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THE AGE DISTRIBUTION OF ITALY'S LABOR FORCE IN 1911 AND
ITS IMPLICATIONS FOR THE ECONOMY'S PAST:
NEW EVIDENCE ON THE LONG SWING IN INVESTMENT
FROM UNIFICATION TO THE GREAT WAR

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ABSTRACT

The data on the age distribution of the labor force in the 1911 demographic census have been very largely neglected. This paper provides an initial examination of those data, which shed light on various aspects of the economy of the day -- and on its preceding path. In particular, these data reflect the long cycle in construction, and in the production of construction materials. They further suggest that the long cycle of the engineering industry documented by its aggregate metal consumption was indeed present in the production of construction-related hardware, but notably absent from the production of machinery and, derivatively, industrial investment. This last point denies the empirical premise of the extant interpretations of Italy's post-Unification industrial growth; but it sits well with the new disaggregated time-series estimates of the engineering industry's product.

*This article is drawn from my thesis "La forza lavoro nel censimento del 1911: la distribuzione per età e i cicli settoriali," defended in October 2014 at the University of Rome "Tor Vergata." I am most grateful to Stefano Fenoaltea for bringing the census age-distribution data to my attention, for his comments and suggestions as the thesis took shape, and, not least, for his valuable assistance in shaping and translating the present article.

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The demographic censuses taken in Italy in 1861, 1871, 1881, 1901 and 1911 are among the most significant sources of data for the post-Unification period, not least because from 1871 on they contain detailed statistics on the distribution of the population by location, activity, age, and more; a significant literature has made use of these data to track the evolution of the labor force at both the national and the regional level.¹

The data on the distribution by age (and sex) is particularly rich in the 1911 census: where the preceding census of 1901 distinguished only three broad age groups, with the cutoffs at 15 and 65, the 1911 census distinguishes six categories, with cutoffs at 15, 21, 30, 45, and 65.² These data on the distribution by age seem to have been neglected by extant literature: no systematic study could be found, and even passing references seem few and far between.³ In fact, however, these data are of considerable interest, as they shed light on a number of features of the economy: in 1911 itself, of course, but over the preceding decades as well.

This article has a threefold purpose. First of all, it aims most generally to call attention to these data, and to their potential usefulness. Second, it seeks to establish their credentials as indicators both of the economy's then current features, and of its past history. Third, it draws out their implications for the long cycle in capital formation. That cycle is well known, and its accepted features underpin the extant interpretations of Italy's post-Unification growth; the age distribution of the labor force in 1911 strongly suggests that those features have been widely misunderstood, and that all the proposed interpretations rest on a flawed empirical premise.

The article proceeds by examining the age composition of the labor force from four successive standpoints; following a by now established tradition, the data considered here refer only to the males of working age, by economic activity (or inactivity).⁴ The first two analyses involve

¹ The five censuses are, in order: Direzione generale della statistica. *Statistica d'Italia. Popolazione. Parte I. Censimento generale. (31 dicembre 1861.)* (Firenze: Barbera, 1867) and *Statistica del Regno d'Italia. Popolazione. Censimento generale (31 dicembre 1861)*, 3 vols. (vols. 1-2, Torino: Tip. Letteraria, 1864-65; vol. 3, Firenze: Tip. letteraria e degli stranieri, 1866); Id., *Popolazione. Censimento 31 dicembre 1871*, 3 vols. (vol. 1, Roma: Stamperia Reale, 1874; vol. 2, Roma: Tip. Cenniniana, 1875; vol. 3, Roma: Regia Tipografia, 1876); Id., *Censimento della popolazione del Regno d'Italia al 31 dicembre 1881*, 3 vols. in 4 tomes (vol. 1, parte 1, Roma: Tip. Bodoniana, 1883; vol. 1, parte 2, Roma: Botta, 1883; vols. 2-3, Roma: Tip. Bodoniana, 1883-84) and *Relazione generale e confronti internazionali.* (Roma: Botta, 1885); Id., *Censimento della popolazione del Regno d'Italia al 10 febbraio 1901*, 5 vols. (Roma: Bertero, 1902-04); Id., *Censimento della popolazione del Regno d'Italia al 10 giugno 1911*, 7 vols. (Roma: Bertero, 1914-16). The literature analyzing the labor-force data in some or all of these includes O. Vitali, *Aspetti dello sviluppo economico italiano alla luce della ricostruzione della popolazione attiva* (Rome: Istituto di Demografia dell'Università di Roma, 1970); V. Zamagni, "A Century of Change: Trends in the Composition of the Italian Labor Force, 1881-1981," *Historical Social Research* 44, no. 1 (1987), pp. 36-97; G. Fuà and S. Scuppa, "Industrializzazione e deindustrializzazione delle regioni italiane secondo i censimenti demografici 1881-1981," *Economia Marche* 7, no. 3 (1988), pp. 307-327.

² There is also a lower bound, set at age 10, up from 9 in 1901.

³ E.g., S. Fenoaltea, "Industrial Employment in Italy, 1911: The Burden of the Census Data," *Rivista di storia economica* 31(2015), p. 229.

⁴ These are the data presented, by region and for the entire Kingdom, in vol. 5 of the 1911 census. Women are neglected because of the well-known unreliability of their classification as either as housewives or (possibly occasional) industrial workers; see, e.g., C. Ciccarelli and S. Fenoaltea, "Through the

interregional comparisons of the entire (male) population or labor force. On the one hand, the local age distribution of the male population seems closely tied to the local incidence of emigration; on the other, the differences in the labor-force participation rates of the youngest groups seem tied to the structure of the local economy, and its impact on the choice between work and schooling.

The other two analyses involve intersectoral comparisons of the national labor force. One notes that the age profile seems normally dominated by the nature of work, and the varying requirement for physical strength, but with some noteworthy exceptions tied to the industry's past history. The long (Kuznets) cycle in construction is solidly established; the comparative lack of middle-aged men in the construction and construction-materials industries appears to reflect the relative reduction of recruitment when construction was in the throes of extended depression.

The other is a case study of the engineering industry: examining the various components of that sector one finds evidence of a long depression in those that produced hardware for the construction industry, but not in those that produced machinery. The age-distribution data thus contradict the long-held belief that machinery production and investment in industry also followed the long swing -- and dovetail nicely with the disaggregated engineering-industry production series newly compiled by Stefano Fenoaltea.⁵

1. Interregional comparisons: the age distribution of the male population of working age

Figure 1 illustrates, at the national level, the percentage share of the "males present" in each of the age classes. The profile reflects of course the varying breadth of the individual classes; dividing the class total by its span of years one obtains a smoothly declining profile (with per-year averages equal successively to 372 - 310 - 247 - 189 - 148 and finally 111 thousand, assuming a ten-year span for the senior category), as one would expect of a society that had not yet completed its demographic transition.

Figure 2 illustrates an index of each region's age structure, calculated for each class simply as the ratio of its percentage of the within-region total to the corresponding percentage of the national total illustrated in Figure 1. Significant differences in the region-specific profiles are immediately apparent: some are practically flat, implying an age distribution much like the national one, others notably humped, or U-shaped, implying respectively supernormal, or subnormal, numbers in the central age groups.

