Determinants and characteristics of internal mobility through military medical examinations. Friuli (North-eastern Italy) between 19th and 20th century*

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Abstract

This paper examines geographical mobility in the second half of the 19th century. The aim is to analyze characteristics of internal migration in relation to socioeconomic status and geographical provenience (birthplace) of migrants. The analysis, based on individual level data and carried out at the municipal level, concerns the population of Friuli, a region of north-eastern Italy. The research is based on medical examinations of some 160,000 military call-up records issued between 1880 and 1910 by the Italian Recruitment Office. Mobility was most likely in the presence of these characteristics: born in small-sized municipalities, located in the hilly areas of the province; belonging to the upper class; involved in public administration or domestic services; with weak family ties; and limited literacy skills. The labour market emerges as one of the key determinants of internal mobility. Social groups who were strongly characterized by international long-distance emigration were little involved with short-distance, internal movements.

Key words: Internal Mobility, Military medical examinations, Individual data, Labour market, North-eastern Italy.

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Los determinantes y características de las migraciones internas a través de los exámenes médicos militares. Friuli (Noreste de Italia) entre los siglos XIX y XX

Resumen

Este artículo examina la movilidad geográfica en la segunda mitad del siglo XIX. El objetivo es analizar las características de la migración interna en relación con la condición socioeconómica y el origen geográfico (lugar de nacimiento) de los migrantes. El análisis, basado en datos a nivel individual y llevado a cabo en el ámbito municipal, se refiere a la población del Friuli, una región del noreste de Italia. La investigación se basa en los exámenes médicos contenidos en 160.000 registros de llamada a filas militares emitidos entre 1880 y 1910 por el Servicio de Reclutamiento italiano. La movilidad era más frecuente en presencia de estas características: lugar de nacimiento en municipios de pequeño tamaño, ubicados en las zonas montañosas de la provincia; individuos pertenecientes a la clase alta, involucrados en la administración pública o los servicios domésticos, con lazos familiares débiles y bajo nivel de alfabetización. El mercado laboral se perfila como uno de los principales determinantes de la movilidad interna. Los grupos sociales fuertemente implicados en la emigración internacional de larga distancia estuvieron poco involucrados en los movimientos internos de corta distancia.

Palabras clave: Movilidad interna; exámenes médicos militares; datos individuales; mercado de trabajo; nordeste de Italia.

Les déterminants et les caractéristiques de la migration interne à travers les examens médicaux militaires. Friuli (Nord-Est de l'Italie) entre le XIXe et XXe siècles

Résumé

Cet article veut examiner la mobilité géographique pendent la deuxième moitié du XIX siècle. Le but du travail est d'étudier les caractéristiques de la mobilité interne en relation à la situation socio-économique et à l'origine géographique (lieu de naissance) des migrants. L'analyse des données individuelles, conduite au niveau des communes, concerne la population d'une région du nord-est de l'Italie: le Friuli. La recherche se base sur environ 160.000 visites médicales des recrues menées par le Bureau Italien de Recrutement Militaire entre le 1880 et le 1910. En règle générale, la mobilité étais plus fréquente en présence de ces caractéristiques: naissance dans une petite commune; résidence en zones de la province; appartenance à une classe sociale aisée; travail dans l'administration publique ou avec tâches ménagères; faibles liens de famille; et bas niveau d'alphabétisation. Dans ce contexte, le marché du travail se révèle comme l'un des principaux facteurs qui expliquent la mo-

bilité géographique. Les groupes sociales intéressés par des migrations de longue distance, au contraire furent peu touchés par des migrations internes de courte distance.

Mots clés: mobilité interne; visite médicale militaire; données individuelles; marché du travail; nord-est de l'Italie.

INTRODUCTION

This paper examines geographical mobility in the second half of the 19th century in the aim of identifying the characteristics of internal migration in relation to socioeconomic status and geographical provenience (birthplace) of migrants. The analysis, based on individual level data and carried out at the municipal level, concerns Friuli, a region of north-eastern Italy.

In Friuli, as in many regions of Italy, permanent emigration emerged in the second half of the 19th century, when the province became a net migratory region. Important, mostly seasonal emigration flows are, however, documented in the Alpine area of the province as far back as the 16th century. Seasonal migration typically involved male workers bound to other regions of Italy as well as Central and Eastern Europe, and also became a feature of low-land areas after 1850, alongside the emergence of permanent emigration.

The data used are the medical examinations for military call-up recorded between 1880 and 1910. Even if this means that the analysis is limited to male mobility in the first 20 years of life, the information recorded in the military registers does allow us to partly bridge a gap in demographic analyses in the context of Italy. In fact, more detailed study of internal mobility in Italy is only really possible from the nineteen-thirties, when the industrialization process was already well under way (Di Rienzo, 1965; Corsini, 1967; Del Panta, 1984).

