

Youth Labour Market Entry, Home-Leaving and Educational Participation in Italy

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Abstract

In this paper I examine a number of issues related to the Italian youth labour market and youth labour market entry, over the last decade or so. The analysis is motivated by a number of characteristics of the youth labour market in this country, which although shared to some extent by youth labour markets in other countries, tend to be particularly pronounced in Italy. Specifically, in recent years, Italy has witnessed:

- a) a very high youth unemployment rate, and, above-all high ratio of youth to adult unemployment rates;
- b) a strong increasing trend in educational participation amongst young people under twenty-five;
- c) a strong and increasing tendency to delay departure from the parental home; and,
- d) a strong decreasing trend in the marriage rate amongst younger people.

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. In contrast to the standard international definition of those aged between fifteen and twenty-four, here the definition of young people is extend to include those not having yet reached their thirty-fifth birthday. 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

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 in 1990. 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. The paper proposes the use of a simple general framework which allows some understanding of relative importance of aggregate economic factors in driving observable trends as well as throwing some light on the extent and nature of the interaction between them.

The analysis presented here is motivated by a desire to better understand three principal phenomena. First, in Italy in recent decades and, particularly over the last ten years or so, the age at which 'young' people leave the parental home has been rising rapidly. This increase is largely attributable to the proportion of young men in their early thirties and young women in their late twenties who remain in the parental home. I have illustrated and discussed this trend in more detail elsewhere (O'Higgins, 2007), for present purposes one may note that between 1993 and 2002, the percentage of men in their early thirties (30-34) who lived with their parents almost doubled, from 23.3% to 39.2%¹. Over the same period, the percentage of women in their late twenties (25-29) who were still with their parents increased from 37.6% to 59.9%.

Second, in recent times, Italy has also witnessed a fairly rapid rise in educational participation, although in this case, the increase is concentrated amongst the more traditional youth category of 15-24 year olds. Between 1993/4 and 2002/3 post-compulsory teenage educational participation increased from 68.3% to 77.1% for young men² and from 69.8% to 81.6% for young females. For older youths (20-24) the corresponding increase was from 27.3% to 32.4% for young men and from 30.1% to 41.2% for young women.

Finally, the Italian youth labour market has been characterised for many years by a very high level of youth unemployment: high that is in both absolute terms but more in particular in relation to adults. The ratio of the youth (15-24 year old) unemployment rate to the aggregate unemployment rate (15+) in 2004 was 3.0. This is easily the highest ratio in the EU and is well above the average of European Community countries whether one thinks in terms of the old EU-15 (ratio = 2.0) or the extended Community of 25 (ratio= 2.1). In contrast to the other two phenomena, however, there is no strong time trend in the high relative youth unemployment rate in Italy. In 1994, for example, the ratio of youth to adult unemployment rates was also 3.0. This despite much policy emphasis on facilitating labour market entry through increasing 'flexibility' in the labour market.

Although not the focus of the analysis here, a fourth related trend may be mentioned which concerns the rapidly falling marriage rate in Italy. Although discernable as a trend

¹ This and the following statistic are based on the Bank of Italy's Survey on Household Income and Wealth (hereafter SHIW).

² These statistics are based on ISTAT's quarterly labour force survey (hereafter LFS).

across the board, in common with home-leaving, this phenomenon is largely concentrated amongst those between 25 and 34. Between 1993/4 and 2002/3 the marriage rate³ amongst those in their late twenties (25-29) fell from 27.9% to 16.8% for men and from 51.2% to 38.9% for women. The corresponding decrease for the 30 to 34 year old age-group was from 65.3% to 49.6% for men and from 77.5% to 66.7%.

Clearly to some extent, the phenomena listed above are related. To illustrate this, and in particular, the relation between leaving the parental home and the other phenomena, table 1 reports a cross tabulation of the living arrangements of 'young' people with the rates of employment, educational participation and marriage (subdivided by age and sex).

Table 1a: 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.

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.

³ Again this is based on the LFS. Note that the marriage rate is here used to refer not to the proportion of the age-group who get married but rather the proportion of the group who are married (and co-habiting with their partner) at the time of the survey and as such includes in the trend both the increased age at which people get married but also the increasing tendency for married couples to separate and/or divorce.