Since emigrants are notoriously dominated by young adult males, the profiles in Figure 2 speak to the local incidence of migration -- in 1911 itself, obviously, but over the preceding years and decades as well. A convenient summary indicator of each region's relative profile is simply the local share of males in the central age groups, from 15 to 45; these resulting figures are collected in Table 1, col. 1. A relatively high share points to lower-than-average emigration (or even net immigration); a relatively low one, to higher-than-average emigration. Not surprisingly, the relative number of young adult males appears lowest in the Abruzzi, Calabria, and Basilicata, highest in Liguria, Lombardy, and Latium; the region-specific rates of net migration over the decade to 1911 are transcribed in Table 1, col. 2.⁶

Figure 3 is the corresponding scatter diagram. The two measures are, as expected, closely related ($r = -.89$); indeed, the only observation well off the dominant curvilinear association pertains to Basilicata, with much the highest rate of net emigration over the preceding decade (almost 13 per thousand), but far from the lowest share of males aged 15 to 45 (about .50, against .45 in the Abruzzi). Pending further research which is beyond the scope of this paper, the fact that Basilicata

magnifying glass: provincial aspects of industrial growth in post-Unification Italy," *Economic History Review* 66 (2013), pp. 57-85.

⁵ S. Fenoaltea, "Italian Industrial Production, 1861-1913: A Statistical Reconstruction. F. The Engineering Industries," *Carlo Alberto Notebooks*, n. 419 (Moncalieri, 2015).

⁶ These are taken from L. Di Comite, "L'emigrazione italiana nella prima fase del processo transizionale," *Giornale degli Economisti e Annali di Economia* n.s. 42 (1983), pp. 507-517.

retained more males aged 15 to 45 in 1911 than one would have expected on the basis of its relative net migration since 1901 suggests that 1911 itself may have been in relative terms an exceptionally good year (for local employment) in an otherwise bleak decade; one notes in this connection the unprecedented boom in construction associated with the Apulian aqueduct.⁷

Different sorts of outliers appear at a finer level of detail. In Apulia and Sicily, in particular, the profile in Figure 2 is practically flat, indicating a distribution virtually identical to that of Italy as a whole, save for a markedly below-average share of senior males. Both these regions had grown rapidly, in demographic terms, since Unification, so an episode of strong emigration in the distant past can be ruled out; one can surmise that what we see here may be the effect of local morbidity and mortality, but a proper investigation of the issue is again beyond the scope of the present paper.⁸

2. Interregional comparisons: the age-specific labor-force participation of the male population

Table 2 reports, in the first line, the national class-specific labor-force participation rates: a little over half for the youngest group (10-15), 90 percent for the next (15-21), just short of 100 percent, as one would expect, from age 21 to 65, and still around 80 percent for the senior group. The region-specific lines report the relative deviations of the local class-specific participation rates from the corresponding national averages: a figure of .10 for the first category indicates a participation rate 10 percent higher than the national mean of 53 percent, that is, a participation rate just over 58 percent (and not 63 percent, as the deviations are relative and not absolute).

Within the groups of prime working age, from 21 to 65, pretty much everyone worked pretty much everywhere, and the local deviations from the national averages range from zero to just (plus or minus) three percent.

Much larger deviations from the national average appear in the first age group, aged 10 to 15, where the alternative to work was presumably study. One notes three broad classes of regions. In four, relatively few boys were working: Liguria above all, with a participation rate just 70 percent of the national average, and then, at a distance, Latium, Lombardy, and Piedmont (all at 85 to 90 percent of the norm). On this measure too, the presence of the capital lifted Latium into rough parity with the industrial leaders of the Northwest.⁹ The boys' participation rate was within 5 percent of the national average in most of the Center-Northeast (Venetia, Emilia, Tuscany, the Marches, Umbria), in Campania in the continental South, and also, perhaps surprisingly, in both major islands, Sicily and Sardinia. A high participation rate, 15 to over 20 percent above the national average, was observed in the remaining regions of the continental South: in ascending order the Abruzzi, Basilicata, Calabria, and Apulia. What is striking here is the difference between Sicily and Apulia, two regions of the South that otherwise appear to have much in common, from a concentration in specialized agriculture (citrus, vines) to rapid (demographic and presumably

⁷ C. Ciccarelli and S. Fenoaltea, *La produzione industriale delle regioni d'Italia, 1861–1913: una ricostruzione quantitativa. 1. Le industrie non manifatturiere* (Roma: Banca d'Italia, 2009), Table B.001 and associated text.

⁸ The senior group was underrepresented in Lombardy and Sardinia too, but the overrepresentation there of men between 21 and 45 clouds the issue. On Apulian and Sicilian demographic growth see S. Fenoaltea, *The Reinterpretation of Italian Economic History: From Unification to the Great War* (New York: Cambridge University Press, 2011), Table 6.02. For what it may be worth the share of young men declared unfit for military service was relatively high in Apulia (48 percent) and Sicily (47 percent) -- surpassed only by Sardinia (63 percent), and followed, perhaps surprisingly, by Lombardy (45 percent). See Direzione generale della Statistica, *Annuario statistico italiano 1911*, plate following p. 40.

⁹ E.g., E. Felice, "Regional value added in Italy, 1891–2001, and the foundation of a long-term picture," *Economic History Review* 64 (2011), Table 1.

overall) economic growth, surpassed only by Liguria's: it is tantalizing, but once again it cannot be pursued here.¹⁰

Statistically, and again not surprisingly, the region-specific relative deviations from the national average participation rate for this youngest age group display a strong positive correlation with the (corresponding deviations from the national average of the) local shares of employment in agriculture and light industry (census categories 2, 4, and 7), which employed significant numbers of children ($r = .89$), a strong negative correlation with those in heavy industry (census categories 2, 4-5, 7, and 8.1-8.2), which did not ($r = .91$), and a weaker negative correlation with those in the services (census categories 8.3-8.4, 9-10; $r = .75$). Allowing for these gross distinctions, the outliers reduce to three, the Marches and even more so Apulia on the up-side, and Umbria (the home of the Terni steel-works) on the down-side. Allowing for the structure of the local economy, the four regions where relatively few boys worked -- the three Northwestern industrial leaders, Latium with the national capital -- all display youthful participation rates close to the norm. There is no evidence of a local preference for keeping children in school, for accumulating human capital: there is no evidence that these (in the Italian context) relatively advanced *economies* were also, from this point of view, relatively advanced *societies*.

2. Interindustry comparisons: the age distribution of the male labor force

We turn now to the age structure of the male labor force not by region but, at the national level, by industry.

That structure can be expected to vary as a function of at least three factors. The first and most obvious reflects the nature of the work itself: where it demands physical strength one would expect a concentration in the central age groups, where it does not one would expect a correspondingly disproportionate number of boys or older men. The second is tied to technological progress. A "new" industry would be expected to employ few older men, as it may not even have existed when they were choosing their trade; conversely, a dying industry would not attract the young, and continue to employ only those too old to contemplate retraining (one recalls here the cotton industry, marked by the golden age of the hand-loom weavers which was ushered in by the mechanization of spinning and suddenly ended when weaving was also mechanized).

A third and subtler factor has to do with the industry's cyclical path. The census data refer to 1911, obviously, but the age distribution is tied to the industry's past. The youngest group, of youths who just entered the labor force, is clearly made up of recent recruits. Older workers may have joined the labor force later in life, or moved from one industry to another; but these can be presumed to be exceptions. The norm, the desired career path, involves an early investment in mastering a trade, and then reaping the return, including the productivity gains that come with experience. As the demand for labor shifts from one industry to another the adjustment seems to come on the one hand by shifting unskilled labor -- the omnipresent fetchers and carriers, whose numbers increase when the skilled are under pressure to concentrate on processing proper, and symmetrically decrease in slack times -- and on the other, even more spontaneously, by redirecting the flow of new entrants to the industries that are actively recruiting. A cyclical industry that passes suddenly from rapid growth to rapid decline will lose skilled workers too, but surely the *least* skilled, those with the least experience and the smallest investment in their own training: the youngest workers, the more recent recruits. "Last in, first out" is not just an accounting practice, or a union rule: it is the very logic of the market-place.

