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“DO IMMIGRANTS IMPROVE THE HEALTH OF NATIVES?”

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Abstract in Italiano

La tesi ha l'obiettivo di studiare l'impatto dei flussi migratori sulle condizioni di salute dei nativi.

Il primo capitolo prende in esame dati presenti nei database di Istat e Inail che studiano la composizione degli immigrati in termini di età, istruzione e paese di provenienza. Questa analisi permette di comprendere in quali occupazioni gli immigrati si inseriscono nel contesto occupazionale Italiano. Viene osservato empiricamente che al diminuire del numero di immigrati si verifica un sensibile aumento degli incidenti sul lavoro per i nativi, confermando la correlazione negativa tra queste due variabili.

Il secondo capitolo presenta una rassegna della letteratura economica. Vengono prese in esame le motivazioni per cui i migranti tendono a ricoprire posizioni con una maggiore intensità di capitale fisico. Minori capacità relazionali, migliori capacità fisiche, ed una maggiore avversione al rischio rappresentano le principali discriminanti per cui gli immigrati ricoprono ruoli ad alto carico fisico. La presenza degli immigrati in suddette occupazioni, associate a livelli più alti di rischio sanitario, permette i nativi di riallocarsi nel mercato del lavoro, passando da occupazioni prevalentemente manuali verso occupazioni che valorizzano maggiormente le capacità relazionali. Questo processo consente così ai lavoratori autoctoni di ridurre i rischi di incidente sul luogo di lavoro, contribuendo ad aumentare il loro capitale sanitario.

L'ultimo capitolo si concentra sull'articolo redatto da Alacevich e Nicodemo (2019). Viene effettuata un'analisi dei principali risultati econometrici. Lo studio osserva empiricamente che, in una data provincia, l'intensità del fenomeno di riallocazione dei nativi è proporzionale al flusso migratorio. E' inoltre visibile che l'allocazione degli immigrati in occupazioni ad alto carico fisico ha effetti positivi nella diminuzione del numero, e della gravità, degli incidenti sul lavoro dei nativi.

Abstract in Inglese

The thesis aims to study the impact of migratory flows on the health of the natives.

The first chapter examines data in the databases of Istat and Inail that study the composition of immigrants in terms of age, education and country of origin. This analysis makes it possible to understand in which occupations immigrants enter the Italian employment context. It is empirically observed that as the number of immigrants decreases, there is a significant increase in work accidents for natives, confirming the negative correlation between these two variables.

The second chapter presents an overview of economic literature. The reasons why migrants tend to hold positions with a higher intensity of physical capital are examined. Lower interpersonal skills, better physical abilities, and increased risk aversion are the main discriminated against for which immigrants play roles with high physical load. The presence of immigrants in these occupations, associated with higher levels of health risk, allows natives to reallocate themselves in the labour market, moving from predominantly manual occupations to occupations that enhance more interpersonal skills. This process thus allows native workers to reduce the risks of accidents at work, helping to increase their health capital.

The last chapter focuses on the article written by Alacevich and Nicodemus (2019). An analysis of the main econometric results is carried out. The study empirically observes that, in a given province, the intensity of the phenomenon of native relocation is proportional to the migratory flow. It is also visible that the allocation of immigrants to high-bodily occupations has positive effects in the decrease in the number and severity of native work accidents.

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Introduction

In recent decades we have seen an increase in the phenomenon of international migration. International migration is a complex and delicate phenomenon; among the factors that feed it are disparities among the various areas of the world in terms of population growth, reported well-being and job opportunities. Evidence has shown that displacements are concentrated in countries with the greatest demographic pressure, with an abundance of young people and with low prospects of improvement the current living conditions. Meanwhile, countries of destination of migrants are those that can guarantee greater opportunities for growth in terms

of educational training, work and prosperity. This migratory event, as estimated by the UN (2017) is expected to grow for several reasons. In addition to those analysed above, we must also consider political instability, which plays a fundamental role in the choices to leave, and the global warming that especially in the future due to desertification will lead to the formation of so-called "climate migrants".

For all these reasons, it is very important to study the comprehensive effects of mass migration on the host countries. Public debate has often focused on the direct economic effects of immigrants, such as the employment rate and wages of natives. However, little effort has been spent on talking about the indirect effects of this phenomenon; what I will try to accomplish through the analysis of research papers is to confirm that natives thanks to immigration, experiencing the phenomenon of the reallocation of labour passing from manual occupations to more intellectual one, record improvements in their health capital. This field has not been much explored by economic literature, due to the complexity of sampling qualitative data such as the health capital of natives. Consequently, I will aim to combine empirical data, published by Istat, Eurostat and Inail, with more qualitative data. Along these lines, I will relate the extent of the incoming migration flow both with more quantitative data, such as the number of accidents at work and their severity, and with more qualitative data such as the satisfaction reported by the natives with different degrees of assimilation of the migratory flow.

Initially, I intend to comprehend the demographic composition of immigrants to study their average education levels and the "healthy immigrant" effect. These data will help us understand what positions migrants occupy in the host country's labour market. The results of the studies show that, due to socio-economic characteristics as language and educational level, migrants tend to hold "low-skilled" jobs characterized by an intensive use of physical capital. This placement in the labour market allows a vocational retraining of the native workers who previously carried out these occupations, which now, instead, go to fill positions in which greater intellectual and relational skills are required. The aforementioned work upgrade allows the natives to avert all the risks associated with massive physical effort, improving the health of the latter.

Chapter 1: Migration and its correlation with accidents at work

1.1) Definition of Immigrant

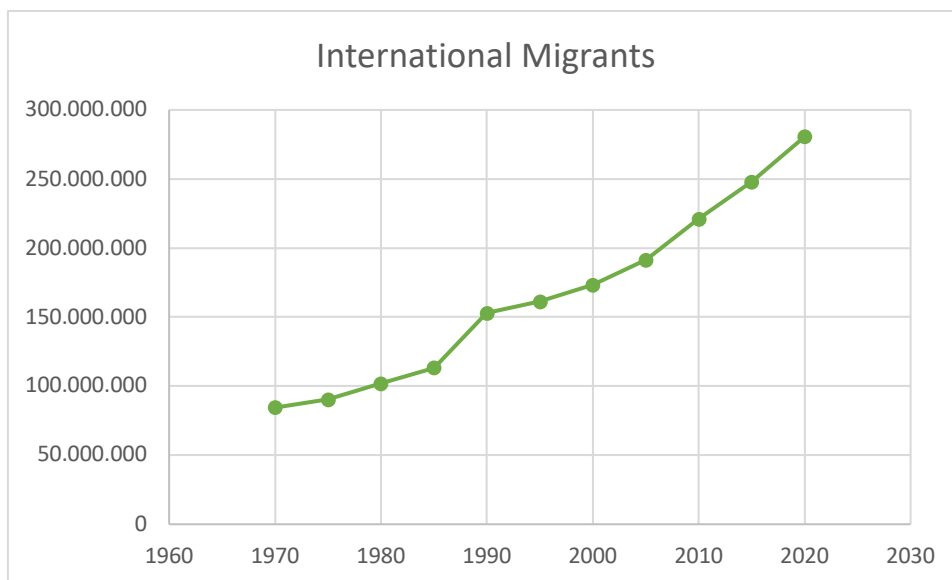
Migration, according to the OECD, refers to all movements of people inward (immigration) or outward (emigration) of a specific country or countries. I think it is important to focus on the motivations that push masses of people to leave their home country. It is necessary to distinguish the reasons of thrust from the factors of attraction. The driving factors are the reasons people

leave their country. The factors of attraction are the reasons why people move to a particular country. There are three main factors of thrust and attraction: socio-political factors, demographic factors, and economic and environmental factors. Socio-political reasons include people fleeing their country due to ethnic, political, racial and cultural persecution. This condition affects the choice of the destination country, which will be the most liberal in terms of reception policies. Demographic changes and the state of the economy can push groups of people to leave their country. In this case, the target countries will be those with higher wages, more job opportunities and a better quality of life. Environmental migrants are those who because of sudden or gradual environmental changes, which adversely affect their living conditions, are forced to leave their homes to move abroad. This category of migrants due to climate change is set to grow dramatically with estimates up to one billion people by 2050.

1.2) Migratory flows in the world

As mentioned in the previous paragraph, migration has increased significantly in recent decades. Taking into consideration the UN (2022) Report the significant increase in migration flows is clear. In 1970 international migration flows amounted to about 80 million individuals, while in 2020 they amounted to more than 280 million people.

Table 1: Amount of international migrants from 1970 to 2020

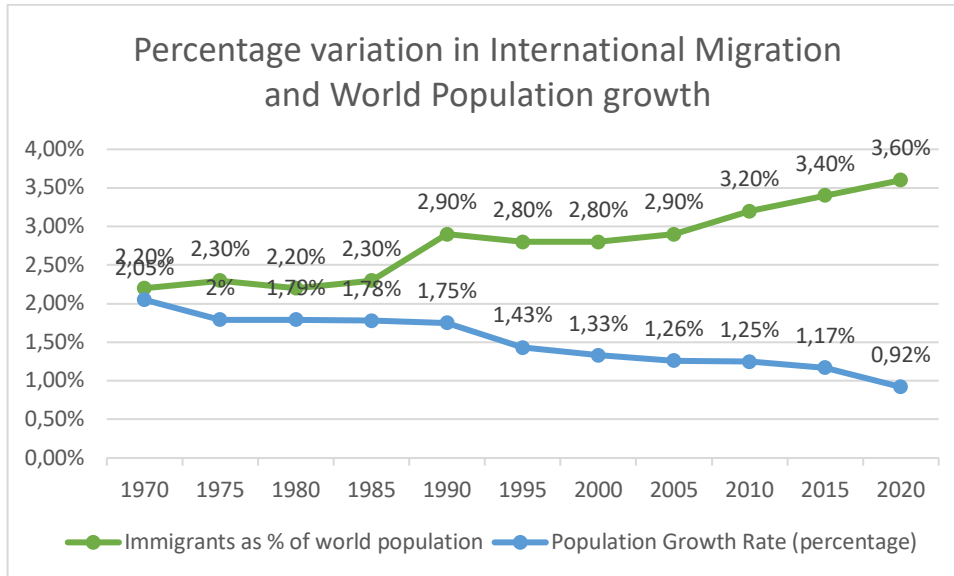


Source: UN, 2022

In addition to the absolute value, it is important to highlight the relative data. Analysing the migration flow in relation to the world population, I discovered that the percentage change in migration flows is not only positive but also much greater than the rate of growth of the world population. This means that in addition to increasing migratory flows over the decades, they

also grow at a more than proportional rate of world population. In fact, if in 1970 the rate of population growth was 2.05%, and that of migration flows in relation to the population was 2.20%; in 2020 they were respectively 0.95% and 3.60%.