The structure of this paper is based on a two-step process: the first is dedicated to analyzing the socioeconomic characteristics of internal migrants; and the second investigates whether these characteristics also affected migration distance.

1. INTERNAL MOBILITY IN EUROPE AND ITALY

Until fairly recently, it was widely held that migration was a limited phenomenon prior to industrialization, especially in rural contexts. This idea first came under criticism in the nineteen-fifties following results from nominative reconstitution studies (e.g. Henry, 1953), and was then definitively rejected after Moch's study in 1992 which, in fact, remarked on the great extent of mobility of rural societies and its being mainly within short and medium distances. Numerous authors have since corroborated these patterns in rural areas in Italy before demographic transition (Kertzer, 1989; Levi et al., 1990). This mobility was also the consequence of return and circular migrations (Tilly, 1978), involving mainly young people and/or specific social or occupational groups such as domestic workers or apprentices (Laslett, 1977; 1983; Szołtisek, 2009; Fauve-Chamoux and Wall, 2005; Hajnal, 1982; Viazzo, 2004).

Despite the growing interest over recent decades in the issue of internal mobility, Arru and Ramella (2003: X) claim that "Generally speaking, we can [...] say that today the internal mobility of populations is acknowledged [...] as one of the constitutive dimensions of societies and their functioning. However, we are still far from reflecting on its implications. It is not an exaggeration to say that geographical internal mobility remains one of the least explored fields in Italian historiography, both for modern and contemporary times". This opinion is also largely shared by Anna Treves (2008: 13-14), who sees a "deep imbalance between the many studies on migrations abroad and the few on internal movements".

Another previously widely held view regarding mobility in the preindustrial period is that movements followed a rural-to-urban direction. This proves misleading since it has come to light that the trajectories of migration flows were much more complex. For example, in Germany, as in other European contexts, there is evidence that migratory flows were more often urban-to-rural (Hochstadt, 1981). The role of cities in migratory processes in England was revisited by Pooley and Turnbull (2000), while Rosental (1999) investigated the great variety of migration flows that interested rural areas in France. A further advance in this research field was also provided by the possibility of analyzing individual-level data, which has allowed for investigating the determinants of internal migration through focusing on out-migrant's so-

cioeconomic status and household composition (Lundh, 1999; Dribe, 2000; 2003; Dribe and Lundh, 2005; Kok, 1997; Bras, 2003).

Kertzer and Hogans' studies on the population of Casalecchio reveal important convergences between findings from Italy and other European contexts (Kertzer and Hogan, 1985; Hogan and Kertzer, 1985). These authors state that "In many areas, what seems to have changed is not the high rate of population mobility, but rather the extent to which long-distance mobility occurred. As we see from Casalecchio, high rates of mobility in the past were often a reflection of continual redistribution of populations within limited geographical areas (Kertzer and Hogan 1985: 18). They also re-examined the role of the town, in this case Bologna, on mobility, again revealing the existence of urban-to-rural movements.

Unlike in many other European contexts, where emigration was often an individual process, representing the first step towards adulthood such as in the case of life-cycle servant family formations systems, in Italy migration was a decidedly household affair. This was particularly evident in sharecropping populations, such as Madregolo, in the Emilia region, where the total turnover rate amounted to one-third for each year in the period 1880-83 (Breschi et al., 2004). In Tuscany, recent studies have proven the existence of important flows of circular migration linked to household structure and socioeconomic status (Manfredini, 2003). This mobility was often caused by economic and epidemiological short-term stress (Breschi et al., 2011).

2. AREA AND DATA

This study examines the Friuli region, in north-east Italy. In the second half of the 19th century, after the Third Italian War of Independence (1866), Western Friuli became part of the Italian Kingdom, after formerly belonging to the Lombardo-Veneto Kingdom, while the Eastern area, which had belonged to the County of Gorizia and Gradisca, remained under Austrian rule.

The annexation to the Italian Kingdom had no significant impact on the overall number of inhabitants or population distribution in the region. The border between Western Friuli and Eastern Friuli remained relatively open and had changed little since the Venetian Republic period. Population movements were essentially limited to mili-

tary, public administration and, to a lesser extent, scholastic contexts. The Austrian personnel was replaced by an Italian one (Fornasin and Marzona, 2008).

The 1871 census puts the regional population at 334,928 inhabitants, and that of 1901 at 408,765. The population shows a 6.6 per thousand growth rate over this period, with individual rates for birth, death and marriage being 35, 25 and 7 per thousand, respectively (Serio, 2002). The period under analysis coincides with a particularly evident fall in mortality levels, marking the beginning of demographic transition in the area (Breschi et al., 1994).