The age distribution of an industry's labor force thus sheds light on its past performance. Assuming for simplicity that boys entered the labor force between ages 10 and 15, those aged 21 to 30, for example, would have been recruited between 1891 (a 30-year-old recruited at 10) and 1905 (a 21-year-old recruited at age 15). In general, therefore, those aged 10 to 15 can be presumed to

¹⁰ On the relative performance of Sicily and Apulia see for instance Fenoaltea, *The Reinterpretation*, pp. 208-209; also Ciccarelli and Fenoaltea, "Through the magnifying glass."

have been recruited over a number of years centered approximately on 1908, and so on for the older cohorts: 21 to 30, ca. 1898, as illustrated; 30 to 45, ca. 1886; 45 to 65, ca. 1869; and 65 plus, say ca. 1854. As good luck would have it, this periodization sits well with the long swing that dominated industrial and GDP growth, marked by slow growth in the 1860s and 1870s, a sharp acceleration to a peak in the later 1880s, decline and slow recovery through the turn of the century, and a renewed boom over the decade to 1911.¹¹ As noted, however, it must be borne in mind that the numbers relate not to the gross recruits of each period, but the *net* recruits, those that did not leave the industry during whatever cyclical decline it experienced after they joined it.

Figure 4 illustrates the age distribution of the labor force for all industry (census categories 2-7, 8.1-8.2); it is analogous to Figure 1. Figure 5 is in turn analogous to Figure 2: it illustrates an index of each industry's age structure, calculated for each class simply as the ratio of its share of the specific industry's labor force to its corresponding share of the all-industry total illustrated in Figure 4.

A number of graphs are much as one would expect, given in particular the nature of the work involved. The light industries, in particular, are broadly "U-shaped," with super-normal numbers of less-than-fully-able-bodied boys and older men: thus both census category 3 (industries working vegetable or animal products other than textiles), and category 6 (textiles). Some heavy (and at times relatively "new") industries, too, display a profile with a notable hump, corresponding to super-normal numbers fully-able-bodied men: thus census category 2 (mining and quarrying), category 7 (chemicals), and categories 8.1-8.2 (printing and publishing, utilities). But not all: category 4 (the metal-processing industries, metalmaking and engineering) displays only a relatively moderate hump, category 5 (non-metallic mineral products, essentially construction materials, and construction) actually displays an *inverted* hump, quite at odds with what the heavy labor it involves would lead us to expect.

The peculiar age profile of the construction and construction-materials industries is explained, it would seem, by the industry's violent long cycle, marked by a strong upswing from the late 1870s to the later 1880s, and another from 1896 to 1911 -- and, in between, a depression so severe that construction in 1896 was over 30% below that at the 1886 peak, and so long that that peak was not surpassed until 1906, a full thirty years later.¹² If the industry's cyclical profile is taken into account it comes as no surprise that the age profile in 1911 should reveal a comparative lack of recruits in the depths of the depression (the 21-to-30 cohort in 1911, from the 1890s), and a lack of *surviving* recruits from the initial boom (the 30-to 45 cohort in 1911, from the 1880s).

The metalmaking and metal-consuming industries experienced a similar aggregate cycle, and it seems equally capable of explaining the (limited) flattening of the profile's central hump; but the sector warrants a closer look. Figure 6, analogous to Figure 5, illustrates the age profile of the two-digit components of category 4, respectively 4.1 (ferrous metalmaking), 4.2 (non-ferrous metalmaking), 4.3 (fabricated metal, essentially hardware), 4.4 (machinery and equipment), and 4.5 (a hodge-podge that includes some hardware, some machinery, and precious-metal products too). These profiles are very different. The two metalmaking industries (categories 4.1 and 4.2) display the typical profile of heavy industry, with a strong central hump, as does the machinery industry (category 4.4) and also, to a lesser extent, the mixed group (category 4.5). The anomalous component is the large hardware industry, with a massive overrepresentation of recent recruits (over the ongoing boom), and an underrepresentation of those in the higher age groups to age 45, presumably as a result, as in the case of construction and construction materials, of a long preceding depression.

The 1911 census evidence on the age distribution of the labor force thus suggests that the long cycle that dominated the Italian economy from Unification to the Great War was one shared by the construction and construction-materials industries, and also, within the metal-processing group,

¹¹ Fenoaltea, *The Reinterpretation*, pp. 40-47.

¹² *Ibid.*, Table 1.03.

by the hardware industry -- also tied to construction -- but not, notably, by the machinery industry. This result undercuts the entire postwar literature on the period at hand: the interpretations of the economy's growth differ from author to author, but all take it for granted that the long cycle in the aggregate (metal consumption and) product of the engineering industry was a long cycle in *machinery* production and, derivatively, in investment in industry.¹³ It is, in terms of that literature, a revolutionary result.

But it is not unprecedented. Stefano Fenoaltea has very recently reconstructed the engineering-industry production series, by components; and the very different evidence which shapes his estimates also forces the conclusion that the long cycle in "engineering" was in essence a long cycle in the production of hardware, tied directly to, indeed part of, the long cycle in construction, whereas the production of machinery (and therefore business investment) instead increased relatively regularly year after year, with no trace of the long cycle that dominates the engineering aggregate.¹⁴ The labor force age-distribution data in the 1911 census and the new production series appear nicely to corroborate each other.

4. Conclusion

The data on the age distribution of the labor force in the 1911 demographic census have been very largely neglected. An initial examination suggests that they are rich in economic content. The interregional differences in the age structure of the male population appear tied to the incidence of migration, those in the labor force participation of school-age boys to the structure of the local economy. Interindustry differences in the age structure of the male labor force correspond in the main to the need, or lack of need, for physical strength; the (from this point of view) anomalous age distribution of the construction and construction-materials industries appears to reflect the relative lack of recruitment during the long cyclical depression that spanned the 1890s and more.

Most interestingly, within the engineering group the hardware industry displays a profile similar to that of the construction-related industries, the machinery industry the "normal" profile typical of heavy industry, with no trace of a long cycle. This last result runs counter to a long literature: but it sits well with the newly compiled engineering-industry time series, which similarly attribute the long cycle to the hardware industry but not to the machinery industry (and, derivatively, to industrial investment). Those results, and these, are independent; both gain strength from their agreement.

¹³ For a review of the literature see *ibid.*, chs. 1 and 2.

¹⁴ Fenoaltea, "Italian Industrial Production"; also Id., "The Fruits of Disaggregation: The General Engineering Industry in Italy, 1861-1913," *Carlo Alberto Notebooks*, n. 358 (Moncalieri, 2014).

Table 1: The age distribution of the male population

| | (1) Males aged 15 to 45: share of all males, 1911 ^a | (2) Rate of net emigration, 1901-1911 |
|------------|--|---|
| Piedmont | .546 | -4.48 |
| Liguria | .585 | 2.74 |
| Lombardy | .570 | -.86 |
| Venetia | .536 | -5.88 |
| Emilia | .541 | -3.57 |
| Tuscany | .538 | -4.74 |
| Marches | .502 | -8.81 |
| Umbria | .510 | -7.78 |
| Latium | .568 | -1.57 |
| Abruzzi | .445 | -11.35 |
| Campania | .513 | -4.99 |
| Apulia | .545 | -3.62 |
| Basilicata | .498 | -12.92 |
| Calabria | .481 | -9.69 |
| Sicily | .547 | -5.59 |
| Sardinia | .566 | -4.21 |

^amales under 10 are excluded from the total.

Source: see text.

