which aggregate economic factors contributed (or did not contribute) to the evolution of the transition processes. The approach adopted is similar in methodology to the study of Canadian and US youth labour markets undertaken by Card & Lemieux[2]. The paper is intended as a first stage in an analysis of changing transition arrangements in Italy and will be complemented in the future by individual level analyses intended to gain better insight in to the factors driving the interrelated decisions concerning the transition from school to work and from 'youth' to 'adulthood'.

2. Trends

The paper is motivated by a series of general observations on the youth labour market. One concerns the intimate connection between the different types of transition. To some extent these are obvious – the transition between school and work, for example

– very few people in Italy, even now, study and work at the same time[3]. Others are perhaps less immediately apparent. Table 1 illustrates the interrelation between living arrangements and the other choices: working, studying and getting married. The differences in behaviour between those who live with their parents and those who have established their own residence are clear. Young men are much more likely to work if they are living away from their parents (although interestingly this is not true for young women over 20). Conversely, those living at home are much more likely to study. The decision of whether to study or work presumably has much to do with the explicit and implicit financial transfers implied by living with one's parents in addition to an individual's work-study preference or indeed different preferences regarding the urgency of establishing one's own household. The last part of the table illustrates the important role of marriage in living arrangements. Clearly the forming of a long-term relationship (which in Italy still mostly means getting married) is the fundamental differentiator between living with ones parents and establishing one's own household above-all for young women[4].

What then has been happening in Italy over the last decade or so? Figure 1 illustrates changes in the living arrangements of young men and young women between 1993 and 2002[5] for Italy as a whole. Evident from the figure is the fact that the increasing age at which young Italians leave the parental home is attributable to the rise in the proportion of 25-34 year olds who remain with their parents. There is a clear upward trend for young men and young women in both the 25-29 and 30-34 year old age groups. The traditional youth group (15-24) shows virtually no change over the period. Also apparent is the difference between young men and young women, the latter being much more likely to leave the family earlier on. The gap between young men and young women seems to have narrowed for those in their late twenties and widened slightly for those in their thirties. Figures 1a-d, allow a little more detail in that they report co-residence rates separately for four age groups also distinguishing between three main geographical areas in Italy[6]. For the traditional youth group, the greater breakdown does seem to suggest a mild negative tendency, possibly depending to some extent on a greater tendency of young people to leave the household whilst still in education[7]. Much more marked however is the positive trend in staying with parents observable in figures 1c and 1d. For those in their late twenties the trend is stronger for young women than young men whilst the opposite appears to be true for those in their early thirties.

Figure 2 shows a similar picture as regards trends in working arrangements. There is a clear downward trend in the proportions of teenage men and women working largely reflecting a general trend towards greater educational participation. Young women in their late twenties and early thirties show a clear upward trend in labour force participation albeit remaining well below the level of men whilst the employment-population ratio of men over twenty has remained more or less constant over the period. Looking at the regional and age-group trends in more detail (figures 2a-d) one can observe the weak downward trend for teenagers and a similarly weak upward trend for 20-24 year olds. For the older age groups one can observe, at least in the North and

Central areas of the country, a general increase in the employment population ratio of women. One might also notice the growing difference between young men and young women which increases with age so that by their thirties the employment rates of young men in all three macro-regions are clearly above those of young women in all three areas.

Figure 3 looks at the situation as regards educational participation. There is a perceptible upward trend in educational participation for young women from all the age-groups. For men this is also true apart from those in their late twenties who don't seem to have increased their participation to any significant degree. Not very surprisingly, the upward trend in participation is most marked amongst the under-25s of both sexes. The regional/age-group breakdown (figures 3a-d) again reinforces the impression of increased educational participation across the board over time. One may also note the greater propensity to remain in education in the Centre possibly to do with the location of Rome in this macro-region. Also worthy of mention is the late twenties age-group. This group traditionally has a fairly substantial educational participation relative to other countries due to the low direct cost of university education in Italy and the lack of limits on the time spent studying for a degree. In the late 1990s the Italian educational system began to be overhauled. Two of the consequences were progressive increases in university fees as well as progressive increases in the costs and administrative barriers to prolonging one's studies indefinitely. This is a plausible explanation for the general downward trend in educational participation observable particularly for males in their late twenties around the turn of the century.

Finally figure 4 presents information on the trend in marriage rates. It might be observed that these figures report the proportion of the age-group who are married and thus include divorce or separation in addition to marriage per se. Notable from the graph are the higher rates of marriage amongst young women which reflect of course the tendency of women to get married younger than men. There is also a very clear downward trend in marriage rates which is most marked for those over 25 for both men and women, particularly so for young women in their late twenties. The regional age-breakdowns (figures 4a-4d) illustrate the higher marriage rates in the South of the country. For some groups the North-South divide appears to be closing but this is by no means universal.

3. Empirical Strategy

The model employed here looks at the relationship between the phenomena of interest - entering employment, participation in education, non-employment, remaining within the parental home and getting married - and two indicators of labour market conditions: a labour demand index and a wage index. The purpose being to determine the extent to which changes in youth behaviour were driven by these broad aggregates.

4

The model estimated is a three-way fixed effects panel linear probability model for the different states of the form:

$$(1) \qquad P_{irt} = \alpha_i + \alpha_r + \alpha_t + \beta_i(DEMAND)_{rt} + \gamma_i(WAGE)_{rt} + \varepsilon_{it}$$

Where P is an age (indexed by i), region (indexed by r) and year (indexed by t) specific probability; namely the employment rate, the educational participation rate, the non-employment rate, the proportion of young people living with their parents and the marriage-rate. The model includes fixed effects for age, region and year (indicated by the α) and age-specific coefficients on the two main variables of interest the demand and wage indices (indicated by the β).

The demand index is intended to capture variations in local opportunities and is simply the region, gender and year specific employment-population ratio of prime age adults here defined as those aged 35-49 so as to avoid overlap with the age-groups of interest. The index is derived from the same source as the dependent variables, namely the National Labour Force Surveys, 1993-2003. This a quarterly (undertaken in January, April, July & October) rotating sample survey of Italian households, covering around 200,000 people per wave. Each observation is based on annualised data from July of one year to April of the following year (corresponding to the academic year and therefore to the major shift points in young people's behaviour) or around 800,000 individual observations[8].

The wage index is intended to capture the attractiveness of available employment opportunities and is more problematic than the demand index. The Italian Labour Force survey contains no information on wages and recourse is had to the Banca d'Italia's Survey on Household Income & Wealth (SHIW). This is a much smaller and less frequent survey covering around 20,000 individuals every two or three years. The data points available for this variable determine the timing of the observations used in this study. Specifically information is used for the years 1993, 1995, 1998, 2000 and 2002. the wage index is constructed as the natural logarithm of the regional 'youth' mean relative to the national mean of the hourly wage of employees aged 15-34. The index is potentially problematic for a number of reasons. Principal amongst these is the small sample size used for the construction of the individual observations and the notorious unreliability of self-reported income[9]. Different trials were also undertaken using different methods of calculating the 'average' regional youth wage. The estimation results do not differ greatly across the different wage indices employed which gives some support to the use of this index[10].

A second potential problem concerns the possible endogeneity of the wage index. One basic assumption underlying the estimation of this type of model is that the youth wage is not affected by the supply of (youth) labour – this is of particular (but not of exclusive) relevance in the estimation of the employment-rate. There are a number of reasons why one might suppose that youth wages are above their market clearing level, not least of which the very high unemployment rates facing young people in Italy[11]. Moreover, a simple test of the hypothesis is possible. Following the approach previously employed for the USA & Canada[12], the regional youth wage variable was regressed on the proportion of young people in the working age population[13]. The resulting coefficient on the youth share of the population was **positive** albeit not statistically significant at conventional levels. This is of course contrary to the prediction of the market clearing model where increases in labour supply should, ceteris paribus, **reduce** the prevailing wage but consistent with a model with excess labour supply in which wages are determined exclusively by the demand side of the market.

In addition to single year age fixed effects, the model allows the effects of the economic variables to vary across each age-group. Clearly it is to be expected that economic factors are likely to affect decisions differently at different points in ones life. Indeed, the results reported below very much reflect this.

Throughout, the dependent variables were lagged by six months. That is, for example for 1992, the employment-rate, educational participation, residence with parents and marriage-rate variables were based on annualised LFS data from July of 1992 until April 1993. The purpose is:
   a) to consider academic years – the decision to participate in education and consequently (to some extent) to participate in the labour market, particularly for the younger age groups, will largely be made in relation to the academic as opposed to the calendar year; and,
   b) to further remove possible problems of endogeneity of the wage variable – it is reasonable to suppose that decisions affecting labour force participation, leaving home and so on will be dependent on current and past values of the explanatory variables, inclusion earlier period from the labour force survey would actually imply using future values of the wage variable to determine current behaviour[14].