The main activity in the plains was agriculture, while the secondary economic sector (handicrafts) was only strong in small towns and Udine, the area's only large town in the 19th century. Friuli's rural regions were characterized not only by employment in the agricultural sector, but also by the nature of what was produced. While the plains featured a mixture of agricultural production deriving from both cereal farming and viticulture, in mountain areas, where grain production was limited and insufficient to cover demand for more than three months a year, cattle breeding was prevalent (Morassi, 2002; Bianco, 1994).

Friuli's different agrarian areas are also characterized by substantial variation in land ownership and tenure. The plains were prevalently characterized large landholdings, usually subdivided in smaller plots and leased to peasant families. The majority of these landholdings were managed by the tenants and rarely by the landowner himself. Although not relevant in absolute terms, smallholdings were also common and involved about half of the population. Lastly, at the lower end of the social ladder we see day laborers, who were hired on a daily or seasonal basis, depending on demand.

Increases in altitude are accompanied by a deterioration in the quality of farming and a growing presence of small-scale farms. In mountain communities farm land tended to be redistributed among resident families. Here, as well as in some coastal regions, we also see the presence of large areas belonging to the community or state which had only partially been denationalized during the Restoration, and were still exploited collectively.

Regarding occupational structure, over half of the male and female workforce was involved in agricultural activities, whilst the building

sector employed around 10% of males of working age. The 1901 census reveals that around half of farmers ran their own farms, about one third were tenants or sharecroppers, and one in seven were day laborers (Maic, 1876; 1884; 1904). About 5% of the female population was employed as domestic staff or servants.

The regional economy also featured seasonal male migration to Central and Eastern Europe mostly for building and construction work. These migratory flows were particularly important in the hills and mountain areas (Di Caporiacco, 1967-69).

The bulk of this research is based on examination of some 160,000 military call-up records issued between 1880 and 1910 by the Italian Recruitment Office, now held in the Udine State Archives Office. With the exception of two western districts, the documentation covers the whole province of Friuli. In some districts, a limited number of registers, regarding a short time-span, are missing.

Conscription to the Italian Army was comprehensive; each year, all males belonging to a given birth cohort were drafted to undergo medical examination to check who was fit, temporary unfit or definitively unfit to join the army (Ilari, 1990; Lamioni, 2002). These records contain an array of valuable information on the total young male population (around the age of 20), although, naturally, our examination is limited to that which serves the purposes of our analysis, although a more detailed account of this source is available (Marzona and Fornasin, 2007). Irrespective of place of birth and residence, this documentation provides basic data such as name, surname, age, occupation and literacy, and additional information concerning physical characteristics and suitability for military service.

Using conscription lists to study migration does present some drawbacks. Primarily, the analysis is limited to the male population, movements occurring in the first twenty years of life, and one displacement per person. On the other hand, they do allow for the study of a vast territory, in this case covering over one hundred municipalities. Also, given that the data regards the entire male population of the same age, it is possible to conduct analysis on 31 consecutive cohorts. Although conscription lists share the weaknesses of other historical sources, they have the advantage of being easily circumscribed. Although using civil or religious vital registers would allow for a wider analysis, we would still be faced with the impossibility of determin-

ing the exact number of movements per person and at what age they occurred (as with the conscription lists), and these sources require a more time-consuming phase of data collection and pose complex methodological problems regarding the interpretation of results.

It is possible to draw some information from censuses on internal migrations, albeit indirect and partial, especially from those after 1901. However, much of the original documentation has been lost and published data is limited to the regional administrative level (Lemmi, 1965). The only sources that would enable a detailed reconstruction of migrations in Friuli during this period are population registers, which allow for reconstruction of the life-history of each male and female inhabitant, at whatever age. However, this apparent advantage is hypothetical. First and foremost, the sheer effort required to collect, organize and process the data necessary to reconstruct individual movements within the territory in question would be so great that this task is effectively impossible at present (Mandemakers and Dillion, 2004). Also, migration data recorded in the population registers derived from municipal registers of residency, which contained information on those who had settled or formally resided in the municipality. However, the nature of the information that had to be collected makes this source somewhat unreliable, at least prior to 1902 (Di Rienzo, 1965).

Given this study's focus on mobility, our attention is first drawn to geographical references. These registers provide three such entries (place of birth, domicile, and residence). We have taken birthplace as 'original' residence and domicile as 'current' residence, since it was officially regarded as the legal abode for military call-up. This means migrants can be defined as individuals whose place of birth and domicile differ. Unfortunately, some time after the launch of compulsory conscription, that began in 1866, birthplace was recorded in a limited number of cases. Our analysis is therefore restricted to the birth cohort from 1860 to 1890 which underwent military medical examination in the period 1880-1910.