Table 2: Labor-force participation of the male population

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|-------|-------|-------|-------|-------|------|
| age group: | 10-15 | 15-21 | 21-30 | 30-45 | 45-65 | 65+ |
| <i>National participation rates:</i> | .53 | .90 | .96 | .97 | .94 | .81 |
| <i>Regional participation rates: relative deviations from national rate</i> | | | | | | |
| Piedmont | -.09 | .02 | .02 | .01 | .01 | .01 |
| Liguria | -.30 | -.03 | .01 | .00 | -.03 | -.12 |
| Lombardy | -.13 | .03 | .02 | .02 | .01 | -.01 |
| Venetia | .04 | .04 | .02 | .01 | .02 | .03 |
| Emilia | -.04 | .02 | .01 | .01 | .01 | -.02 |
| Tuscany | -.01 | .00 | .01 | .00 | -.01 | -.05 |
| Marches | .02 | .01 | .00 | .00 | .01 | .03 |
| Umbria | .04 | .01 | .01 | .00 | .01 | .05 |
| Latium | -.14 | -.05 | -.03 | -.01 | -.01 | -.08 |
| Abruzzi | .15 | .03 | -.01 | -.01 | .01 | .10 |
| Campania | -.01 | -.05 | -.03 | -.02 | -.02 | .00 |
| Apulia | .22 | .00 | .00 | .00 | .01 | .01 |
| Basilicata | .18 | .01 | .00 | .00 | .01 | .00 |
| Calabria | .20 | .00 | -.02 | -.02 | -.01 | .05 |
| Sicily | .01 | -.06 | -.03 | -.02 | -.02 | .00 |
| Sardinia | .01 | .01 | .00 | -.01 | .00 | -.01 |

Source: see text.

Figure 1 - Males of working age present in 1911, by age class.

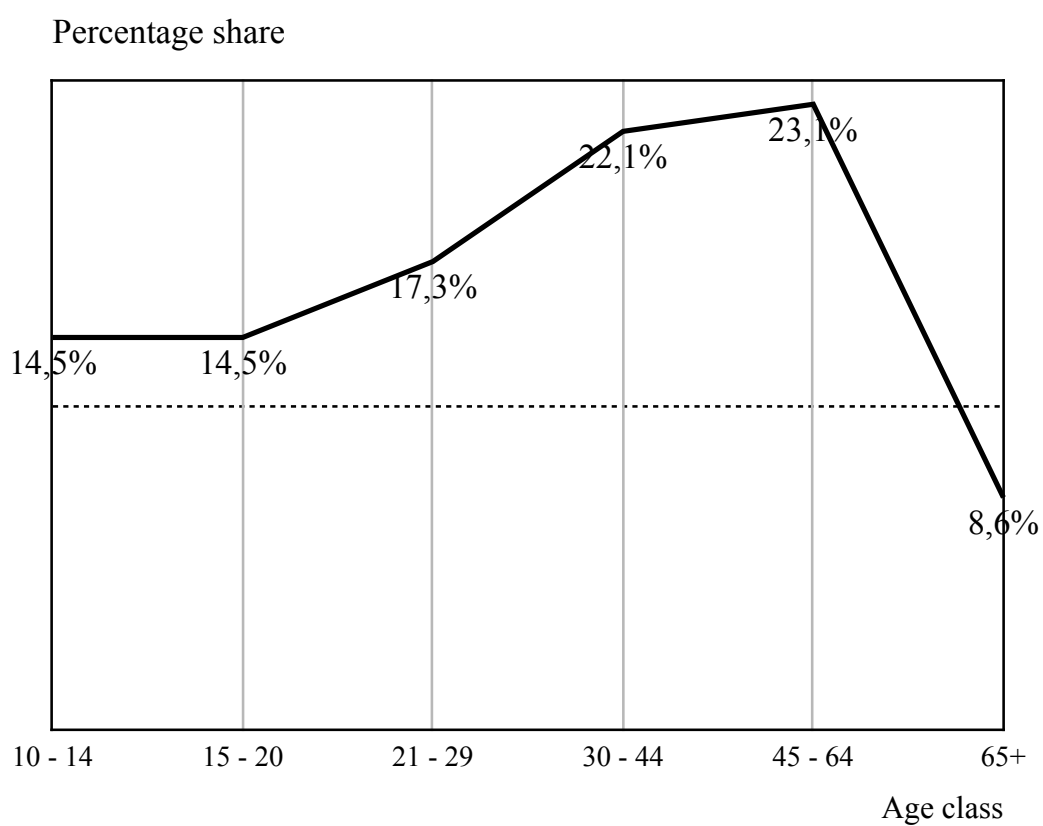
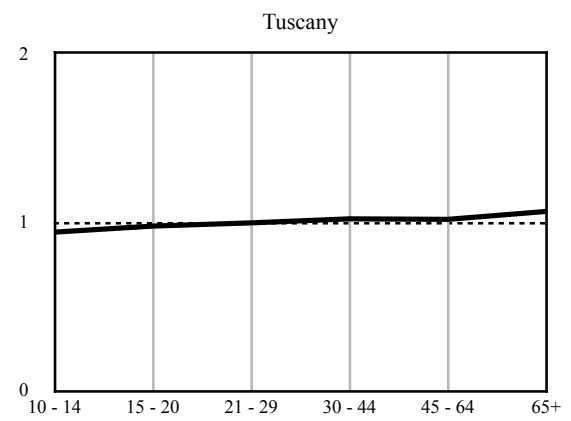
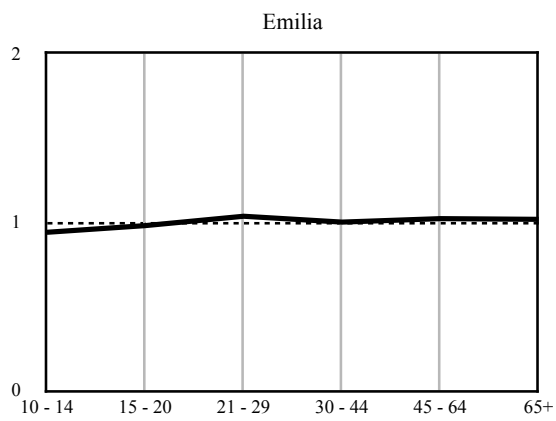
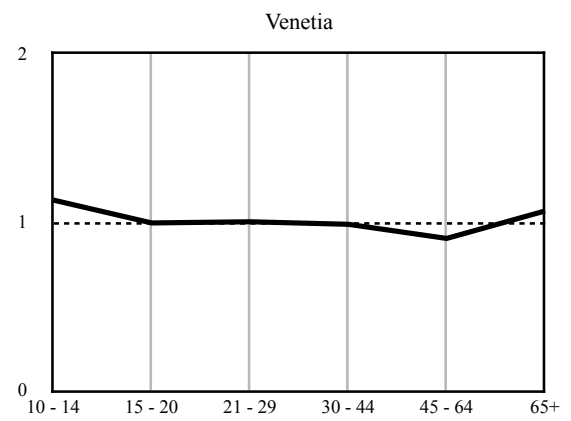
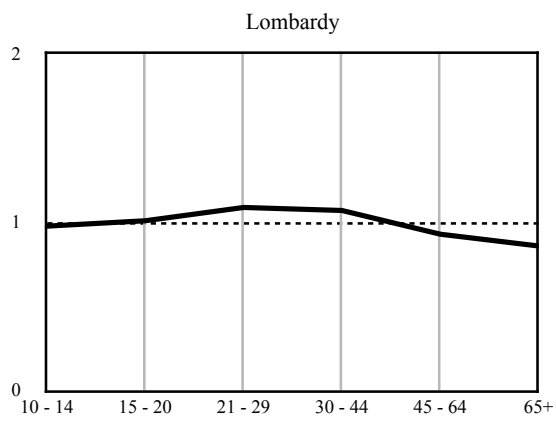
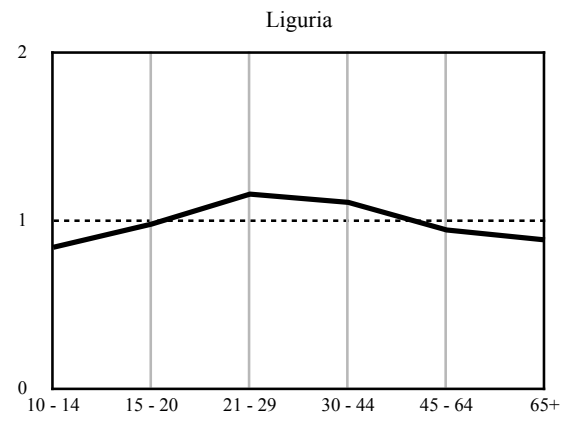
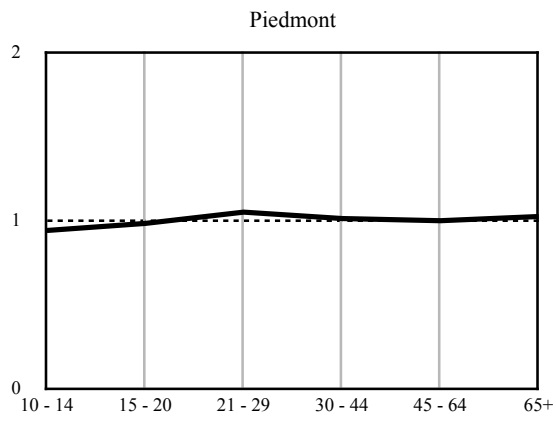
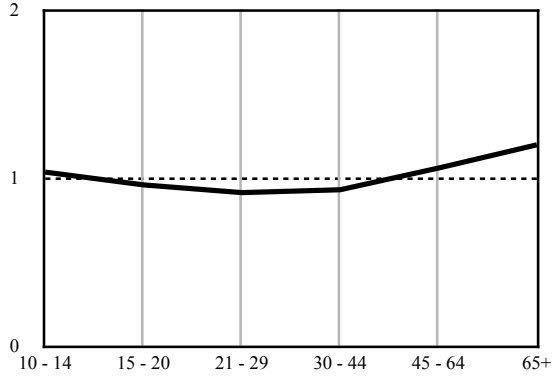


