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Original article

When small-sized and non-innovating firms meet a crisis: Evidence from the Italian labour market

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Abstract:

The Italian jobs crisis consists of a high percentage of non-working labour force, matched with a high percentage of discouraged, long-term unemployed and inactive population. Not only a sharp deregulation of the job market is groundless, but even a hypothetic return to expansionary fiscal policy would be insufficient in order to solve such structural problems. Starting from the literature dealing with the "Italian decline", this article demonstrates that the current problems of the Italian labour market are strictly connected to both (post-crisis) fiscal adjustment and pre-existing features of the industrial branch.

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Empirical evidence (ISTAT, 2016) has recently revealed the ineffectiveness of the radical reform of the job market (law 183/2014 and addenda, commonly known as the *Jobs Act*) recently implemented by the past Italian government.[1] A robust explanation of such a failure

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[1] Analysing data for 2015, Bendinelli (2017) concludes that the increased incidence of permanent contracts was largely attributable to monetary incentives, rather than the regulatory changes introduced by the *Jobs Act*. In addition, Cirillo, Fana and Guarascio (2017) emphasize that such increase in open-ended positions is concentrated in low-skilled branches. Furthermore, they stress that (*i*) new open-ended contracts are mostly driven by transformation of pre-existing contracts; (*ii*) a relevant share of new open-ended positions is represented by part-time contracts and (*iii*) the increase in employment is concentrated among older employees. More recent data confirm that, from 2014 to 2016, employees rose by 3.2% overall, however fixed-term workers grew by 6.5%, whereas permanent workers only 2.6% (www.istat.it/it/lavoro-e-retribuzioni). Looking at the data for the third quarter of 2017 (ISTAT, 2017b), when compared to 2014, the number of employees grew by 5.8%, nevertheless fixed-term workers increased by 22.3%, while the permanent workers by 3.2%. Furthermore, in the third quarter

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necessarily implies a reconsideration of the causes of the Italian crisis, particularly in the market of labour.

Back in 2014 – the year in which the *Jobs Act* was discussed and enacted – two publications issued by two bodies of the Italian administration seem particularly useful to this end. Firstly, ISTAT's *Annual Report* (ISTAT, 2014) highlighted that the recession had shifted GDP back to the level of year 2000. In particular, the statistical office emphasized two anomalous features of the Italian economy, when compared to the rest of the EU countries: they concern the labour market and fiscal policy. On the one hand, unemployment reached a peak of 12.2% in 2013: one of its highest level since the 1950s. On the other hand, not only did the Italian government not implement any expansionary fiscal policy between 2008 and 2012, but it even enacted a fiscal adjustment equivalent to 5% of GDP in the same period. More precisely, tax revenues increased by 122 billion Euro whereas public expenditures decreased by 53 billion Euro (ISTAT, 2014).

Secondly, the *Report on the Labour Market 2013-2014* (CNEL, 2014) explicitly questioned the meaningfulness of the official rate of unemployment, considering some unprecedented characteristics of the Italian job market. Assuming a definition of unemployment very close to the U-6[2] adopted by the U.S. Bureau of Labor Statistics, the publication emphasized that the rate of discouraged workers was extremely high in Italy when compared to the rest of the European Union (14.2% vs. 4.1%). Furthermore, CNEL evidenced that the reduction of working hours to zero ("Cassa integrazione a zero ore") involved 527.986 people in 2014 (CGIL, 2014). Accordingly, the real percentage of non-working labour force was equivalent to approximately 28%.

To complete the picture, one may add that the rate of economically active population was sensibly lower in 2016 than the EU average (69.6% vs. 77.5%[3]) and, also, that the rate of long-term unemployment in Italy was higher (57.4% vs. 46.4%[4]). Furthermore, the *2017 Welfare State Report* by Felice Roberto Pizzuti (2017) highlighted that the Italian job market has been characterized by a serious mismatch between demand and supply of labour. Notwithstanding an extremely low percentage of highly educated labourers (only 25% of the 30-34 years old active population has got a degree, versus the 38.7% of the European Union), the Italian labour force is over-educated when compared to the skills demanded by the employers. Since most Italian firms are both small-sized and belonging to mature branches, firms prefer cost-reducing decisions over investments in human capital. Accordingly, the demand for labour is insufficient in order to employ the domestic supply of highly skilled labour force, although this latter remain modest when compared to the rest of the advanced economies.[5]

In other words, already in 2014 the Italian case revealed a worrisome scenario: a high percentage of non-working labour force was matched by a high percentage of discouraged, long-term unemployed and inactive (i.e. obsolete, from the employers' point of view)

of 2017 the share of fixed workers on total reached 15.7% that is the highest value since 1993. Since in 2014 such share was 13.6%, it is easy to conclude that the *Jobs Act* has not succeeded in stimulating the growth of permanent employment with respect to fixed-term employees.

[2] "Total unemployed, plus all persons marginally attached to the labor force, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to the labor force" (see https://labor.ny.gov/stats/PDFs/alternative_measures.pdf).

[3] Eurostat, *Employment and activity by sex and age – annual data*, available at http://ec.europa.eu /eurostat/data/database

[4] Eurostat, *Long-term unemployment by sex – annual average, available at* http://ec.europa.eu /eurostat/data/database

[5] See e.g. OECD, *World Indicators of Skills for Employment*, available at http://stats.oecd.org/

population. Therefore, not only was a sharp deregulation of the job market groundless, but even a hypothetic change in the fiscal policy (the much-debated 'end of austerity') would have been insufficient to solve such structural problems. As evidenced by the works of Hyman Minsky ([1965] 2013; 1986; 2014), in similar cases the government has to act resolutely, as an 'employer of the last resort'.

Starting from such a theoretical background, this article aims to show that the current problems of the Italian job market are strictly connected to both the austerity measures and the pre-existing features of the industrial branch. The thesis we want to explore is that the consequences of the crisis on employment have been more severe in Italy than in other EU countries also because of the (previous) unbalanced distribution of industrial jobs within the micro-enterprises. That is the case in both non-innovating and non-exporting firms, as such more exposed to the consequences of fluctuations and/or crises. From this perspective, our article builds on several contributions (De Cecco, 2007; D'Ippoliti and Roncaglia, 2011; Ciocca, 2012; Ferrari, 2012; Lucarelli et al., 2013; Perri and Lampa, 2014; Forges Davanzati, 2016), which stress that, in Italy, the pre-existence of a non-innovating industrial branch has been weakening the expansionary effect of aggregate demand on GDP for decades.

1. The convergent analysis of the Italian job market: A critique and a restatement

The economic literature on the jobs crisis in Italy consists of two converging fields of research, both belonging to the state failure paradigm. In the first place, a group of mainstream scholars (Ichino et al., 2005; Alesina and Giavazzi, 2008; Alesina and Ichino, 2009) has been emphasizing that Italy's labour productivity remained lower than that of other EU countries because of the excessive protection of employment and, accordingly, the strong incentive to moral hazard by salaried employees. Therefore, they have repeatedly proposed radical reforms of the job market, aimed at increasing labour market flexibility, meant as the only viable strategy in order to achieve both economic growth and a higher rate of employment. After 2008, a very important addendum has been issued: those countries (Ireland, Latvia) that had already implemented similar reforms in the job market before the crisis showed a better recovery than the ones (Spain, Portugal, Greece, and Italy) that changed their legislation only after the financial breakdown (Draghi, 2014).