4. Results

Tables 2-6 report results of estimating equations of the form of (1) for each of the dependent variables of interest. The two panels in each table report the results of estimating the model for young men and young women separately. For working behaviour (table 2), one can observe the very strong positive impact of the 'adult' employment rate on young people's likelihood of employment particularly for young

men[15]. Although the effect is also clearly statistically significant for young women, the coefficients are much smaller in size. This somewhat surprising result may be explained by the use of the female 'adult' employment rate as a regressor. Introducing the male employment rate as the explanatory variable into the regression for females removes this strong time trend from the demand index and produces coefficients which are similar to the males. The implication is that behaviour of young women is less subject to the general trend in greater labour force participation of women and more subject to variations in overall labour demand than the participation rates of 'middle-aged' women. Wage effects are also positive for those over 20, however, in this case the coefficients are, with the exception of young women in their early twenties, not statistically significant. Perhaps most interesting are the negative and (mostly) statistically significant coefficients on the demand and wage indices observable for teenagers of both sexes. One interpretation of this concerns the possibly positive impact of improvements in economic conditions on the expected long-run benefits of, and therefore demand for, education. The negative coefficient here may be taken to imply that these expected longer term benefits outweigh to some extent the positive direct effects of increased or reduced demand per se.

As implied by the concluding observation of the previous paragraph, the effect of demand and wage variables on the decision to remain in education are less clear cut than for entry into employment. On the one hand, increases in demand and/or wages increase the opportunity cost of education[16] but at the same time may also raise the expected benefits in terms of better employment and/or higher wage returns[17]. The simple model employed here does not allow a distinction to be made between these two effects. For young women over twenty the effect of demand on educational participation is negative and statistically significant. Although the effect is weaker, the same can be said for young men over 25. Again however, the effect of demand and wages on teenagers appears to be positive which supports the notion that employment and wage indices are being taken as indicators of employment and wage returns to education by this group, in other words, the expected benefits of education rather than its opportunity cost.

Non-employment is essentially a residual category. It may be interpreted as the broad unemployment-population ratio[18]. It will be observed that the coefficients on demand and wage indices in table 4 are very similar, with changed signs, to the coefficients from the employment-ratio equation in table 2. this suggests that the main response to worsening economic conditions was a move into inactivity rather than refuge in education and, on combination with the results from table 3, to some extent puts into question the received wisdom on the Italian case where education has been traditionally seen as the refuge for the unemployed. Given the increasing costs and difficulties associated with attending and above-all remaining in university since the late nineties, it would be interesting to see the extent to which the coefficients are stable over time or whether in fact the response to falls in labour demand in terms of increased demand for education has got smaller over the years in response to the institutional changes in Italy.

Turning to the determinants of co-residence with parents, one finds strong negative effects of demand for all young women and for young men under 25. For young men, the effects of wages are also negative and declining with age becoming statistically significant for those over 25. Also for women the wage coefficient falls with age. These results are consistent with the models of family transfers and offspring's' residential decisions current in the literature[19]. Increased employment opportunities and/or higher wages in employment will tend to relax the financial constraint preventing young people from leaving the parental home. More prosaically, the family in Italy still seems to be playing the role of providing the social safety net not available from the State.

One of the main immediate determinants of leaving the parental home is marriage. As noted above, almost all young married couples live outside the parental home, although the extent to which this is because marriage provides a means to escape the parental home as opposed to the establishment of one's own residence being a natural but incidental consequence of marriage remains open to question. In any event, since marriage and leaving the parental home are so closely connected, but without entering into much detail on the main determinants[20], table 6 reports results on a similar equation estimated for marriage rates. To some extent at least the results support the maintained hypothesis. Particularly for the younger age groups, the demand (and, for young men, also the wage) indices exert a positive influence on the marriage rate of young people confirming the notion of a relaxation of the financial constraint allowing the formation of separate two person households. Clearly however, differences between tables 5 and 6 point to a more complex array of influences. Certainly it would be interesting to look separately at the evolution of the formation of single- and two-person person households by young people.

In order to get a sense of the extent to which aggregate economic changes have been driving changes in youth behaviour, table 7 reports the results of two exercises comparing estimated total changes in the behavioural variables over time with the changes over time in the behavioural variables explained by changes in labour market conditions. The first part of the table looks at the contribution of demand to total changes over time, whilst the second part, looks at the extent to which macro-region specific changes in labour market conditions have been behind divergent trends in young people's behaviour in the less developed South of the country compared to the North-Centre. The two comparisons are based essentially on the estimation of the models with and without the demand index[21]. In the first case, a model is estimated without demand and wage indices but with time, region and age fixed effects. The difference in the fixed effects for the end year with respect to the base year provides an estimate of the total time trend in the phenomenon of interest. This is then compared to the time fixed effects produced by estimating a model of the form of equation (1), that is including the economic aggregates as explanatory variables. The time fixed effects in this model correspond to the unexplained portion of the total time trend identified previously. The explained portion of the time trend is then simply the difference between the two. A similar procedure is

adopted for the estimation of divergent trends between North-Centre and South. In this case, however, separate time fixed effects are estimated for the North-Centre and South of the country for the two models (with and without explanatory labour market variables). The difference in the difference in the time fixed effects between base year and end year for North-Centre and South in the restricted model (without explanatory labour market variables) provide the total time trend, the same parameters from the unrestricted model provide the unexplained effects and, again, the total effect is the difference between them.

Looking at panel a) of the table, the first column reports the overall time trend in youth behaviour. For example, overall, the employment rate of young men (15-34 rose by 1.8 percentage points between 1995/6 and 2002/3. Half of this change (0.9 percentage points) is attributable to changes in the demand index. Overall, the table suggests that labour market conditions were responsible for a substantial part of the time trends in the employment and non-employment rates, a modest portion of the time trend in the co-residence of young men, but very little of the change over time in educational participation or marriage rates. In several cases, in particular regarding the co-residence decisions of young women, the labour market variables worked against the overall time trend. That is, for example, the model suggests that without the impact of labour demand, co-residence of young women would actually have increased significantly more than it actually did.

Turning to panel b), the table shows the impact of labour market variables on divergent (and occasionally convergent) time trends across the two macro-regions. Thus, for example, the table shows that on average, the gap between the North-Centre and the South of Italy in terms of young male employment rates increased by 6.2 percentage points. Of this increased divergence, a little under two-thirds (or 3.9 percentage points) is explained by differences in changes in the demand index. It is clear from the table that labour market variables made an important contribution to divergent time trends i youth behaviour between the two macro-regions. One may note also that with respect to the strong difference in trends in educational participation between the North-Centre and the South, labour market factors more than completely account for the substantial difference over time in the trend. That is, the model suggests that differences in labour market conditions by themselves would have produced and even greater North-South divide in terms of educational participation than was actually observed. I would not wish to overemphasise the importance of this type of counterfactual exercise, however, it does support the notion that labour market conditions played an important role in divergent North-South time trends in youth behaviour.

5. Conclusions

In this paper I have looked at a picture of changes in the Italian youth labour market, broadly defined. Applying a simple empirical model, the strong influence of aggregate demand and wage indices on young people's behaviour is clearly established. In particular, the analysis suggests that aggregate labour market factors played an important role in driving youth employment and non-employment rates as a whole over time. Moreover, such factors were very influential in driving divergent trends in employment and educational participation rates between the North and the South of Italy.

Beyond this, a number of other issues of interest also emerge. First, substantial differences are observable in the responses of young people of different ages. This suggests that analyses of issues such as parental home-leaving should take this into account. Leaving home at 20 is clearly a very different matter and influenced by different factors than leaving home at 30. Lumping together such groups is likely to produce a misleading picture. Second, the different timing of events and the differential influence of aggregate variables on them tends to bring into question the overly simplistic theoretical models underlying (although not usually being tested by) much of the research in this area. Third, although entry into a long-term relationship or marriage seems, particularly for young women, to be the key to escaping from the parental home, differences in the response of marriage and co-residence to economic aggregates, as well as the analysis of time trends, suggest that there is rather more to be investigated here. In particular, it may well be fruitful to look at exit from the parental home in order to form single person households separately from the marriage based exit. Finally, the analysis has raised the obvious question of the effects of changing university costs (and entry and exit mechanisms) which has characterised recent Italian History in the way that education is used as a refuge from unemployment.