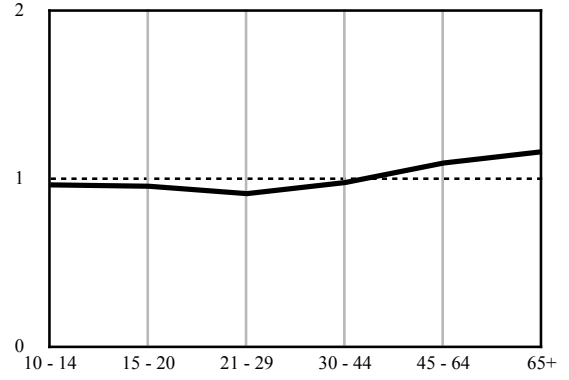
Figure 2 - Relative regional age structure.



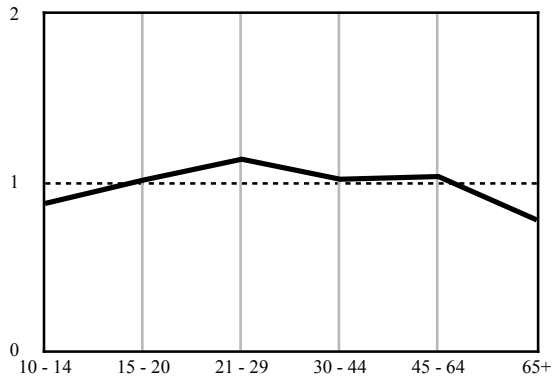
Marches



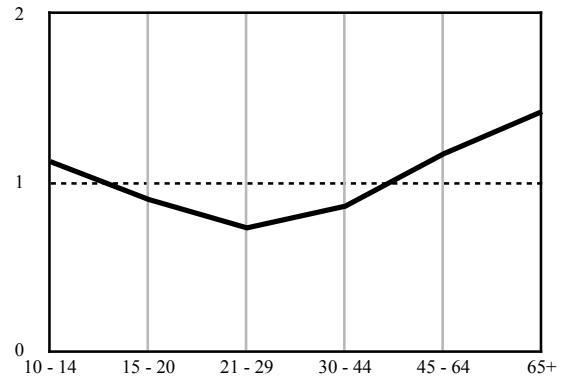
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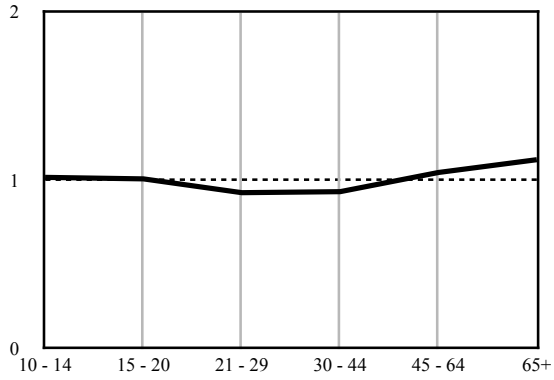
Latium