Table 2: The relationship between changes in international migration and population growth



Source: UN, 2022

This global empirical evidence combined with projections published by the UN (2017) suggests that governments must implement adequate migration and reception policies to cope with the growing migration phenomenon. This introduction allows us to be aware of how important it is to study the effects of these flows; not only from an economic point of view but also from a social one.

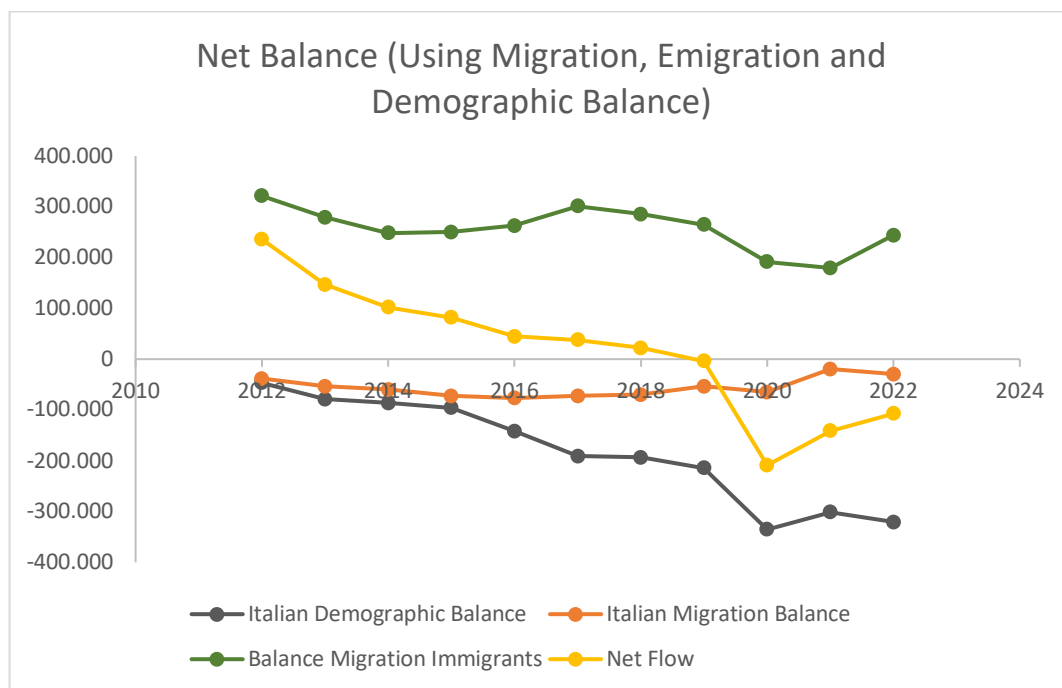
1.3) The effects of immigration in Italy

Being looking for evidence that an incoming migratory flow is a reason for improving the health of the natives, it is important to first contextualize the Italian demographic situation. The demographic situation in Italy is certainly not positive; at least as regards births and fertility. In fact, Italy is since 2006, as observed by the Istat (2022), which has a negative natural balance. This natural balance is calculated as a result between births and deaths of Italian residents and is worsening over time. In fact, if in 2006 the natural balance was positive of 2,118 individuals, with more 560,000 births, in 2022 the births amounted to less than 393,000 individuals and 713,000 deaths, with a negative balance of 320,000 persons. It is also important to mention the Italian migration balance, which is the difference between Italians who decide, after a period abroad, to move back to Italy and Italians who decide to emigrate. Even this indicator, while not worsening over time, remained negative. The phenomenon of Italian emigration has been

defined as "brain drain", the choice of young workers to move abroad to seize better job opportunities. The only positive demographic indicator is the overall migration flow. Immigration up to 2019 managed to offset the demographic balance of births and emigration, but from that year on, mainly due to the collapse of births, the net demographic balance remains negative.

This information is vital to understand the role of immigrants in the Italian labour market. Especially because of the decrease in births, the Italian population is ageing more than others and this represents a problem both for the pension system but also for the lack of young people in the labour market.

Table 4: Analysis of: migration flows, emigrates and Italian birth rates



Source: Istat, 2022

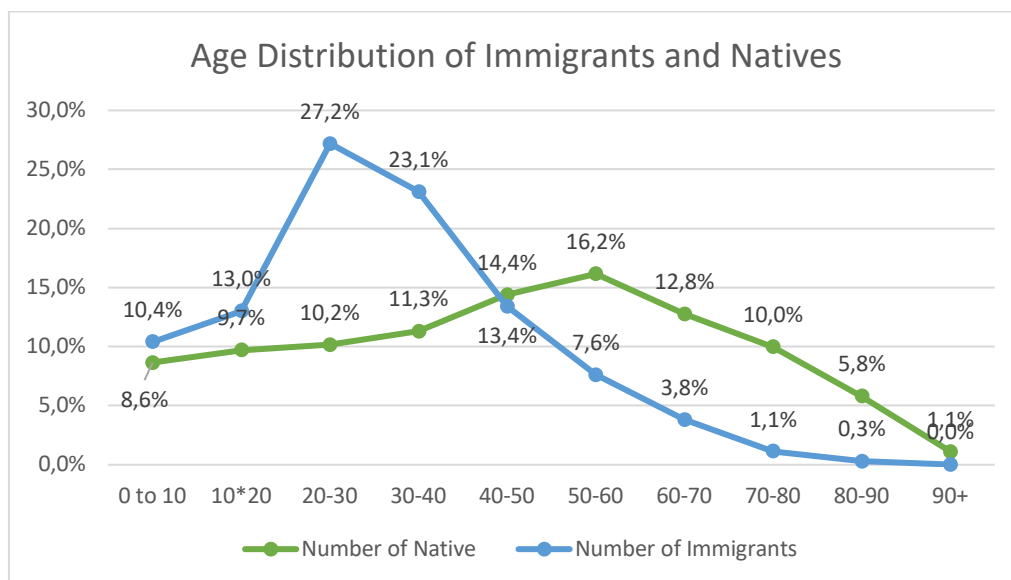
1.4) Age distribution of Italians and immigrants

After talking about the demographic situation in Italy, I wanted to try to comprehend how immigrants enter the world of work given their characteristics. One of the main features that I found by combining the Istat's Dataset is that incoming immigrants are markedly younger than natives. As already mentioned in the previous paragraph, the fall in births contributes significantly to increasing the average age of the Italian population. This process has a twofold effect: increasing the percentage of people with advanced age, which jeopardizes the sustainability of the pensioner system and fueling the lack of younger workers. From the following graph 60.3% of the Italian population is represented by individuals between the ages

of 40 and 90+ years. While 73.7% of immigrants are between the ages of 1 and 40. These data is crucial to understand that, in addition to significantly contributing to the sustainability of the pension system, they also represent a source of young workers who can be easily integrated into the Italian labour market.

This indicator can be a first signal to comprehend how immigrants go to occupy jobs with high intensity of physical capital. In fact, immigrants being younger than natives are more likely to perform in work with a high level of physical load, since they better perform in physical tasks, compared to that older natives colleagues, and as there is a lack of people ready to replace the next retirees in key sectors such as agriculture and industry.

Table 5: Analysis of the distribution of natives and immigrants according to age



Source: Istat, 2021

1.5) Educational levels for immigrants and natives

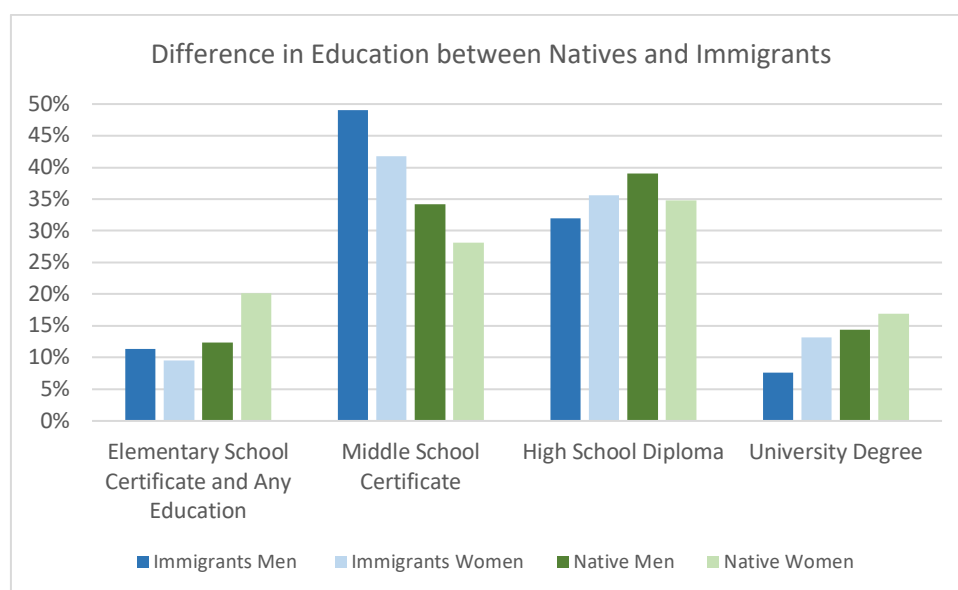
Another factor to comprehend what kind of jobs immigrants fill in the Italian labour market is certainly related to their level of education. In this case, to understand this component correctly, I compared the educational levels of migrants with those of natives. A further analysis was conducted to investigate whether gender affects the level of education. Immigrants who have a level of education equal to or below the middle school level is 60.4%, while for natives it is 46.6%. Instead, immigrant women who have a level of education equal to or lower than middle school is 51.3%, while for native women it is 48.3%. Assuming that having a middle school license or lower is equivalent to having a "low level of education" I can come to two conclusions. First of all, I can confirm that, on average, natives are more educated than migrants. This is evidenced by the two percentages identifying the remaining part of the native

population with an education equal to or higher than the high school license, which is respectively 53.4% for men and 51.7% for women. Secondly, these results show that educational differences are more marked among men; immigrant women are considerably more educated than their male compatriots. This tendency is less visible in the indigenous, only on maximum levels of education, as in the section "Universities and beyond" women exceed their male compatriots.

In addition to giving us an overview of educational differences based on sex, I can conclude that immigrants are more likely to occupy jobs with greater physical capital intensity, precisely because of their lower educational levels.