Based on such premises, the public debate on the possible solutions to the crisis in Italy has been hegemonized by several proposals of reform of the labour market, which eventually led to the aforementioned *Jobs Act* in 2014. From this perspective, the economists belonging to this branch insisted on a more flexible job market in Italy in order to stimulate recovery from the crisis, showing an explicit continuity with a pioneering work by Olivier Blanchard (2006). This notwithstanding, they deliberately ignored the subsequent updates of this very same field of research, such as the partial retraction by Blanchard himself (Blanchard and Leigh, 2013).[6]

In the second place, another group of more heterodox authors (e.g. Travaglini, 2013; Saltari e Travaglini, 2009; Lucidi and Kleinknecht, 2010) stated that the Italian jobs crisis was the effect of a government failure. Contrarily to the aforementioned literature, these contributions stressed that the excess of reforms implemented in the labour market during the years before the crisis (1997 and 2003) produced an unprecedented change in the legislation that acted as an exogenous shock on the supply side. More precisely, in the 1997-2007 period,

[6] See in particular paragraph IV.B ("Components of Aggregate Spending and Unemployment"), pp. 17-18.

the huge increase in labour market flexibility represented an incentive for firms to re-switch to labour intensive techniques, which implied a decrease in labour productivity, in investments in innovation and, therefore, in the competitiveness of the whole industrial branch. Accordingly, the 2008 crisis affected the Italian economy in a more severe way because of such a (pre-existing) deteriorated economic outlook.

Notwithstanding the different implications, it is worth noting that also in this case the most important theoretical antecedent was represented by an article by Olivier Blanchard (1997), in which he stressed the disturbing role played on the European labour markets by a technological (exogenous) shock that took place in the 1980s.

In other words, the Italian debate revealed an unexpected convergence between the main fields of research. In both cases, the jobs crisis is the effect of the declining productivity of labour, which in turn is the effect of institutional inefficiencies that characterized Italy in the years before 2008. Accordingly, a number of unspecified "reforms" would represent the only viable (although painful) solution to Italy's problems. On the other hand, both types of analysis minimize the role played by fiscal conservatism, implicitly ignoring that the compression of the aggregate demand, the increasing inequality and the contractionary fiscal policies[7] have also determined a decrease in labour productivity (Delli Gatti et al., 2012a; 2012b; Blanchard and Leigh, 2013). The intensity of such tendencies in Italy, in the three decades before the global crisis, was such that the whole industrial branch had already been affected.

In line with these latter works, our thesis is that a long-lasting solution to the problems of the Italian job market necessarily implies a resolute fiscal stimulus on aggregate demand, since public expenditures remain a fundamental tool in order to create job opportunities, both in the public and in the private sector, especially during a severe crisis. However, we are also persuaded that such a stimulus would be insufficient if not matched by an industrial policy aimed at directing investments towards a limited number of strategic – as well as innovating – branches (D'Ippoliti and Roncaglia, 2011; Ciocca, 2003; 2012; Ferrari, 2012; Lucarelli et al., 2013). To our eyes, the most important result of such a policy would be to incentivize the centralization of industrial capitals, thus contrasting the permanence of workers in inefficient micro-enterprises, since these latter are more exposed to the negative consequences of fluctuations and/or crises (ILO, 2009; OECD, 2009). Stated succinctly, our thesis is that full (and good) employment is a task of the government.

A similar idea of a government as employer of the last resort is originally advanced by Minsky ([1965] 2013; 1986; 2014), Sylos Labini (1984a; 1987; 1999) and, more recently, by Harvey (1989) and Leon (2014; 2016). In Minsky's pioneering formulation, raising aggregate demand using fiscal policy, although necessary, is not sufficient in order to end poverty and long-term unemployment because of two reasons. First, government spending is biased both toward 'non-expanding jobs sectors' such as military expenditures, monopolies etc. Second, public expenditures are unbalanced in favour of the richest part of the population (*via* tax cuts). Such combination of biases implies that 'Keynesianism' alone would not reduce inequality significantly:

> Obviously, labor is not homogenous and fluid. The gestation period of a worker with particular skills in a particular place may be quite time consuming and the gestation process quite costly. At every day there is a need not only to generate the right kinds of labor, but also to make do with the available labor force […]. Since labor is actually heterogeneous and viscous, the efficacy of different

[7] It seems important to highlight that Italy have run continuously a primary surplus since 1992.

> demand-generating instruments in rising employment depends upon where the initial change in final demand takes place, what the immediate derived demands are, and what the ultimate change in final demand is […]. A conventional argument is that fiscal ease can be used to offset the effects of tight money; and seemingly, tax reductions are perfect substitutes for spending programs. But this, in fact, is not so. (Minsky, [1965] 2013, pp. 13-14).

Accordingly, in Minsky's eyes, a durable solution to long-term unemployment consists of a resolute state interventionism inspired by both F.D. Roosevelt's *New Deal* and L.B. Johnson's *War on Poverty*: the focus of any anti-poverty policy should be re-oriented towards direct jobs creation, rather than welfare state and transfer payments. Minsky also shows that job-creating policies produce a multiplier effect on the labour demand of the private sector. Additionally, they prevent the wage dumping determined by the expansion of the industrial reserve army.

In line with the aforementioned works, the thesis we are going to explore is that the Italian jobs crisis depends in the first place on fiscal conservatism (particularly *after* the crisis) and, in the second place, on the lack of a proper industrial policy in the past three decades.

2. Pro-ciclical and contractionary effects of fiscal conservatism on the job market

A mere observation of stylized facts (fig. 1) suggests that, in Italy, employment is highly correlated to the variations of domestic demand (our analysis is grounded on descriptive statistics).[8]

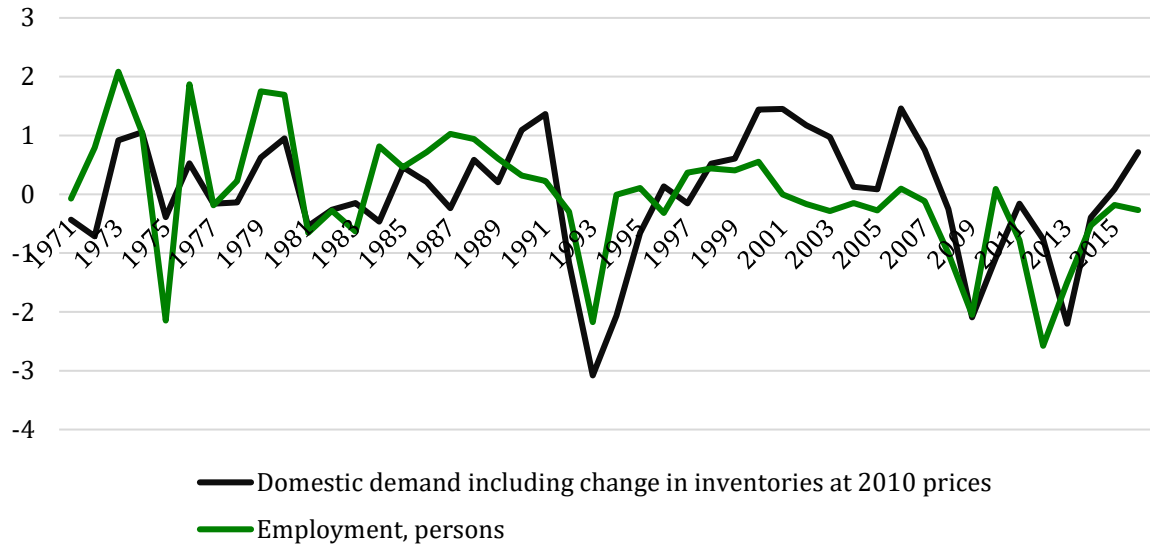
Such correlation is even reinforced once we compare the dynamics of domestic demand with the average of the EMU (European Monetary Union), Germany and France. Assuming that the 1991 level of real domestic demand is equal to 100, in 2015 the average of the EMU countries reached 136.6, Germany 127.1, and France 145.3. In contrast, Italy showed a very modest result: 109.7.