Due to the nature of the information available, this study makes a number of assumptions: 1) only one movement per conscript is considered, overlooking other possible movements between birth and domicile; 2) possible return migrations to birthplace equate as an absence of migration; 3) there is no differentiation between date of migration (e.g. in childhood or near the military medical examination itself); 4) as

a consequence of this previous point, the role of individual compared to family characteristics may be underestimated.

In order to carry out spatial analyses, all the information was georeferenced at the municipal level. Since the administrative borders changed during the period studied, we have decided to refer to the situation existent at the census of 1881, for which a vectorial map is available (Fornasin, 2005).

3. DESCRIPTIVE FINDINGS

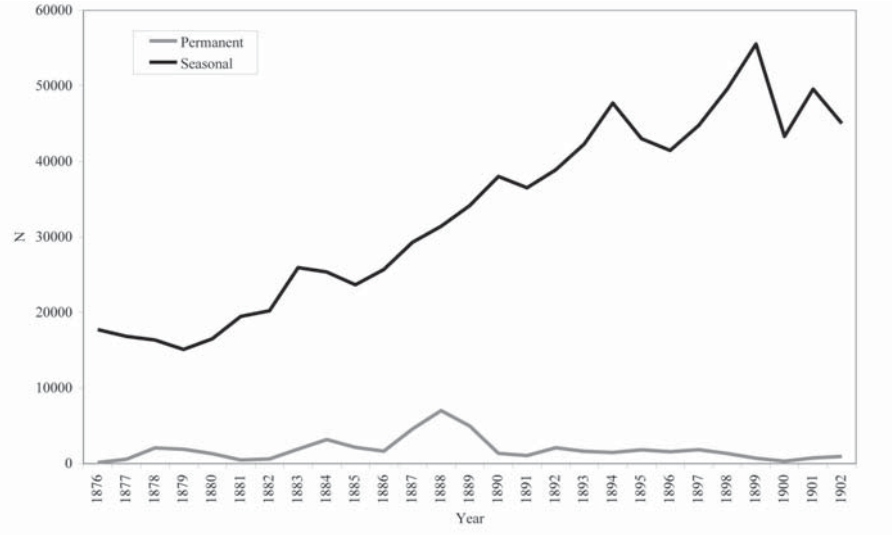
Before examining the main characteristics of mobility in general, we should first take a brief look at the phenomenon of emigration in Friuli.

The most reliable statistical data on emigration from Friuli were collected by Antonio Cosattini (1983). The first information dates from 1876, when 17,732 seasonal and 139 permanent migrants were recorded (Graph.1). Seasonal emigrants progressively increase in number, peaking at over 50,000 at the turn of the century, when many children were also involved (Ermacora, 1999). On the other hand, permanent emigration lacks any clear trend, even if the total number of emigrants was quite high, namely over 42,000 between 1880 and 1899. These were mostly masons and kilnmen due to the demand for these skilled labourers sustained by the strong growth of the building sector particularly in Central and Eastern Europe.

It is possible to discern different attitudes towards emigration of the inhabitants in the various areas of the territory. Mountain contexts featured a much greater intensity of temporary emigration compared to hilly and plain areas, where permanent emigration prevailed (Cosattini, 1983: 30). Although official statistics on internal mobility do not exist and the little data available regards single districts, this type of migration appears to be much less relevant. In the mountain area, for example, it is possible to estimate a total of roughly 1,700 individuals moving within Italy out of 5,600 emigrating abroad around 1869. We can also note that the majority of these internal migrations were temporary with just a small proportion settling permanently in other municipalities (Renzulli, 1978; Fornasin, 1998). The use this study makes of these military medical records makes it one of the few sources of evidence on mobility. In table 1, we report the absolute and relative numbers of conscripts by place of birth and residence.

GRAPHIC 1

Seasonal and permanent emigration from Friuli (1876-1902)



Source: Cosattini (1983: 20).

TABLE 1

Birthplace and place of residence of conscripts, Friuli (1880-1910)

N			
Birthplace	*Overall*	*Born in the province of Friuli*	*Not living in birthplace*
Municipalities of Friuli in the DB	150,285		
living in birthplace		140,980	
not living in birthplace		9,305	9,305
Municipalities of Friuli not in the DB	963		963
Born in Italy	2,201		2,201
Born abroad	4,780		4,780
Unknown	51		
Total	158,280	150,285	17,249
%			
Municipalities of Friuli in the DB	95		
living in birthplace		94	
not living in birthplace		6	54
Municipalities of Friuli not in the DB	1		6
Born in Italy	1		13
Born abroad	3		28
Unknown	0		
Total	100	100	100

Note: Administrative and international borders refer to 1881.