Indeed, because of the limitations in terms of training of immigrants, the latter not having academic qualifications are automatically excluded from occupations that require advanced specific skills or the qualification to practice; this reduces the audience of possible occupations that can be covered by migrants, pushing them towards more manual works. Thus lower levels of education are associated with jobs with a higher level of physical load.

Table 6: Analysis of the educational levels of immigrants and natives, also by gender



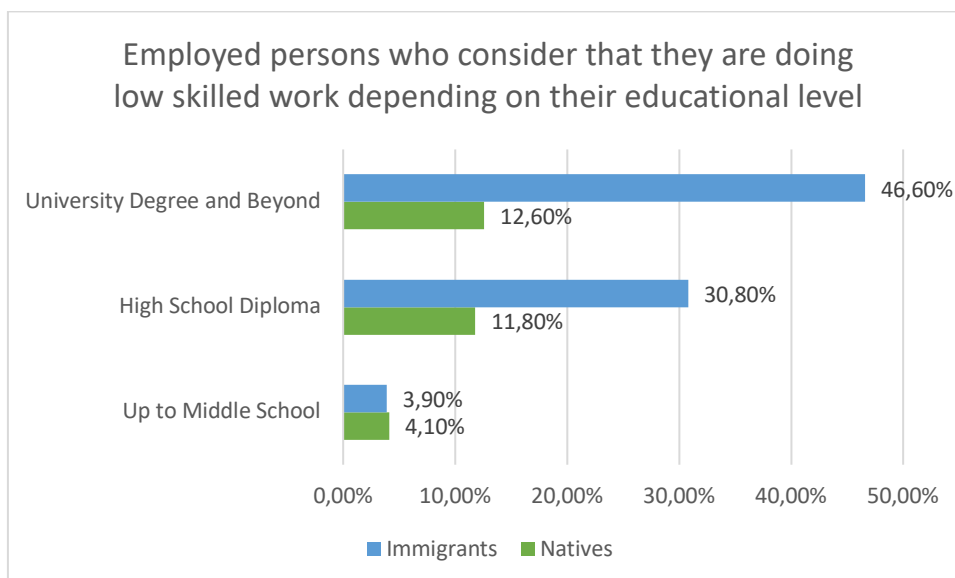
Source: Istat, 2020

1.6) Job satisfaction by educational level

After analysing, through Istat data, the level of education of immigrants and natives, I would now like to understand whether immigrants, on average, perform a more or less qualified job according to their educational qualifications. In fact, in the previous paragraph I said that immigrants tend to do more manual work because of their lower average levels of education, but I will now determine whether this trend can be associated only with less educated

immigrants. Proof of this is clear evidence in the Istat's (2023) Report. It is visible that with the increase in the level of education of immigrants, dissatisfaction with the work done increases exponentially. With the word dissatisfaction with the work done, I intend that immigrants recognize that they are too qualified for the profession they are conducting. These data are equally relevant in my analysis to native levels of dissatisfaction, for which the trend is confirmed but is much less marked. This shows that immigrants encounter considerable difficulties in entering the Italian labour market; obviously it is true that on average immigrants have lower levels of education, but even if they are highly qualified they are unable to fill jobs that should be easily accessible for them. The result of this barrier to entry is the presence of highly qualified workers in occupations with a high physical workload, thus not exploiting the knowledge and potential of the emigrant who finds himself in an underqualified employment for his academic title. This means that the natives have a comparative advantage in equal level of instruction, probably due to other characteristics, such as knowledge of the language, which I will go to deepen in the next paragraphs.

Table 7: Analysis of workers who perceive that they are over-qualified for work they do, dividing them by immigrants and natives



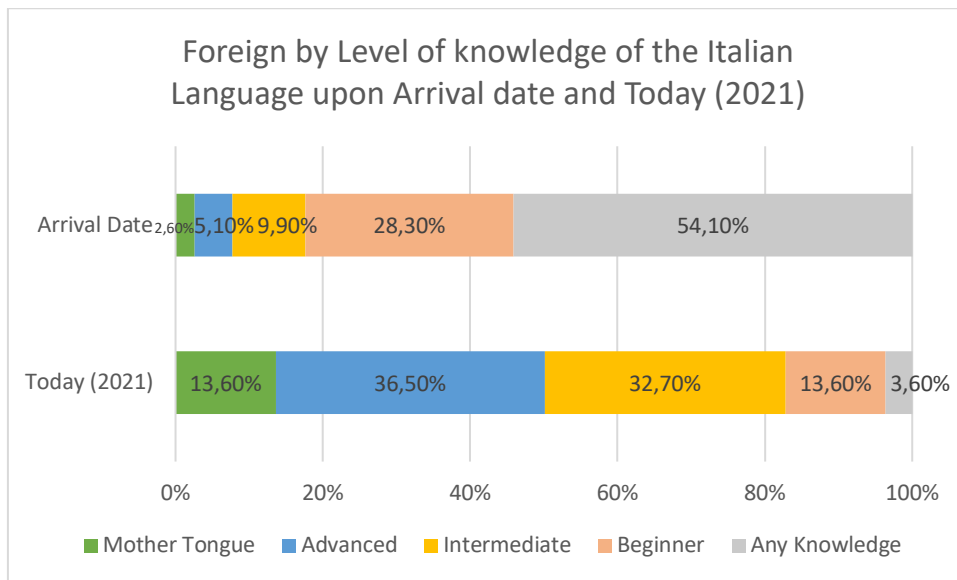
Source: Istat, 2023

1.7) Knowledge of Italian language by immigrants

Another indicator that I wanted to focus my attention on is the knowledge of the Italian language of immigrants. This factor, I believe, is closely linked to the before-analysed dissatisfaction that immigrants experience with the work they do. Indeed, regardless of their educational levels of origin, knowledge of the language of the host country plays a crucial role in employers' choices. A lack of knowledge of the language may preclude inclusion in works involving relations

between the different actors. As can be seen from the graph, immigrants have a poor knowledge of the Italian language. Especially when migrants arrive on Italian territory, more than 80% of them have no or little knowledge of the language and, as time goes by, their knowledge of the language increases. Unfortunately, the Istat Report (2023) does not give us the time gap between the arrival and the second interview with immigrants, but there is a clear improvement. At the second interview immigrants only 3.6% have no knowledge of the Italian language, compared to 54.10% on arrival. It should be noted, however, that, despite the marked improvements, at the date of the second interview however 49.9% of immigrants have a knowledge of the language equal to or below the intermediate level. This fact testifies how, because of the very low knowledge of the language on arrival, immigrants have difficulty in obtaining an advanced knowledge of the Italian language. There is also to consider that the Italian language is a language very little spoken abroad and compared to the French and English language, it represents an additional barrier to entry for the world of work for emigrants. In conclusion, as the Istat Report (2023) shows, I can affirm that the lack of knowledge of the language has a strong influence on the integration of immigrants into the labour market and their satisfaction with it. We can therefore also underline the predisposition of migrants to jobs with a high intensity of physical capital since they are unable to have conversations with potential Italian colleagues. In turn, low knowledge of the language also testifies low satisfaction with the work done by immigrants. In fact, despite being qualified they cannot be inserted in duties that involve a high intensity of capital relation; and for this as we will see they are predisposed to obtain mainly manual jobs. Manual labour involves a low level of interaction between workers, and in addition, because of the massive migratory flows, immigrants could be moved en masse to these sectors of the economy and fuel a vicious circle. The low knowledge of the language foresees the displacement of new foreign workers in sectors with a high intensity of physical capital and low intensity of relational capital, feeding and increasing the percentage of immigrants present in that compartment. This process will encourage the inclusion of newcomers in these work district, given the already high presence of foreign workers in these division. The new workers would find themselves carrying out activities with other immigrants, with the possibility of speaking the same language and facilitating communicating task for employers. In this process, however, would be also include "highly educated" immigrants who, in fact, as demonstrated in the previous paragraph, have high levels of dissatisfaction.

Table 8: Levels of knowledge of the Italian language of immigrants, measured on arrival and in 2021



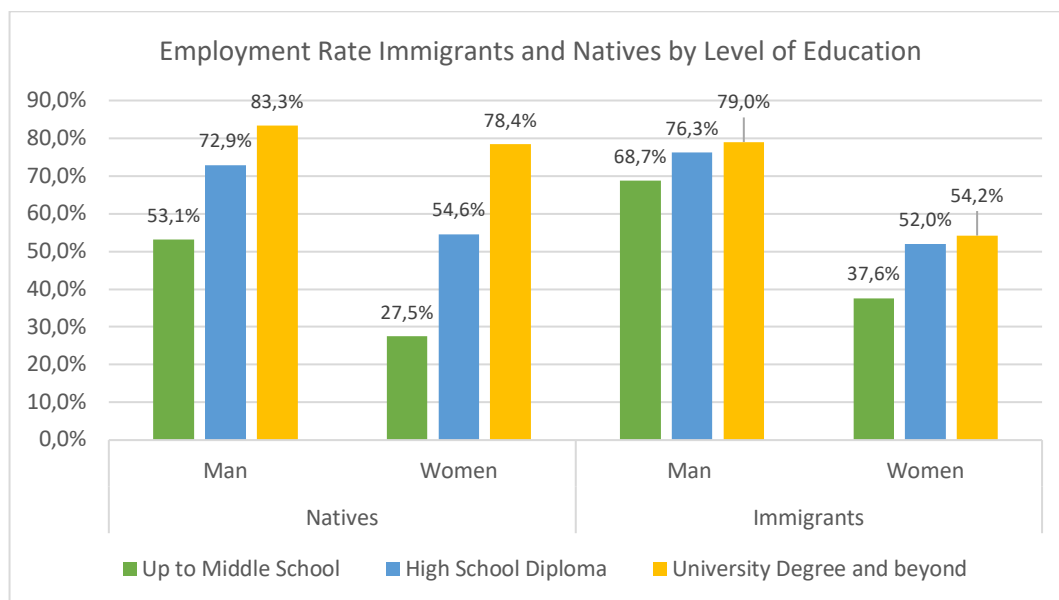
Source: Istat, 2023

1.8) Employment rates for immigrants and natives

In order to make the analysis as complete as possible, the evidence I have expressed in the previous paragraphs leads me to analyse employment rates for immigrants and the native population. I will try to understand the underlying mechanisms between newcomer and labour market, taking into account the Istat's (2023) report that observes, in general, employment rates of immigrants less sensitive to the level of education than natives. When immigrants arrive on the Italian coast, due to the lack of well-established reception and integration policies, they are not provided with adequate language and support courses in the job search process, this has a dual effect. On the one hand, immigrants who do not receive the right support face labour market in which employers could take advantage of people in difficult conditions to obtain lower labour costs. On the other hand, as documented above, having communication difficulties, as well as cultural, the potential and knowledge of the latter are not exploited at all. The result is the progressive push of immigrants towards occupations that can give them as quickly as possible an economic gain to support themselves. This process is in turn encouraged by the legal condition reserved for immigrants, for whom, in order to regularize their position towards the Italian state, they must obtain employment. In fact, in recent decades we have seen an increase in migratory flows especially on the Mediterranean route, which starts from North Africa and reaches South Italy. All migrants coming through this route are legally defined as "Irregular Migrants". By the word "irregular migrant," I mean an individual who entered the country without regular border control. To regularize themselves, migrants must by law, find a placement with a regular employment contract. In the event that the migrant loses his employment, unless he finds another one, he can remain on Italian territory only one year after

the loss of his profession, otherwise he will be forced to leave the country. This stringent legal condition may push the immigrant to accept the first job offer available in order to enjoy the rights issued by the residence permit; it could therefore represent an additional factor that plays a role of psychological pressure on the newcomer and lead him to accept a labour supply for which he is overqualified. It is also true that, due to the lack of work especially in southern Italy, newly arrived immigrants, in order to be able to support themselves financially, could also be willing to accept work-opportunity without regular employment contracts to ensure themselves a minimum income, this is the case of the illegal hiring (“caporalato”). This situations explains why migrant employment rates are less sensitive to educational level, and why even the most educated may have to accept professions for which they are over-experienced.

