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The Italian Labour Market and the Crisis

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Abstract:

The aim of this paper is to analyse the effects of the crisis on the Italian labour market. The Italian labour market is characterized by deep gender differences and regional variability. The data show that the crisis lead to an increase in the gap of female employment rates and women's inactivity rates with respect to Europe. The North of Italy experienced a higher increase in unemployment than the South, where many people withdrew from the labour market because of poor employment prospects. Moreover, in Italy, the increase in unemployment has been mitigated by the increase in the number of workers having access to the wage supplementation fund who are not computed within the unemployed. However, the heterogeneity in the system of unemployment benefits increased inequalities amongst the unemployed. Using a micro simulation techniques, we estimate the effect of the crisis on income distribution and poverty and find that at the national level, the population showed a reduction in equivalised household income by about 1 percent. The limited impact on household's equivalent income can be connected to the relatively high share of unemployed who are young with relatively low income and sustained by other members of the household.

Keywords: labour market, poverty, economic crisis

Jel classification: I32, J6

Introduction

The current economic crisis, that started as a financial crisis in the U.S., represents, according to IMF, the most severe recession since World-War II. Each crisis arises for a number of reasons, but also its effects are various. Although Italy's financial system solidity (IMF, 2006), the Italian real economy has been affected by the financial crisis through different channels: first of all, the confidence of consumers and investors has fallen, damaging industrial production and employment, furthermore, as any other open economy, Italy has been hit by the contraction of the global trade activity (ILO, 2009c). The aim of this essay is to analyse the effects of the crisis on the Italian labour market. Section 1 presents and outline of the Italian labour market as it was prior to the crisis highlighting its weaknesses and the extent of the safety net to cover unemployment. We will then use the main macroeconomic indicators to analyse in Section 2 the effect of the crisis on the Italian labour market with respect to Europe. Section 3 will contain estimates of the effect of the crisis on income distribution and poverty by using simulation techniques followed by concluding remarks.

Section 1 – The Italian Labour Market Structure Before the Crisis

A first look at the employment indicators for Italy shows neatly the existence of more than one labour market and of deep gender inequalities. Sharper differences can be found by comparing the North and the South of Italy as Table 1 shows by using 2007 Istat Labour Force data (Istat, 2008). On the whole men's employment rate in Italy is 70.7% while women's 46.6% with an average gender gap at the disadvantage of women by 24%. The employment rates range for males from 62% in the South of Italy to 76.3% in the North with a higher degree of variation for women whose employment rates range from 31% in the South of Italy to 56.8% in the North. The lower employment rates for women in the South of Italy mirrors the much lower availability of childcare services (Addabbo, Caiumi and Maccagnan, 2010) and this is consistent with the positive effect between mothers' labour supply and childcare provision (De Henau, Meulders and O'Dorchai, 2010).

Table 1 – Employment rates 15-64 years old by gender and regions. 2007.

	M	F	Gender gap
North	76,3%	56,8%	19,5%
Centre	73,0%	51,8%	21,2%
South	62,2%	31,1%	31,1%
Italy	70,7%	46,6%	24,1%

Source: Our elaborations from Istat (2008)

The gender differences and regional variability are also reflected in unemployment rates (Table 2). Unemployment is more likely to occur for the youngest, living in the South of Italy and for females. By looking at unemployment rates by gender and age one can see that women's unemployment is still significantly higher with respect to men's unemployment rates not only in the youngest age group. This can be related to higher difficulties for women in re-entering the labour market in Italy after interruptions related to childbirths.

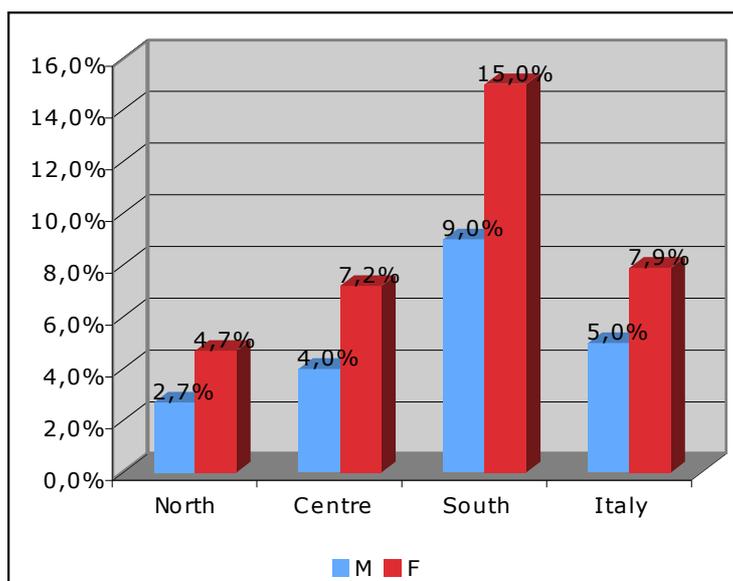
Table 2 – Unemployment rate by age, gender and areas. 2007

	North		Centre		South	
	M	F	M	F	M	F
15-24	10,5	14,3	15,3	21,4	28,9	38,3
25-34	3,1	5,7	5,4	9,2	12,7	20,9
35-44	1,7	3,9	2,6	6,4	6,2	12,8
45-54	1,6	3,1	1,8	4,2	4,1	6,3
55-64	1,6	1,5	2,8	2,0	3,6	3,0
15-64	2,7	4,7	4,0	7,2	9,0	15,0

Source: Our elaborations from Istat (2008) Table 4.11.

The experience of unemployment in Italy is more likely to be of long term duration than in other countries: in 2008 almost 45% of men and almost 50% of women unemployed in Italy were long-term unemployed compared to 25.4% of men and 26% of women in the OECD countries (OECD, 2009). As shown in Figure 1 it is more likely to be in long term duration unemployment in the South and for women.

Figure 1 – Long term unemployment rates by gender and areas. 2007.



Source: Our elaborations from Istat (2008) Table 4.15.

