

Selected papers from the 2016 Conference of European Statistics Stakeholders

SPECIAL ISSUE

2017 edition



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the 2016 Conference of
European Statistics
Stakeholders**

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Printed in Luxembourg.

Manuscript completed in September 2017.

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Print ISBN 978-92-79-73629-2

doi:10.2785/186842

KS-TC-17-006-EN-C

PDF ISBN 978-92-79-73628-5

ISSN 2315-0807

doi:10.2785/091435

KS-TC-17-006-EN-N

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5

The challenge of permeable borders: estimating cross-border employment between Italy and Switzerland

MARIA ELENA COMUNE, SABINA RONCONI, LORENA VIVIANO⁴⁷

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1. Introduction

The free movement of workers over borders is enshrined in European Union (EU) treaties and is a pillar upon which Europe was built. The freedom of movement also applies to countries which are part of the European Free Trade Association (EFTA). Notwithstanding a history of more than fifty years, the subject seems underrepresented in socio-economic research. Several studies (Nerb et al. 2009, Fries Tersch et al. 2015, Jorens et al. 2015, InArco Project 2012) point out at the current gap on qualitative and quantitative knowledge of labour mobility patterns, both migration and commuting.

A specific type of labour mobility concerns 'cross-border workers' or 'cross-border commuters', who are citizens that reside in one country but work in another one, and for this purpose move across the border regularly. Even focusing on this specific aspect, the extent and evolution of the phenomenon are difficult to grasp, since harmonised and comparable data are not available at neither European nor national level. According to a recent report prepared for the European Commission (Fries Tersch et al. 2015), however, a first indication of the magnitude of cross-border mobility can be obtained. In 2014, in the EU and EFTA there were about 1.6 million people who worked in a different EU or EFTA country from the one in which they resided. About 1.2 million worked in another EU country (accounting for 0.6 % of the employed EU population) and 379 000 worked in an EFTA country (making up 5.4 % of the employed population in EFTA). In the different countries, the share of cross-border workers relative to the total employed population varies greatly. The small Grand Duchy of Luxembourg, for instance, relies on people residing in other countries for as much as 69 % of its employed population; many cross-border workers are also present in Germany and Austria, although their overall significance is quite low (0.8 % and 3.8 % respectively). In Switzerland, which is one of the main importers in absolute terms (approximately 330 000), they make up 7.6 % of the employed population.

Among European countries, Italy is an important 'supplier' of cross-border labour, though according to a recent study (ISTAT 2014) its significance at national level remains very small relative to the total employed population (approximately 0.3 % or 90 000 in absolute terms). Furthermore, cross-border movements are highly localized on the territory, namely along the longest and traditionally most accessible land border in terms of infrastructures, that is the border between the Italian regions of Lombardy and Piedmont and Switzerland. In the last decade, the Territorial Office for Lombardy of the Italian National Institute of Statistics has been at the forefront of research to study this phenomenon.

In the context of official statistics, two research projects have been carried out with specific reference to the measurement of cross-border workers. The first and less recent one has been limited in geographical scope to the border between Italy and Switzerland. This experience resulted notably in the provision of data on cross-border work and on the economic system of the two neighbouring territories, with a view to comparing and integrating statistical sources and, where possible, to the harmonization of the data produced on either side of the border⁽⁴⁸⁾.

The second and more recent research activity, unlike the first one, has been in principle comprehensive in geographical scope, as it focused on flows across all land borders of Italy, including the Republic of San Marino and neighbouring countries such as the Principality of Monaco⁽⁴⁹⁾ (Figure 1).

⁽⁴⁸⁾ As a result of the project, for three consecutive years starting with 2004, the ISTAT Territorial Office for Lombardy, in collaboration with the Statistical Department of Canton Ticino of the Swiss Federal Statistical Office, published the statistical yearbook on the labour market in the cross-border area of Insubria (ISTAT Territorial Office for Lombardy and USTAT 2004, 2005, 2006).