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 one's parents and establishing one's own household above-all for young women⁴.

Table 1b: Percentage point changes in employment, educational participation and marriage rates, by living arrangement, age-group and sex, Italy January 1994 - 2002/03.

% who are:	Males		Females	
	Living with parents	Living in own household	Living with parents	Living in own household
Working				
- 15-19 years	-3.1	+26.9	-2.0	-2.2
- 20-24 years	+1.1	+6.2	-0.1	+4.9
- 25-29 years	+3.4	+2.3	+4.3	+13.6
- 30-34 years	+2.5	+0.8	+3.6	+7.0
Studying				
- 15-19 years	+8.4	-22.0	+10.2	-21.0
- 20-24 years	+5.1	+0.7	+8.5	+4.2
- 25-29 years	-1.5	-0.6	+1.5	+0.1
- 30-34 years	+1.0	+0.3	+2.0	+0.4
Married				
- 15-19 years	=	+15.2	-0.3	+15.2
- 20-24 years	-0.3	-4.5	-0.7	-8.7
- 25-29 years	-1.6	-12.9	-0.6	-7.3
- 30-34 years	-1.6	-0.9	-0.2	-6.2

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 1b shows the percentage point changes in the various rates reported in table 1a between January 1994 and 2002/3. Thus, the table illustrates the changing interaction

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.

of home-leaving with other youth behaviours over time. The table illustrates various trends, although some care is needed in its interpretation⁵. In particular, one needs to bear in mind that each cell concerns the interaction between living with parents (or not) and the specific behaviour such as working or studying. Thus, it is well to remember that the large percentage point change in working and studying behaviours of teenagers who are not living at home, actually regards a very small number of young people since very few teenagers actually live outside the parental home. It is possible to identify overall trends from the table, for example, the substantial drop over all in marriage (and co-habitation) illustrated by the (almost) universal negative change in 'married' percentages. Of more consequence, however, it also shows the greater tendency for young women in particular to live on their own (without a partner). At the same time, it also shows the greater tendency of teenagers to co-habit with a partner.

These tables and the trends reported above motivate the analysis which follows. Specifically, living arrangements are closely related to educational participation, employment and marriage. Second, these relationships are rather different for young women and young men. Third, perhaps a little less obviously, the relationship between home-leaving and the other phenomena shown in the table changes with age. For example, nearly 60% of teenage men who leave home work whereas only around 10% of male teenagers living with their parents do. For men in their early thirties, this relationship changes. Although, men living in independent households are more likely to work, the distinction according to living arrangements is much weaker and the vast majority work whether living 'at home' or independently. This type of consideration leads to the adoption of a flexible model allowing for a relationship between youth behaviour and economic factors which changes over age. These ideas will be developed further in the next section.

2. 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. The approach adopted is close in spirit and methodology to the work undertaken by Card & Lemieux (2000) in the North American context.

The body of literature dealing with the school-to-work transition is substantial indeed and will not be the subject of review here⁶. It is, however, worth mentioning some recent work on the home-leaving decision. This aggregated approach is in contrast to the more usual microeconomic analyses of either individual cross-section, repeated cross-

⁵ For a more detailed analysis of trends in the different types of youth behaviour over time in Italy, the interested reader is referred to O'Higgins (2007).

⁶ The interested reader is directed towards the excellent review by Paul Ryan (Ryan, 2001). Also worth mentioning, O'Higgins (2001) provides an overview of youth unemployment and employment policy, and Bertola et al. (2002) and Jimeno & Rodriguez-Palenzuela (2002) look at the impact of institutional factors on youth unemployment. See also the recent paper by Biagi & Lucifora (2005).

section or (occasionally) panel data. For Italy, an example of a cross section analysis is Giannelli & Monfardini (2003) which finds negative effects of housing costs and poor labour market conditions on the home-leaving decision and a strong positive influence of expected earnings gains from education on the decision to ‘study and co-reside’. Manacorda & Moretti (2006) using repeated cross-section data find a strong negative influence of parental income on home-leaving. Worth mentioning also, although not directly concerned with Italy⁷ is the recent study by Giuliano (2006) which finds significant ‘cultural’ effects on the home-leaving decision. Panel data estimates which use as their basis for observation the actual decision to leave the parental home rather than the state in which young people are observed at a point or points in time⁸ are less common, but for Italy include the work of Becker et al. (2005) which finds a negative effect of perceived job insecurity on the home-leaving decision⁹.