What is striking about the Italian (poor) performance is that it mostly depends on the policies implemented after the global crisis. In fact, in 2008, Italy still showed a higher level of domestic demand than Germany (121.4 vs. 118.7), despite it being sensibly lower than both the EMU average (139.6) and France (139.1). In other words, during the crisis, Italy and Germany were characterized by two opposite fiscal policies. In spite of the dominant narrative, only the Italian governments implemented a dramatic fiscal adjustment (as discussed above) whereas Germany's administrations actually expanded domestic demand.

Looking at the dynamics of investment in Italy, we find an even higher correlation with the level of employment (fig. 2).

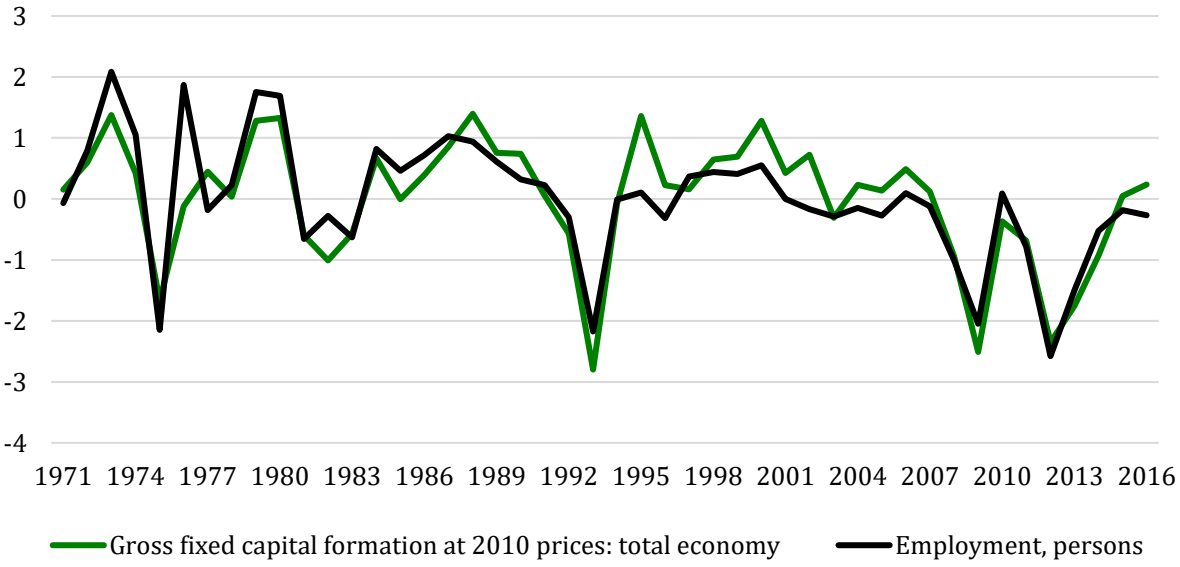
[8] In what follows, we focus on domestic demand, because it is particularly affected by the austerity policies. Furthermore, it shows a greater impact on the level of employment.

Figure 1 – *Domestic demand and employment (standardized data, percentage variation)*



Note: the series are standardized by calculating the difference between each observation and the sample mean, and dividing by the standard deviation.
Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

Figure 2 – *Gross capital formation and employment (standardized data, percentage variation)*



Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

This is not surprising, since investment is the most important component of domestic demand concerning the level of employment. Nevertheless, the comparison with EMU countries, Germany and France clearly evidences a worrisome situation. Comparing the 2000-2007 period to the 2008-2015 period in real terms, the total value of gross capital formation in Italy has decreased by –13.4%. In the EMU countries, it has remained almost the same (–0.3%) while it has increased significantly both in France (+6.9%) and in Germany (+8.2%).

The remarkable performance of Germany can be easily explained by the investment in the public sector (table 1): in the examined period, it increased by +17%. A similar tendency involved France (+5%) and the euro area. On the contrary, the catastrophic performance of Italy is, in the first place, a consequence of the dramatic reduction of public investment: –8.8% (table 1).

Table 1 – *Gross capital formation: General government, billion euros*

	2000-2007	2008-2015	Var. %
EU15	2771.8	2976.3	7.38
EA12	2231.7	2310.4	3.53
Germany	397.8	465.5	17.02
France	605.4	635.8	5.03
Italy	376.8	343.6	–8.8

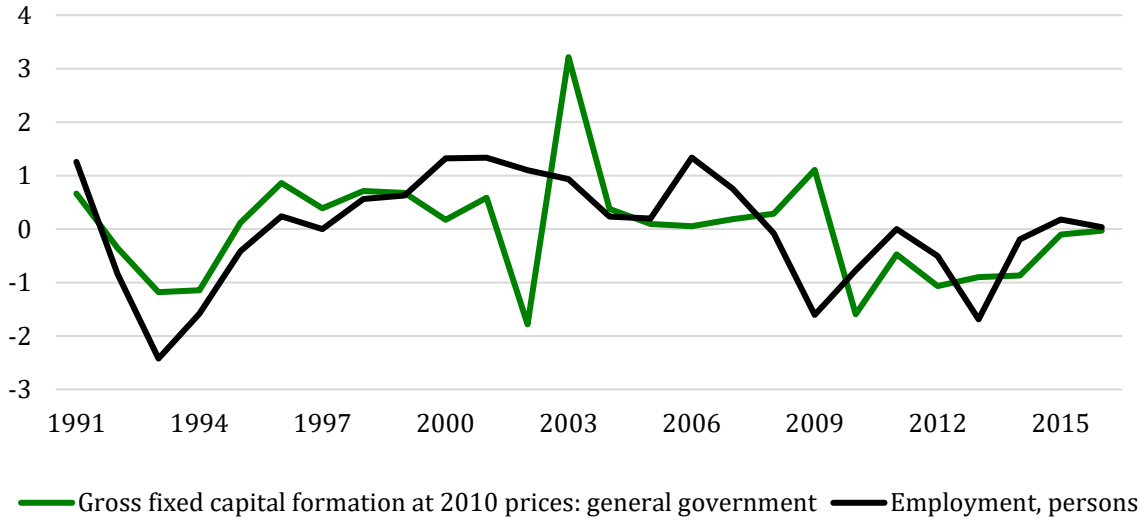
Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

The pro-cyclical dynamics of public investment in Italy has always had serious consequences on the job market. Figure 3 shows the correlation between public investment and employment. Plotting together the standardized[9] values of the two variables (fig. 4), it is possible to show how the negative values of percentage variations in employment of both the early 1990s and the 2008-2016 periods are associated with a negative variation in public investment. In the 26-year period examined, the signs of the variation of the two quantities have been different only four times.[10]

Therefore, an expansion of investment (both public and private) seems inescapable in order to counteract unemployment.[11] Regardless of this, the current debate is circumscribed to the 'indirect' stimuli on investment alone,[12] in spite of the poor results evidenced by similar policies when compared to the direct investment by the government (Mazzucato, 2014).[13]

[9] The values of the general government gross fixed capital formation in the AMECO database are in nominal terms.
[10] It will be noted, confronting figure 2 and figure 3, that while in the year 2003 and in the year 2009 public investments rose, total investments decreased sharply. At this regard, one should keep in mind that variations of employment are affected by total investments and not only by public investments alone.
[11] Notwithstanding the (overall) optimistic conclusions of their work, also Fortis and Quadrio Curzio (2018) emphasize the disturbing role played by decreasing public investment on both growth and jobs creation in Italy (2014-2017).
[12] See for instance the so-called *Juncker Plan*, November 2014.
[13] "The assumptions that all the State has to do is to 'nudge' the private sector in the right direction; that tax credits will work because business is eager to invest in innovations; that removing obstacles and regulations is necessary; that small firms – simply due to their size – are more flexible and that their core problem in Europe is simply one of 'commercialization' – are all myths. They are myths about where entrepreneurship and innovation come from" (Mazzucato, 2014, p. 33). Recently, also Bianchi (2013) has emphasized the importance of Italian state owned enterprises in terms of innovation along the past century.