Table 9: Educational levels for natives and immigrants, also broken down by sex



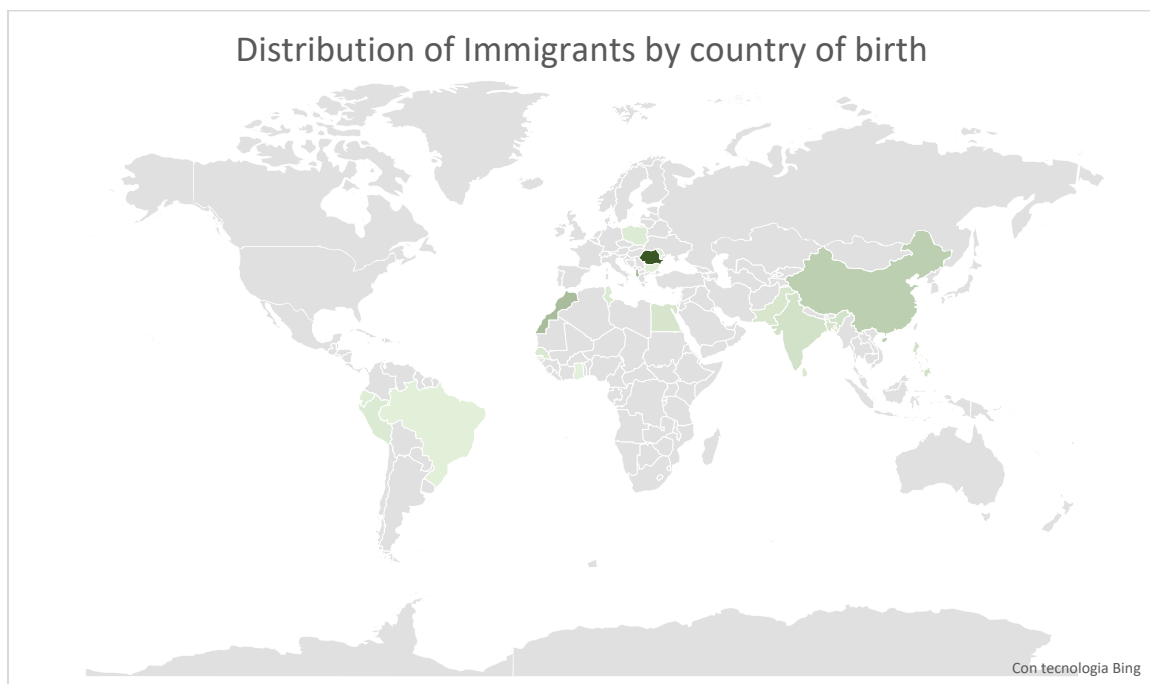
Source: Istat, 2023

1.9) Distribution of immigrants by country of origin

In the previous paragraph, I analysed the maintenance of legal status as a possible reason why immigrants take over positions in which they are too qualified. In this paragraph I would like to examine the countries of origin of immigrants. The countries from which immigrants come most in Italy are: Romania (27.5%), Albania (10.2%) and Morocco (10.0%). I wanted to consider this indicator since it could be relevant in immigrants' job choices. Newcomers may have a distorted perception of risk, not being familiar with the new social environment and language, taking risks that could lead to injury. Immigrants may also not be aware of or understand the long-term consequences of their working conditions, leading to a rapid deterioration in their health. The latter could therefore assume excessive risks at the workplace

and not compensate for these risks with adequate care and attention. One reason for the distorted perception of risk is that, for immigrants, the risk of injury in the host country is lower than they would have had to face working in the same occupation in their home country. Prejudice in the perception of risk, pressure to obtain a "regular" status as an immigrant and poor knowledge of the language could be determining factors in the positioning within the labour market, encouraging the choice of professions with high physical intensity, which may appear to be appropriate solutions for migrants.

Table 10: Distribution of immigrants in Italy by country of origin



Source: Ministero del Lavoro e delle Politiche Sociali, 2021

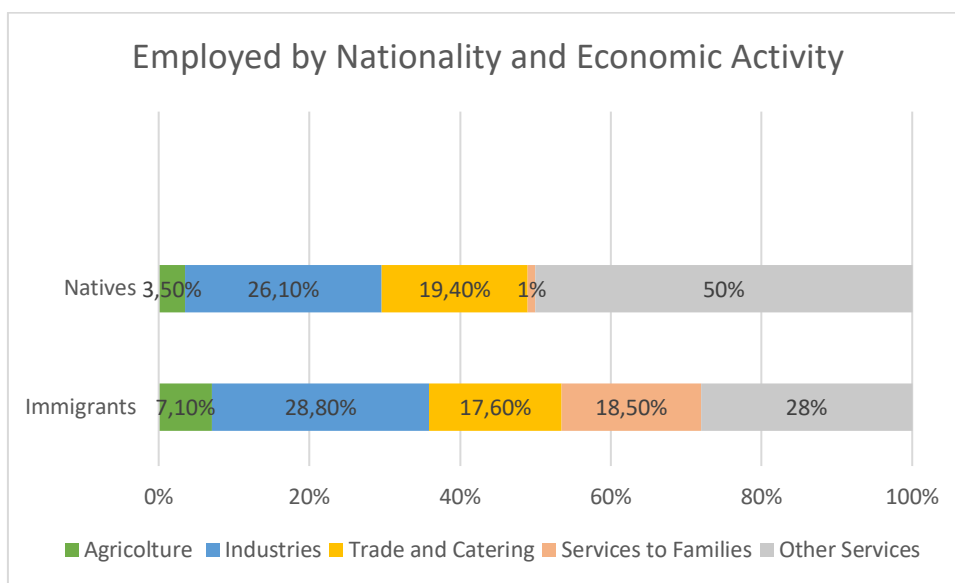
1.10) Integration of immigrants into the Italian labour market

In the previous paragraphs I studied the main socio-economic characteristics of immigrants that constitute the flow of migrants to Italy. To conclude, I intend to present two studies: one at the macro level made by Istat (2023), associated with the economic sectors in which immigrants are positioned, and another one, written by Ministry of Labour and Social Policy (2021), focused on the micro level that studies the characteristics of the employment carried out.

The first report (Istat, 2023) allowed me to comprehend how migrants and natives are distributed among the different sectors of the economy. Important differences between migrants and indigenous people are visible. First, I noticed that migrants represent more than two times the percentage of native workers in agriculture. This trend is also observable, but in a less impactful way, in industrial workers. Moreover, it is observable that only immigrants carry out professions associated with family services with a percentage of 18.5%, unlike 1% of natives.

The differential between immigrants and natives in economic sectors such as agriculture, industry and family services is absorbed by services. In fact, for the natives the tertiary sector represents 50% of the occupations. This first analysis allows me to confirm my thesis expressed in the previous paragraphs: migrants are distributed in sectors with a low intensity of intellectual capital and a low intensity of relational capital. In the agricultural and industrial sectors in particular, no special qualifications are required and the interaction between the various workers is very low.

Table 11: Analysis of immigrant and native labour force by economic sector



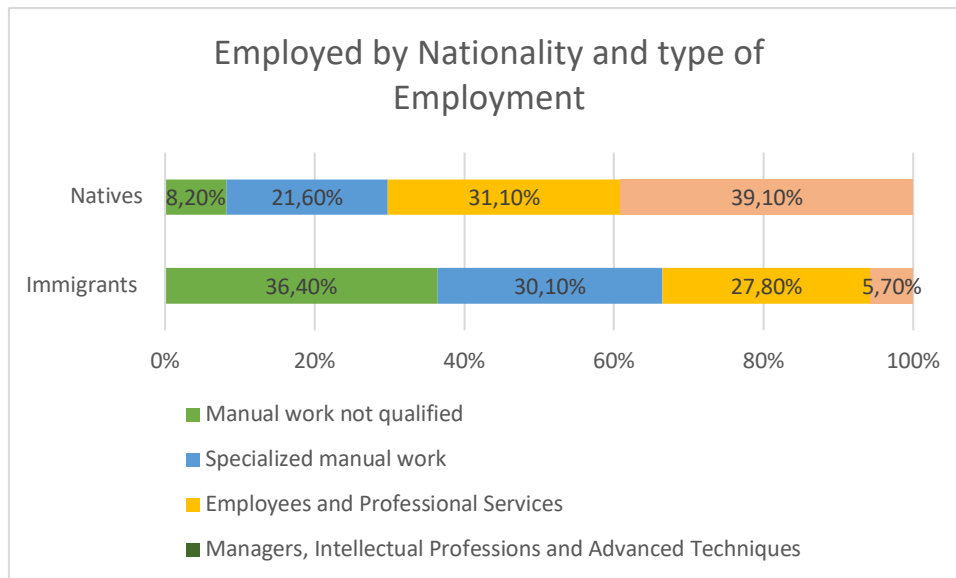
Source: Istat, 2023

The second study conducted by Ministry of Labour and Social Policy (2021) allowed me to comprehend if immigrants perform tasks with a high intensity of physical capital. Here too, my argument is confirmed. 36.4% of migrants do unskilled manual work, 30.10% manual skilled work. These percentages are crucial to understand how more than 60% of migrants work with a high intensity of physical capital. The data are also more relevant when compared with those of natives where only 8.20% carry out unskilled manual work and 21.6% specialized manual work. The trend reverses for occupations with a high intensity of educational and relational capital. In these cases 31.6% of natives perform technical tasks and 39.10% perform managerial and highly professional occupations. Immigrants, because of the characteristics listed above, do not represent a consistent share in these sectors with a percentage of 27.8% for technical tasks and 5.7% for managerial and highly professional tasks.