Whereas the focus of such studies is looking at whether specific factors - housing prices, parental income and/or job insecurity - affect the home-leaving decision, the focus is here on identifying the extent to which aggregate economic factors have been *driving* the observable trends in home-leaving and other youth behaviours in Italy over the last decade or so¹⁰. Thus, the analysis here can be seen as complementary, as opposed to alternative, to the recent studies of home leaving and labour market entry in Italy mentioned above.

Specifically, an econometric model is employed to identify the influence of three aggregate factors on the decisions of young people to work, study, leave the parental home and get married (or co-habit). The specific aggregate factors used here are: a) an indicator of regional labour demand; b) an indicator of the regional youth wage; and, c) and indicator of the size of the youth cohort. The main interest here lies with the first two of these with the third acting as a control. The model allows for the effects of the factors to vary for individuals of different ages. Thus, for example, the impact of labour demand on the decision to study may well be different for 30 year olds than it is for 16 year olds. Thus the model is sufficiently flexible to incorporate the changing nature of the decisions facing young people as they grow older.

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

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

⁷ The paper is concerned with the effects of culture on second-generation immigrants co-residence decisions in America and as such looks at inter alia at Italians albeit not in Italy.

⁸ Clearly, in principle, the panel type estimates are preferable to cross-section inasmuch as they analyse the home-leaving decision itself. Analyses based on cross-section data imply that a decision that may have been taken years ago is based on the current value of explanatory variables.

⁹ The drawback with the panel estimates is that actually, in the period of observation, very few members of the sample do actually leave the parental home. This is particularly an issue in using fairly short panels with *relatively* few observations such as the Bank of Italy’s SHIW.

¹⁰ One might note, for example, that Manacorda & Moretti (2006) look at the effect of parental income on the decisions of young men in the age group 18-30. As observed above, the increase in co-residence in Italy amongst young men has largely been driven by the increased co-residence of 30-34 year olds who are not actually included in the aforementioned analysis.

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 β & γ). The model also includes as a control, in the spirit of Korenman & Neumark (2000), the size of the age specific cohort relative to the working age population for each region and year¹¹.

The demand index is intended to capture variations in local opportunities and is simply the region and year specific employment-population ratio of prime age males 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 is 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 observations¹².

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 in this period 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 gender-specific 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 size¹³ used for the construction of the individual observations and the notorious unreliability of self-reported income¹⁴. 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 index¹⁵.

¹¹ Due to the possible endogeneity of cohort size, I use it here purely as a control although it may be observed that, in the north American context analyzed by Korenman & Neumark (2000), the use of the birth rate as an instrument for cohort size did not greatly affect the estimates.

¹² Although, of course given the rotating nature of the sample, not 800,000 individuals.

¹³ The size of each wage cell varied between around 10 and 180 observations although most cells were in the range 50-100. This may in part explain the low levels of statistical significance of the estimated coefficients on the wage variable reported below. However, see also note 15 below.

¹⁴ 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.

¹⁵ 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

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 Italy¹⁶. Moreover, a simple test of the hypothesis is possible. Following the approach previously employed for the USA & Canada¹⁷, the regional youth wage variable was regressed on the proportion of young people in the working age population¹⁸. 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 market¹⁹.

The importance of the specific age of young people on the decision to leave the home was stressed above. So, 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 behaviour²⁰.

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.

¹⁶ 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.

¹⁷ Card & Lemieux (2000).

¹⁸ Including also time and region fixed effects and the prime-age adult employment rate.

¹⁹ Hausman tests also reject the endogeneity of both the wage index and the cohort size variable.

²⁰ 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.