Figure 3 – *Gross public investments and employment (standardized data, percentage variation)*



Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

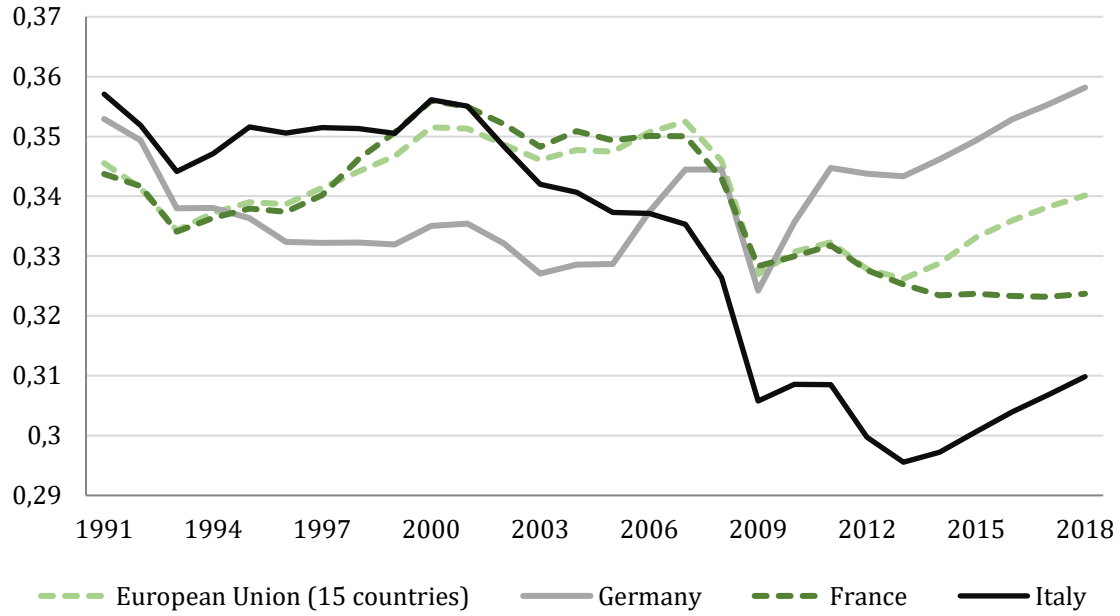
Nevertheless, this point deserves closer attention as far as the Italian economy is concerned. Broadly speaking, the relation between investment and employment is strongly associated to the relation between investment and income. Yet, recent literature has shown that the impact of investment on GDP growth has been decreasingly effective in Italy between 1987 and 2012 (Lucarelli et al., 2013). In short, the lack of an adequate productive specialization in high-tech sectors implies that the Italian firms (operating in these branches) have systematically had to import capital goods, as evidenced by the continuous sectoral trade deficits. Within this framework, the structure of the Italian economy tended to lower the multiplier effect of the investment on income, when compared to other European countries. Such a situation can be reverted only if Italy directs the accumulation of capital towards a change in its productive specialization (ibid., p. 202).

In the latter part of this article, we are going to analyse in depth the relationship between aggregate demand and productive structure in Italy. However, at this stage of the analysis, it is already possible to note that, in the Italian economy, the so-called 'capital productivity'[14] (i.e. gross domestic product divided by the value of the capital stock), has decreased sharply in the first decade of the 2000s, becoming lower than that of other European countries in 2006, i.e. already before the global crisis of 2008. Figure 4 highlights such a decreasing trend (despite the good performance of the 1990s). This result may implicitly support the thesis that, although existing, the impact of the investment on gross domestic product is weaker in Italy than in the rest of the European countries because of the lack of productive specialization in high-tech branches.[15]

[14] As the Cambridge capital controversy showed, there is an aggregation problem in defining the productivity of capital. See, among others, Harcourt (1972), Lebowitz (2009), Nell and Thirlwall (2017).

[15] Nell and Thirwall (2017) analysed the causes of the different productivities of investment across countries. However, Salvatore and Campano (2017, p. 7) showed that: "investment in new machines (which increase the

Figure 4 – *Productivity of capital*



Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

On the other hand, the analysis of private investment in Italy also questions the economists' shared assumptions. Broadly speaking, private investment is traditionally assumed to be a function of expected profitability. On the contrary, it seems that in Italy a rising real wage-rate boosted capital accumulation. However, one should remember that several economists have disputed this traditional understanding. Besides e.g. Adam Smith and J.M. Keynes,[16] Gérard Duménil and Dominique Lévy (2014) have recently showed that investments and profits are negatively correlated in the United States. In their analysis, a distinctive feature of neoliberalism is that firms systematically retain profits in order to allocate them in the financial sector. Accordingly, large profit rates do not motivate capitalists and/or enterprises in their propensity to invest and do not contribute anymore to the financing of investment.

From this perspective, Italy seems to manifest the same tendencies. However, rather than to the financial sector alone (Tropeano, 2012), a significant part of private profits have been

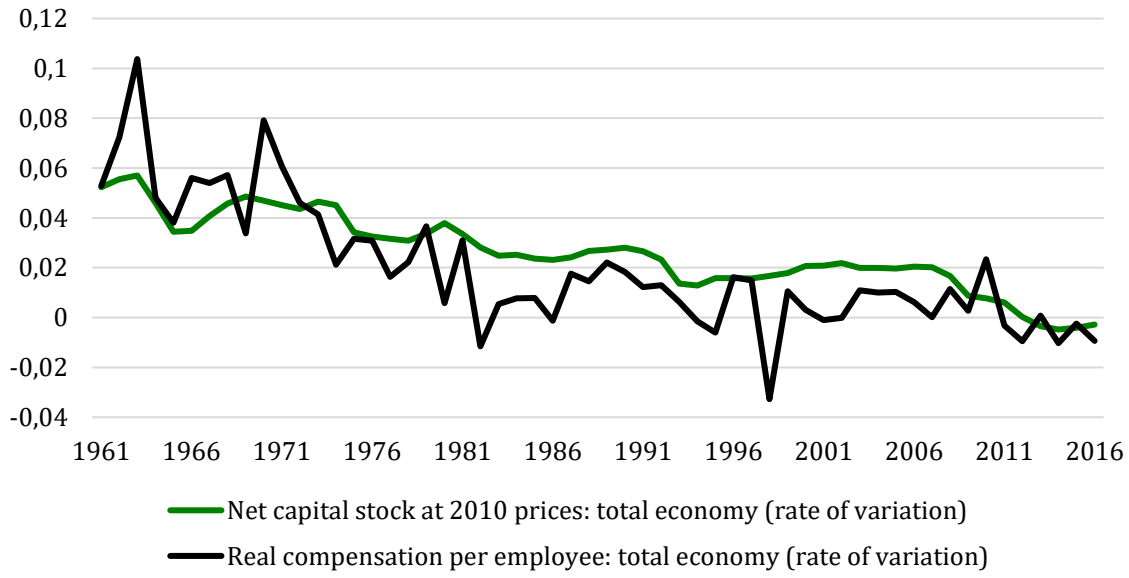
capital/labor ratio) may even lead to slower growth because in most EU countries the output elasticity with respect to labor is higher than the elasticity with respect to capital. Italy will start growing again if its firms start hiring and stop thinking in terms of substituting more capital for labor."