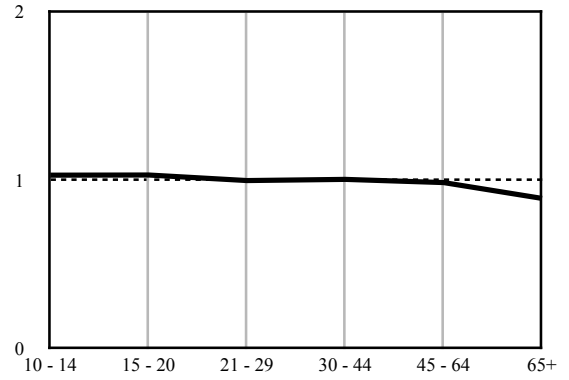
Abruzzi



Campania



Apulia



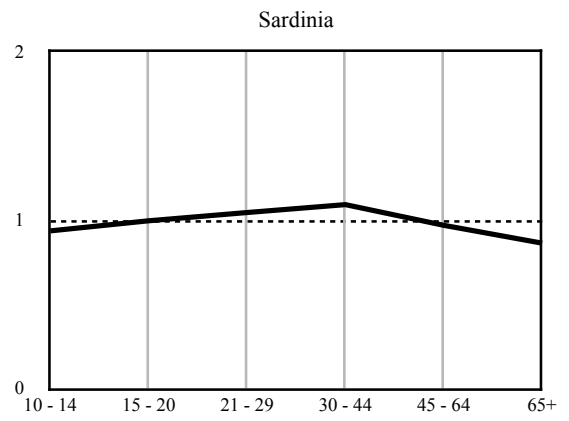
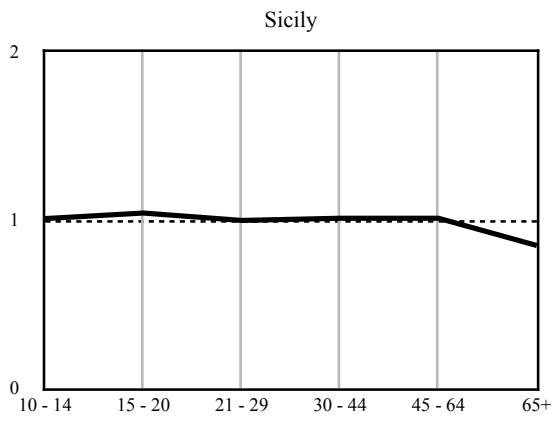
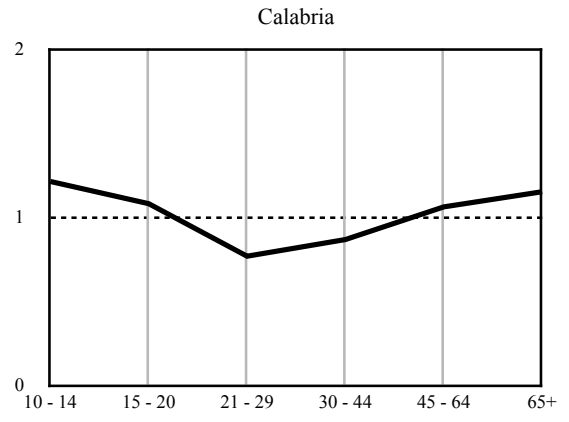
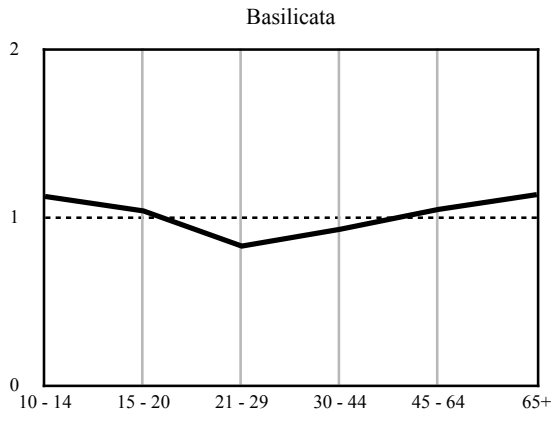


Figure 3 - Age structure of the male population and net emigration

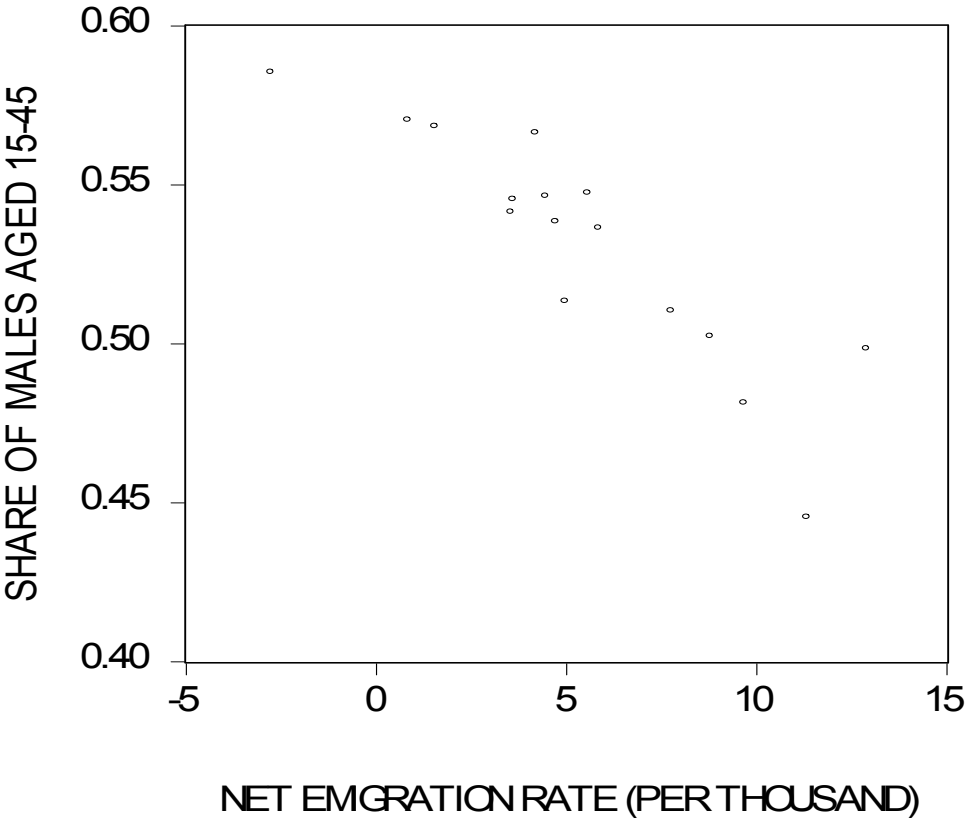


Figure 4 - Labor force of all industry, by age class.