3. Results

Tables 2-6 report the 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 separately²¹. As regards working behaviour (table 2), one can observe the very strong positive impact of the ‘adult’ employment rate on young people’s likelihood of employment²² for male and female ‘youths’ over the age of 20. One may note, however, the negative and statistically significant coefficients on the demand 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 variations in demand per se. Figures 1a and 1b report the full set of age coefficients on the employment index of the model for young men and young women respectively. One may observe a clear inverted-U pattern in the effects – for teenagers, higher labour demand is associated with lower labour force participation; for those in their early twenties the effect of labour demand on the probability of working is positive and increasing with age until around 23 for young men and 26 for young women, thereafter its effect tends to decrease for young men and remain constant for young women. This suggests that as young people get older the opportunity cost effect on education first increases and then decreases in relative importance. The wage index seems to have much less influence on the employment behaviour of young people, although it is usually positive (for those over twenty - consistent with the previous argument on opportunity cost of education), it is only statistically significant for young women in their early twenties.

The observations of the previous paragraph suggest that the effect of demand and wage variables on the decision to remain in education (table 3) are less clear cut than for entry into employment. On the one hand, increases in demand and/or wages increase the opportunity cost of education²³ but at the same time may also raise the expected benefits of education in terms of improved employment prospects and/or higher wage returns²⁴. The simple model employed here does not allow a distinction to be made between these two effects. For young women in their twenties and young men in their late twenties, the estimated effect of demand on educational participation is negative albeit not statistically significant. On the other hand for teenagers and those over thirty the effect is positive (although not statistically significant for teenage men). This supports the notion that the

²¹ As an aid to the reader the results of a slightly modified model are reported. Specifically, the coefficients on age are restricted to be constant across five-year age groups, the fuller set of coefficients on the labour demand index (adult employment-rate) is reported in the subsequent figures. Although included in the estimation, given the possible endogeneity of the cohort size, the coefficients on this variable are not reported.

²² 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.

²³ 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.

²⁴ See, for example, O’Higgins (1992) for a discussion of this specific issue.

employment index is being taken as an indicator of the employment benefits or returns to education by the youngest and oldest group although it is also consistent, particularly for those in their thirties, of the idea that labour demand and wage indices are an indicator of the relaxation of the financial constraints on participation in education.

'Broad unemployment' is essentially a residual category comprising all those not in education or employment. It thus includes both the ILO unemployed as well as those neither looking for work, nor participating in education²⁵. 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 traditionally been seen as a 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 leaving the parental home, one finds strong positive effects of demand for all groups. The effect is particularly marked for the youngest and oldest groups of young women. These results are consistent with the models of family transfers and offspring's' residential decisions current in the literature²⁶. 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. Young women do show a rather different pattern over age to young men. This becomes more evident if one looks at the single year age coefficient on the labour demand index reproduced in figures 2a and 2b. Whereas for young men, the effect of demand is more or less constant over age becoming more variable as young men grow older, for young women there is a clear U-shaped pattern which more or less mirrors the inverted-U of the employment response to labour demand over age.

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

²⁵ 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. (2006) for a discussion of the issue in the Italian (as well as EU) context. The results of estimating the effects of demand and wage indices on ILO unemployment are reported in the appendix. It will be observed that whilst the results are qualitatively similar for young men, they are much weaker for young women reinforcing the idea of non-participation as a choice, based on labour market conditions, which involves also the decision to marry or cohabit and, sometimes, consequently not participate on the labour market.

²⁶ See, in particular, the afore-cited papers on home/leaving in Italy. Lafferrière & Wolff (2006) also provide a good general review of microeconomic models of family transfers on which these empirical analyses are based.

marriage and leaving the parental home are so closely connected, but without wishing to embark on a detailed discussion of the underlying issues²⁷, table 6 reports results on a similar equation estimated for marriage rates. To some extent at least the results support the maintained hypothesis. For young men in their twenties and teenage and older women, the demand indices exert a positive and statistically significant influence on the marriage rate 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 which would require further analysis.

In order to get a sense of the extent to which aggregate economic and cohort size changes have been driving changes in youth behaviour over time, 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 and cohort size. 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 and cohort size indices²⁸. In the first case, a model is estimated without demand, wage and cohort size 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 and demographic 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 fell by 0.4 percentage points between 1993/4 and 2002/3. This change is entirely attributable to

²⁷ 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).

²⁸ In practice this means the changes driven by the demand index and cohort size indices 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. In order to estimate separately the demand and cohort size 'effects, the cohort variable was removed at an intermediate step.

changes in the demand index. Indeed, with the addition of the cohort size variable, the 'explained' portion is greater than the actual change. This implies that factors not included here were working against the changes induced by demand and cohort size changes. Overall, the table suggests that labour market conditions were responsible for a substantial part of the time trends in the employment and rates of young men but only a modest portion of the time trend in the co-residence of young men and young women.