This is just a start. The next stage would be to move towards a quasi-structural model still using aggregated data. This would imply introducing a more nuanced analysis which would allow the disentanglement of different basic effects, two obvious examples being: the direct costs of education vs. their longer run employment and wage returns; and, the distinction between parental and child's income in determining home leaving behaviour. This could then inform and be complemented by an individual level analysis of the interrelated choice variables.

References

Becker, Sascha O., Samuel Bentolila, Ana Fernandes and Andrea Ichino, "Job Insecurity and Children's Emancipation." IZA Discussion Paper no. 1046, March 2004.

Biancotti, Claudia, Giovanni D'Alessio and Andrea Neri, "Errori di Misura nell'Indagine sui Bilanci delle Famiglie Italiane." Temi di Discussione no. 520, Servizio Studi, Banca d'Italia, October 2004.

Brandolini, Andrea, "The Distribution of Personal Income in Post-War Italy: source Description, Data Quality and the Time Patterns of Income Inequality." *Giornale degli Economisti e annali dell'Economia* , Vol 58(April 1999): 183-239.

Brandolini, Andrea, Piero Cipollone and Eliana Viviana, "Does the ILO Definition Capture All Unemployment." Mimeo, Banca D'Italia, December 2003.

Clark, Ken C. And Lawrence H. Summers, "Labour Market Dynamics and Unemployment: Reconsideration." *Brookings Papers on Economic Activity*, Vol. 1 (1979): 13-72.

Card, David. and Thomas Lemieux, "Adapting to Circumstances: The Evolution of work, School, and Living Arrangements Among North American Youth." In David Blanchflower and Richard Freeman (ed.s), *Youth Employment and Joblessness in Advanced Countries* (Chicago: University of Chicago Press, 2000).

Del Boca, Daniela, Marilena Locatelli and Silvia Pasqua, " Employment Decisions of Married Women: Evidence and Explanations." ChilD Working paper no. 8, 2000.

Del Boca, Daniela, Silvia Pasqua and Chiara Pronzato, "Employment and Fertility Decisions in Italy, France and the UK." ChilD Working paper no. 8, 2004.

Giannelli, Gianna and Chiara Monfardini, "Joint Decisions on Household Membership and Human Capital Accumulation of Youths – The Role of Expected Earnings and Local Markets." *Journal of Population Economics,* Vol. 16(2003): 265-285.

Jimeno, Juan F. and Rodriguez-Palanzuela, Diego, "Youth Unemployment in the OECD: Demographic Shifts, Labour Market Institutions and Macroeconomic Shocks." Working Paper Series no. 155, European Central Bank, June 2002.

Laferrière, Anne, and François-Charles Wolff, "Microeconomic Models of Family Transfers." Forthcoming in Serge-Cristophe Kolm et al. (ed.s), *Handbook on the Economics of Giving, Reciprocity and Altruism,* (Aldershot: Edward Elgar, 2005).

Manacorda, Marco and Enrico Moretti, "Why Do Most Italian Young Men Live with Their Parents? Intergenerational Transfers and Household Structure." Mimeo, LSE, London, June 2004.

O'Higgins, Niall, "School-Leaving at Sixteen: An Empirical Analysis using Individual Data," *Economia e Lavoro,* anno XXVI: 3-22, 1992.

O'Higgins, Niall, "Trends in the Youth Labour Market in Developing and Transition Countries." Social Protection Discussion Paper Series no. 0321, World Bank, December 2003.

O'Higgins, Niall, "I Giovani nel Mercato di Lavoro Meridionale," in ISFOL, *Il Mercato di Lavoro Meridionale*, ISFOL, forthcoming 2005.

Table 1: Employment, educational participation and marriage rates, by living arrangement, age-group and sex, Italy 2002/03.

% who are:	Males		Females	
	Living with parents	Living in own household	Living with parents	Living in own household
Working				
- 15-19 years	11.1	57.4	6.5	20.8
- 20-24 years	43.7	68.9	32.8	33.4
- 25-29 years	66.7	87.4	53.9	55.9
- 30-34 years	78.4	92.8	64.3	54.3
Studying				
- 15-19 years	78.0	29.5	82.8	18.9
- 20-24 years	33.4	18.1	45.3	12.7
- 25-29 years	14.1	4.0	21.8	3.5
- 30-34 years	5.1	0.7	7.3	1.2
Married				
- 15-19 years	0.4	25.6	0.5	39.9
- 20-24 years	1.1	32.7	1.9	67.7
- 25-29 years	2.1	61.0	4.6	80.6
- 30-34 years	6.5	77.7	10.9	84.9

Note: The table reports the employment, educational participation and marriage rates separately according to living arrangements and by age-group and gender.
Source: ISTAT Labour Force Surveys, July & October 2002 and January & April 2003.

Table 2: Effects of Demand and Wage Indices on working behaviour of young people, unified age-groups.

MALES	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	**-.50**	**-.079**
	(.204)	**(.0330)**
20-24 year olds	**1.10**	.045
	(.258)	(.0443)
25-29 year olds	**1.18**	**.093**
	(.219)	**(.0331)**
30-34 year olds	**.53**	.009
	(.213)	(.0402)
FEMALES	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	**-.74**	-.082
	(.077)	(.0570)
20-24 year olds	**.36**	**.064**
	(.049)	**(.0274)**
25-29 year olds	**.73**	.042
	(.059)	(.0312)
30-34 year olds	**.65**	.004
	(.060)	(.0304)

Note: The table reports the results of estimating equation (1). For reporting purposes, the age varying coefficients on the demand and wage indices were restricted to be constant over five year age groups. This simplifies the reporting procedure (rather than reporting 20 coefficients for each of the explanatory variables). In addition to the reported coefficients, each equation included unrestricted age, region and year dummies. Estimates were weighted by age specific regional population. Standard errors corrected for arbitrary heteroscedasticity and clustered for each region and year are reported in parentheses. Coefficients which were statistically significant at a least 10% are reported in bold. The number of observations in each equation is 1900 (19 regions x 5 years x 20 single year age groups).

Table 3: Effects of Demand and Wage Indices on the Educational Participation of young people, unified age-groups.

MALES	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	.21 (.132)	.020 (.0359)
20-24 year olds	.09 (.126)	.022 (.0211)
25-29 year olds	-.11 (.107)	**-.044** **(.0194)**
30-34 year olds	.01 (.107)	-.043 (.0362)
FEMALES	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	**.22** **(.044)**	.009 (.0196)
20-24 year olds	**-.08** **(.043)**	**-.049** **(.0288)**
25-29 year olds	**-.17** **(.037)**	-.028 (.0177)
30-34 year olds	**-.14** **(.044)**	.047 (.0269)

Note: The table reports the results of estimating equation (1). For reporting purposes, the age varying coefficients on the demand and wage indices were restricted to be constant over five year age groups. This simplifies the reporting procedure (rather than reporting 20 coefficients for each of the explanatory variables). In addition to the reported coefficients, each equation included unrestricted age, region and year dummies. Estimates were weighted by age specific regional population. Standard errors corrected for unspecified heteroscedasticity and correlation across age-groups for each region and year are reported in parentheses. Coefficients which were statistically significant at a least 10% are reported in bold. The number of observations in each equation is 1900 (19 regions x 5 years x 20 single year age groups).

Table 4: Effects of Demand and Wage Indices on the non-employment of young people, unified age-groups.

MALES	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	**.35**	.054
	(.179)	(.0449)
20-24 year olds	**-1.18**	**-.065**
	(.184)	**(.0355)**
25-29 year olds	**-1.07**	**-.048**
	(.147)	**(.0288)**
30-34 year olds	**-.55**	**.033**
	(.144)	**(.0197)**
FEMALES	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	**.55**	.074
	(.067)	(.0492)
20-24 year olds	**-.24**	-.012
	(.045)	(.0181)
25-29 year olds	**-.54**	-.014
	(.053)	(.0242)
30-34 year olds	**-.49**	**-.053**
	(.059)	**(.0284)**

Note: The table reports the results of estimating equation (1). For reporting purposes, the age varying coefficients on the demand and wage indices were restricted to be constant over five year age groups. This simplifies the reporting procedure (rather than reporting 20 coefficients for each of the explanatory variables). In addition to the reported coefficients, each equation included unrestricted age, region and year dummies. Estimates were weighted by age specific regional population. Standard errors corrected for unspecified heteroscedasticity and correlation across age-groups for each region and year are reported in parentheses. Coefficients which were statistically significant at a least 10% are reported in bold. The number of observations in each equation is 1900 (19 regions x 5 years x 20 single year age groups).

Table 5: Effects of Demand and Wage Indices on young people remaining with their parents, unified age-groups.