Thanks to these two studies by the Ministry of Labour and Social Policy (2021) and Istat (2023), I assert say that immigrants perform tasks with a high degree of physical capital. It is very

difficult to define what is the main motivation to explain this placement of immigrants in the labour market, but I can say that it's a combination of the characteristics that I have analysed. The low knowledge of the Italian language, the lower level of education compared to the Italians and their younger average age pushes the emigrants to fill these positions.

Table 12: Analysis of immigrant and native labour force by type of work performed



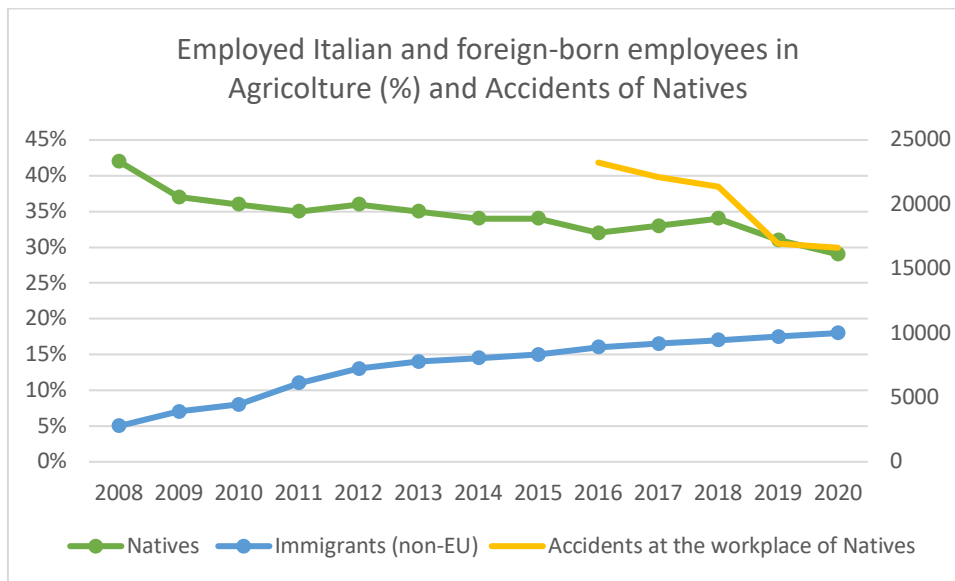
Source: Ministero del Lavoro e delle Politiche Sociali, 2021

1.11) Migration stimulates the reallocation of work

Having confirmed that immigrants tend to engage in occupations with a high intensity of physical capital and a low intensity of relational capital, I will demonstrate that there is a process of reallocation of labour. By the word work reallocation I mean the mechanism by which native workers in sectors with purely manual tasks are pushed towards sectors that require more relational skills, thus leaving the place to immigrants. I therefore consider the Istat data on the composition of the labour force in agriculture by country of origin. I have decided to consider this sector because it is one of the sectors most associated with jobs with a high intensity of physical capital. It's interesting to mention that over the years, the percentage of immigrants has increased noticeably. In 2005 the share of non-EU immigrants was 5%, while in 2020 it was 18%. This growing trend is contrasted with a decrease in the share of natives in this sector. Starting from 42% in 2005 and reaching 29% in 2020. I think it is also worth considering that these data could also be slightly altered, since, as shown by the ANPAL's (2018) report in agriculture is estimated that there are 25% of unregistered immigrants on the total. For this reason, the proportion of immigrants could be even higher. Nonetheless, it is still possible to establish that in the presence of a migratory flow, given their characteristics, immigrants tend to engage in occupations with a high degree of physical capital and stimulate the movement of

natives to other sectors. I also wanted to add Inail data on accidents in Agriculture from 2016 to 2020 (the only available, yellow line). It is visible that as the percentage of non-EU immigrant workers in agriculture increases, accidents at work decrease. So flow of natives from the capital-intensive sectors to the low-intensity sectors could improve their health, is what I will try to understand in the next paragraph.

Table 13: Analysis of the participation of immigrants and natives in the agricultural sector from 2008 to 2020



Source: Istat, 2021

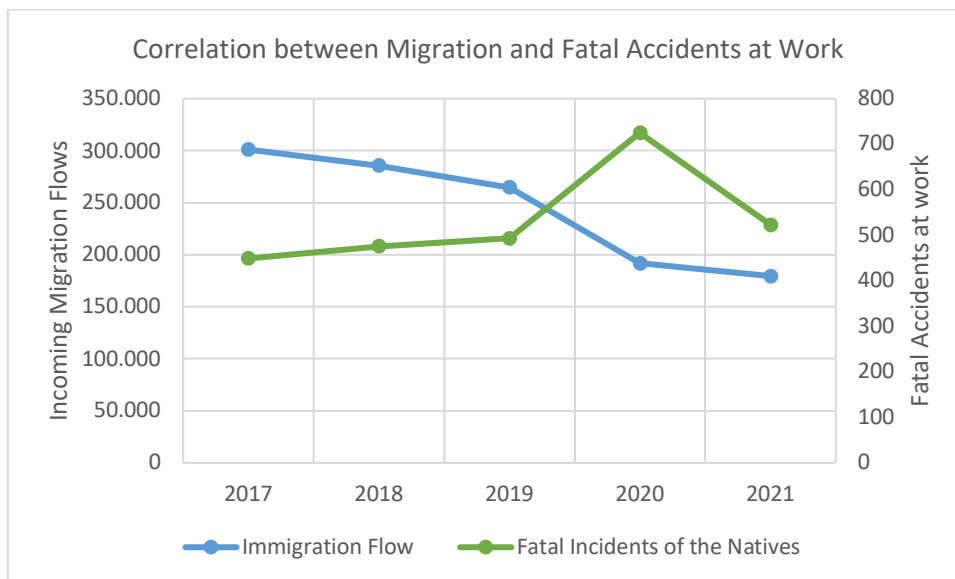
1.12) Incoming migration improves native health

To best comprehend the improvement in the health of the natives, I have taken into consideration the Inail data that includes all sectors of the economy, while, in the previous chart, only the agricultural workers were considered. It has been shown that in that sector, as the proportion of migrants employed increases, there is a decrease in native employees, resulting in a decrease in accidents at work. This decrease in work accidents could be explained by multiple reasons. Migrants, for example, with a lower average age than natives could, thanks to their better physical performance, reduce the risk of accidents. To test this hypothesis two trends are put in the next section. The first one concerns the migratory flow coming from 2017 to 2021. Only this time period is taken into consideration since, for the latter alone, data on deaths at native work are available. The flow of immigrants in this time period tends to decrease from 301,000 in 2017 to 179,000 in 2021. While work-related deaths rise from 449 in 2017 to 523 in 2021, obtaining a correlation coefficient of -0.708. A negative correlation coefficient means that the variation of one element corresponds to the variation, in the opposite direction, of the other element considered. In other words, as migration flows decrease, deaths at work increase. This

mechanism is especially visible in the years 2017 - 2018 - 2019 where we see a continuous decrease in the migration flow and a continuous growth of accidents at work. So it is clear that there is a strong correlation between these two parameters. I wanted to use the deaths at work as a proxy for the health of the natives because I believe that it is an excellent indicator for safety at work. Occupational safety can then be associated with better levels of health capital: fewer accidents at the workplace and fewer chances of fatalities are associated with lower medical expenses and improved health of the natives. Evidence based on research-wide data suggests that new immigrants are employed mainly in risky activities and high intensity of physical capital, and that because more immigrants are willing to accept riskier jobs in a company, native workers have the opportunity to be promoted to safer tasks.

In the previous paragraphs I have tried to explain, through my own data processing, what the reasons for immigrants holding these positions in the labour market might be. In the next chapter I will deepen some of the theories I have expounded and others that have been formalized by economic researchers.

Table 14: Analysis of migration flows related to accidents at the work place of natives



Source: Inail, 2021

Chapter 2: Migration and the improvement of the health of the natives: Evidence from the economic literature

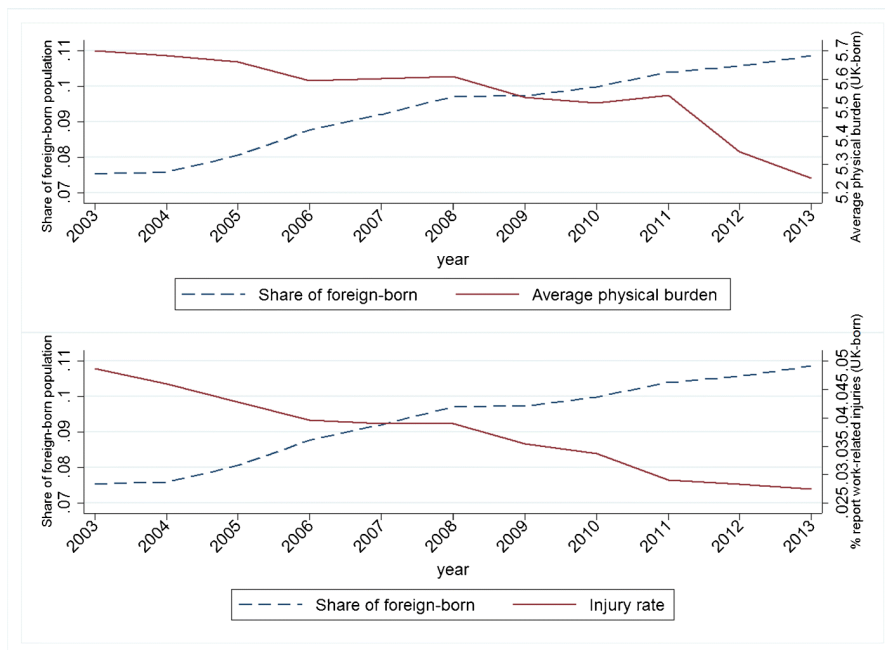
In this chapter I will review some important articles that economic researchers have published in the last years on the correlation between immigration and health.