[16] "The high rate of profit seems everywhere to destroy that parsimony which, in other circumstances, is natural to the character of the merchant. When profits are high, that sober virtue seems to be superfluous and expensive luxury to suit better the affluence of his situation. But the owners of the great mercantile capitals are necessarily the leaders and conductors of the whole industry of every nation; and their example has a much greater influence upon the manners of the whole industrious part of it than that of any other order of men" (Smith, [1776] 1979, p. 612). "This would not mean that the use of capital instruments would cost almost nothing, but only that the return for them would have to cover little more than their exhaustion by wastage and obsolescence together with some margin to cover risk and the exercise of skill and judgment [...]. Now, though this state of affairs would be quite compatible with some measure of individualism, yet it would mean the euthanasia of the rentier, and, consequently, the euthanasia of the cumulative oppressive power of the capitalist to exploit the scarcity-value of capital" (Keynes, [1936] 1973, p. 376).

displaced abroad. Not only in Italy (also in Germany) outsourcing has been extremely intense between 1995 and 2006 (Breda and Chiapparello, 2010), but the dimensions of the phenomenon have been actually closer to a massive offshoring. Accordingly, domestic investment dropped to an extremely low level, unlike in Germany (Deutsche Bundesbank, 2011; Simonazzi et al., 2013).

A useful relationship to clarify this issue is the variation of the real wage compared to the variation of capital stock. Figure 5 shows that their correlation is positive, or, more precisely, both the trend of the rate of variation of real wages and of that of the capital stock have been decreasing during the whole period considered.

Figure 5 – *Real wage and capital stock (standardized data, percentage variations)*



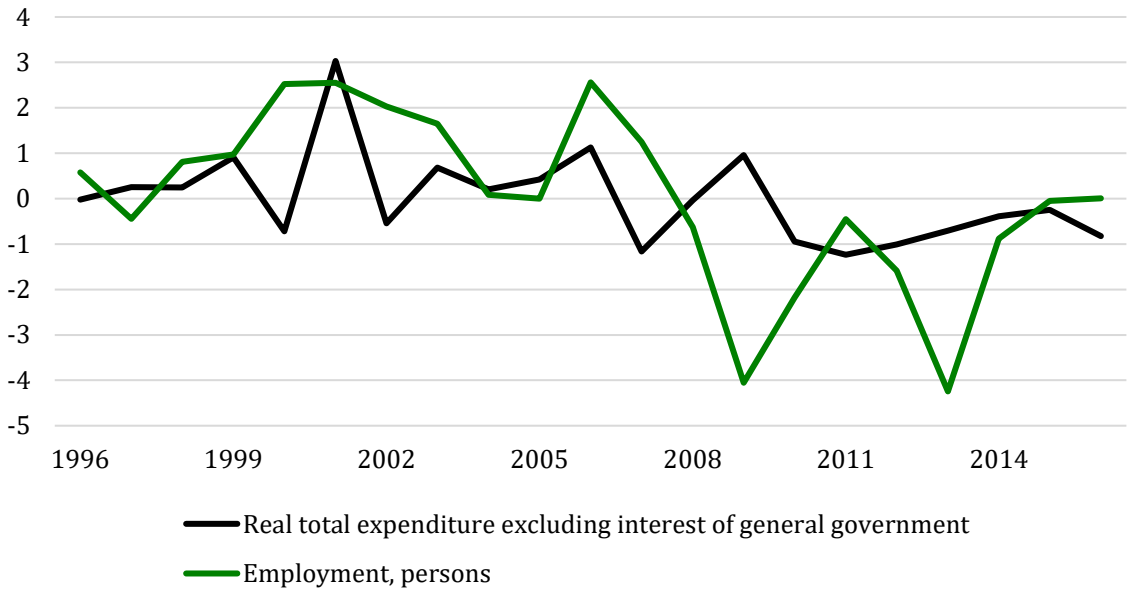
Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

Even if this evidence does not account for any causal relationship, a similar result is consistent with the thesis that accumulation of capital (and, therefore, economic growth) has been wage-led in Italy. Accordingly, wage deflation has acted as a disincentive to invest, inescapably determining a fall in labour productivity (Sylos Labini, 1984b; 1985; 2004; Coltorti and Venanzi, 2017).

Finally, in order to complete our analysis, it is useful to consider the positive correlation between public expenditure and employment since 1995 (the first year in the AMECO database for the public expenditure data) as shown in fig. 6.

According to our thesis, it is possible to conclude that fiscal conservatism (particularly, compression of public investment) and massive offshoring have negatively affected the level of employment in Italy. Consequently, it seems reasonable to suggest that the first step to solve the jobs crisis is a strategic re-launch of all components of domestic demand.

Figure 6 – *Government expenditure and employment (standardized data, percentage variations)*



Source: European Commission, AMECO database, available at http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm

3. The enhanced effect of the crisis on the job market: A consequence of the Italian industrial structure

In what follows, we are going to analyse the most significant features of the Italian industrial sector, particularly when compared with the rest of the EMU area. The proposed analysis is disaggregated in terms of firm size (number of salaried employees) in order to highlight both the transformation of the Italian industrial structure in the past three decades and its repercussions on the job market after the crisis. Of course, this is only one possible way of analysing such issue, since changes in the relationships between firms (clusters, vertical integration, outsourcing, global chain value etc.) represent another important aspect of the very same problem. Therefore, at the end of this paragraph we are going to briefly discus this related issue.

Table 2 – *Manufacturing, 2013*

	R&D expenditure on added value	R&D expenditure on gross investment
France	8.1%	50.8%
Germany	9.4%	78.5%
Italy	4.2%	33.8%

Notes: 2013 is the last available year in the OECD database that allows a comparison between the three countries.
Source: OECD, *Research and Development Statistics*, available at http://stats.oecd.org/

Firstly, Research and Development (R&D) expenditure is very low in the Italian productive system when compared to that in other European countries. Table 2 shows both the poor performance of the Italian manufacture firms (with regard to the relationship between R&D expenditure and the added value) and the astonishingly low ratio of R&D expenditure on gross investment. This is a serious structural weakness of the Italian productive system, to be situated at the origin of the dependency on the imported hi-tech capital goods, described in section 3 and in Lucarelli et al. (2013).

Figures 7a and 7b show the evolution of manufacturing employment since 1981, the year in which it reached its peak in Italy: total decrease until 2015 was equivalent to over 1,500,000 people. This phenomenon is not particularly original, since de-industrialization has been a common feature of all the advanced economies during the past thirty-five years. Nevertheless, in the Italian case, big enterprises (according to the Eurostat taxonomy[17]) showed the worst performance, as their loss of employment was superior to both the medium and the small enterprises. Such evidence reinforces the conclusions of the previous section: offshoring played a pivotal role in Italy. Furthermore, the biggest loss of employment within big enterprises took place before the crisis (see also table 3 below).

Figure 7a – *Manufacturing employment, 1971-2011*

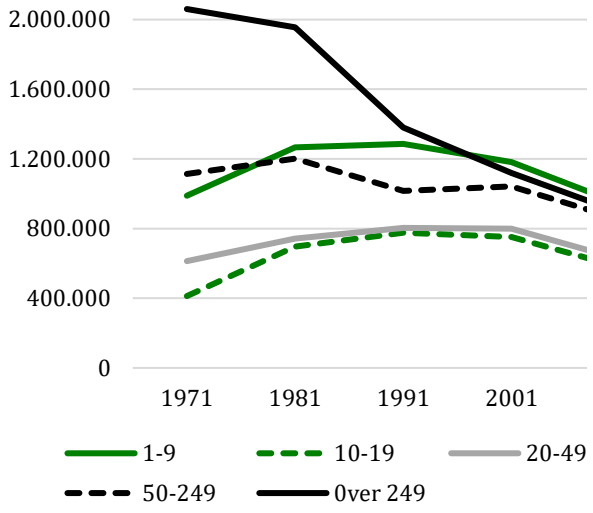
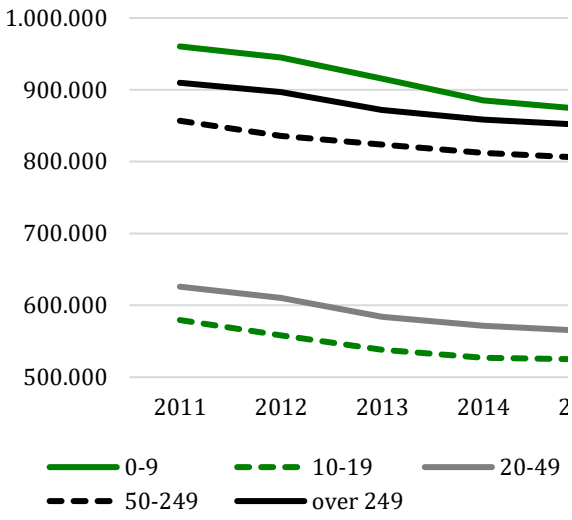