MALES	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	**-.50** **(.199)**	-.030 (.0593)
20-24 year olds	**-.34** **(.160)**	-.037 (.0593)
25-29 year olds	.17 (.199)	**-.084** **(.0274)**
30-34 year olds	**.33** **(.186)**	**-.141** **(.0460)**
FEMALES	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	**-.36** **(.116)**	**.077** **(.0272)**
20-24 year olds	**-.21** **(.082)**	.017 (.0219)
25-29 year olds	**-.14** **(.080)**	**-.102** **(.0370)**
30-34 year olds	**-.32** **(.101)**	-.006 (.0221)

Note: The table reports the results of estimating equation (1). For reporting purposes, the age varying coefficients on the demand and wage indices were restricted to be constant over five year age groups. This simplifies the reporting procedure (rather than reporting 20 coefficients for each of the explanatory variables). In addition to the reported coefficients, each equation included unrestricted age, region and year dummies. Estimates were weighted by age specific regional population. Standard errors corrected for unspecified heteroscedasticity and correlation across age-groups for each region and year are reported in parentheses. Coefficients which were statistically significant at a least 10% are reported in bold. The number of observations in each equation is 1140 (19 regions x 3 years x 20 single year age groups).
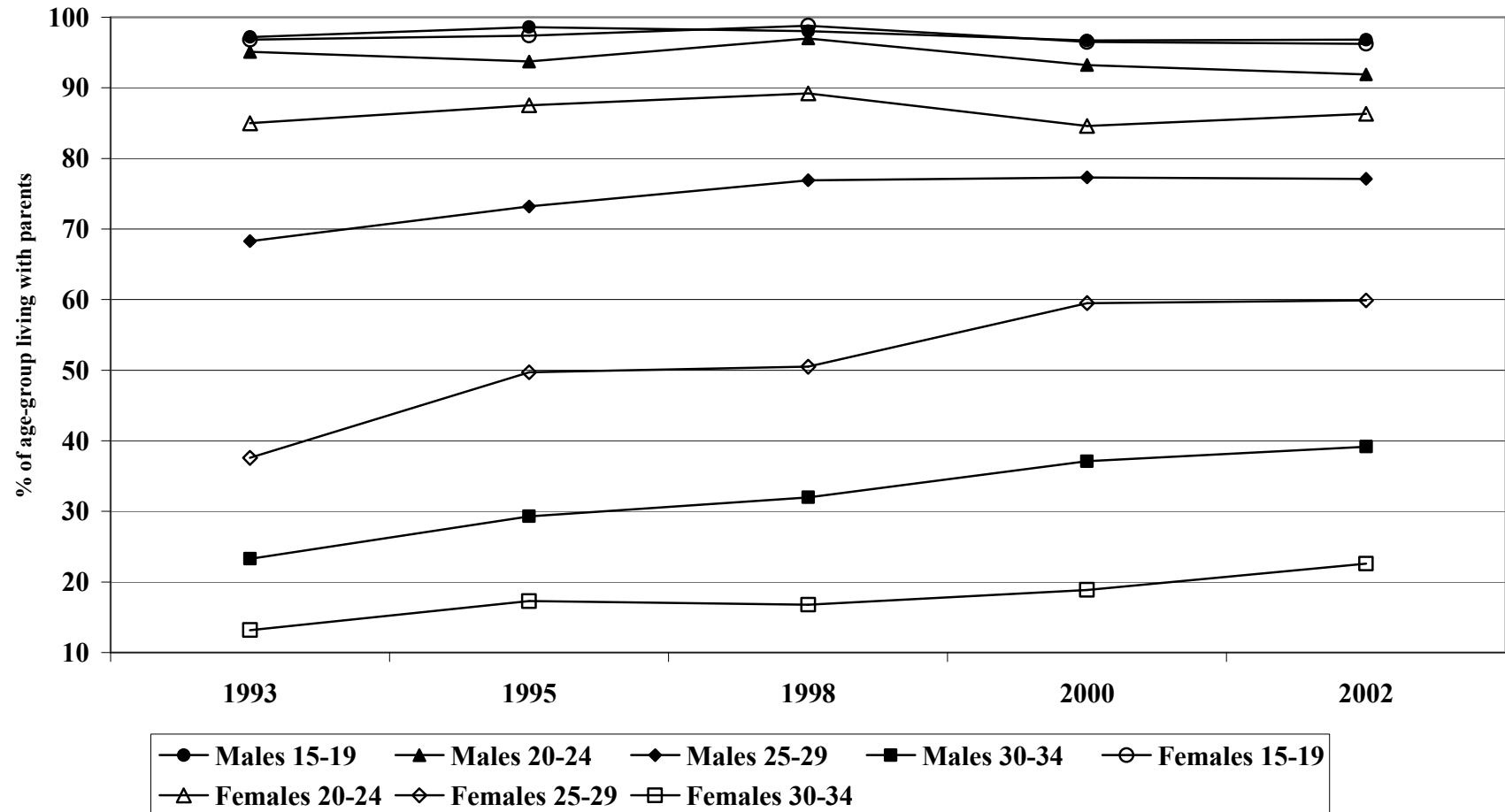
Table 6: Effects of Demand and Wage Indices on Marriage amongst young people, unified age-groups.

MALES	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	**.47** **(.192)**	**.091** **(.0486)**
20-24 year olds	**.36** **(.152)**	**.054** **(.0322)**
25-29 year olds	-.08 (.129)	-.034 (.0396)
30-34 year olds	-.17 (.174)	-.039 (.0465)
FEMALES	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	**.35** **(.068)**	-.007 (.0296)
20-24 year olds	.02 (.068)	.001 (.0183)
25-29 year olds	**-.16** **(.057)**	**.048** **(.0292)**
30-34 year olds	.02 (.064)	.016 (.0307)

Note: The table reports the results of estimating equation (1). For reporting purposes, the age varying coefficients on the demand and wage indices were restricted to be constant over five year age groups. This simplifies the reporting procedure (rather than reporting 20 coefficients for each of the explanatory variables). In addition to the reported coefficients, each equation included unrestricted age, region and year dummies. Estimates were weighted by age specific regional population. Standard errors corrected for unspecified heteroscedasticity and correlation across age-groups for each region and year are reported in parentheses. Coefficients which were statistically significant at a least 10% are reported in bold. The number of observations in each equation is 1900 (19 regions x 5 years x 20 single year age groups).