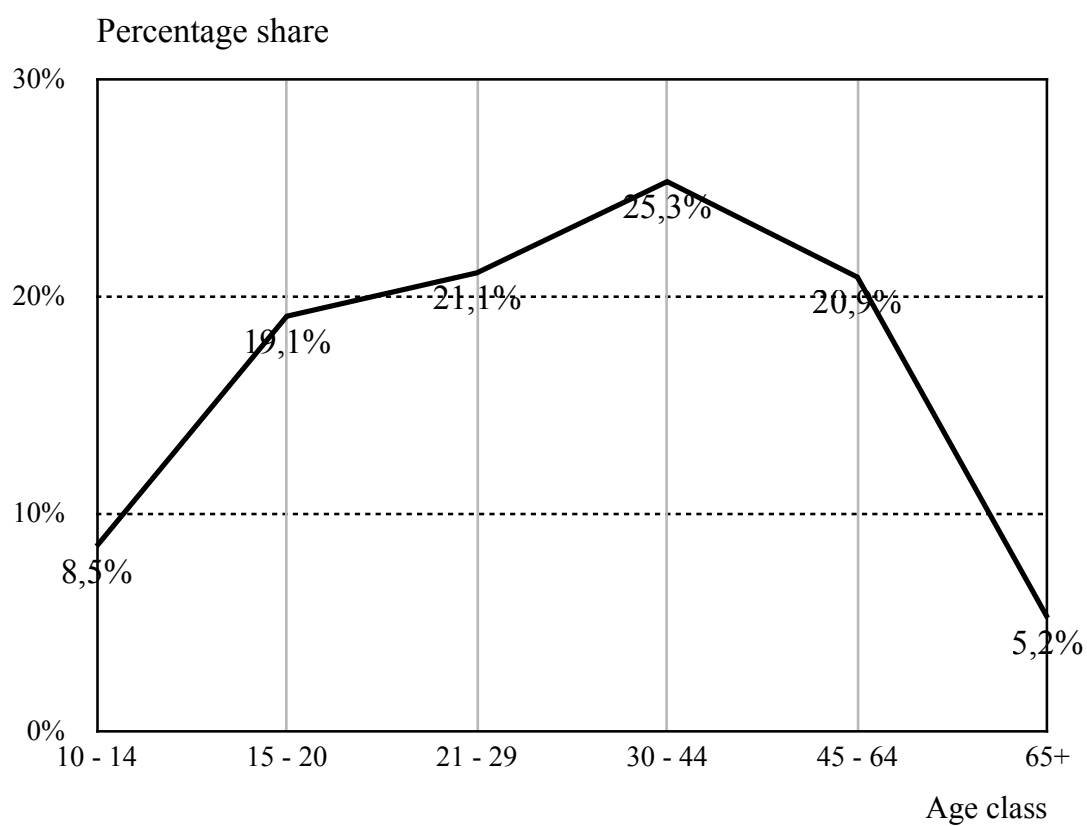
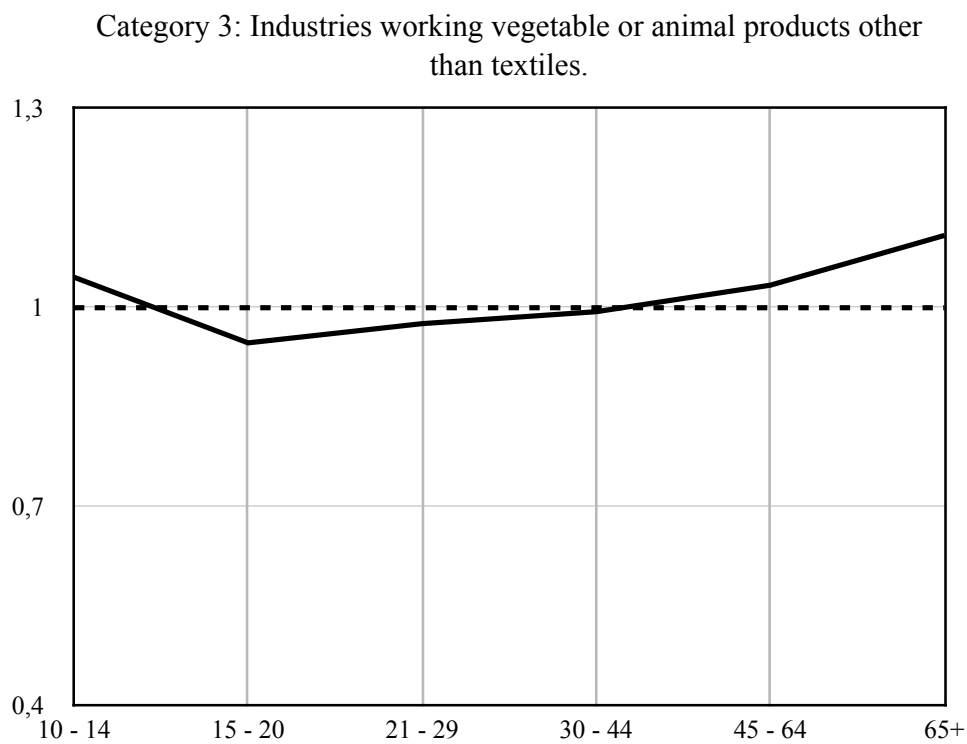
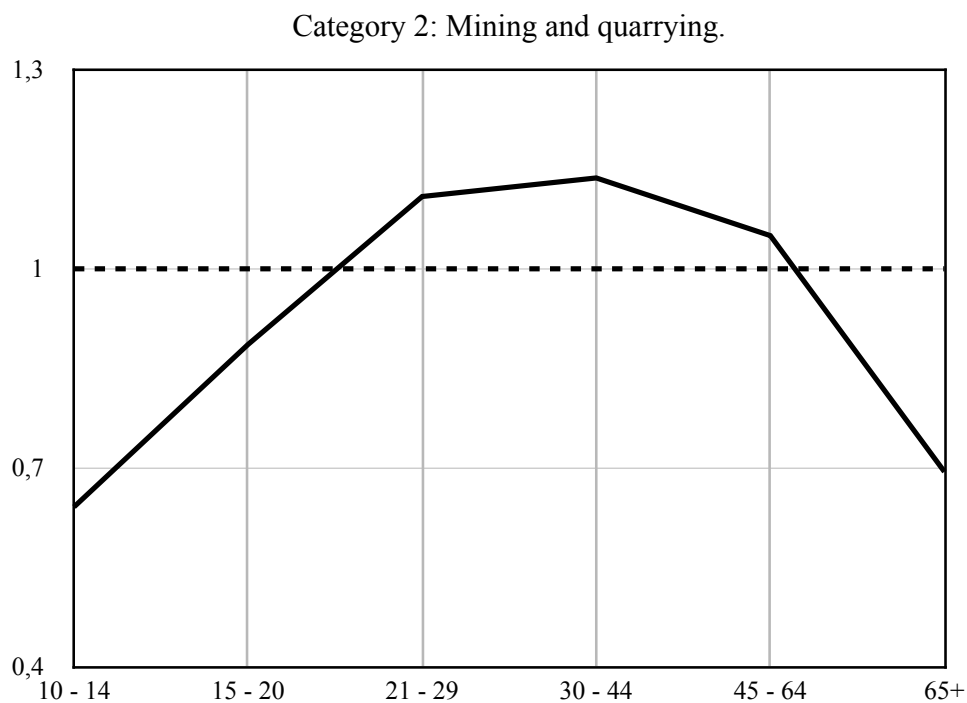
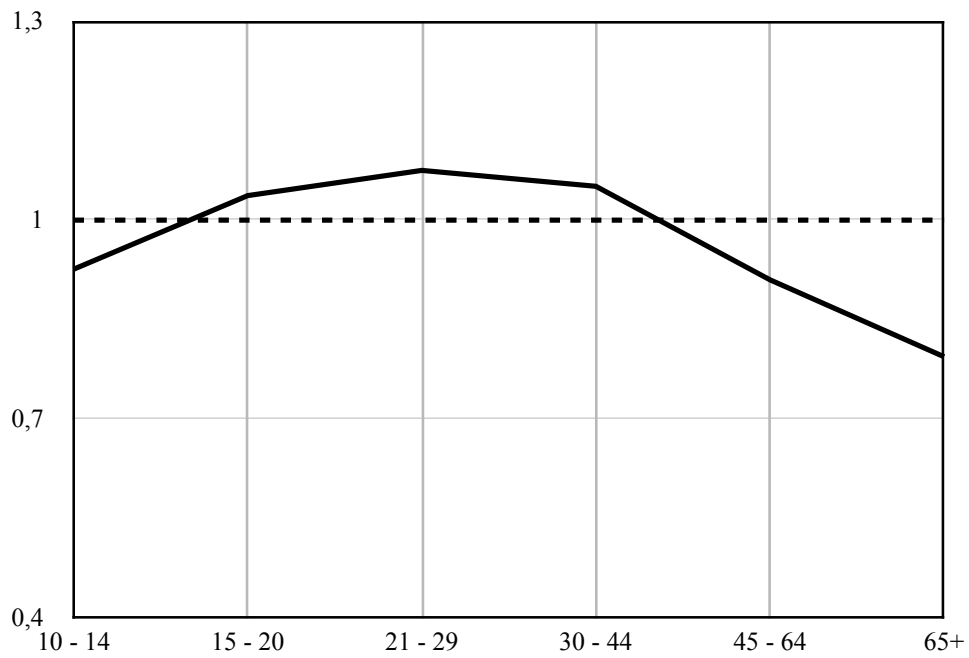


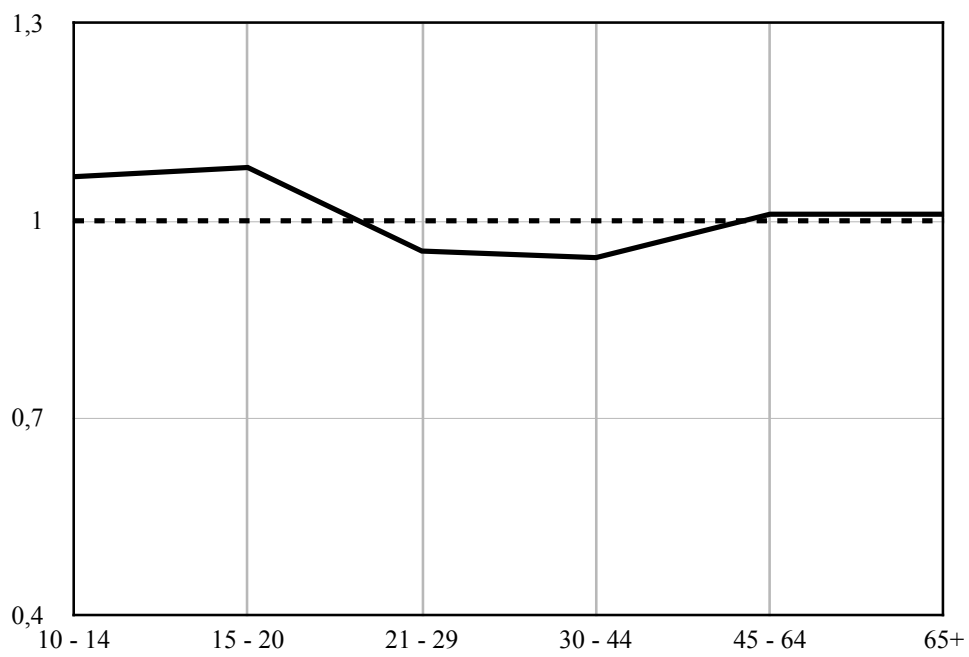
Figure 5 - Relative age structure, one-digit industries.