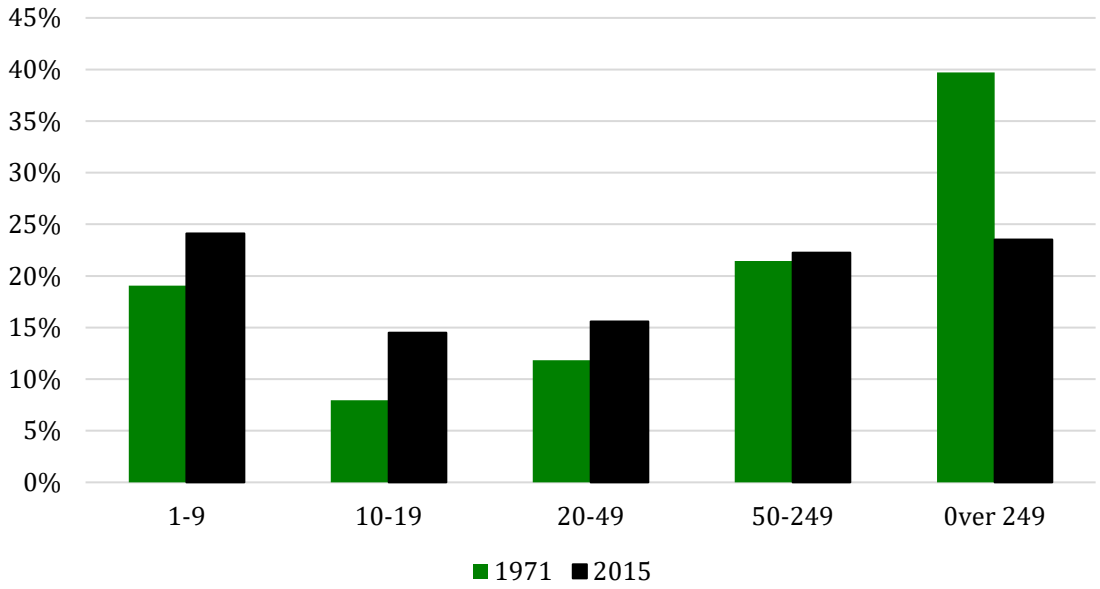
Figure 7b – *Manufacturing employment, 2011-2015*



Note: figure 7a plots data from ISTAT ten-year census; since the last available census data is for year 2011, figure 7b plots data for the period 2011-2015 available from ISTAT, *Structure and Competitiveness of Businesses*.
Sources: ISTAT, *Ten-year Industry and Services Census*, available at http://www.istat.it/it/censimenti-permanenti/imprese; and Istat, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/107133; www.istat.it/it/archivio/140207; www.istat.it/it/archivio/175950; www.istat.it/it/archivio/193436; and www.istat.it/it/archivio/206643

[17] Following Eurostat, we use the terms: 'micro enterprises' (0 to 9 employees); 'small enterprises' (10 to 19); 'medium-small enterprises' (20 to 49); 'medium enterprises' (50 to 249) and big enterprises (over 249). It is worth noting, however, that in the Italian literature 'medium enterprises' are actually the ones employing 50 to 499 workers (see Coltorti and Garofoli, 2010, p. 10).

Figure 8 – *Distribution of total employment (manufacture)*



Source: ISTAT, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/107133; and www.istat.it/it/archivio/206643

In other words, not only did the Italian manufacture branch contract during the past three decades, but it also changed its composition: medium-small sized firms replaced big enterprises in terms of total employment. Figure 8 shows this transformation, comparing 1971 and 2015. Compared to 1971, the importance of big enterprises in terms of total employment of the industrial sector has decreased from 39% to 24%; medium enterprises' participation has remained constant, whereas the share of employment generated by medium-small, small and micro enterprises has increased (small enterprises have almost doubled their share: from 8% to 15%). Micro enterprises deserve a further remark: even if employment has increased at a slower pace (from 19% to 24%) than in small firms, they currently represent the most important class of enterprises by number of employees.[18] Among the EMU countries, only in Greece and Cyprus micro-enterprises play a more important role.[19]

In Italy "technical efficiency has a strong dimensional component […] increasing progressively in the biggest class of enterprises" (ISTAT, 2014, p. 54); therefore, such a structural change determined a weakening of the whole industrial sector, for several reasons. In the first place, the relative importance of small enterprises negatively affected R&D activity (Brandolini and Buganelli, 2009). In the second place, a lower productivity of labour, a low level of investment and a limited access to information and communication technologies (Rossi, 2015; Ciocca, 2003) characterize small enterprises. In the third place, small firms have also a very limited internationalization, both active and passive (Cristadoro and Federico, 2015).

[18] De Mitri et al. (2013) remark that in traditional branches (textile, food and wood industries) micro-enterprises employ over 30% of total workers.

[19] See e.g. Eurostat, *Structural Business Statistics, Annual enterprise statistics by size class for special aggregates of activities* (NACE rev. 2), available at http://ec.europa.eu/eurostat/data/database

Figure 9 shows that in Italy the level of investment (both per employee and as a share of value added) is directly proportional to the size of the firm: medium and big enterprises are characterized by a high level of investment. It will be noted that the micro enterprises show a very low level of investment per employee, but a level of investment on added value similar to that of medium-small enterprises. However, this is not surprising, because, as it will be shown below (table 5), the labour productivity of medium-small enterprises is roughly two times that of micro enterprises.

Figure 9 – *Manufacture investment, 2015*

Source: ISTAT, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/206643

Table 3 – *Variation in employment (manufacture)*

	1981-2015	2007-2009	2009-2015	2007-2015
0-9	–28.42%	–11.33%	–13.39%	–23.21%
10-19	–21.29%	–9.5%	–15.07%	–23.14%
20-49	–20.19%	–7.72%	–15.22%	–21.76%
50-249	–27.44%	–2.86%	–9.86%	–12.43%
Over 249	–48.53%	–0.36%	–9.33%	–9.66%
Total	–33.04%	–6.14%	–12.15%	–17.55%