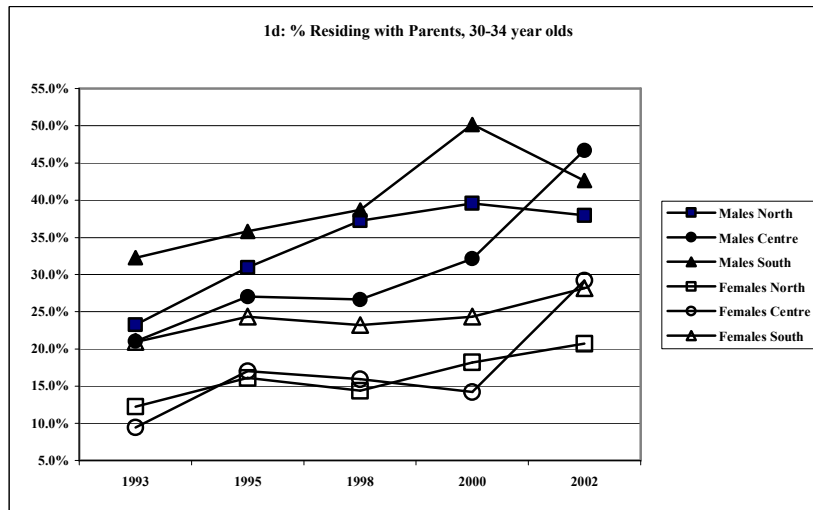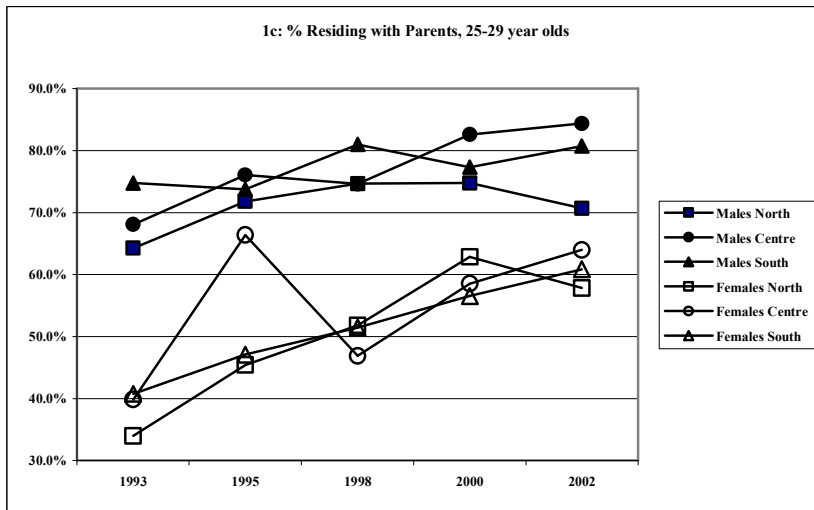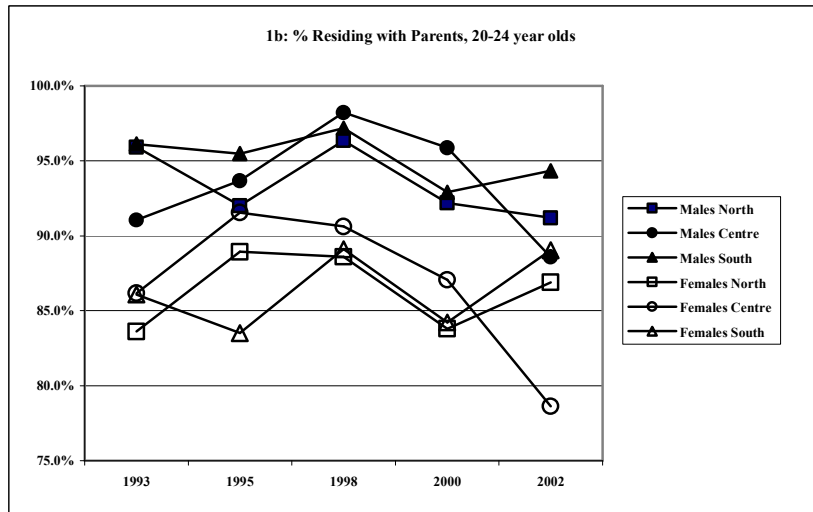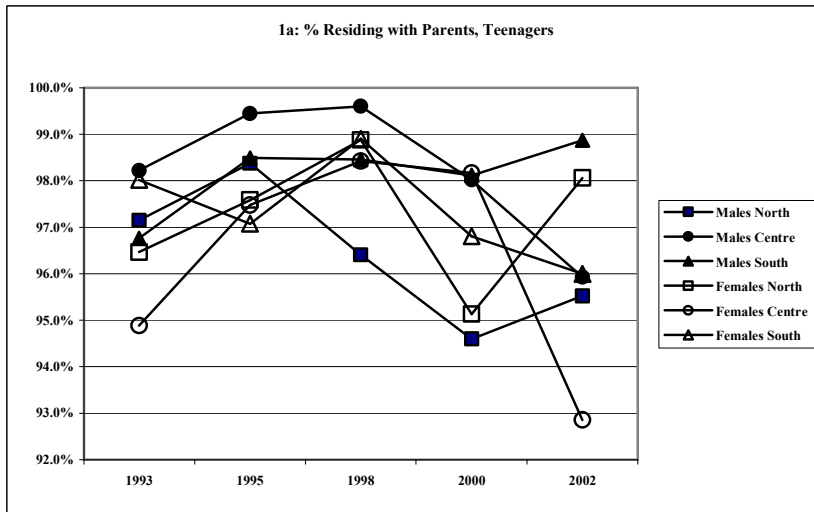**Table 7: The Contribution of Labour Market Conditions:**
   a) **to Changes in Young People's Behaviour Over Time in Italy; and,**
   b) **to Geographically Divergent Trends in Young People's Behaviour Between the North-Centre and the South.**

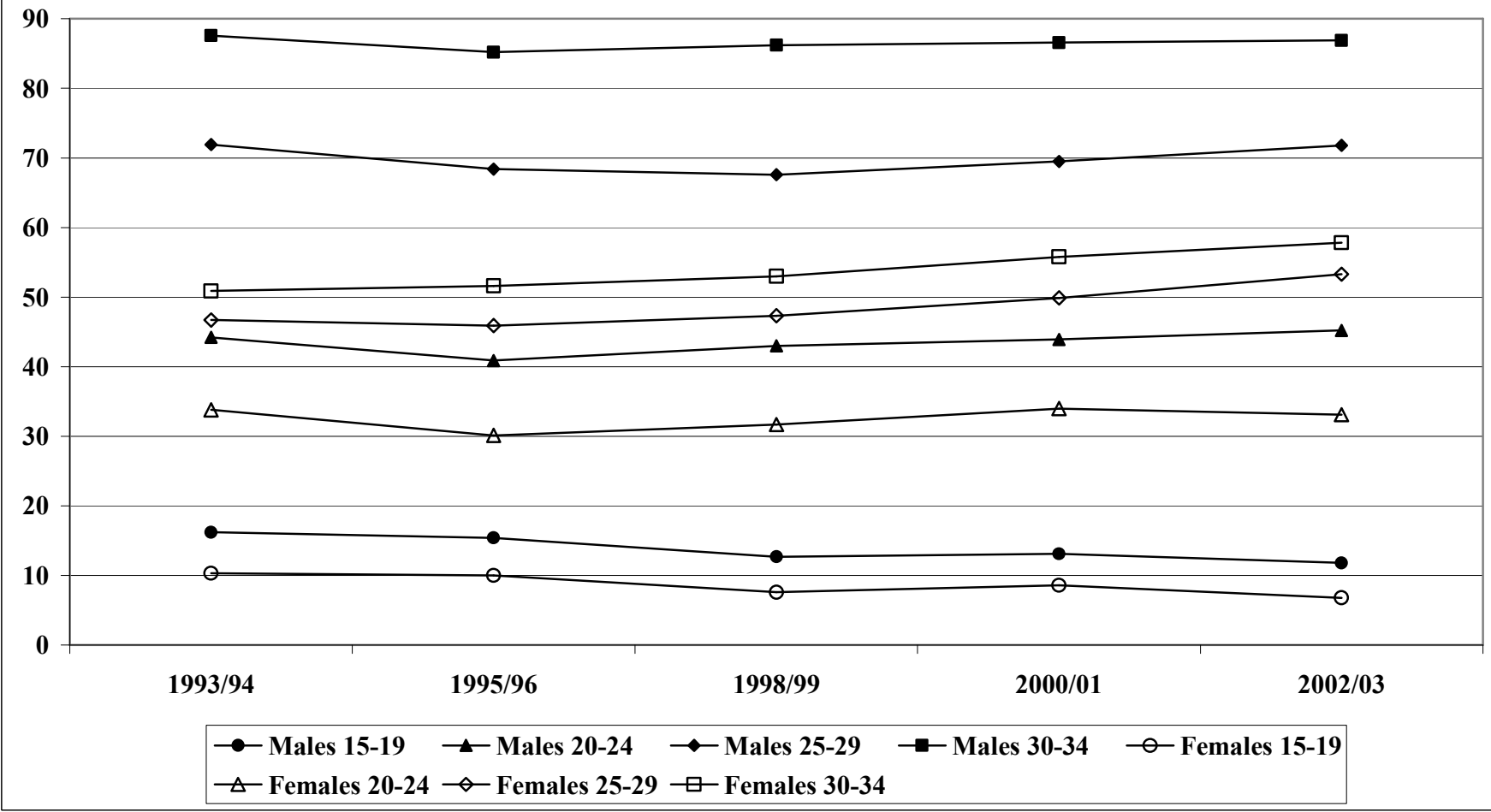| a) Difference over time in Italy, 1995/6-2002/3				
		Total change	Changes Explained by Labour market conditions	Unexplained change
Males	Working	1.8	0.9	0.9
	Studying	1.9	0.1	1.8
	Non-employed	-3.6	-1.0	-2.6
	Living with parents	1.0	0.2	0.8
	Marriage	-5.6	0.1	-5.7
Females	Working	4.2	2.7	1.5
	Studying	3.6	-0.5	4.1
	Non-employed	-7.8	-2.2	-5.6
	Living with parents	2.4	-1.3	3.7
	Marriage	-5.9	0.1	-6.0
b) Differences between the North-Centre and the South over time, 1993/4-2002/3				
		Total change	Changes Explained by Labour market conditions	Unexplained change
Males	Working	6.2	3.9	2.3
	Studying	10.0	12.6	-2.6
	Non-employed	-1.2	-1.5	0.3
	Living with parents	0.0	-0.1	0.1
	Marriage	-2.6	1.1	-3.7
Females	Working	7.7	5.2	2.5
	Studying	7.4	12.2	-4.8
	Non-employed	-1.2	-1.5	0.3
	Living with parents	-2.6	1.1	-3.7
	Marriage	-0.3	0.6	-0.9