The first article I take into analysis is edited by Giuntella, O., & Mazzonna, F. (2015). The article shows that upon their arrival, immigrants are healthier than natives, but that their health

converges quickly to that of the natives. This evidence is more marked among male individuals as they perform more physically demanding work. It is defined that immigrants are positively selected based on their better health, lower educational level and lower income level to carry out jobs with a high intensity of physical capital. Therefore, immigrants have an incentive to exchange their health capital for money and to accept poorer working conditions in exchange for higher wages. It has moreover been established that immigrants are more likely to engage in riskier occupations than natives, and that this is positively correlated with a rapid deterioration of their health. It is observed that, as immigrants are more likely to engage in strenuous occupations, natives experience significant health improvements. Empirical evidence from the German Socio-Economic Panel shows that a 10-percentage point increase in the proportion of immigrants in a local authority reduces the physical burden of indigenous males by 5% compared to the average. This improvement is explained by detailing the relocation process whereby natives, as well as previous cohorts of immigrants, are pushed into occupations with lower levels of physical load that are associated with higher levels of occupational safety.

Giuntella, Mazzonna, Nicodemo, and Vargas-Silva (2019) show that immigrants push natives towards jobs with less physical load and less risk of injury in the U.K.. The effects of this reallocation of labour are especially visible among workers born in the UK with average levels of education. In fact, with these workers, employers face lower training costs and workers move easily from occupations with high physical capital intensity to occupations that require greater intensity of relational capital. Native workers, moving among the labour market, report fewer work accidents and other health problems. This evidence, linked to the “healthy immigrant effect” shows that thanks to immigration there is a lower overall demand for health care assistance, with undoubted economic benefits as well as health. This mechanism is explained through three radical differences between immigrants and natives: risk aversion, health capital and risk estimation. Assuming that there is a proportional trade-off between wages in a given occupation and the level of physical burden, it is shown that immigrants are less risk-averse than natives. This could be explained by the fact that the countries from which they come have much higher occupational risk levels. Giuntella (2017) also observed that immigrants have higher health capital than natives. This in turn would lead emigrants to self-select themselves to more risky occupations. And finally, immigrants have a greater chance of underestimating (voluntarily or involuntarily) the job risk, this is due to the language barrier or to regularize their status as a migrant in the United Kingdom.

Figure 15: Analysis of migration flows related to the physical intensity of native work and their accident rates



Source: Giuntella, Mazzonna, Nicodemo, and Vargas-Silva (2019)

2.1) The evidence of United States

Dillender and McInerney (2020) carry out a study on the United States of America relating the massive influx of Mexican immigrants, who today represent more than 25% of the population born abroad, with the "WC", an allowance granted by the US Government in the event of an accident at work. The study considers the period 1980-2015 in which Mexican immigrants increased from 2.2 million to 11.6 million. The results show that during this period the non-fatal accident rate decreased by 60%, from 8.8 accidents per 100 workers, to 3.0 accidents per 100 workers in 2015. It is also created a measure of riskiness that analyses changes in working conditions over time resulting from changes in employment, excluding improvements in working conditions. This indicator allows us to understand more clearly whether Mexican immigration has entailed a lower occupational risk for natives and exclude improvements resulting from new policies or technologies. The latter is drawn up using O*NET data on physical working conditions which are compared with the risk of accidents in 2010. It turns out that an 11% of 68% in the decrease in "WC" requests is attributable to the increase in Mexican male immigration in the period under consideration. The results indicate that as Mexican immigration increases there are improvements in job security for indigenous people, resulting in a decrease in the release of "WC" allowances.

To complete the analysis, I glance at the results from Orrenius and Zavodny (2009). This study seeks to understand the reasons behind the disparity in workplace deaths between natives and immigrants in the US. In fact, looking at the death rate between 1992 and 2005, it is visible that the death rate for the natives has decreased, while the reverse for immigrants. The chart below

shows that the death rate among foreign-born workers rose from 11% in 1992 to 18% in 2005. This percentage exceeds the representation of immigrants in the US labour force, which was 15% in 2005. The article also confirms that immigrants are overrepresented in the so-called "risky" occupations, that is, those related to a greater probability of accidents such as agriculture, construction and manufacturers. In the secondary sector the death rate among immigrants is 1.8 deaths per 100,000 workers higher than among natives, and higher than 1.6 deaths per 100,000 for accidents. The two main discriminators found by the study for which immigrants perform riskier jobs are the educational level and knowledge of English. There is in fact an inverse relationship between education, knowledge of English and occupational accidents. The regression results suggest that workers with low educational levels and poor English are more likely to be employed in risky jobs. On the one hand, the low level of education prevents migrants from taking over more skilled positions in the US labour market; on the other hand, poor knowledge of English prevents employers from placing immigrants in positions where a moderate level of relational capital is required. These two combined characteristics inevitably push immigrants to sectors of the economy where the use of physical capital is highest, thus explaining their over-representation in these sectors. If in fact the immigrants in the construction sector in 1994 accounted for 6%, in 2005 they accounted for 22%. It is defined that the increased number of accidents and deaths is attributable to inadequate knowledge of occupational risks and inadequate training and supervision of workers, which is exacerbated by language and literacy problems. The results, as the article points out, are probably distorted downwards by the underestimation of accidents of immigrants, since the analysis excludes state and self-employed workers who are associated with lower accident risks (excluding the armed forces). There are other reasons for the underestimation of the results: undocumented immigrant workers may also decide not to report incidents because they may fear retaliation or fear that they cannot regularise their legal position. On the other hand, employers, in addition to taking advantage of the weak conditions (referring to education and language knowledge) of immigrants, as reported in the article, they may not register accidents to keep workers compensation rates low and avoid interruptions in the production chain.

Figure 16: Analysis of deaths at work and the percentage of accidents at workplace of immigrants



Source: Orrenius and Zavodny (2009)

I wanted to consider these two articles with the proposal to analyse in the most complete possible way the functioning of the US labour market and its correlation with the increase of the health capital of the natives. It is therefore understood that the knowledge of the English language and the educational level play a key role in the allocation in a risky position for immigrants, this allocation allows an improvement in health conditions, tangible through the reduction in the demand for "WC".

2.2) The evidence of Spain

The study from Bellés-Obrero, Bassols, and Castelló (2021) look at the Spanish context since it presents a worse situation in terms of safety at work, compared to the others EU countries, and has experienced radical changes in migration flows. Firstly, the share of migrants in the total Spanish population increased from 8.07% in 2003 to 15.78% in 2010, while it decreased to 13.54% in 2015. The strong inflow of immigrants until 2009 can be explained by the strong economic growth in Spain during that period, while the turnaround is due to the economic crisis that began in 2008. These data confirm in the first place that migrants tend to choose the countries where they settle according to the strength of the attraction factors of that country, which depends on economic growth, wealth and general well-being. Secondly, between the years 1994-2003 it is reported that Spain had the highest number of accidents at work, among the EU countries, almost three times higher than those in the United Kingdom and Sweden. It is important to mention that it is estimated that 50% of newcomers have experienced downward occupational mobility (that is, they hold positions for which they are over-qualified), only 13% have developed upward mobility and the residual have found adequate employment. These data explain the over-representation of migrants in sectors where a greater intensity of physical

capital is required, such as construction and manual labour services in which about 70% of immigrants were employed from 2003 to 2015. There is a double-face phenomenon with accidents at work: from 2004 to 2009, there was a decrease in the probability of natives being employed in less qualified positions such as those in agriculture, construction and manufacturing while the likelihood of them being hired as skilled technicians, managers and executives increased. The study also, through O*NET data, classifies the different occupations with a value from 1 to 15, according to whether the position require a greater use of physical (1) or relational (15) capital. This classification shows that in the 2004-2009 period natives relocate from more dangerous occupations to occupations requiring more interpersonal relationships. However, for the period from 2010 to 2015, there is no robust effect on job security for indigenous people. This effect can be explained by the severe economic crisis that Spain has been facing since 2008. The scarcity of jobs has greatly curbed the phenomenon of the reallocation of work and even there is a slight reversal of the trend whereby natives are more likely to do manual work. Since this trend is very small it is not possible to check any effect on accident, but this points to an important labour market phenomenon during the recession. These results are relevant to my analysis: only when natives are able to move from predominantly manual occupations to more technical occupations, with less physical workload, they can record positive effects on their health. This process is visible only in the stages of economic growth, in which the increased labour demand allows the natives to make the displacement; on the contrary, in the phases of recession the displacement is not possible due to the lack of labour demand. It is therefore noted that during the economic growth period 2004-2009 the impact of migratory flows on the accidents of Spanish workers is negative (leading to improvements) and statistically significant. An influx of 1000 immigrants (again between 2004 and 2009) reduced accidents by 8.67 (11.5 for men and 3.6 for women) per 100,000 workers born in Spain. This suggests that on average immigrants being less educated but younger and healthier assume safer attitudes than their older and less healthy Spanish substitutes. If we consider the entire period 2004-2015, the reduction in the incidence of accidents at work, with an influx of 1000 immigrants, drops to 4.2 per 100,000 inhabitants due to the economic crisis. This article adds some important evidence that had not yet been analysed, namely the effect of migration in the presence of economic crisis. Finally, it is important to highlight how migration flows have different effects between accidents at work between men and women. This is due to the fact that men tend to work with a higher intensity of physical load and are therefore more exposed to occupational hazards.

2.3) Evidence of the European labour market

The article made by Peri and Sparber (2009), using data on 15 Western European countries during the 1996-2010 period, analyse a different aspect of the phenomenon of migration. The paper aims to study whether some countries of EU, despite others, according to the characteristics of the labour market, may be more or less inclined to absorb a migration flow. It is confirmed that the natives, in the presence of an immigration flow, have a comparative advantage in carrying out more complex works, and for this reason they tend to relocate themselves in the market.

The evidence that this article adds to the economic literature are two: one concerning the effect of immigration on the wages of the natives, and one on the effect of immigration on the basis of labour market flexibility. Until now, in fact, it had been claimed that an incoming migratory flow did not have negative effects on the salaries of the natives, the article not only confirms this theory, but also discovers that, to a doubling of immigrants the monthly salary of the natives increases by 0.7%. This effect is added to the already studied positive outcome of the reallocation of labour, which is formalized by stating that a doubling of immigrants involves a specialization of natives in more complex occupations of an average of 5-6%, but with considerable differences between EU countries. A separation is then made between European countries with strong and weak Employment Protection Legislation (EPL). The narrowness of collective agreements and the rules on temporary work are taken into account as indicators of labour market flexibility in a particular country. Estimates show that for a 1% increase in the share of immigrants, in a country with weak legislation there is a reallocation of less educated workers by 0.076%, while in countries with strong legislation of protection 0.054%. For more educated native workers, engaged in occupations with a higher degree of interpersonal and individual skills, there are no significant results between countries with varying degrees of labour market flexibility, as they do not suffer competition with immigrants. It is argued that countries with weaker labour legislation present a greater reallocation of labour as a result of immigration, while countries with more intensive legislation expose themselves to a more modest reallocation. This result is consistent with the fact that less skilled native workers, in the presence of strong legislation, suffer more from competition in these jobs with immigrants and face greater difficulties in upgrading their professions condition. Therefore, the ease with which workers are sorted between jobs depends heavily on the degree of protection of the labour market. As a result, the rigidity of a labour market can considerably reduce the benefits of immigration, limiting for native workers in sectors with a high intensity of physical capital to relocate themselves to occupations requiring greater interpersonal interaction.