Source: ISTAT, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/206643

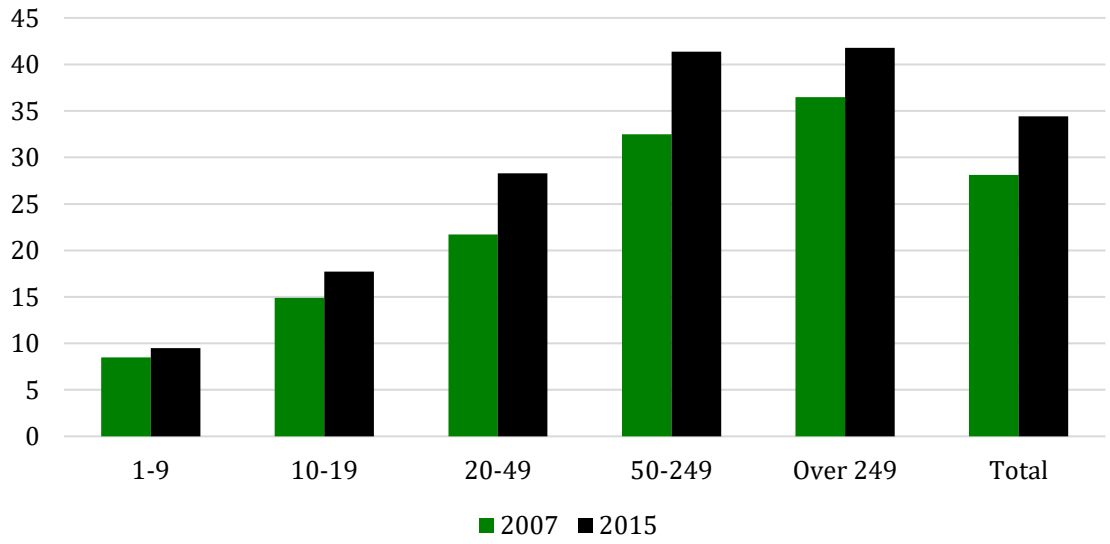
Accordingly, during the crisis (2007-2015), the contraction of employment (which in turn depended on the fall of investment) was higher in the small and micro enterprises than in the medium and big ones (table 3). This result is in line with ISTAT *Report on Italian Clusters* (ISTAT, 2015). This publication showed a sharp decrease (–21%) in the number of employees

in clusters, in the 2001-2011 period. Conversely, employment in "local systems non-district" (i.e. biggest productive unities) increased by +22.8%.

Export is, of course, a closely related issue. In times of fiscal adjustment and declining domestic demand, the external channel represents a crucial resource in order to counteract the effect of a recession.[20] However, export necessarily implies a high degree of competitiveness. Recently, the *Report on the Competitiveness of the Productive Sectors* (ISTAT, 2017a) has emphasized that in 2014, the top 20 Italian exporters represented 13% of the industrial sector, which is a smaller portion than the top five French and German exporting firms. In addition, the exporting firms in Italy are also characterized by a smaller size: micro enterprises represent 65% (and small enterprises 29%) of total exporting firms. As a result, it contends that most of the exporting firms are still (largely) dependent on domestic demand since, as shown by figure 10, the share of export sales over total sales is related to the size of the enterprises in Italy.

Not surprisingly, exporting firms have shown a far better performance in terms of profit. In 2015, the profit share on value added has been very low for micro non-exporting enterprises. However, non-exporting micro enterprises still represent the vast majority within each branch.

Figure 10 – *Turnover from exports on total turnover (manufacture, 2015)*



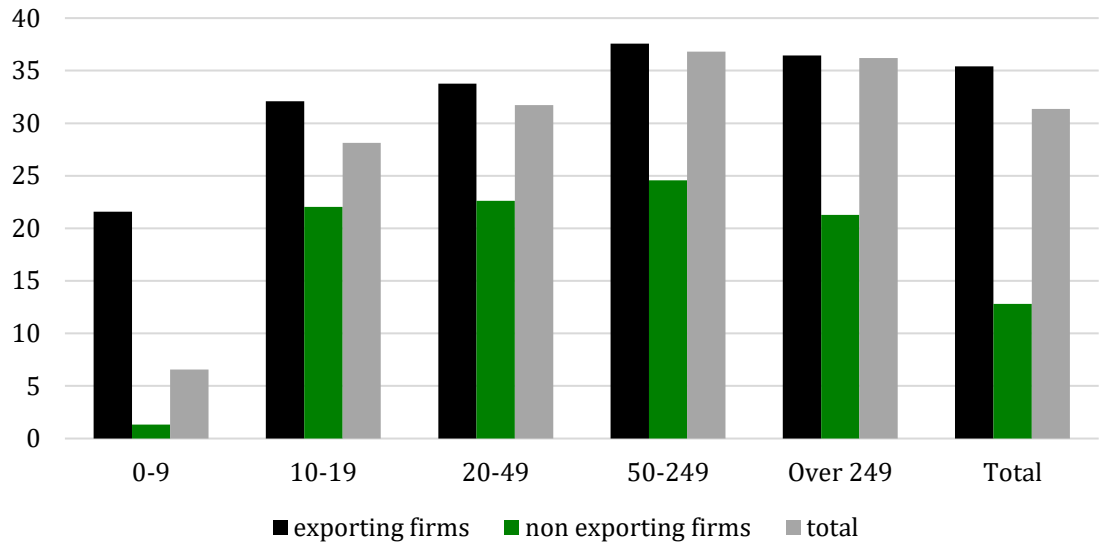
Source: ISTAT, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/206643

Finally, it is important to stress that several works have shown that our results hold true also in terms of global value chain analysis. Broadly speaking, big and medium enterprises act as leaders of the value chain, focusing on the high value-added activities. In turn, small enterprises play a subordinated and complementary role, which becomes extremely risky in the event of a crisis. From this perspective, the prevalence of small firms in Italy has also implied their intermediate position in the global value chains, characterized by a low

[20] Simonazzi et al. (2013) emphasize that Italian clusters' capability of finding new markets have been modest, when compared to Germany.

productivity. Accordingly, the 2008 crisis had severe consequences on Italian firms (Sacchetti and Sugden, 2003; Razzolini and Vannoni, 2007; Accetturo et al., 2011; Giunta et al., 2012; Accetturo et al., 2013; Accetturo and Giunta, 2014), particularly concerning employment levels (Garofoli, 2014).

Figure 11 – *Profits on added value (manufacture, 2015)*



Source: ISTAT, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/206643

The declining productivity of labour

The analysis developed in the previous section implies that, in the first place, productivity of labour was negatively affected by fiscal adjustment and outsourcing/offshoring. Furthermore, empirical evidence suggest that the loss in productivity caused by outsourcing and offshoring was not even counterbalanced by a corresponding influx of investment income. The balance of investment income, direct investment and reinvested Earnings on FDI for the total economy shows a deficit between 1995 and 1998; a moderate surplus in 1999; a deficit in the 2000-2003 period; a surplus in 2004-2014 and, finally, a deficit in 2015 and 2016.[21] In addition, even the surpluses in investment income were unable to affect the balance of neither primary income nor current account during the analysed years (Cecioni and Ferrero, 2012).

However, it should also be considered that the most critical feature of the Italian industrial sector is the relative importance of small and micro enterprises, characterized by both low productivity of labour and extremely low internationalization. Table 4 compares the share of employees with the share of value added for the different classes of enterprise: such a comparison is a preliminary way of measuring labour productivity.

[21] Compare Banca d'Italia, *Bilancia dei Pagamenti e Posizione Patrimonale sull'Estero*, available at http://www.bancaditalia.it/pubblicazioni/bilancia-pagamenti/index.html

Table 4 – *Number of employees (manufacture), 2015*

	Share of value added (on total)	Share of employees (on total)
0-9	11.55%	24.13%
10-19	11.42%	14.5%
20-49	15.28%	15.6%
50-249	27.85%	22.26%
Over 249	33.91%	23.52%

Source: ISTAT, *Structure and Competitiveness of Businesses*, available at www.istat.it/it/archivio/206643

Both micro and small enterprises show a share of employees higher than the share of value added (i.e. labour productivity is lower than the average of the industrial sector). Medium-small enterprises are characterized by an equal share of employees and valued added (i.e. labour productivity is equal to the average of the industrial sector). Finally, medium and big enterprises' labour productivity is higher than the average of the industrial sector. In other words, the much debated problem of Italian labour productivity is (also) a problem of small sized enterprises. A comparison with Germany and France shows that it is true that labour productivity is lower in Italy. However, by disaggregating each industrial sector we immediately notice that Italy's performance is negatively affected (mainly) by micro enterprises and (partly) by big firms. On the contrary, Italian labour productivity is higher than Germany's in any other class of firms, and even to France's medium enterprises. Table 5 shows such a result, considering the apparent labour productivity in 2015.[22]

Table 5 – *Apparent labour productivity (manufacture, 2015)*

	Total	0-9	10-19	20-49	50-249	over 249
Germany	73.6	35.2	42.7	50.3	59.6	91.7
France	71.7	46.3	52	57.6	63	88.6
Italy	58.8	28.2	46.3	57.6	73.6	84.8

Source: Eurostat, *Structural Business Statistics. Annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2)*, available at http://ec.europa.eu/eurostat/data/database

Extending such analysis to the 1999-2015 period (table 6), we obtain some very interesting results: as far as the medium-small, medium and big enterprises are concerned, the increase in apparent labour productivity has been constantly higher in Italy than in Germany and France, even during the 2007-2015 period (that corresponded to Italy's most severe recession). The only exception is represented by micro enterprises. Table 7 focuses on this aspect of the problem: the anomalous importance of micro enterprises in Italy (in terms of employees), when compared to the EU average, France and Germany.