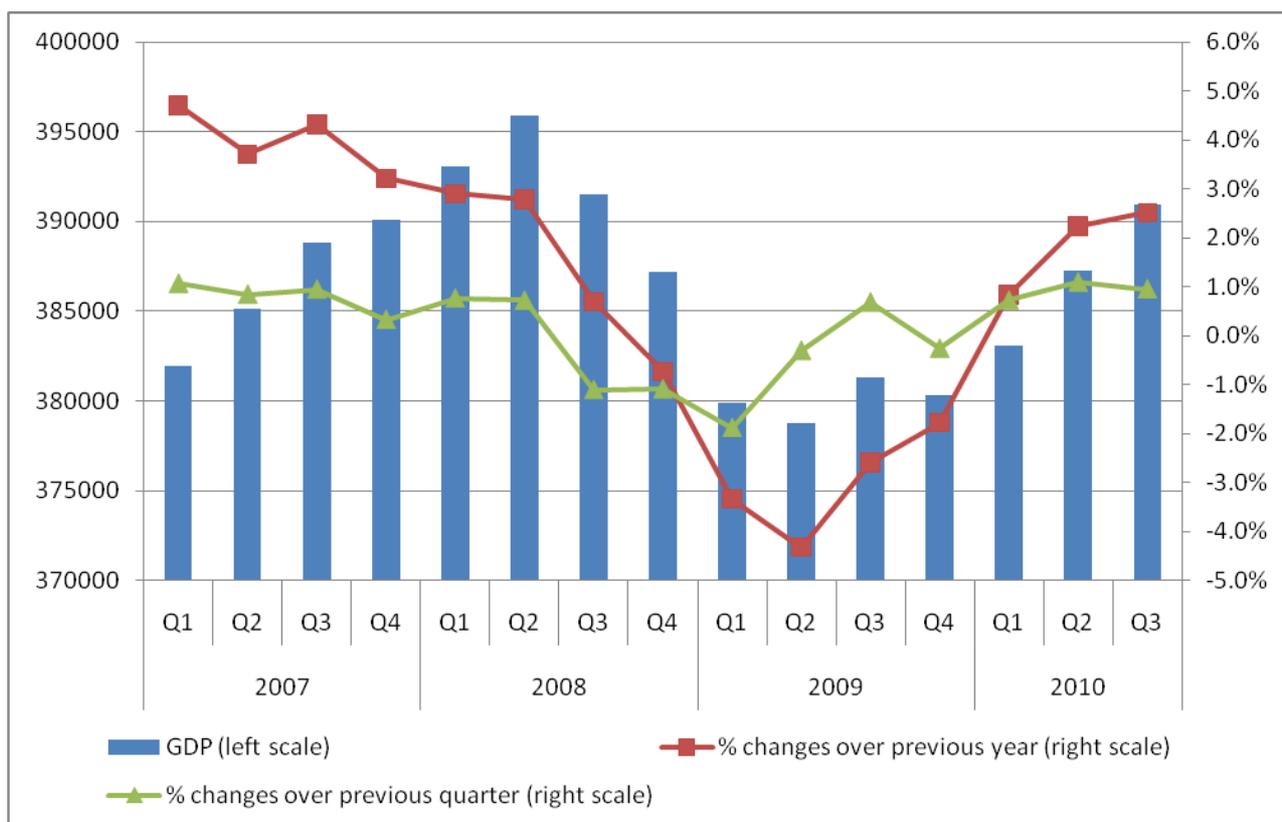
Turning to the safety net system a first characteristic is its inequality. This is due to the different conditions of eligibility (connected to previous employment condition and changing with the employment status and job contract prior to unemployment), and to the different degree of coverage and duration (Anastasia, Mancini and Trivellato, 2009; Bank of Italy, 2009a). Notwithstanding the recent extension in the access to redundancy system and ameliorative policies enacted during the crisis there is still a wide group of workers who are exposed to the risk of not being covered by unemployment benefits in case of job loss (Bank of Italy, 2009a; Berton, Richiardi and Sacchi, 2009).

Section 2 – The Effects of the Crisis on the Italian Labour Market

We will start analyzing the direct effects of the economic crisis on the Italian and the European economy, through the presentation of some main macroeconomic indicators we will then focus more on the available data on unemployment trends by sectors, regions and gender.

Though an imperfect estimation of human development, Gross Domestic Product is an important measure of economic development that allows comparisons over time and across countries (Eurostat).

Figure 2 – Gross domestic product in Italy

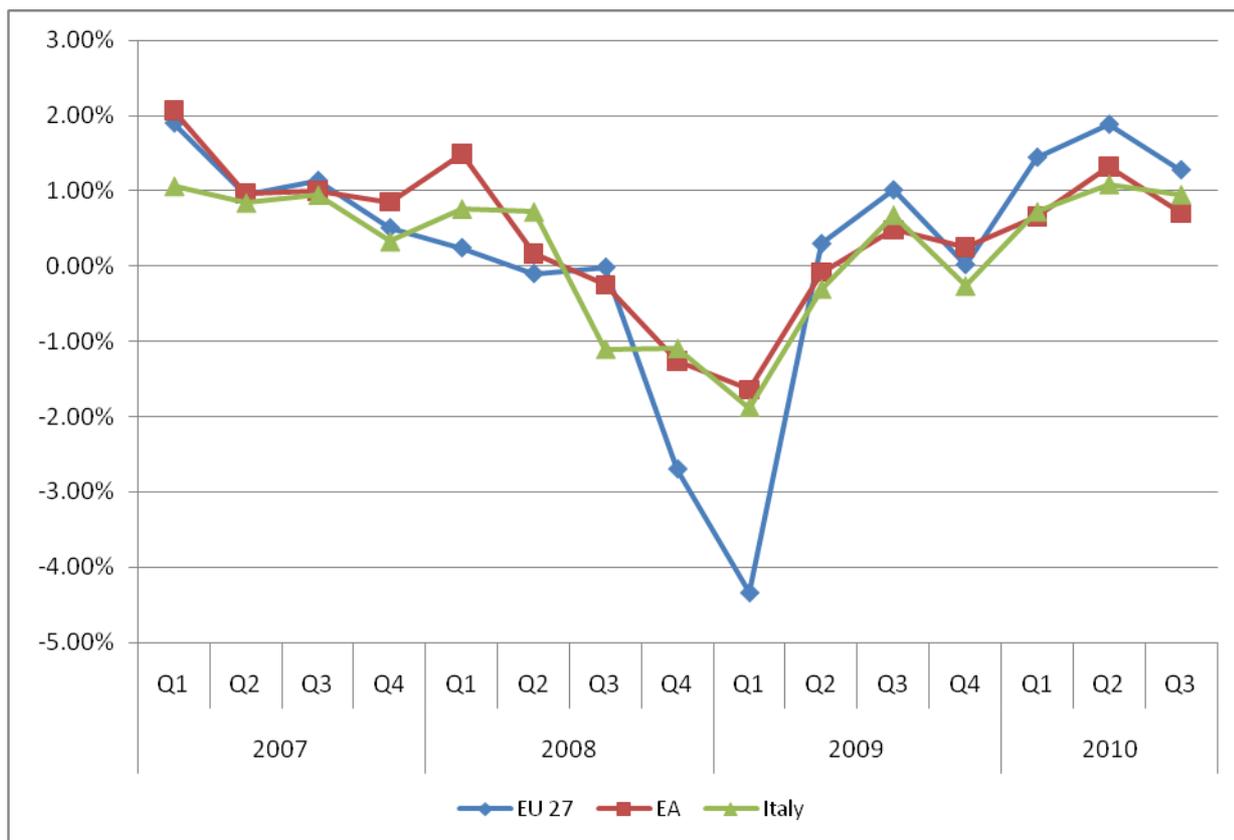


Source: Istat

As shown in Fig. 2, Italy officially entered into technical recession in the last quarter 2008, as the level of GDP shrank for the second consecutive quarter (-1.1 in both the third and fourth quarter 2008). The downturn got worse in the subsequent quarter: -1.9 percent in the first quarter 2009. It represents the worst decline since World War II (Bank of Italy, 2009b). According to the data made available by Istat¹, the GDP components most affected by the crisis in the first quarter 2009 have been exports (-21.9 percent over the first quarter 2008 and -12.4 percent over the last quarter 2008) and gross investments in industrial goods (respectively -10.8 and -5.2 percent). Consumption decreased by respectively 0.6 and 0.4 percent.