2.4) Working hours, immigration and health

Through the article edited by Bond, Giuntella, and Lonsky (2023) I will go to deepen the impact of immigrants on native labour services in the United States of America, focusing on working hours. This work poses two fundamental assumptions at the beginning of its analysis. First, it states that night work is an imperfect substitute for day work, this means that a relative increase in supply for night work leads to a reduction in the relative wage for these occupations. Secondly, also on the basis of what was said earlier and reiterated in this article, immigrants have a comparative advantage, because of their socio-demographic characteristics, in performing tasks with greater workloads and at night. In fact, being on average younger and healthier, immigrants could be induced to perform tasks at night, where there is a relative higher wage than day work. Moreover, the lack of knowledge of the language of the host country could lead them to engage in occupations at night, since the same employment at these times requires less interpersonal skills and less coordination with the natives. If immigrants then would concentrate on these time slots, they will be even more encouraged to choose the latter since they will have to interact with other immigrants, who supposedly speak the same language. In other words, the placement of migrants in night shifts could be due to costly barriers in the daytime employment. The document confirms that only 19% of autochthonous workers say they work at night (between 18.00 and 7.00), unlike 25% of immigrants. As immigrant workers concentrate on night-time occupations, the increase in the relative proportion of foreign workers leads to an increase in the relative supply of night-time hours. As mentioned above, since night and day work are imperfect substitutes, the relative price of day work increases as relative supply decreases. These positive changes in relative wages in the daytime work bundles push native workers to shift to daytime hours. Consistent with the model presented by the study, an increase of 10 percentage points in the share of immigrants reduces the probability of natives doing work at night by 0,8%. The displacement of natives could take place within the same company or choose to change jobs upgrading their job position; undoubtedly this process brings benefits in terms of health for the natives. In fact, according to the US Centers for Disease Control and Prevention, 44% of night workers sleep less than 6 hours a night, unlike 28% of day workers. According to the article of Giuntella, O., & Mazzonna, F. (2019) a difference of 4h in the sleeping hours during the night entails a healthy expense per individual equal to 82\$ per year. But it is not the only benefit that could draw the natives, the nocturnal work is in fact related to a lower family balance and lower balance in work- social life, with considerable effects on emotional well-being. The model, however, predicts that there are not only positive effects, in fact the natives for whom it was optimal to work at night with the old compensatory differential will see a loss in absolute economic terms by switching to less paid day shifts. Thus,

although the daily wage is rising in relative terms, it is still lower in absolute terms than the night wage, which provides a premium for the greater physical load. Regardless of this, policy-makers should not underestimate the benefits in terms of health and psychological capital that natives can experience in the presence of a migratory flow.

2.5) Alternative indicators of well-being

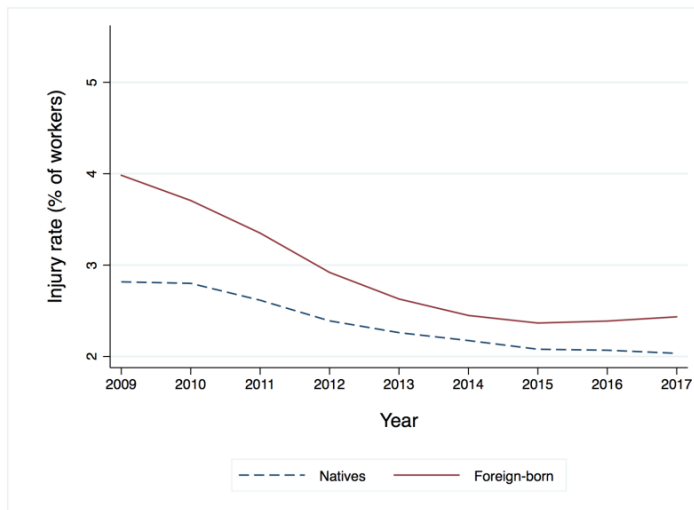
I aim to take into consideration the article drawn up by Akay, A., Constant, A. F., & Giuliotti, C. (2014) as it studies the welfare of natives in the presence or not of a migratory flow, regardless of the characteristics of the total labour market. It studies the welfare of the natives as the "utility" experienced in general, reporting the well-being subjectively reported by the natives. I find this interesting because, so far, I've argued how natives, through empirical studies, experience an improvement in the health of the natives thanks to the influx of immigrants, but this happened through the analysis of data, and not of the subjectively reported well-being by the natives. Objective measures are certainly capable of capturing many aspects of an individual's well-being, but in recent years economic researchers have also begun to consider other indicators to describe it. The article written by Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009) states that quality of life is a broader concept of economic production and living standards, going beyond its material side. To capture the general well-being of individuals, researchers now study measures of subjective well-being (SWB, "happiness" or "life satisfaction") that can integrate objective income-based metrics and improve our understanding. The German context is studied since it was one of the European countries that more in the last decades has experienced massive influxes of immigrants, in fact today 12% of the population is a foreign-born. The German Socio-Economic Panel (GSEOP) portal is used to determine the geographical distribution of migrants, which helps to understand the levels of well-being perceived by the natives based on the share of migrants in a given area. Immigration could have an effect on the local labour market and influence the native SWB accordingly. It turns out that the positive effect of immigration on natives on SWB is function of the assimilation of immigrants in the region. The impact is zero when migrants are total assimilated in the labour market, that is, when there is a high share of migrants in a given area, or when the assimilation is zero, that is there is no migratory flow in the geographical area considered. While the effect of immigration is positive on the SWB when assimilation is intermediate, that is, when the migration flow is modest. This means that beyond the empirical studies that I have presented so far, natives perceive an added value to their well-being only when migrants are assimilating within the labour market and society gradually. This in part could be explained by factors such as cultural diversity and the ability of migrants to integrate culturally with natives; a significant share of migrants may not really integrate into the habits and customs of the host country's

society, forming closed groups “outside” of the national society, not making perceived improvements in welfare to the natives.

Chapter 3: The evidence from Italy

The article written by Alacevich and Nicodemo (2019) analyzes in detail the Italian context, estimating that immigration reduces accident rates, and their severity, of native workers, measured through paid sick leave. The study is based on administrative data on accidents at work and immigration in Italy, found through ISTAT and INAIL. The figure below shows the significant gap between the two demographic groups: although the difference in time has been reduced, the reported migrants’ accidents are still 25% higher than those of the natives.

Figure 18: Injury rate in the foreign-born and the native employed population (16-65) in Italy



Source: Alacevich and Nicodemo (2019)

The article confirms for immigrants the evidence found previously, namely: lower education rate, lower risk aversion, a comparative advantage in healthcare equipment and less bargaining power over employers than natives. The listed socio-demographic characteristics combined with the increase in migration flows in Italy, which brought the share of residents born abroad from 7% in 2009 to 10% in 2017, leads to over-representation for migrants in risky works. The insertion of migrants in positions of high intensity of physical capital, push the natives to move in the labour market towards occupations with a higher intensity of relational capital, characteristic associated with safer occupations. This phenomenon can be seen in the next figure, which traces native injuries per each 100 workers on a scale, along with the evolution of the migrant population from 2009 to 2017.

Figure 19: Injury rates among native workers (16-65) and share of foreign-born residents in Italy

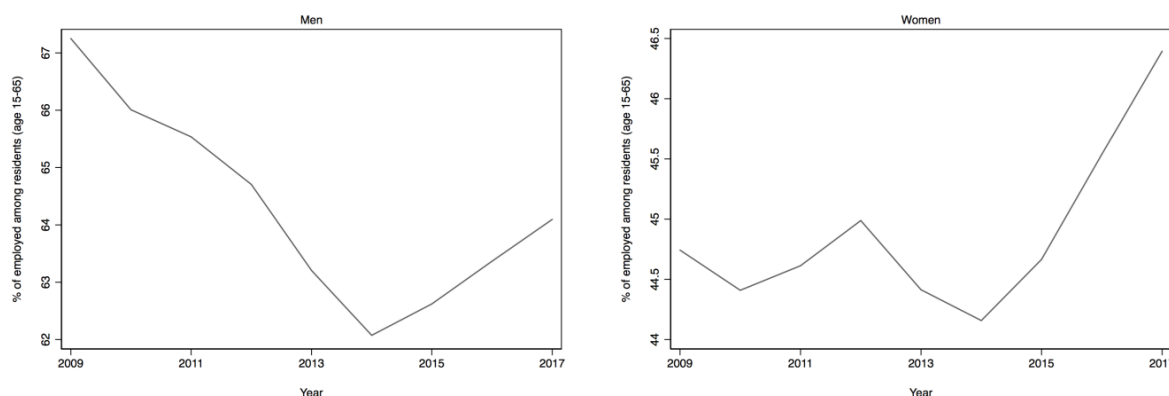


Source: Alacevich and Nicodemo (2019)

The article by Giuntella, O., Mazzonna, F., Nicodemo, C., & Vargas-Silva, C. (2019) that I previously analyzed used data from the Labor Force Survey, noting, in response to the increased migratory, that medium-skilled native workers were reallocated to occupations with a lower risk index and physical burden; but no evidence was reported for lower skilled workers. The authors in this case, using administrative data from the Italian Labour Survey, exceed this limit and provide a new contribution. A concern of researchers in the analysis of the consequences of immigration is that the concentration of immigrants between the Italian provinces could be endogenous to the demand for work; migration decisions could be directly or indirectly related to local labour market conditions. Endogeneity is a term used in economics to indicate the situation in which the explanatory variable is related to the error term. For this reason, fixed effects per province and per year will be included in the model, to exclude fixed characteristics and year-specific shocks for the labour market. Second, the "shift-share" tool à la Card (2001) is used as a statistical tool to measure the impact of a change on a variable. The "shift-share" tool, as conceptualized by Card (2001) within an instrumental variable framework, is a statistical method used to untangle the effects of external factors from regional or local characteristics when analysing a result variable. This involves using an instrumental variable to isolate the causal relationship between a specific regional or local characteristic and the outcome of interests, taking into account the potential confounding effects of external factors that could simultaneously affect the outcome. This technique helps researchers improve the accuracy of causal inference in empirical analyses. The shift-share tool works by breaking down

the variation in the concentration of foreign-born among the provinces into three components: the structural change component, the relative change one and the residual change one. The first one measures the effect of the change in the structure of the labour market on the provinces, the second one, measures the effect of the change in the concentration of those born abroad between the provinces in relation to the national average, and the last one, measures the effect of all other variables that have not been taken into account by the other two components (like government policies). The macroeconomic conditions of the period under analysis support the view that immigration does not simply reflect trends according to labour demand; this is evidenced by the following figure. Despite the employment rates for the natives, during the great recession, have suffered a setback and a subsequent recovery, migratory flows have increased continuously under both economic conditions.