The first column gives information on birthplace of the 158,280 conscripts who underwent military medical examination between 1880 and 1910. As expected, the overwhelming majority (95%) were born in the municipalities of Friuli included in our database. More surprising was the high number of conscripts born abroad (3%), which exceeded those born in municipalities of Friuli not included in our database, proving that this region was also a place of strong immigration. This is partly due to the presence of the extensive border between Friuli and Austro-Hungarian Empire, but also to the migratory traditions of the area. A large proportion of these immigrants were possibly sons of temporary or seasonal labourers. The second column considers the conscripts born in municipalities included in the database, differentiating between those who were and were not still living in their birthplace. The third column looks at the 6% of conscripts who no longer lived in their birthplace, discerning between internal mobility and migration outside the province.

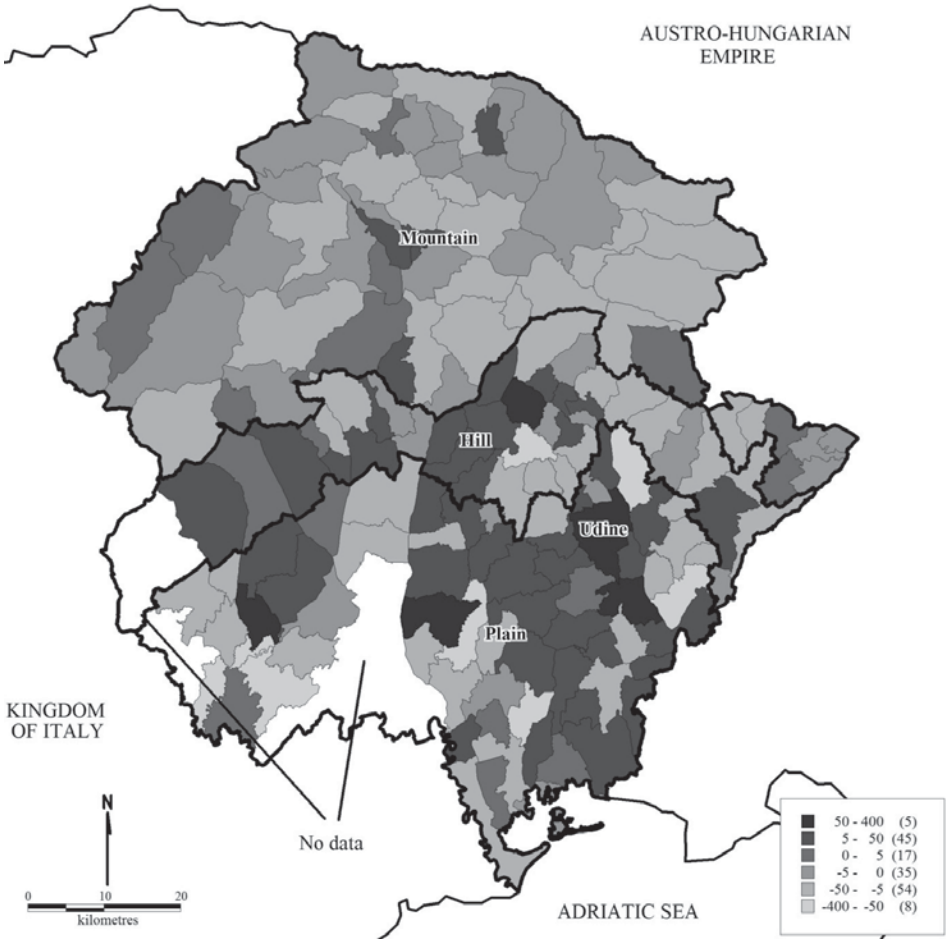
In short, some 17,249 conscripts had moved at least once before medical examination, leading to a migration rate of males <20 years of 1.2 per thousand. This relatively low figure is partly due to the age of the populations studied; in Friuli, as in other areas of Italy, mobility usually involved older people, unlike in other European contexts (Reher, 1998). The socioeconomic traits of the territory also played a role; the migration flows of young farmers, apprentices and servants were weak. However, only a more detailed investigation, carried out on a life-course basis, could clarify these aspects.

Figure 1 illustrates internal mobility in Friuli with net migration by municipality. As population was unevenly distributed across the territory, net migration allow us to better evaluate the intensity of flows between areas than other demographic measures, such as the net migration rate.

This map also indicates our four-way territorial division (plain, hills, mountains and town of Udine). Results show that, but for a small group of municipalities around Udine, the plain is characterized by positive net migration, whereas the mountain area is generally characterized by negative net migration.

Table 2 shows conscripts' socioeconomic characteristics according to their birthplace.

FIGURE 1
Net migration by municipality in Friuli (recruits cohorts 1860-1890)



Note: absolute terms.