¹ This data is available on http://www.istat.it/salastampa/comunicati/in_calendario/contitri/20101210_00/. We are illustrating seasonally adjusted and adjusted by working days data on GDP at current prices.

Figure 3 – Gross domestic product by countries – Percentage changes over previous quarter



Source: Eurostat

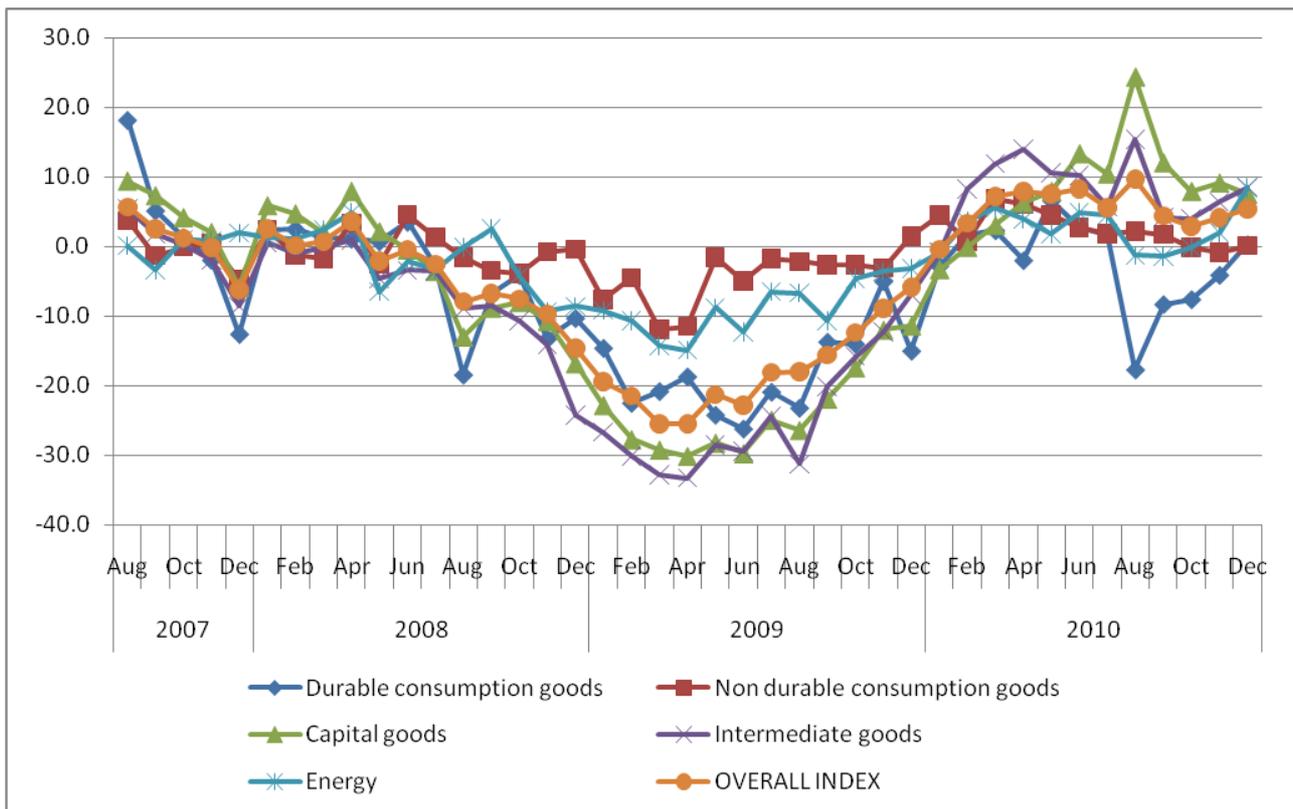
Figure 3 compares the dynamics of economic development of Italy with respect to the EU 27² and the Euro Area average³ (Fig. 3). The Euro Area entered into recession in the same quarter as Italy (having faced a decrease in GDP of 0.3 percent in the third quarter 2008 and of 1.3 percent in the fourth quarter 2008), while in the EU 27 the GDP decreased by 0.1 and by 0.02 percent respectively in the second and third quarter 2008, and the situation deteriorated in the two subsequent quarters (-2.7 and -4.3 percent respectively). In the second quarter 2009 Italy faced the fourth consecutive decrease in domestic product (-0.3 percent over the first quarter 2009), and its change has been negative again in

² The euro area includes Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain. The EU27 includes Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

³ Data source for EU27 and the Euro Area: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>

the last quarter 2009 (-0.3 percent). Instead, in the Euro Area and in the EU the GDP has started increasing constantly since respectively the third and the second quarter 2009.

Figure 4 - Annual changes of the Italian calendar adjusted Industrial Production Index by main industrial groupings.