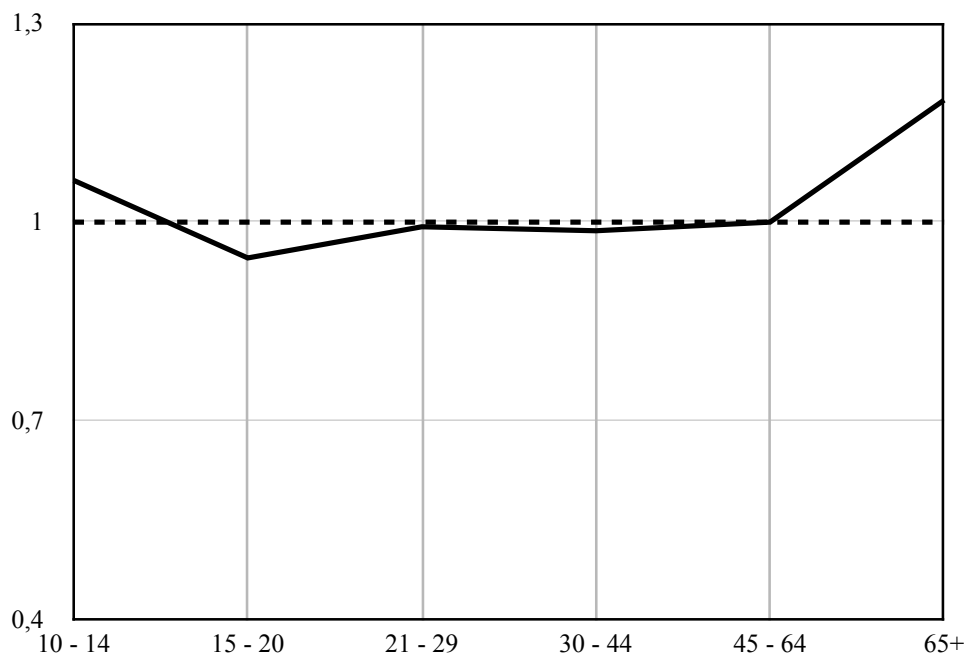
Category 4: Metalmaking and engineering



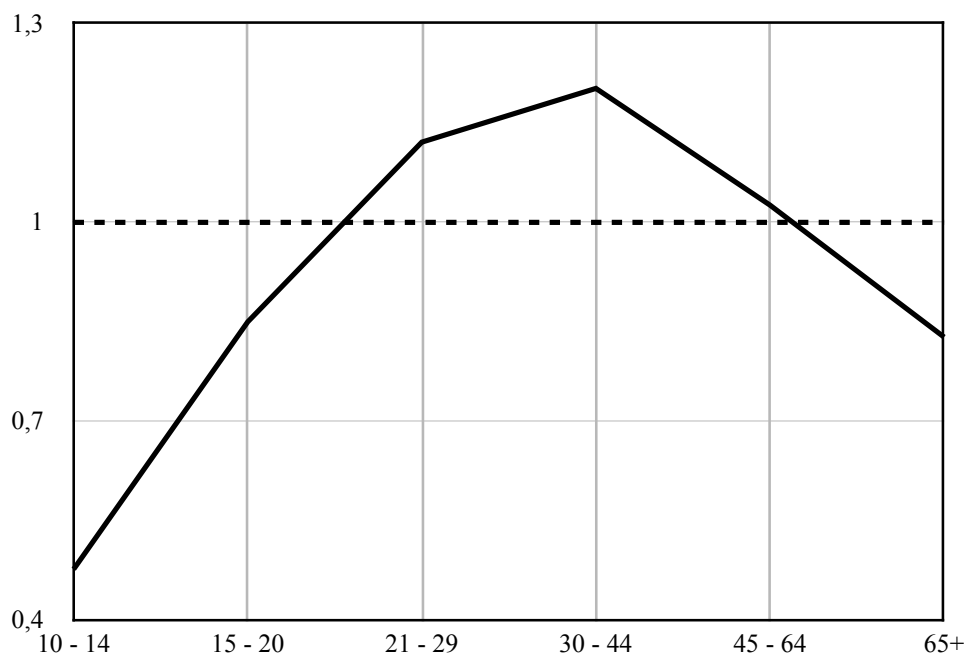
Category 5: Non-metallic mineral products, construction



Category 6: Textiles



Category 7: Chemicals



Category 8.1-8.2: Printing and publishing, utilities

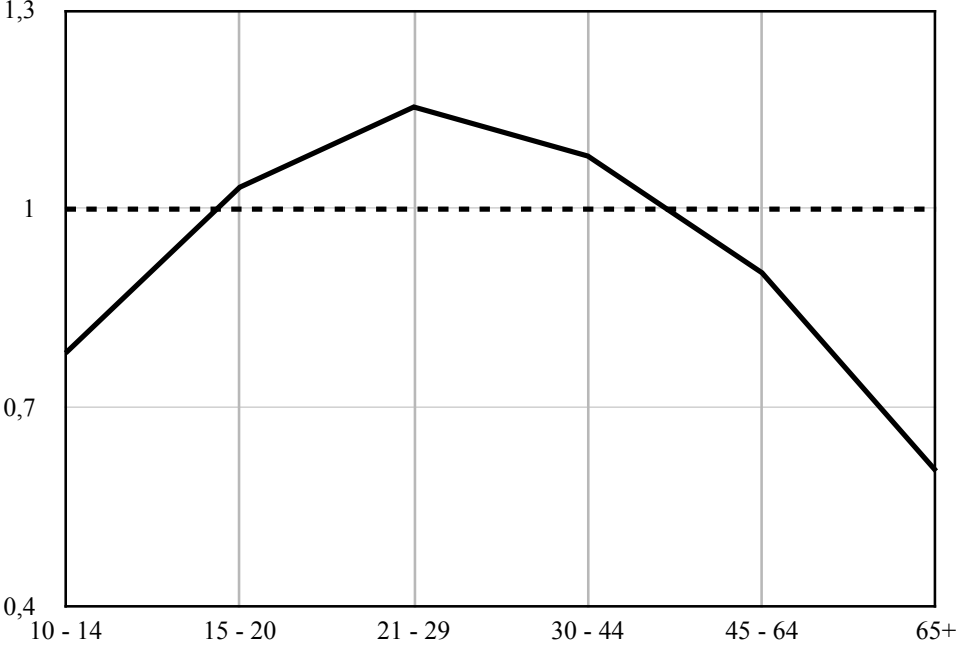


Figure 6 - Relative age structure, category 4, two-digit industries.