TABLE 2

Socioeconomic characteristics of conscripts according to their place of birth

	Born in the province of Friuli		*Not living in birthplace*	
N inhabitants	*N*	*%*	*N*	*%*
<2000	27,277	18	1,625	17
2000-3000	34,031	23	2,186	23
3000-6000	69,167	46	4,346	47
>6000	19,810	13	1,148	12
Total	150,285	100	9305	100
Territory				
Plain	62,255	41	5,819	63
Hill	44,117	29	2,071	22
Mountain	36,509	24	859	9
Town	7,404	5	556	6
Total	150,285	100	9305	100
Occupation				
Peasants	59,153	39	4,332	47
Builders	17,414	12	548	6
Artisans	25,510	17	1,680	18
Traders	4,101	3	300	3
Upper class	4,529	3	413	4
Domestic Services	870	1	78	1
Other and unknown	38,708	26	1,954	21
Total	150,285	100	9305	100
Final statement of military medical examination				
Fit	77,559	52	5,185	56
Unfit	40,233	27	2,549	27
Not visited	32,493	22	1,571	17
Total	150,285	100	9305	100
Father				
Alive	131,638	88	7,841	84
Dead	15,456	10	983	11
Father unknown	2,060	1	374	4
Missing information	1,131	1	107	1
Total	150,285	100	9305	100
Ability to read				
Yes	68,407	46	4,496	48
No	14,512	10	1,287	14
Unknown	67,366	45	3,522	38
Total	150,285	100	9305	100

It emerges that a higher percentage of inhabitants of the plain were involved in internal mobility than those of the hills or mountains. We can also see that internal mobility was more common among farmers than construction workers, who were more involved in international emigration, and that areas where international emigration prevailed contributed little to internal mobility.

4. INDIVIDUAL ANALYSIS

4.1. Variables and method

In this paper, internal migration has been assessed at the municipal level. Although the main focus of this study is on the socio-economic determinants of internal migration, context and control variables were also included in the analysis.

The first social variable relates to occupation. This paper adopts a six-way (plus one residual) classification, based in part on the Historical International Standard Classification of Occupations (van Leeuwen et al., 2002) and the individual's relationship with spatial 'mobility' and social class structure of the time. These are: 1) peasants; 2) construction workers; 3) artisans and industry workers; 4) traders and travelling traders; 5) upper class; 6) domestic staff and non-agricultural unskilled labourers; 7) other and unknown. The building trade is considered separately given its strong link to emigration. The "upper class" is particularly composed of students and white collar workers. Is it possible that a not fixed relation between SES and occupation may introduce a bias in the analysis, but in absence of adequate informations on this, we assume the non time-varying nature of occupation in this period.

The second social variable concerns the final statement of suitability for military service based on the underlying hypothesis that a conscript's health status might have affected his mobility. Conscripts could be found fit for service or rejected either temporarily or definitively. As conscripts considered temporarily unfit were required to return the following year, this study deals with first-round medical examinations only. Although all residents are recorded in the military registers, a large number of people, especially emigrants, were not visited. Some of them underwent medical examination in Italian consulates and were often allowed to skip military service, but the majority simply failed to

report to the recruiting office and was thereby classified as draft dodgers (Ilari, 1990: 354). These aspects do not bias the results on internal migrations, and not even those on foreign-born young (immigrants).

The third social variable checks for the influence of household head on mobility by determining whether the conscript's father was still alive. The hypothesis here is that recruits more heavily influenced by parental constraints would have been more likely to choose a partner from within the local community, with a possible effect on levels of mobility. Three categories were used: father still alive; father dead; and father unknown. For some conscripts this information is missing for both parents, which could be an indication of being a foundling. The fourth, and final social variable was the conscript's ability to read and write, based on the hypothesis that literate individuals would have been more desirable within the labour market, with a positive effect on levels of mobility.

Context variables refer to the geographical setting. The first concerns the size of the conscript's hometown, which could be a determinant of mobility based on the hypothesis that the bigger the population the lower the levels of out-migration between birth and call-up. The second considers the regional setting of the place of birth (plain, hills, mountains and town) in their representing a distinct combination of cultural, social and economic elements.

Although in this period, the age range of conscripts was between 19 and 21 years only, age is by far the most important of the control variables included in the analysis since the older the conscript, the higher the likelihood that he has already moved. Age has been calculated in years. The second control variable is time period, which allows us to control for the trend of migration levels in Friuli between 1880 and 1910.

A logistic regression model was devised and applied to the data to identify and measure the influence of the determinants of mobility. The outcome variable is coded 1 if the conscript had migrated at least once between birth and call-up (at the municipal level), 0 if he had not.

An Ols regression model was devised and applied to the data to assess the factors that influenced migratory distance (km) between place of birth and residence. Distance is the dependent variable and has been logarithmized to obtain an approximately normal distribution of the variable.

4.2. Results

Table 3 shows the results of the logistic regression model. The analysis considered some 150,285 men born in Friuli between 1860 and 1890, and still living there at the moment of call-up.