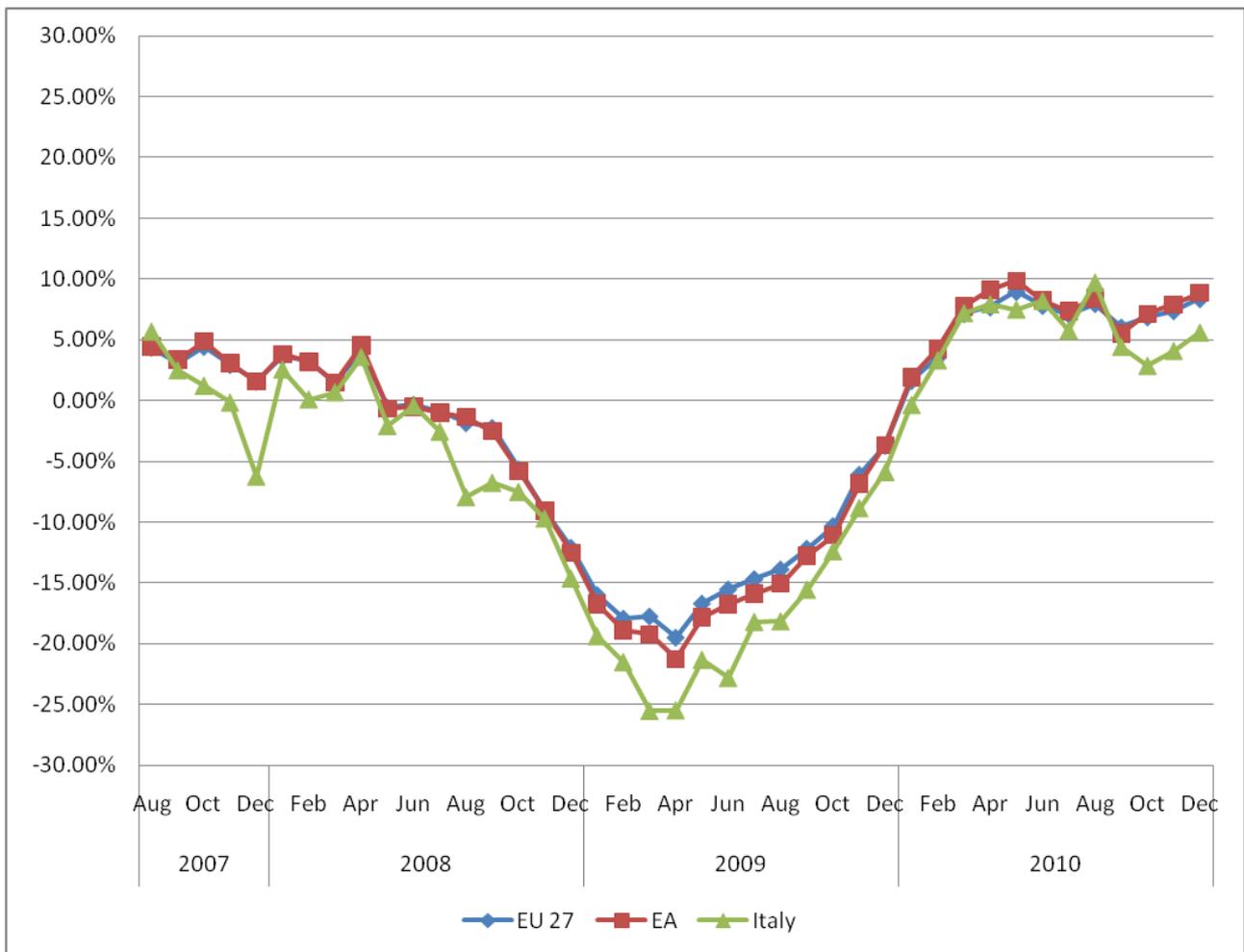
Source: Istat

Fig. 4 shows the annual changes of the Italian calendar adjusted Industrial Production Index by main industrial groupings⁴. The IPI captures the activity of the industrial sector, “one of the most volatile components of the economy” (Eurostat). The overall industrial sector started shrinking in spring 2008 and the situation deteriorated until January 2010. In particular, in April 2009 the IPI fell by 25.5 percent respect to April 2008. Analyzing the rate of change of the IPI by main industrial groupings, as it is commonly done, we find that capital, intermediate and durable goods production were the most affected by the economic downturn. In particular, in April 2009 durable goods production decreased by

⁴ According to the data available by Istat on [www. http://dati.istat.it/](http://dati.istat.it/)

18.7 percent over the same month of 2008, capital goods production by 30.1 percent and intermediate goods production by 33.3 percent. Non durable goods and energy production, instead, fell, in the same month by 11.5 and 14.9 percent.

Figure 5 – IPI by countries

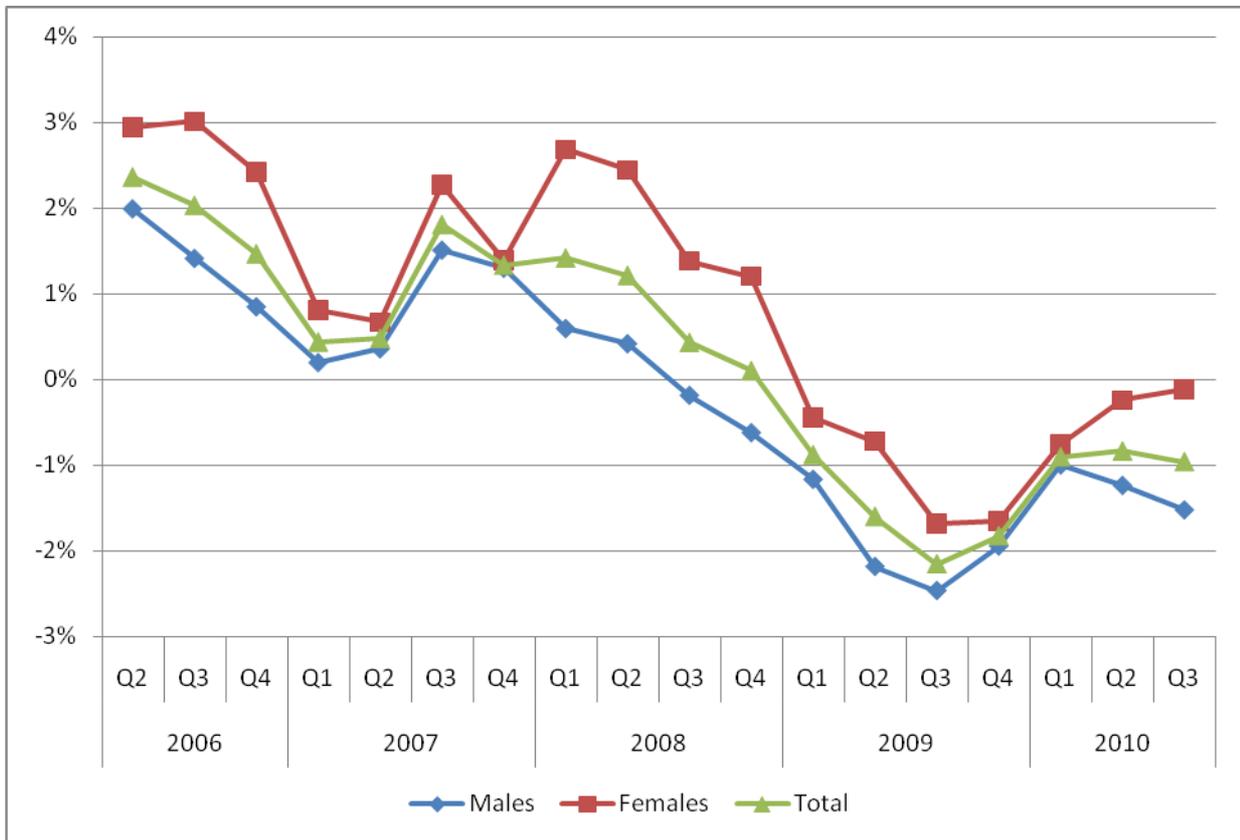


Source: Eurostat

In a comparison over time and across countries, the Italian economy appears always weaker than the European economy (both than the Euro Area and the EU 27). The average decrease of the IPI in Europe started later than in Italy and less sharply (Fig. 5). In April 2009, according to Eurostat data, when the Italian IPI fell by 25.5 percent, the industrial production fell by 21.3 percent in the Euro Area

and by 19.5 in the EU27. In addition, in both the Euro Area and the EU 27, the IPI has started increasing since January 2010, it was February 2010 for Italy.