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 2.4 percentage points. Of this increased divergence, over half (or 1.3 percentage points) is explained by differences in changes in the demand index and a further 0.2 percentage points by changes in cohort size. It is clear from the table that labour market demand and to a lesser extent cohort size changes made important contributions to divergent time trends in youth behaviour between the two macro-regions. 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.

4. 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 divergent trends in the North and South of the country.

Beyond this, and of possibly more significance, 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 tend 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. 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. Specifically, it was observed that the main behavioural response of young people to worsening economic conditions came through an increase in inactivity rather than increased participation in education. This runs contrary to the conventional wisdom which suggests that education in Italy serves as a refuge for the unemployed.

One plausible explanation for this finding concerns the increasing direct costs of university education beginning in the second half of the 1990s, however, plausible as it might be, this explanation needs further investigation.

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

<i>MALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	-.30 (.124)	.03 (.023)
20-24 year olds	.91 (.147)	.03 (.036)
25-29 year olds	.90 (.124)	.04 (.028)
30-34 year olds	.34 (.125)	-.03 (.040)
<i>FEMALES</i>	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	-1.35 (.141)	-.03 (.020)
20-24 year olds	.50 (.157)	.06 (.023)
25-29 year olds	1.04 (.156)	.04 (.024)
30-34 year olds	.73 (.151)	-.01 (.023)

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 and a cohort size index. 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 young people, unified age-groups, 1993/4-2002/3.

<i>MALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	.02 (.108)	.02 (.036)
20-24 year olds	.06 (.103)	.02 (.0211)
25-29 year olds	-.02 (.081)	-.04 (.0194)
30-34 year olds	.16 (.090)	-.04 (.036)
<i>FEMALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	.31 (.119)	-.03 (.016)
20-24 year olds	-.06 (.102)	-.05 (.018)
25-29 year olds	-.06 (.090)	-.02 (.013)
30-34 year olds	.19 (.103)	.05 (.015)

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 and a cohort size index. 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 4: Effects of Demand and Wage Indices on the Broad Unemployment rates of young people, unified age-groups, 1993/4-2002/3.

<i>MALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	.23 (.098)	-.01 (.023)
20-24 year olds	-1.11 (.125)	-.03 (.033)
25-29 year olds	-.97 (.103)	-.06 (.025)
30-34 year olds	-.55 (.101)	-.01 (.021)
<i>FEMALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	.96 (.153)	.07 (.018)
20-24 year olds	-.60 (.154)	-.01 (.021)
25-29 year olds	-1.11 (.165)	-.03 (.023)
30-34 year olds	-1.01 (.157)	-.04 (.020)

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 and a cohort size index. 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 5: Effects of Demand and Wage Indices on young people leaving the parental home, unified age-groups, 1993/4-2002/3.

<i>MALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	.24 (.146)	-.03 (.035)
20-24 year olds	.28 (.125)	-.01 (.025)
25-29 year olds	.29 (.109)	.05 (.036)
30-34 year olds	.24 (.144)	.02 (.044)
<i>FEMALES</i>	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	.63 (.130)	-.02 (.013)
20-24 year olds	.27 (.120)	-.02 (.013)
25-29 year olds	.38 (.132)	.01 (.017)
30-34 year olds	.71 (.110)	.02 (.026)

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 and a cohort size index. 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 6: Effects of Demand and Wage Indices on Marriage amongst young people, unified age-groups, 1993/4-2002/3.

<i>MALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	.06 (.122)	.00 (.029)
20-24 year olds	.20 (.111)	.01 (.028)
25-29 year olds	.18 (.084)	.02 (.027)
30-34 year olds	.07 (.120)	-.04 (.040)
<i>FEMALES</i>	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	.23 (.108)	-.01 (.013)
20-24 year olds	-.01 (.090)	.02 (.014)
25-29 year olds	-.02 (.102)	.01 (.021)
30-34 year olds	.29 (.086)	-.03 (.017)

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 and a cohort size index. 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).