TABLE 3
Logistic regression. Determinants of mobility

	Odds Ratio	*P>z*
Age	1.09	0.004
Birth Year	1.01	0.000
N inhabitants (ref. <2,000)		
2,000-3,000	0.87	0.000
3,000-6,000	0.70	0.000
>6,000	0.60	0.000
Territory (ref. Plain)		
Hill	0.52	0.000
Mountain	0.23	0.000
Town	0.87	0.038
Occupation (ref. Peasants)		
Builders	0.64	0.000
Artisans	1.05	0.093
Traders	1.19	0.005
Upper class	1.48	0.000
Domestic Services	1.25	0.063
Other and unknown	1.00	0.959
Final statement of military medical examination (ref. Fit)		
Unfit	0.99	0.839
Not examined	0.79	0.000
Father (ref. alive)		
Dead	1.16	0.000
Father unknown	2.23	0.000
Missing	3.97	0.000
Ability to read (ref. Yes)		
No	1.36	0.000
Unknown	0.90	0.010
Number of obs	150,285	
LR chi2(20)	3,381.53	
Prob > chi2	0.000	
Log likelihood	-33206	
Pseudo R2	0.048	

As expected, age is significantly and positively linked to emigration; the older the conscript, the greater the likelihood that he had left his hometown. The same positive relationship was also found for the year of birth, meaning that mobility was increasing in the second half of the 19th century, which is in line with previous findings (Fornasin 2011; Fornasin and Marzona 2008; 2009).

In terms of geographical context, the likelihood of emigration appears to be inversely correlated with population size. If population size is taken as a proxy of labour market size, this confirms the idea that larger municipalities offer a wider spectrum of work opportunities, which in turn acts as a disincentive to emigrate. Regional setting also affects the risk of emigration. In general, the propensity to internal mobility is negatively associated with altitude, with mountain dwellers experiencing an 80% lower risk of emigration than inhabitants of the plain. Living in the town of Udine also implied a lower out-migration risk compared to the plain, but to a lesser degree (13%).

As already mentioned, a limited propensity to internal mobility does not necessarily imply limited out-migration. In fact, a large body of literature reveals that international migratory flows are actually much more relevant in the mountains than in the plain (Cosattini, 1983; Di Caporiacco, 1967-69; Fornasin, 1998). The apparently contradictory nature of these results can be explained in a number of ways. Firstly, in communities strongly characterized by long-range migrations, there are simply fewer people that can potentially be involved in short-range movements. Secondly, the migratory chains which can be formed between long-distance emigrants and their native communities may contribute to weakening ties with immediately surrounding areas. In the event of exogamous marriages, mountain villagers were more likely to choose a spouse from a distant community rather than from one nearby.

Our findings regarding occupation are also consistent with the above results. Table 3 shows that farmers, especially smallholders, were one of the least mobile sectors of the population, undoubtedly due to their strong ties with the land (Kok, 1997: 520). However, over short distances construction workers were even less mobile than farmers, being 36% less likely to have experienced internal mobility before the age of 20. We can again note the divergent relationship between short and long distance mobility. Masons and kilnmen were less likely to move within the province of Friuli precisely because of

their involvement in international out-migration. With the exception of artisans, all other occupational groups had a greater likelihood of internal mobility than the reference category. This probability was 48% higher for members of the upper class, 25% for domestic workers and 19% for traders.

The statement of suitability for military service does not appear to significantly affect the risk of internal movements, which is to be expected given that the mobility of people below the age of 20 was largely dependent on family migration. It is likely that the health status of parents, rather than conscripts, would reveal a more direct correlation. Conversely, the risk of mobility of those who failed to report for military service (for the most part people who had left Italy in search of work) is significantly lower (-21%) than the reference category.

In general, our findings regarding the presence of the conscript's father confirm similar results from other Italian regions (Breschi et al., 2002). As expected, the presence of the conscript's father is associated with reduced mobility, and his absence tends to increase the propensity to move. For orphans this risk is 16% greater than conscripts living with their father, for those whose father is unknown it is doubled, and for those lacking any indication of parents (for the most part foundlings) it is quadrupled. In short, the fewer the family constraints, the higher the propensity to move.

Our results regarding literacy, however, are unexpected. The inability to read is associated with a higher risk of internal mobility compared to literate individuals. One might argue that families and communities were more prone to let illiterate people leave, but it is also possible that literate people were more likely to be involved in long-distance migrations. Another explanation is that certain types of literate individuals, such as students and practitioners, had yet to enter the work force.

Table 4 shows the results of the OLS regression model. This analysis examines the 9,305 conscripts who had changed their residence between birth and call-up. Here, we are interested in assessing the determinants of migratory distance, namely the distance between place of birth and residence at time of call-up. The variables used are the same as those for the previous model.