Figure 6 - Annual rates of change of the employment level by gender in Italy

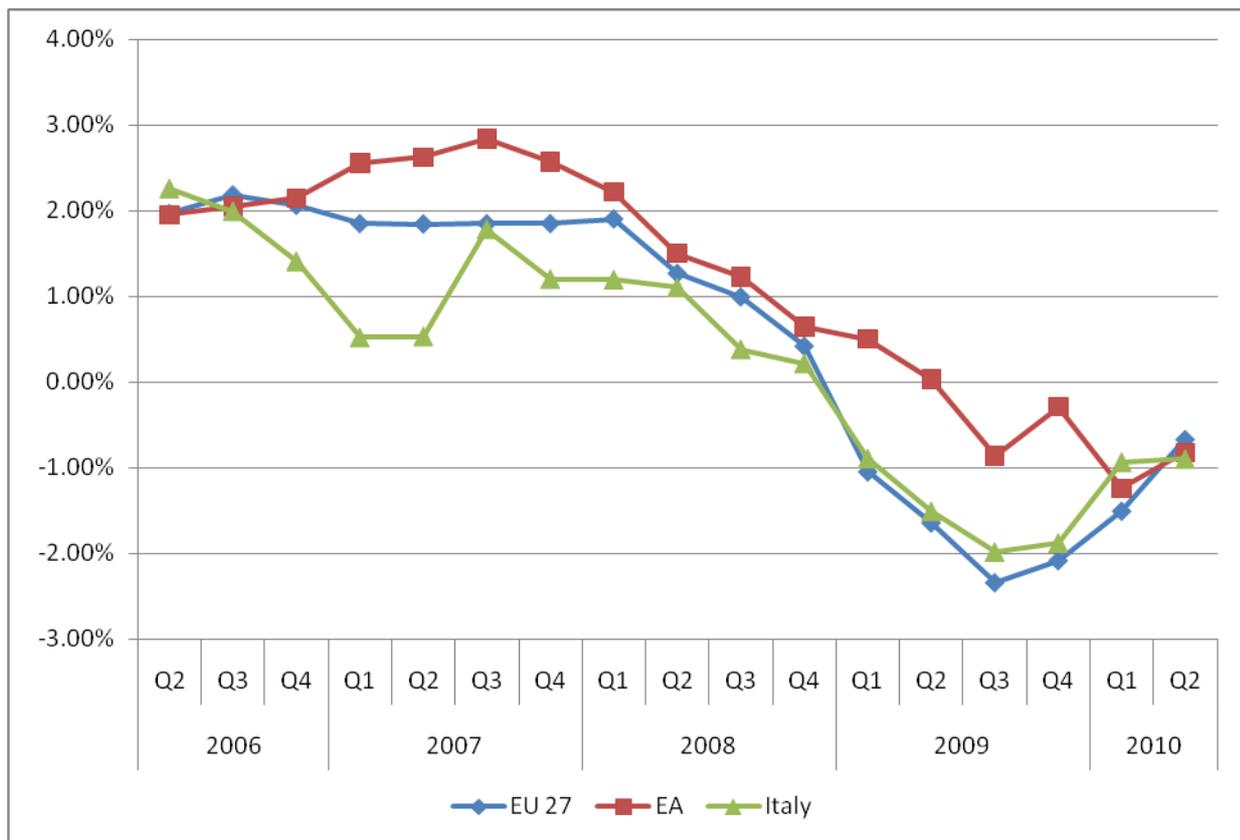


Source: Istat

The declining growing rates of 2008 affected also the Italian and European labour market. The European Labour Force Survey, that for Italy is run by the Italian National Institute of Statistics (ISTAT), represents the most important source of information about the European labor market. Data are collected on a rotating sample of households on a continuous quarterly basis⁵.

⁵ More information on the EU LFS can be found on <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

Figure 7 Annual rates of change of the employment level by countries



Source: Eurostat

Using this data, we can see from Fig. 6 and 7 that year 2008 has been characterized for both Italy and Europe by the continuous slowdown of the employment growth that has not stopped yet. At the beginning men have been more affected by the crisis than women⁶: their employment level started decreasing in the last quarter 2008 in both the Euro Area and EU27 (-0.13 and -0.14 percent over the last quarter 2007). Female employment started decreasing in the first quarter 2009 in the EU27, and only in the first quarter 2010 in the Euro Area. In Italy the situation started deteriorating earlier: the employment level started decreasing in the third quarter 2008 for men (-0.2 percent), and in the first quarter 2009 for women (-0.4 percent). Examining the trends in occupation by main sectors of economic activity (not shown here), we find that the service sector, that is traditionally a female-dominated sector in Italy, has been the less affected by the crisis (-0.8 annual percent change in

⁶ For the sake of shortness, data broken down by gender are not shown for the EU 27 and the Euro Area, but they can be found on <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>