Figure 19: Native workers (% of resident population) in Italy (age 16-65)



Source: Alacevich and Nicodemo (2019)

The National Institute of Labour Insurance (INAIL) provides compensation for complications and health diseases of workers residing in Italy, involving at least one day of absence from work and reported within 48 hours of receiving the medical certificate. This definition implies that compensation in the event that an immigrant is without a residence permit, and therefore irregular, has much less chance of being received. The decrease in accidents could therefore be related to the presence of irregular immigrant workers, however there is evidence that the incidence of the informal economy has remained stable in recent decades; this would confirm that natives report fewer injuries due to high-intensity physical competition with immigrants. The table below shows the descriptive statistics for the sample of 91 provinces for the 9 years of analysis. The latter shows that the average share of immigrants is 8.44%, between 1% and 17%, and that the average accident rate for workers is 2.47% while for residents is 1.42%.

Table 1: Descriptive statistics, Italian provinces (2009-2017)

	N	Mean	SD	Min	Max
Foreign-born Share	819	8.44	3.95	1.02	17.04
Injury Rate (% of Workers)	819	2.47	0.80	0.87	5.66
Injury Rate (% of Residents)	819	1.42	0.63	0.32	3.97
Severity					
Sick Leave Days per Accident	819	27.11	5.28	13.35	45.55
Degree of Impairment per Accident	819	1.29	0.49	0.36	3.57
Days (severe)	819	92.04	15.21	53.30	168.55
Impairm.(severe)	819	7.39	0.95	4.19	11.20

Source: Authors' estimation from ISTAT demographic data, INAIL archive of work injuries, and the Italian Labour Force Survey (LFS-ISTAT), years 2009-2017.

Initially a linear model is identified which specifies the estimates of the basic fixed effects taking into account the relationship between immigration and accident rate through changes in the concentration of migrant workers.

$$INJ_{p,t}^{nat} = \alpha_p + BMIG_{p,t} + \eta_t + \epsilon_{p,t} \quad (2)$$

$INJ_{p,t}^{nat}$ represents the share of accidents among native workers in the province p at time t ; while MIG , the independent variable, represent the share of migrants among resident in the province p . α_p and η_t are the fixed effects of province and time. However, there is a problem of endogeneity, for instance an increasing demand for work could attract more migrants; to face it the resident share of migrants in the local labour market is instrumented on the basis of historical settlements, following the "shift-share" approach (Card 2001). The underlying rationale of this strategy is that the initial distribution of migrants between provinces is independent of the future changes in local labour market conditions. For this, it is imputed the distribution of migratory flows by country of origin c and at the time t between the provinces p , allocating the incoming flows at the national level on the basis of their historical space.

$$\widehat{MC}_{c,p,t} = ShM_{c,p,1990} \cdot FlowM_{c,t} + StockM_{c,p,1990} \quad (3)$$

Premising to consider a province p at the time t and immigrants of origin c ; to obtain the imputed number of migrants ($MC_{c,p,t}$), the authors multiply the flows of migrants at the national level ($FlowM_{c,t}$) by their 1990's shares ($ShM_{c,p,1990}$), adding the initial stock of migrants ($StockM_{c,p,1990}$). Subsequently to calculate the imputed share of migrants of all origins in a province p at time t , a summation of all migrants is made and is divided by the total number of male or female residents aged between 15 and 65.

$$M_{p,t} = \frac{\sum(MC_{c,p,t})}{Pop_{p,t}} \quad (4)$$

The authors then proceed with an estimate of the minimum squares to two states, exploiting the share of migrants on the resident population in a given administrative unit ($MIG_{p,t}$), with the imputed share ($M_{p,t}$). However, while being the depended variable the proportion of accidents among native workers, the impact of immigration on occupational accidents will be estimated.

In this section I will present the results of estimates of the impact of immigration on the incidence of injuries on native workers. The following table shows the results obtained by estimating equation (2). The OLS regression with fixed effects per province and per year shows a negative relationship between the proportion born abroad and the accident rate of autochthons at the provincial level; the coefficient for immigration is statistically significant at the 5% level. Whereas in the second column, the coefficient is not statistically significant. In the third column, however, when the share of migrants is instrumented using the quota imputed through historical settlements, a statistically significant reduction in accidents is found. An increase of 10 percentage points in the share of residents born abroad in a given province, corresponds to a decrease in accident rates of natives by 2.1 percentage points. Estimating the instrumental variable solves the problem that the choice of settlement of immigrants could be related to changes in local labour market conditions; while its first stage takes the "shift share" approach à Card (2001). The latter is based on the settlements of foreign-born in 1990, weighting the number of residents by year by their historical distribution across provinces, and summing up all areas of origin. The first stage coefficient shows a positive and significant prediction while the specific F-test for the "shift share" instrument is 8.19, slightly below the critical value of 10.

Table 2: Foreign-born residents and native workers' injury rates

	(1)	(2)	(3)	(4)
	OLS-FE	FE	IV	First Stage
Foreign-born Share	-0.03** (0.01)	-0.03 (0.02)	-0.21* (0.12)	
Instrument $\hat{M}_{c,p,t}$				0.28*** (0.10)
Mean Dep. Var.	2.47	2.47	2.47	8.44
StDev Dep. Var.	0.80	0.80	0.80	3.95
N	819	819	819	819
F-Stat (First Stage)				71.10
F-Stat (First Stage) Excl. Instr.				8.19

Source: Alacevich and Nicodemo (2019)

Another thesis supporting the use of the "shift-share" tool is suggested by the article written by Brunello, Lodigiani and Rocco (2019). The study argues that the choice of using 1990 data as historical silage has two advantages. On the one hand, 1990 precedes the Maastricht Treaty, which established freedom of movement throughout the European Union for its citizens, while on the other hand it precedes the entry into the EU of countries such as Poland, Romania and Bulgaria, whose citizens make up a large share of born abroad resident in Italy. For these reasons, concerns that the historical distribution of migrants may not be exogenous, are mitigated.

I will now consider whether the presence of immigrants contributes to a decrease in the severity of accidents at work, looking at Table 3 which presents the results of the 2SLS second stage instrumental variable estimation. To do this I focus on the average number of days of absence from work assigned by doctors; in particular an increase of one percentage point in the share of immigrant citizens decreases the assigned sick days by almost two days, with a statistical significance of 5%. For the most serious accidents the decrease is 8.5 days and 0.4 degrees in the degree of impairment, both with a level of significance of 10%. These figures bear witness to the fact that not only does immigration have positive effects on the number and severity of accidents; but it also excludes the hypothesis that the indigenous, suffering competition from immigrants, go to hide accidents in order to keep their jobs. This is because there would be more serious incidents, more difficult to hide thanks to the controls of the Labour Inspectorate, and then observable from the table.

Table 3: Foreign-born residents and the severity of natives' injuries (2SLS - Second Stage)

	(1)	(2)	(3)	(4)
	All Injuries		Severe Injuries	
	Mean days	Impairment	Mean days	Impairment
Foreign-born Share	-1.939** (0.969)	-0.090 (0.058)	-8.489* (4.808)	-0.415* (0.251)
Mean Dep. Var.	27.113	1.295	92.039	7.386
StDev Dep. Var.	5.281	0.494	15.214	0.949
N	819.000	819.000	819.000	819.000

Source: Alacevich and Nicodemo (2019)

Finally, the degree of reallocation of labour for natives is investigated in table 4, using the General Index of Physical Intensity of Employment OPI by Kroll, L. E. (2011). Columns 3 and 4 of Table 5 report fixed-effects and two stage least squares estimations of province-level average native workers' OPI in response to foreign-born inflows, as from Equations 2 and 4.

Although the coefficients are not statistically significant at standard levels, they have a negative sign, which is consistent with the assumption that an increase in the share of residents born abroad is associated with a decrease in physical workload for natives.

Table 5: Foreign-born and native Occupational Physical Intensity (OPI) exposure

Dependent variable: OPI	(1)	(2)	(3)	(4)
	Individual data		Province level	
Foreign-born	2.015*** (0.005)	1.810*** (0.005)		
Female	-1.062*** (0.004)	-0.890*** (0.004)		
Migrant Share			-0.011 (0.013)	-0.053 (0.064)
Constant	6.112*** (0.007)	6.800*** (0.012)	6.624*** (2.353)	7.723** (3.263)
Mean of Dep. Var.	5.938	5.944	5.827	5.827
Trimester FE	yes	yes		
Demographic controls	no	yes		
StDev of Dep. Var.	2.794	2.791	0.367	0.367
N	1.84e+06	1.64e+06	819	819
R2	0.101	0.203	0.039	

Source: Alacevich and Nicodemo (2019)

Conclusion

In the document I tried to summarize the scarce scientific evidence reported by researchers in this field. Through the collection of data from ISTAT and INAIL on migration flows in Italy and their processing, I tried to understand the underlying mechanisms in the labour market among natives and immigrants; looking for similarities with the results reported in the literature. The results state that immigrants, not only have a positive effect on employment and wages, but that they stimulate the reallocation of labour by elevating the working position of natives. Displacement allows natives to engage in occupations with a lower intensity of physical capital, and consequently to experience fewer illnesses and injuries that are often associated with the great physical exertion conducted. In summary, the positive aspects of migration flows in the host country offer policymakers a unique set of opportunities that can be exploited through strategic structural policies. These benefits include economic growth, innovation, cultural enrichment, and social cohesion. Through the implementation of comprehensive policies focusing on labour market integration, education and social support, politicians can exploit the potential of migrants to contribute to the progress of our society. By embracing these

opportunities, states can aspire to implement their own economic and social development and to flatten gaps due to demographic characteristics of the host country.

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