TABLE 4

OLS regression. Determinants of migratory distance (logged km)

	Coef.	*Std. Err.*	*P>t*
Age	0.006	0.023	0.783
Birth Year	0.002	0.001	0.042
N inhabitants (ref. <2,000)			
2,000-3,000	0.068	0.024	0.005
3,000-6,000	0.238	0.022	0.000
>6,000	0.429	0.036	0.000
Territory (ref. Plain)			
Hill	-0.079	0.019	0.000
Mountain	0.593	0.028	0.000
Town	0.185	0.049	0.000
Occupation (ref. Peasants)			
Builders	0.045	0.034	0.189
Artisans	0.165	0.021	0.000
Traders	0.385	0.044	0.000
Upper class	0.557	0.038	0.000
Domestic Services	0.454	0.083	0.000
Other and unknown	0.148	0.034	0.000
Final statement of military medical examination (ref. Fit)			
Unfit	0.016	0.018	0.379
Not examined	-0.087	0.035	0.013
Father (ref. alive)			
Dead	-0.018	0.025	0.461
Father unknown	0.402	0.072	0.000
Missing	0.359	0.045	0.000
Ability to read (ref. Yes)			
No	-0.113	0.024	0.000
Unknown	0.009	0.027	0.730
Constant	-2.711	2.364	0.252
Number of obs	9,305		
F (21, 9283)	78.87		
Prob > F	0.000		
Adj R-squared	0.150		

These results are consistent with those from logistic regression, which implies that many of the determinants of internal mobility also influence migration distance. As expected, age and year of birth have little or no impact on the migratory distance. A significant and positive relationship does however emerge between migratory distance and population size; the larger the population the further the migratory distance. Whereas the previous model suggested that people born in large communities were less likely to leave because of an increased number of work opportunities, it now appears that when these individuals were forced to move elsewhere the distances involved were fairly great, which is in line with the principle of "Intervening opportunities" (Stouffer 1940). It appears therefore that the relation between mobility and distance is to some extent determined by the geographical distribution of municipalities according to their size.

As expected, the occupational category that moved the shortest distances was farmers (10.4 km.), whereas the most distant movements were associated with white collar workers and domestic staff (respectively 21.5 and 18.3 km.). Interestingly, those who failed to report for recruitment had a higher propensity to move shorter distances. Given that these were for the most part emigrants resident abroad, this finding suggests that more consistent international migration flows meant shorter movements within the province.

The father's absence also emerges as a decisive factor on migratory distance. Not only were foundlings and orphans more likely to emigrate than individuals with living fathers, but they also tended to move further away.

Lastly, people without literacy skills result as moving shorter distances than those with. Generally speaking, although illiterate individuals, most likely from peasant families, had access to a limited range of occupations, they were likely to find similar work opportunities both close and far from home. On the other hand, the greater range of work opportunities available to people with literacy skills often meant moving further afield. For example, civil servants and teachers had little choice of where they worked and were obliged to move. In addition, such movements occurred between municipalities where the public administrative sector was more developed, which also implies their being quite distant from one another.

CONCLUSIONS

This analysis of military registers from the province of Friuli both confirm findings from previous research and provides new evidence on the subject of internal mobility in modern times.

In particular, this study substantiates the intensity of the phenomenon. Our findings demonstrate that over one in ten of the 20 year-old men living in Friuli in the second half of the 19th century lived in a different municipality from that where they were born, representing around 60% of all immigrants at the municipality level. Udine, the chief town of the province, emerges as the main destination place but, at the same time, also constituted a point of departure.

While it can be said that this level of mobility is relatively modest, it should be remembered that the customary age at migration was unquestionably higher in Italy with respect to Central and Northern Europe and that the role of marriage in the migration patterns of 20-year olds is negligible.

In short, mobility results as most likely in the presence of the following criteria: born in small-sized municipalities, located in the hilly areas of the province; belonging to the upper class; involved in public administration or domestic services; with weak family ties; and limited literacy skills. However, it should also be remembered that mobility not only depended on the personal characteristics of these individuals but also on those of their family. Our analysis demonstrates that the influence of family ties depends largely on the presence of the conscript's father.

The labour market emerges as one of the major determinants of internal mobility. With population size of municipalities taken as proxy of the width of the labour market, we saw that larger municipalities tended to attract young men, and the smaller ones failed to keep them. However, it also emerged that the quality of human capital negatively affected internal mobility. It possible that literate men moved less within the province because they were more likely to find a job with ease in the municipality where they were born or move further afield to more distant locations.

The most intriguing result emerging from our analysis concerns the contraposition between internal mobility and international emigration. We found evidence that groups and contexts strongly charac-

terized by long-distance, international emigration flows had little involvement in short-distance, internal movements. It appears that the characteristics of one typology affect the intensity of the other. These results strongly suggest the need for further joint study of these two types of migrations, since we still know very little about the possibly reciprocal influences between them.

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