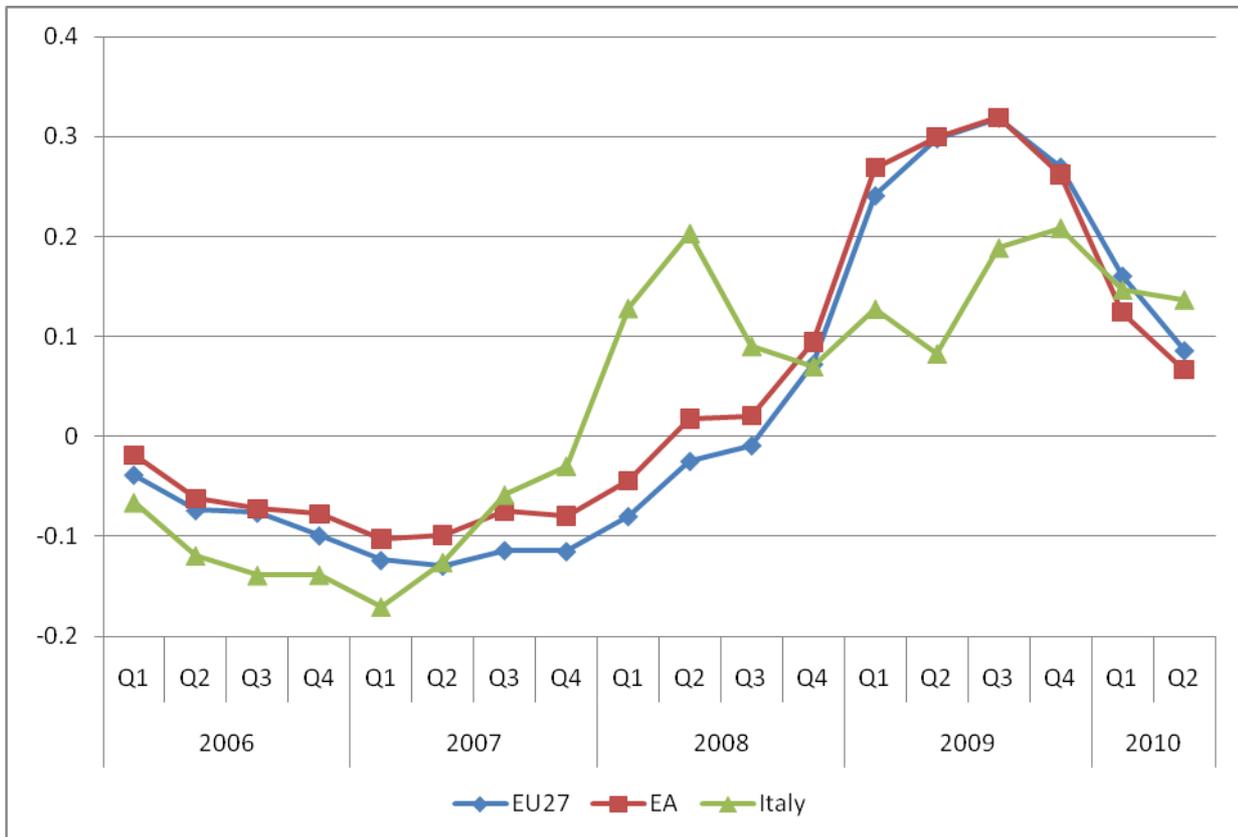
employment in the first and in the second quarter 2009). On the other side, the male-dominated industry sector was more hardly hit: the employment level decreased by 4 percent in second quarter 2009, by 6.1 in the third quarter 2009. It is still negative in the third quarter 2010: -3.2 percent. However the weight of the manufacturing sector on the decrease in employment in 2009 (54.2%) has been lower than in the EU average (71.7%) according to Istat (2010). Women's contribution to the decrease of employment has been more relevant in Italy than on average in European countries leading to an increase in the gap in women's employment rates: in the fourth 2009 quarter this gap is more than 12 percentage points (Istat, 2010).

Amongst the unemployed there has been a sensible increase of the formerly employed and of the youngest and self-employed, collaborators and temporary workers (Istat, 2010). The average youth unemployment rate in Italy (according to Istat labour force survey data) reached 25.4% in 2009 (Istat, 2010). According to Istat Labour force survey data (Istat, 2010) if at the beginning of 2009 temporary workers and self-employed were the groups of workers more hit by job loss, at the end the very bulk of the workforce (standard and permanent) have been interested by the decrease in employment while involuntary part-time increased. The sensible decrease in nonstandard employment lead to a decrease in its share on total employment not due to a stabilization of these workers but rather to their exit from employment (Istat, 2010).

Labour demand reduced since the third 2008 quarter in all regions and especially in the North of Italy (Istat, 2010). Distinguishing by regional area (data not shown), we find that employment levels' rates of change of the North and of the Centre, although decreasing, remained positive until the first quarter of 2009 (when they fell respectively by 0.4 and 0.9 percent). The South, that is characterized by serious and deep-seated social and economic problems, was instead more hardly hit by the crises: employment started decreasing over year in the third quarter 2008 (-1 percent), and the situation is still deteriorating: it decreased by 2.1 percent in the third quarter 2010, this is against a 0.7 percent decrease in the North and a 0.1 percent decrease in the Centre. The increase in unemployment rate has been in part reduced by the parallel increase in workers having access to wage supplementation fund and of the

inactive. The latter have been especially increased in the South of Italy where the discouragement from participation has been particularly relevant.

Figure 8 - Annual rates of change of the unemployment level by country



Source: Eurostat

On the other side, the unemployment level decreased in Italy until the end of 2007. Then it rose by 12.8 percent in the first quarter 2008 respect to the first quarter 2007 (+199,000 units), by 20.3 percent in the second quarter (+287,000 units) and has not stopped increasing yet (+14 percent over one year in the second quarter 2010). In the Euro Area unemployment started increasing in the second quarter 2008 (+1.8 percent), while in the EU 27 it was still decreasing in the third quarter 2008 (-0.9 percent).

Unlike Europe, the Italian unemployment growth, although increasing, started slowing down in the second half of 2008. This is due to a very high level of hidden-unemployment in the South of Italy: in this area, although the sharp decrease in employment and because of discouragement, many people

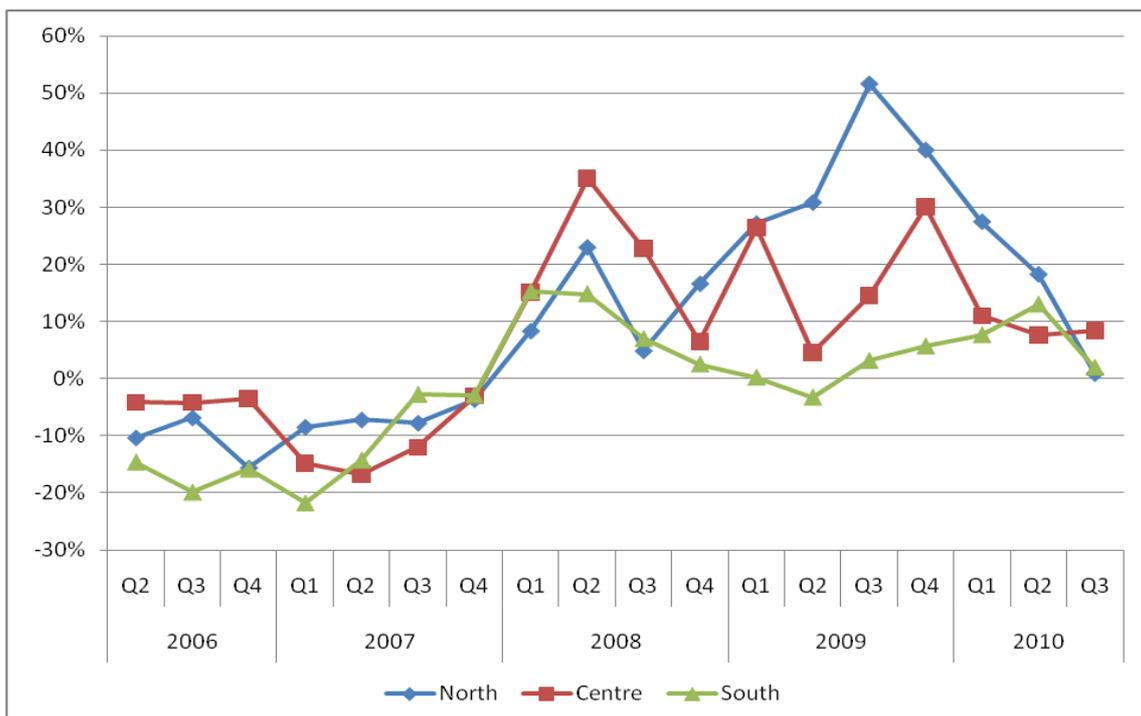
have stopped looking for a job (Istat, 2009), and the change in unemployment levels was even negative in the second quarter 2009 (-3.3 percent). Moreover the increase in unemployment has been mitigated by the increase in the number of workers having access to the wage supplementation fund who are not computed within the unemployed.