Note: the table reports the resultant changes converted into percentage points. For co-residence with parents, changes refer to the period 1998/9-2002/3.
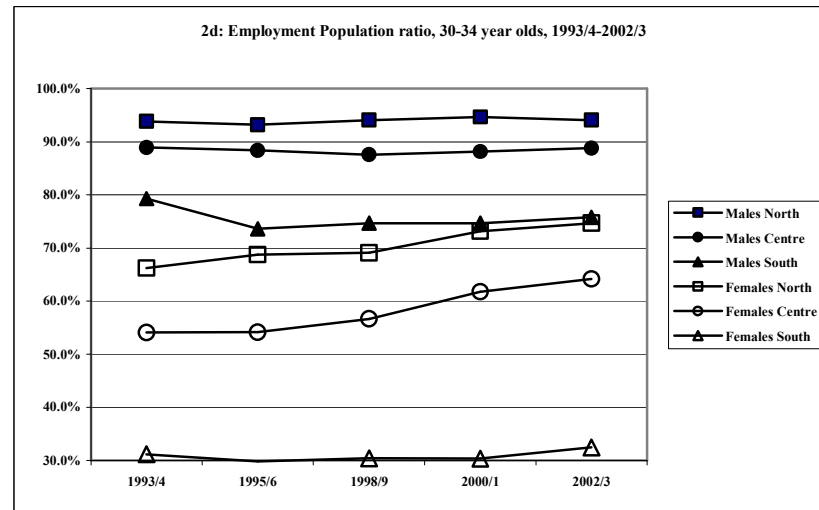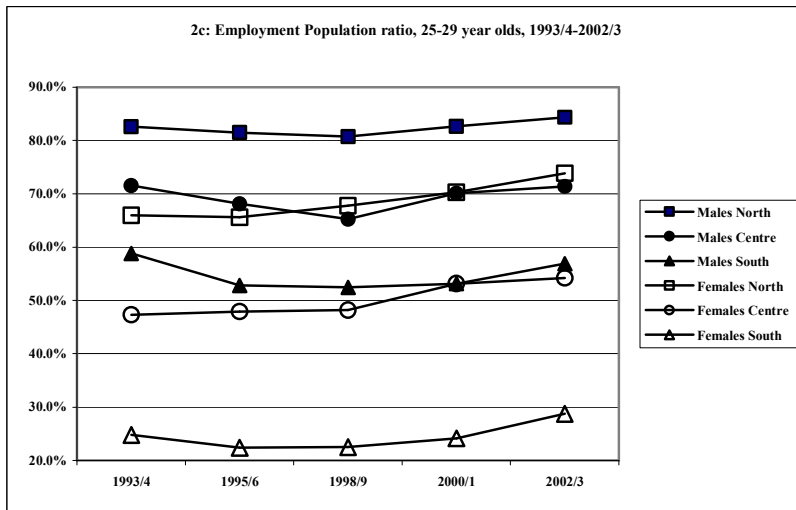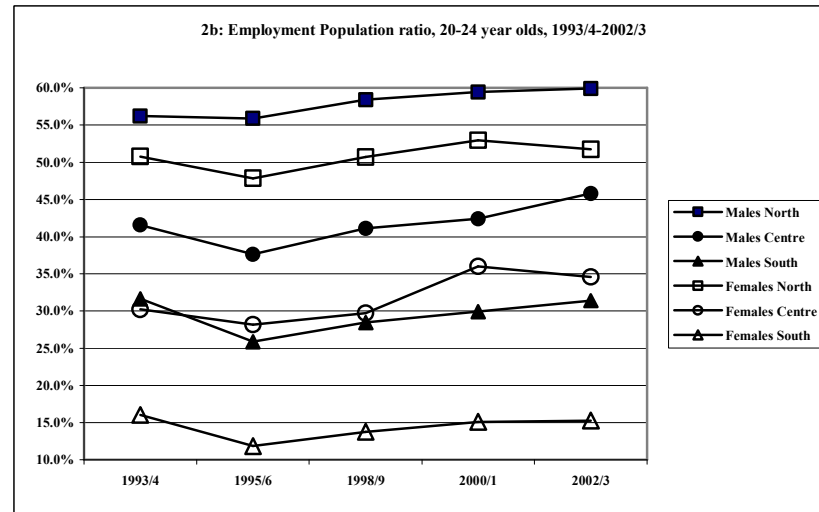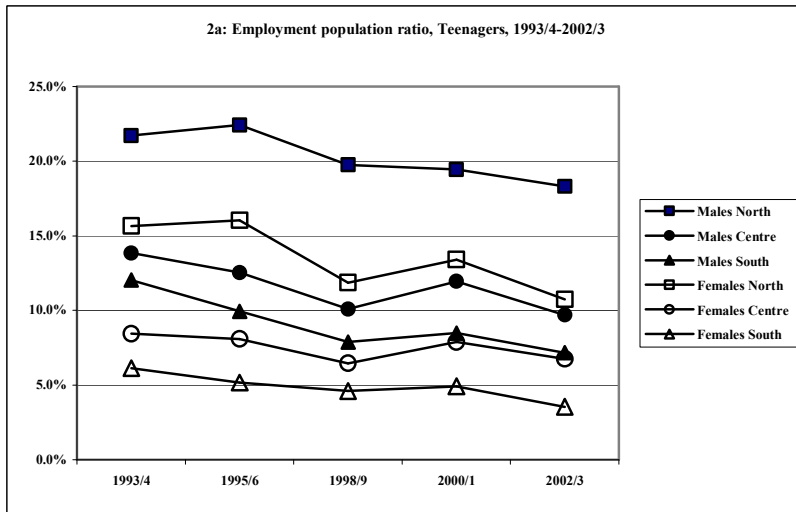
Figure 1:Percentage of young people living with their parents by age, Italy 1993-2002

1a: % Residing with Parents, Teenagers

1b: % Residing with Parents, 20-24 year olds

1c: % Residing with Parents, 25-29 year olds

1d: % Residing with Parents, 30-34 year olds

20
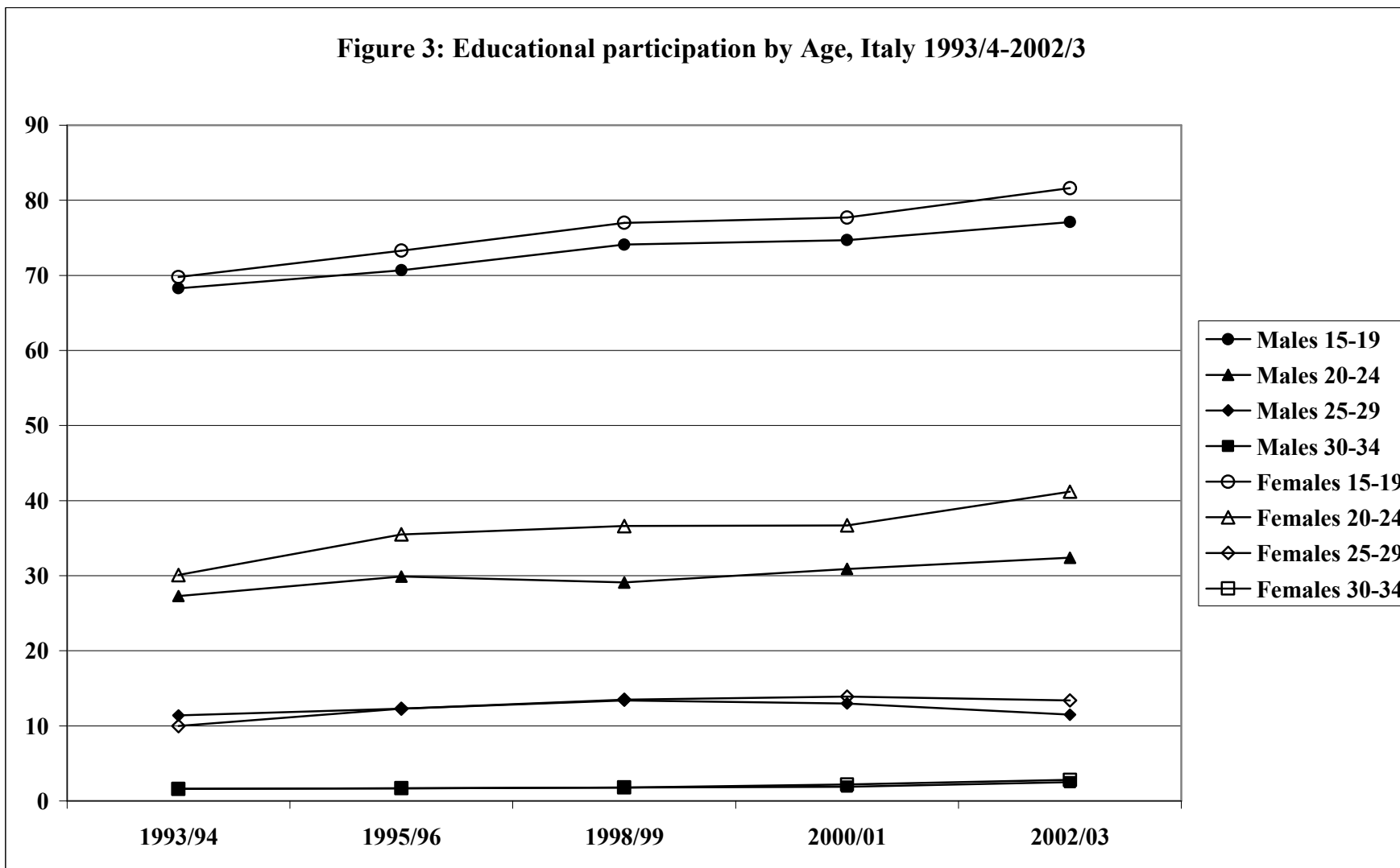
Figure 2: Employment-population ratio by Age, Italy 1993/4-2002/3