Appendix:

Effects of Demand and Wage Indices on the ILO Unemployment rates of young people, unified age-groups, 1993/4-2002/3.

<i>MALES</i>	Employment-Population Ratio, 35-49 year old men	Relative Regional Wage-rate, 15-34 year old men
15-19 year olds	.23 (.090)	-.02 (.019)
20-24 year olds	-.80 (.096)	-.04 (.016)
25-29 year olds	-.63 (.088)	-.04 (.017)
30-34 year olds	-.35 (.088)	-.01 (.016)
<i>FEMALES</i>	Employment-Population Ratio, 35-49 year old women	Relative Regional Wage-rate, 15-34 year old women
15-19 year olds	-.05 (.096)	.02 (.014)
20-24 year olds	-.88 (.105)	-.04 (.016)
25-29 year olds	-.89 (.098)	-.03 (.015)
30-34 year olds	-.70 (.088)	-.03 (.014)

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 and a cohort size index. 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).

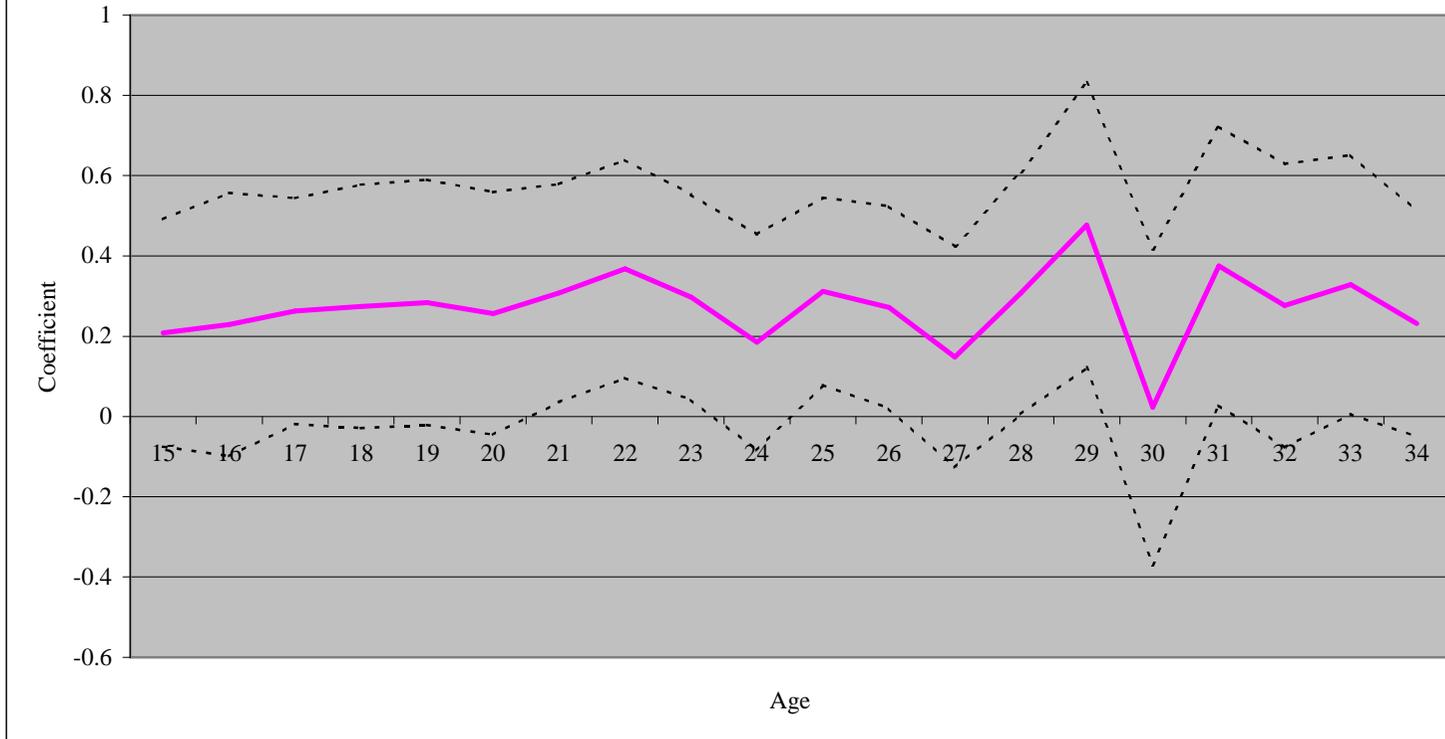


Note: The figure reports the single year age coefficients on the labour demand index. 10% confidence intervals are shown by the dotted lines.