On the other side, unemployment reached a very high level in particularly in the North of Italy, where, in the first quarter 2010, it was 27.5 percent higher than in the first quarter 2009 (see Fig. 9). The discouraged worker effect of the South of Italy is the main reason why the unemployment level has been increasing in Italy less than in Europe.

Analyzing the growth in unemployment by gender (not shown), we find that in Europe it started earlier for men than for women (+4.4 percent over year in the second quarter 2008 in the Euro Area and +0.6 percent in the third quarter in the EU27 for men; and in the fourth quarter for women, respectively +2.1 and +3.8 percent).

Also in Italy men were in general more affected than women by the crisis, especially after the third quarter 2008, when the level of unemployment among men rose by 10.5 percent over one year, versus 7.8 among women.

Figure 9 - Annual rates of change of the unemployment level by area



Source: Istat

In 2008 and 2009, also the government deficit and the government debt were affected by the crisis. If compared to year 2007, the ratio of the government deficit to GDP increased from 1.5 to 2.7 percent in 2008 and 5.3 percent in 2009, while the ratio of the government debt to GDP increased from 103.5 to 106.1 percent in 2008 and to 115.8 percent in 2009 (Eurostat, 2010). Italy has the highest ratio of government debt to GDP among the Member States: it is was 69.4 percent for the Euro Area and 61.6 for the EU27 in 2008, while for 2009 it was respectively 78.7 and 73.6 percent (Eurostat, 2010).

Section 3. The impact of the crisis on poverty and income distribution

In order to evaluate the impact of the crisis on income distribution due to the lack of data on income we had to use microsimulation namely the calibration approach. Within this framework, one can use auxiliary information on the changes that have taken place in the population in order to re-weight available data. Weights, in fact, allow to adjust the distribution of sample data to the distribution of relevant population characteristics (for more details see United Nations 2005). In our case, we have used the Italian Labour Force Survey for year 2009, which collects information about Italian labour market behaviour and is released a short time after data collection to re-weight IT SILC data available for 2007 and providing data on income. This allows us to simulate changes in the aggregate Italian unemployment rate.

The calibration approach consisted in computing new weights, which minimize the distance compared to the starting weights, while adjusting the sample distribution to the new unemployment rates underlying the new scenario and preserving the sample distribution compared to other key variables.⁷ IT SILC data provide both household and individual weights we have applied the calibration strategy to the former, as we are interested in estimating the effect of unemployment on the well-being of the whole household and not only of the individual. Using this procedure, we end up with the IT

⁷ See Creedy (2003), Deville and Särndal (1992), and Estevao and Särndal (2006) for a more complete presentation of the technique used.

SILC sample for 2007, for which two different sets of weights are available. Using the starting weights, we conformed our data to the 2007 population, while using the calibrated weights, we obtained those for the 2009 population. In the re-weighting procedure we have kept the following variables: area where the family lives, number of household components, gender, educational level and age group of the family members.

At the national level, the first moment of income distribution referring to the whole population showed a reduction in equivalised household income by 1% (Table 3). The limited impact on household's equivalent income can be connected to the relatively high share of unemployed who are young with relatively low income and sustained by other members of the household. A similar finding has been detected by Istat (2010).

Table 3 - Descriptive statistics on actual and simulated equivalised disposable household income in 2009

Variables	Mean	Std. Dev.
simulated equivalized household income (whole sample)	17271.23	12020.82
	-1%	
actual equivalized household income (whole sample)	17472.92	12080.54

Source: Our elaborations on Istat Labour Force survey data (2009) and IT SILC (2007)

Taking into account poverty rates in terms of equivalent money income the poverty rates increase by 1% at national level (Table 4).

Table 4 - Poverty rates in Italy by area (simulated and actual equivalised income)

		simulated (r.w.) eq. income		
		Mean	Std.Dev.	Diff.
North	20324	0.11	0.31	0%
Centre	10727	0.14	0.35	1%
South	14088	0.34	0.47	1%
Total	45139	0.20	0.40	1%

Source: Our elaborations on Istat Labour Force survey data (2009) and IT SILC (2007)

Conclusions

The impact of the crisis in the Italian labour market can be seen in the deterioration of employment rates that lead also to an increase in the gap of female employment rates and women's inactivity rates with respect to Europe. The increase of this distance is of serious concern given the structural factors limiting female labour supply in Italy with respect to other European countries.

Unemployment increase has been matched with an increase in inactivity and in the use of wage supplementation fund. The latter, together with a higher involvement of youth living in their birth family, brought about a limited increase in the poverty rates.

The heterogeneity in the system of unemployment benefits increased inequalities amongst the unemployed. This calls for a reform of the system of unemployment benefit and safety net in Italy that has been long postponed.

Given the higher exposure to the risk of being unemployed that characterizes youth in Italy and the higher likelihood to exit the labour force (especially for women and in the South of Italy) policies able to decrease the deterioration of the increased number of unemployed or discouraged workers' human capital are needed to reduce the long term costs of unemployment and increase the probability of employment.

References

- Addabbo, T., Caiumi, A. and Maccagnan, A. (2010) 'Allocation of Time in Italian Couples: Exploring the Role of Institutional Factors and the Effect on Household's Well Being', paper presented at the IATUR 32nd International Conference on Time Use, Paris, Sciences Po, 7-10 July 2010.
- Anastasia, B., M. Mancini, U. Trivellato (2009), *Il sostegno al reddito dei disoccupati: note sullo stato dell'arte. Tra riformismo strisciante, inerzie dell'impianto categoriale e incerti orizzonti di flexicurity*, ISAE, Working paper No. 112, April 2009.
- Bank of Italy (2009a) *Relazione annuale 2008*, Roma, Banca d'Italia.
- Bank of Italy (2009b), *Bollettino Statistico* No. 57, July 2009, available at www.bancaditalia.it
- Berton, F., Richiardi, M. & S. Sacchi (2009), 'Quanti sono i lavoratori senza tutele', www.lavoce.info.