[22] Apparent labour productivity is defined as value added at factor costs divided by the number of persons employed.

Table 6 – *Apparent labour productivity (manufacture, nominal annual rate of growth)*

	1999-2007	2007-2015	1999-2015
Total Manufacture			
Germany	3.32%	1.2%	2.26%
France	2.58%	1.87%	2.23%
Italy	3.33%	1.87%	2.6%
0-9			
Germany	4.63%	0.47%	2.53%
France	3.01%	0.78%	1.89%
Italy	2.34%	0.18%	1.25%
10-19			
Germany	2.43%	0.27%	1.34%
France	2.55%	1.68%	2.12%
Italy	4.22%	1.05%	2.62%
20-49			
Germany	1.49%	0.96%	1.22%
France	3.1%	1.26%	2.18%
Italy	3.33%	1.91%	2.62%
50-249			
Germany	2.74%	0.45%	1.59%
France	2.9%	1.64%	2.27%
Italy	3.13%	2.15%	2.64%
Over 249			
Germany	3.74%	1.38%	2.55%
France	2.3%	2.16%	2.23%
Italy	3.67%	1.96%	2.81%

Source: Eurostat, *Structural Business Statistics, annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2); manufacturing, subsections DA-DE and total (NACE Rev. 1.1, D) by employment size class (1995-2001)*; *manufacturing, subsections DA-DE and total (NACE Rev. 1.1, D) by employment size class (from 2002 onwards)*. All available at http://ec.europa.eu/eurostat/data/database

Table 7 – *Share of employees on total (manufacture, 2015)*

	0-9	10-19	20-49	50-249	over 249
European Union	13,3%	7,9%	11,67%	25,66%	41,69%
Germany	6,74%	7,02%	7,59%	24,21%	54,44%
France	12,51%	6,62%	11,29%	22,3%	47,28%
Italy	24,13%	14,5%	15,6%	22,26%	23,52%

Source: Eurostat, *Structural Business Statistics, annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2)*, available at http://ec.europa.eu/eurostat/data/database

It does not seem plausible to claim that the Italian low productivity of labour depends on an (allegedly) higher cost of labour. In table 8, we compare the wage adjusted[23] labour productivity (i.e. the increase in terms of value added for any euro spent for employees) with that of France and Germany, observing very similar results. Even though the Italian performance is negatively affected by the micro enterprises (which is not surprising), Italy's data are definitely better than those of Germany and France, particularly in the medium-small, medium and big enterprises.

Not coincidentally, also the comparison between the share of personnel costs in production and the share of personnel costs in total purchases of goods and services confirms that Italy's performance is better than that of both Germany and France (tables 9 and 10).

Table 8 – *Wage adjusted labour productivity (manufacture, 2015)*

	Total	**0-9**	**10-19**	**20-49**	**50-249**	**over 249**
Germany	133.6	142.4	141.3	132.4	134	134
France	130.2	92.2	122.6	129.3	131.1	131.1
Italy	138.8	105.9	139	146.4	158.2	158.2

Source: Eurostat, *Structural Business Statistics, annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2)*, available at http://ec.europa.eu/eurostat/data/database

Table 9 – *Share of personnel costs in production (manufacture, 2015)*

	Total	**0-9**	**10-19**	**20-49**	**50-249**	**over 249**
Germany	21.6%	22%	31%	26.5%	23.2%	20.6%
France	19.9%	28.2%	27.1%	21.9%	20.2%	18.2%
Italy	15.3%	15.3%	18.2%	17.1%	15.4%	13.9%

Source: Eurostat, *Structural Business Statistics, annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2)*, available at http://ec.europa.eu/eurostat/data/database

Table 10 – *Share of personnel costs in total purchases of goods and services (manufacture, 2015)*

	Total	**0-9**	**10-19**	**20-49**	**50-249**	**over 249**
Germany	26.4%	36.7%	55.5%	39%	31.8%	23.8%
France	24%	38.8%	37.5%	28%	25.6%	21.1%
Italy	19.6%	21.6%	25.2%	22.8%	19.8%	16.6%

Source: Eurostat, *Structural Business Statistics, annual enterprise statistics by size class for special aggregates of activities (NACE Rev. 2)*, available at http://ec.europa.eu/eurostat/data/database

[23] The wage adjusted labour productivity is defined as value added divided by personnel costs, which is subsequently adjusted by the share of paid employees in the total number of persons employed or, to put it simply, apparent labour productivity divided by the average personnel costs.

Table 10 needs a further qualification: the outsourcing of the Italian firms contributes to the extremely low level of the Italian share of personnel costs in total purchases of goods and services too. It has been noticed (Breda and Chiapparello, 2010) that in the manufacturing sector, "Italian firms seem to be even more internationalized than German firms: in 2006 the import content of production amounted to 30.4 per cent in Italy and to 28.2 per cent in Germany, despite the higher share of low-tech sectors, which are the least internationally fragmented, in the first country" (ibid., p. 7).

The differential in the import content of production (+2.2%) does not affect the validity of our conclusions: costs of labour have nothing to do with the problems of competitiveness evidenced by the Italian economy. The enhanced effects of the global crisis on the Italian job market do not depend on the excessive costs of labour and/or on its insufficient flexibility. Quite on the contrary, they are the consequence of the (regressive) structural change of the Italian industrial sector that took place in the past three decades, which determined an unbalanced distribution of industrial employees towards non-competitive micro-enterprises.

4. Concluding remarks

The analysis developed in this article led us to a different interpretation of the jobs crisis in Italy than is usually put forward. Unlike most popular views on this issue, which focus on the rigidity of the job market and/or the deficiencies of regulation, we argued that the crisis in the labour market is the consequence of two main determinants.

In the first place, empirical evidence suggests that fiscal conservatism (before the crisis) and fiscal adjustment (after the crisis) have led to a constant fall in investment, both public and private, which became dramatic during the 2008-2012 period. Such a tendency, further reinforced by the intensity of both offshoring and outsourcing, inevitably affected both GDP and employment.

In the second place, by means of a disaggregated analysis(in terms of employees) of the Italian industrial sector, we have shown the imbalanced distribution of employees, skewed towards non-competitive micro and small enterprises. Accordingly, the loss of employment determined by the global crisis was stronger in Italy than in other European countries (France, Germany) because of a regressive change in its productive structure, which took place in the past four decades.

Stated succinctly, austerity and the lack of industrial policy have conditioned a deep crisis that involved both the quantity and the quality of jobs in Italy. Furthermore, several indicators (e.g. the rate of inactive population; long-term unemployment and discouraged workers) suggest that the problems of the Italian job market have already turned into structural deficiencies. Therefore, even an expansionary fiscal policy (which does not seem plausible, under the present circumstances) would be insufficient in order to counteract the Italian jobs crisis.

Rather than insisting with the same strategy (i.e. deregulating the job market), policy makers should act resolutely, keeping in mind Albert Einstein's lesson: "insanity is doing the same thing over and over again and expecting different results".

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