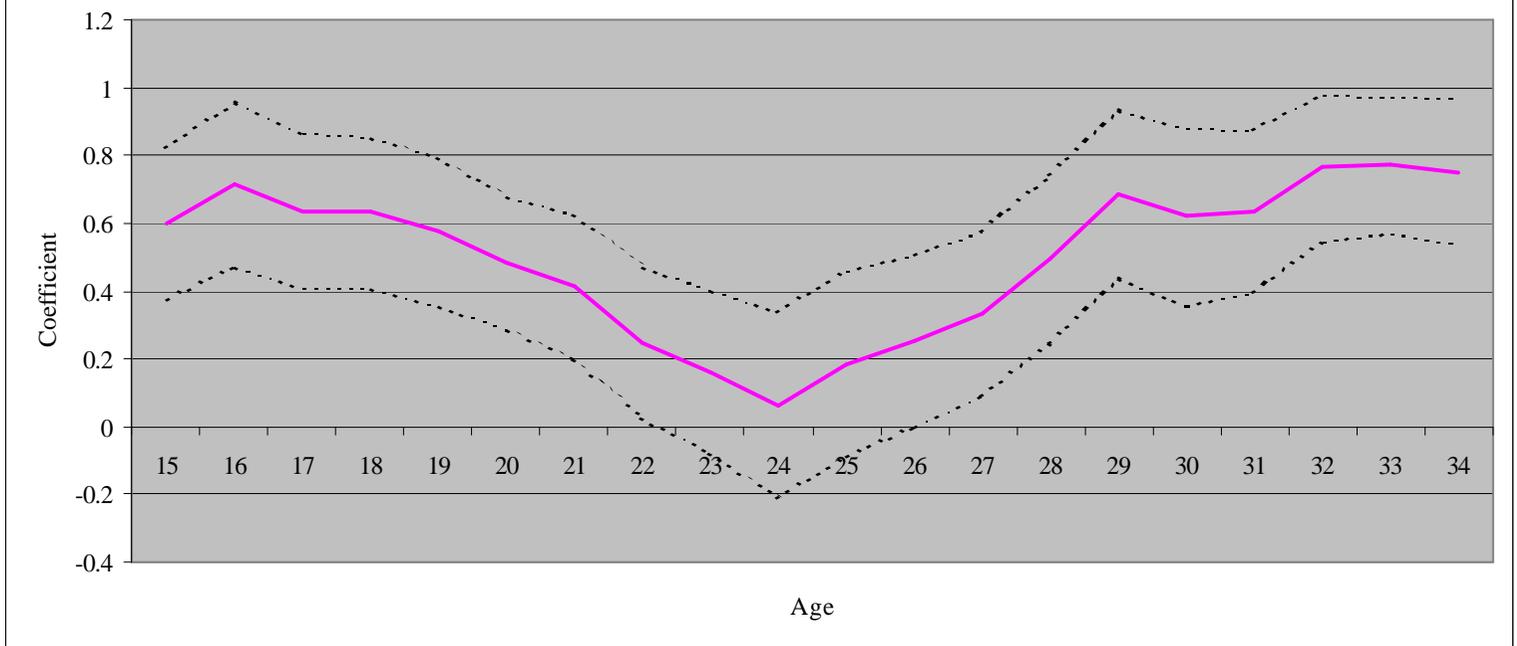
Note: The figure reports the single year age coefficients on the labour demand index. 10% confidence intervals are shown by the dotted lines.

Figure 2a: Effects of labour demand on young male home leaving rates: Single year age coefficients



Note: The figure reports the single year age coefficients on the labour demand index. 10% confidence intervals are shown by the dotted lines.

Figure 2b: Effects of labour demand on young female home leaving rates: Single year age coefficients



Note: The figure reports the single year age coefficients on the labour demand index. 10% confidence intervals are shown by the dotted lines.