2a: Employment population ratio, Teenagers, 1993/4-2002/3

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

2b: Employment Population ratio, 20-24 year olds, 1993/4-2002/3

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

2c: Employment Population ratio, 25-29 year olds, 1993/4-2002/3

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

2d: Employment Population ratio, 30-34 year olds, 1993/4-2002/3

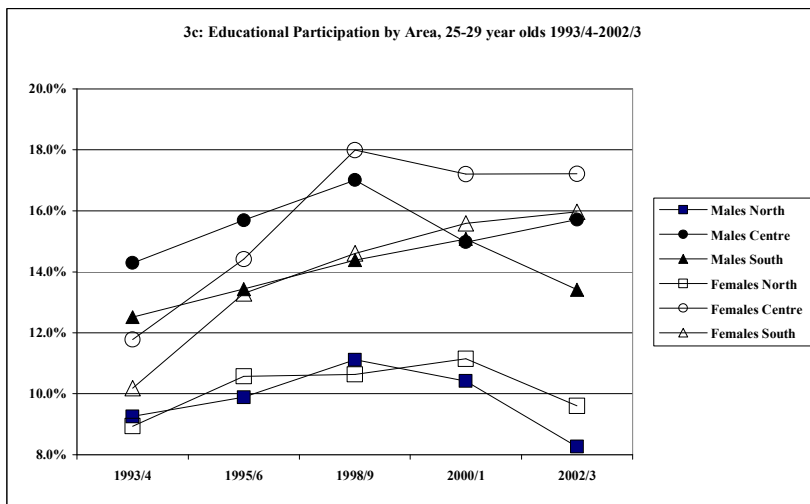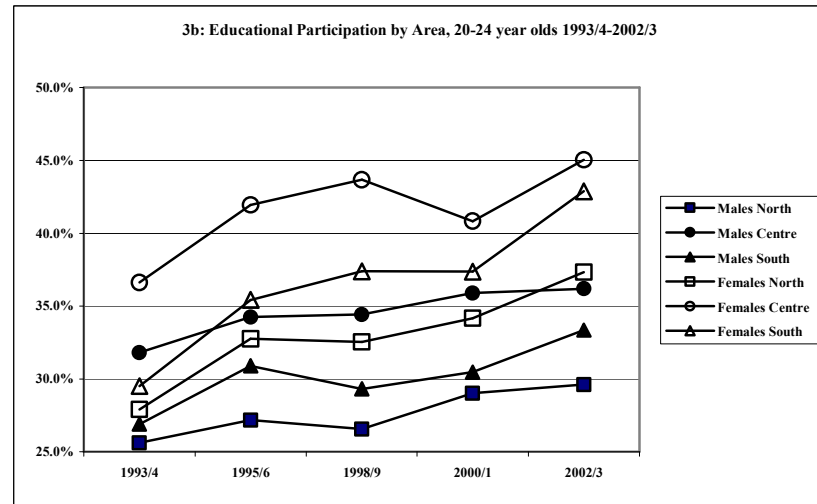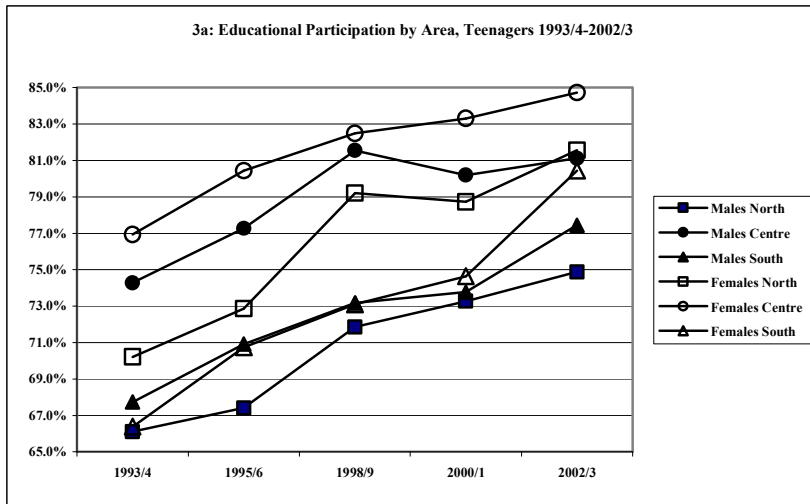Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South
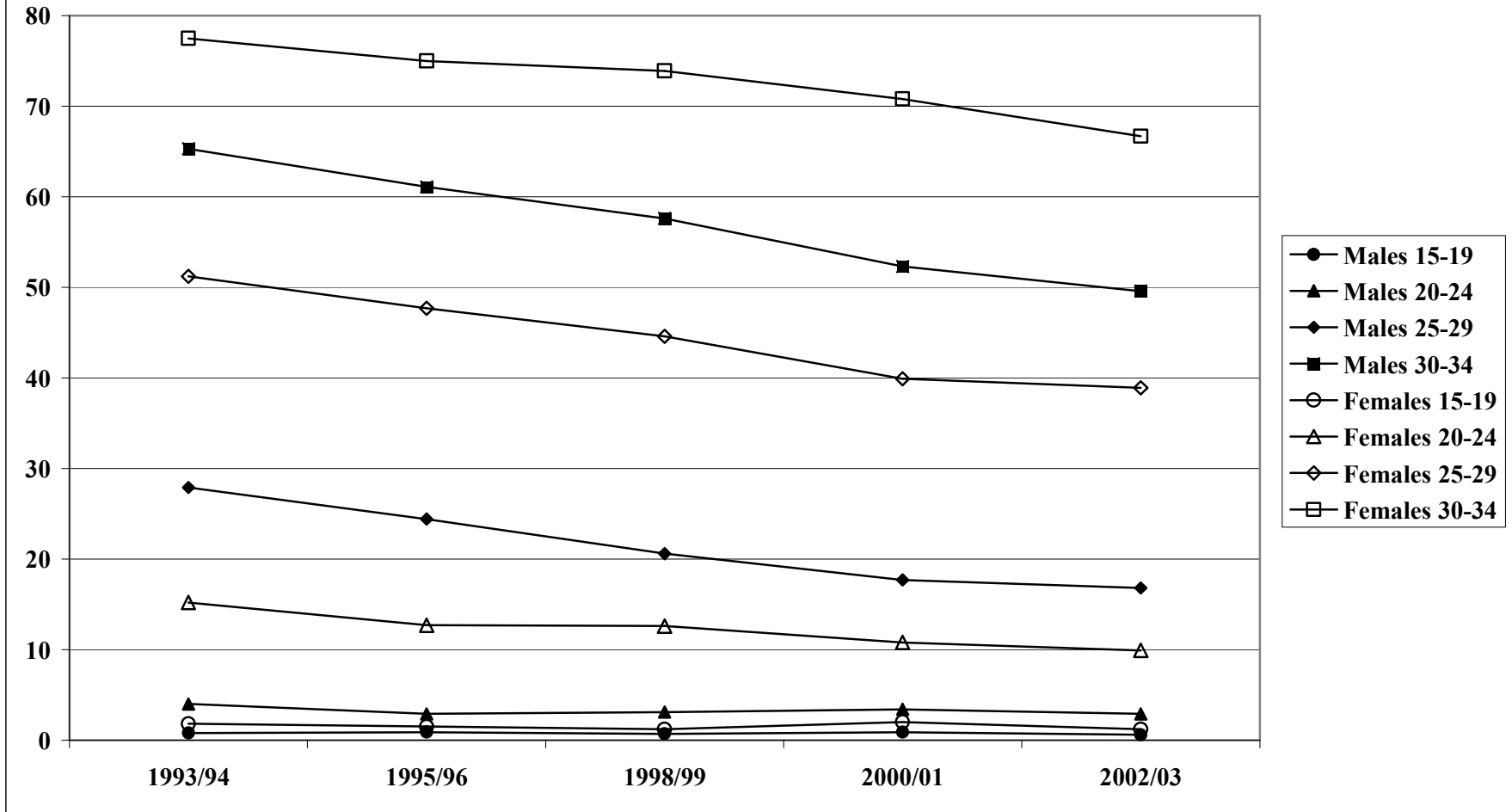
22