- Creedy, J. (2003) *Survey Reweighting for Tax Microsimulation Modelling*, New Zealand Treasury Working Paper 03/17
- De Henau, J., Meulders, D. and O'Dorchai S. (2010) 'Maybe baby: comparing partnered women's employment and child policies in the EU-15', *Feminist Economics*, 16(1), January 2010, 43-77.
- Deville, J.C. & C.E. Särndal (1992). Calibration estimators in survey sampling, *Journal of the American Statistical Association*, 87, 376–382.
- Estevao, J.M. & C.E. Särndal (2006). Survey Estimates by Calibration on Complex Auxiliary Information, *Journal of the American Statistical Association*, 74 (2), 127–147.
- Eurostat (2010), New release 55/2010: Euro area and EU27 government deficit at 6.3% and 6.8% of GDP respectively, <http://ec.europa.eu/eurostat>.
- International Labour Office (ILO). 2009a. Global Employment Trends.
- International Labour Office (ILO). 2009b. Global Employment Trends for Women.
- International Labour Office (ILO). 2009c. The Financial and Economic Crisis: A Decent Work Response.
- International Monetary Fund (IMF), 2006 "Italy: Financial System Stability Assessment", Country Report No. 06/112. Washington, DC
- Istat (2008) 'Forze lavoro. Media 2007', *Annuario n. 13 – 2008*
- Istat (2009) 'Rilevazione sulle forze di lavoro. Secondo trimestre 2009', Roma, Istat.
- Istat (2010) 'Rapporto annuale: La situazione del paese nel 2009', Roma, Istat.
- Jones, S.R.G. & W.C. Riddell (2006), 'Unemployment and Nonemployment: Heterogeneities in Labor Market States', *The Review of Economics and Statistics*, 88 (2), 314-323.
- OECD (2009). *Employment Outlook*, Paris, OECD.
- United Nations. *Designing Household Survey Samples: Practical Guidelines*. Department of Economic and Social Affairs Statistics Division. Studies in Methods Series F No.98. New York; 2005.

“Materiali di Discussione” LATER PUBLISHED ELSEWHERE

- N. 546 - M. Murat and B. Pistoiesi, *Emigrants and immigrants networks in FDI*, Applied Economics letters, April 2008, <http://www.informaworld.com/content~content=a789737803~db=all~order=author> (electronic publication), **WP No. 546 (December 2006)**.
- N. 545 - M. Brunetti and C. Torricelli, *The Population Ageing in Italy: Facts and Impact on Household Portfolios*, in M. Balling & E. Gnan & F. Lierman (eds.), *Money, Finance and Demography: The Consequences of Ageing*, Vienna, Suerf (2007), **WP No. 545 (November 2006)**.
- N. 532 - M. Montanari, *Between European Integration and Regional Autonomy: The Case of Italy from an Economic Perspective*, Constitutional Political Economy, Vol. 17, 4, pp. 277-301 (2006), **WP No. 532 (March 2006)**.
- N. 529 - M. Montanari, *Knocking on the EU's door: the Political Economy of EU-Ukraine Relations*, Journal of Contemporary European Research, Vol. 3, 1, pp. 64-78 (2007), **WP No. 529 (February 2006)**.
- N. 518 - M. Brunetti and C. Torricelli, *Economic Activity and Recession Probabilities: information content and predictive power of the term spread in Italy*, Applied Economics (2009), **WP No. 518 (December 2005)**.
- N. 517 - M. Murat and S. Paba (2006), *I distretti industriali tra immigrazioni e internazionalizzazione produttiva*, in B. Quintieri (ed.) *I distretti italiani dal locale al globale*, Rubbettino (2006), **WP No. 517 (December 2005)**.
- N. 491 - V. Moriggia, S. Muzzioli and C. Torricelli, *On the no arbitrage condition in option implied trees*, European Journal of Operational Research (2009), **WP No. 491 (May 2005)**.
- N. 482 - G. Di Lorenzo and G. Marotta, *A less effective monetary transmission in the wake of EMU? Evidence from lending rates passthrough*, ICAFI Journal of Monetary Economics, Vol. 4, 2, pp. 6-31 (2006), **WP No. 482 (February 2005)**.
- N. 472 - M. Brunetti and C. Torricelli, *The internal and cross market efficiency in index option markets: an investigation of the Italian market*, Applied Financial Economics, Vol. 17, 1, pp. 25-33 (2007), **WP No. 472 (November 2004)**.
- N. 466 - G. Marotta, *La finanza del settore non profit tra ritardi nei pagamenti e Basilea 2*, Banca Impresa Società, Vol. XXIV, 1, pp. 35-51 (2005), **WP No. 466 (September 2004)**.

- N. 453 - Pederzoli and C. Torricelli, *Capital requirements and Business Cycle Regimes: Forward-looking modelling of Default Probabilities*, Journal of Banking and Finance, VI. 29, 12, pp. 3121-3140 (2005), **WP No. 453 (February 2004)**.
- N. 448 - V. Moriggia, S. Muzzioli, C. Torricelli, *Call and put implied volatilities and the derivation of option implied trees*, Frontiers In Finance and Economics, vol.4, 1, pp. 35-64 (2007), **WP No. 448 (November 2003)**.
- N. 436 - M. Brunetti and C. Torricelli, *Put-Call Parity and cross-market efficiency in the Index Options Markets: evidence from the Italian market*, International Review of Financial Analysis, VI.14, 5, pp. 508-532 (2005), **WP No. 436 (July 2003)**.
- N. 429 - G. Marotta, *When do trade credit discounts matter? Evidence from Italian Firm-Level Data*, Applied Economics, Vol. 37, 4, pp. 403-416 (2005), **WP No. 429 (February 2003)**.
- N. 426 - A. Rinaldi and M. Vasta, *The Structure of Italian Capitalism, 1952-1972: New Evidence Using the Interlocking Directorates Technique*, Financial History Review, vol, 12, 2, pp. 173-198 (2005), **WP No. 426 (January 2003)**.
- N. 417 - A. Rinaldi, *The Emilian Model Revisited: Twenty Years After*, Business History, vol. 47, 2, pp. 244-226 (2005), **WP No. 417 (September 2002)**.
- N. 375 - G. Marotta, *La direttiva comunitaria contro i ritardi nei pagamenti tra imprese. Alcune riflessioni sul caso italiano*, Banca, Impresa, Società, Vol. XX, 3, pp. 451-71 (2001), **WP No. 375 (September 2001)**.
- N. 303 - G. Marotta and M. Mazzoli, *Fattori di mutamento nella domanda di prestiti ed effetti sulla trasmissione della politica monetaria*, in P. ALESSANDRINI (ed.) *Il sistema finanziario italiano tra globalizzazione e localismo*, Bologna, Il Mulino, pp. 223-260 (2001), **WP No. 303 (April 2000)**.
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