Figure 3: Educational participation by Age, Italy 1993/4-2002/3

Legend:
- Males 15-19
- Males 20-24
- Males 25-29
- Males 30-34
- Females 15-19
- Females 20-24
- Females 25-29
- Females 30-34

3a: Educational Participation by Area, Teenagers 1993/4-2002/3

3b: Educational Participation by Area, 20-24 year olds 1993/4-2002/3

3c: Educational Participation by Area, 25-29 year olds 1993/4-2002/3

3d: Educational Participation by Area, 30-34 year olds 1993/4-2002/3
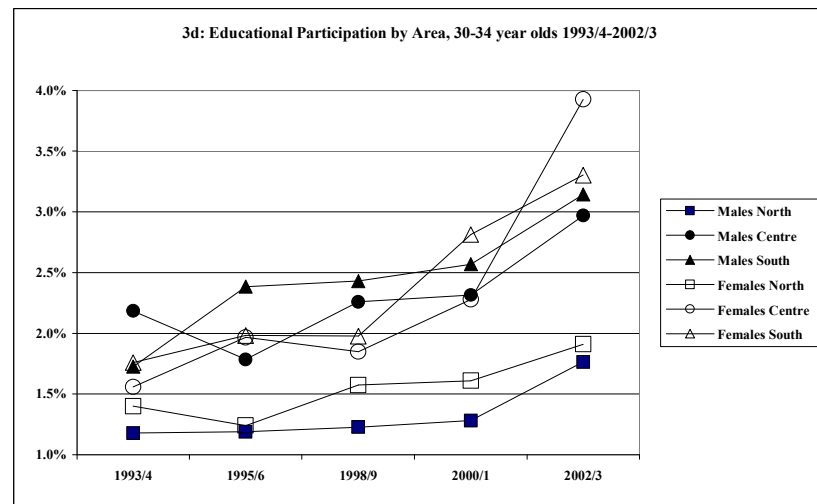
Figure 4: Marriage Rate by Age, Italy 1993-2002

Legend:
- Males 15-19
- Males 20-24
- Males 25-29
- Males 30-34
- Females 15-19
- Females 20-24
- Females 25-29
- Females 30-34

4a: Marriage Rate by Area, Teenagers, 1993-2002

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

4b: Marriage Rate by Area, 20-24 year olds, 1993-2002

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

4c: Marriage Rate by Area, 25-29 year olds, 1993-2002

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

4d: Marriage Rate by Area, 30-34 year olds, 1993-2002

Legend: Males North, Males Centre, Males South, Females North, Females Centre, Females South

26

Endnotes

[1] Indeed, Active Labour Market Policies for 'Youth' in Italy typically apply to those aged up to 29, 32 or even 35 (depending on the policy). This contrasts with countries like the UK, for example, where typically 18 or 24 are the cut-off ages used for youth employment policy.

[2] Card & Lemieux (2000).

[3] This is also the reason why the table does not include separately the non-employed category or 'activity'. Although studying and working are not necessarily mutually exclusive states, in Italy, and given the way the studying is defined – including only those whose principal activity was studying, as opposed to all those undertaking some sort of off-the-job training or education - this is in practice the case. Only a little under 0.5% of 15-34 year olds reported studying and working in the academic year 2002/03. Thus 'not working' is essentially a residual category.

[4] Interestingly, the table does not really support the three state model employed in a recent study of the joint determination of working/educational participation and exit from the parental home in Italy by Giannelli & Monfardini (2003). In contrast to that model which posits three possible states: living in the parental home and either working or studying or leaving the parental home and working, actually the numbers of young people who leave home and continue studying is by no means insignificant at least according to the LFS data.

[5] In order to allow an analysis of trends over the full period, the figure is based on data from the Banca d'Italia's Survey on Household Income and Wealth (hereafter SHIW) which provides data on living arrangements over the whole period under study. The ISTAT Labour Force Survey Data which is used as a basis for the statistical analysis of living arrangements below (and for the other figures included here has the advantage of a much larger sample size (each quarterly survey is roughly ten times the size of the bi or tri-annual SHIW) but which does not, in the version with the author, allow identification of living arrangements in 1993/4 and 1995/6.

[6] Italy is divided administratively into 20 regions (and 95 provinces) which form the basis of the statistical analysis (excluding Valle d'Aosta which is very small and, until 2002 was not identified separately in the LFS). For the purposes of the trends shown here, the regions are grouped into three super-regional blocks composed of the North (Piemonte, Valle D'Aosta, Lombardia, Liguria, Trentino, Veneto, Friuli, and Emiglia-Romagna), the Centre (Toscana, Umbria, Marche and Lazio), and the South (Abbruzzi, Molise, Campania, Puglia, Basilicata, Calabria, Sardinia and Sicily). The three macro-regions are strongly differentiated in terms of their level of development, industrial structure and per capita income.

[7] In order to go to university outside their home town for example, an unusual but gradually increasing choice amongst young people.

[8] Although, of course given the rotating nature of the sample, not 800,000 individuals.

[9] See inter alia, Brandolini (1999) and Biancotti et al. (2004) for specific discussions of the reliability of the income variables in the SHIW. Note however, that employee wages are by far the most reliably reported income variables in the survey.

[10] The small sample size also effectively excluded the possibility of using additional age (-group) breakdowns of the regional wage rates. Trials were made using a five year age breakdown on the wage variable combined with a larger geographical conglomeration. That is, rather than using THE wage rate of 15-34 year olds differentiated across 20 regions (and year), a separate wage-rate for 15-19 year olds, 20-24 year olds, 25-29 year olds, 30-34 year olds was calculated separately for five (as opposed to 20) geographical areas. Interestingly, the results did not change greatly.

[11] The youth (15-24) unemployment rate in Italy is amongst the highest in the EU with only Poland & Slovakia basting a worse situation facing young people. Moreover, the **ratio** of the youth (15-24) unemployment rate to the adult (25-54) unemployment rate in Italy is easily the highest in the EU. In 2002, the ratio stood at 3.5 compared to an EU average of 2.1. See, for example, O'Higgins (2005) for a discussion.

[12] Card & Lemieux (2000).

[13] Including also time and region fixed effects and the prime-age adult employment rate.

[14] Since the wage variable is based on annual income and the labour force variable on four time points during the year, using for example the April educational participation rates would imply that the decision

stay on at (or return to) education in April of a year would depend on wage rates observable largely in the future.

[15] The importance of demand to youth unemployment is of course a ubiquitous finding throughout the literature. See, for example, Jimeno & Rodriguez-Palanzuela (2002) on OECD countries and/or O'Higgins (2003) on the developing world.

[16] This is the principal effect identified in the work of Card & Lemieux (2000) in their study of North American youth where education acts as a refuge from unemployment.

[17] See, for example, O'Higgins (1992) for a discussion of this specific issue.

[18] It includes of course the 'ILO' unemployed who are willing, able and actively seeking to work but also all others who are neither in employment or in education, and above all the so-called discouraged workers group. Following from the seminal work by Clark & Summers (1979), in recent years the usefulness of the distinction between those actively seeking work and those who are not (i.e. the discouraged) has been increasingly been subject of debate. See, for example, Brandolini et al. (2003) for a discussion of the issue in the Italian (as well as EU) context.

[19] See, in particular, Manacorda & Moretti (2004), Becker et al. (2004) and Giannelli & Monfardini (2003) on Italy. Lafferrière & Wolff (2005) provide a general review of microeconomic models of family transfers on which these empirical analyses are based.

[20] Del Boca et al., in a series of papers (for example, Del Boca et al. (2000) on marriage and labour supply behaviour amongst women), has looked at the issues related to marriage, fertility and employment amongst women. It is relevant to note that in Italy, in common with other Southern European Countries, the negative correlation between fertility and the employment rates of women has persisted to the present. In contrast, in most other OECD countries, the correlation has become positive since the 1980s (Del Boca et al., 2004).

[21] In practice this means the changes driven by the demand index since the wage index is normalised to have mean zero in each time period there is no year-on-year change to impact on the fixed year effects.