⁽⁴⁹⁾ The research developed in the context of the activities to ensure compliance with the new national accounts standards, and specifically to allow the provision of updated and revised estimates of labour input consistent with the economic aggregates that contribute to the formation of gross domestic product (GDP). To this end, it was necessary to improve the knowledge of the phenomenon of cross-border work with the objective to measure exhaustively the input of labour employed on the economic territory of our country. It should be noted that the measurement of the input of labour plays a key role in the estimation of Italian GDP. The measure of labour input, and in particular of those employed, includes cross-border workers, i.e. people who cross the border daily or weekly to work in the Italian economic territory, but exclude workers who reside in Italy and cross the border to work in another economic territory.

Figure 1: Map of northern Italian land borders (Alpine arch)

Source: Elaboration on Google maps

The study has been carried out by the ISTAT Working Group on Cross-border Workers (IWGCW), where representatives of the National Accounts Department and of the relevant Territorial offices⁽⁵⁰⁾ collaborated with the aim to analyse the sources available and estimate the in-flows and out-flows of cross-border workers for each border country for the years 2010 and 2011⁽⁵¹⁾.

The present paper contributes to improving the knowledge base on cross-border movements in a selected border area between Italy and Switzerland, where the largest documented commuting stream flowing out of Italy can be observed. Our work builds on the findings of the IWGCW and specifically updates the results of the previous research by presenting new evidence on the socio-economic profile of cross-border workers. To do this, we use data from the Italian Population Census 2011, which were not yet available for analysis at the time of closure of the IWGCW Report.

Definition adopted of cross-border workers

A cross-border or frontier worker is somebody who commutes regularly (in principle every day or at least on a weekly basis) from the country of residence to a neighbouring country, whether employed or self-employed. Workers employed by productive units located on the economic territory of a neighbouring country and do not commute regularly to work due to teleworking are also included. Seasonal workers are not counted as cross-border workers, as they move albeit temporarily (less than 12 months) from the country of residence to the country where they work (Regulation 883/2004/EC).

The essential elements of the definition are:

- **Income:** the worker has to perceive an income, whether as an employee or self-employed, regular or not regular, and as long as the economic activity is a productive one according to the national accounts production border.
- **Time:** the commuting to work from the place of residence has to take place on a regular basis and across a national border. Not to be considered a migrant worker, the person has to go back on a regular basis to the country of residence.
- **Space:** neighbouring countries not necessarily with a contiguous border in common (for instance, the workers coming to Italy from Croatia, or going from Italy to the Principality of Monaco).

⁽⁵⁰⁾ The territorial offices competent for the following regions were involved: Lombardy, Liguria, Piedmont and Aosta Valley, Veneto and Friuli-Venezia Giulia, Emilia-Romagna and Marche.

⁽⁵¹⁾ The IWGCW ended its activities in April 2014 and included its main findings and estimations in its final report produced for internal purposes (ISTAT 2014).

2. Sources and methodology

An issue of critical importance is the lack of data for some border areas. The presence or absence of statistical/administrative records plays a key role for data availability. Even when the sources on the labour force exist, the problem of isolating the information regarding the cross-border workers may not be easily overcome. Existing data may allow to observe by approximation the phenomenon in different ways but not to obtain robust estimates.

Information on cross-border workers are collected by tax authorities and social security registers. Their use requires an in-depth knowledge of applicable legislation⁽⁵²⁾. To use fiscal data for statistical purposes, it is necessary to establish an active collaboration with the authorities concerned and become familiar with their way of coding and collecting data. It should be noted, however, that the estimates may be affected by systematic underestimation, because labour income is only taxed above minimum thresholds, below which no reporting obligation applies. Therefore cross-border workers with incomes below the threshold would not be counted. Nevertheless, in general, the information gathered from administrative sources which are built by current standards, offers a potential information base regarding social, demographic and economic aspects of the phenomenon.

According to the conclusions drawn by the IWGCW, the most relevant flow of workers crossing daily or weekly the Italian border can be undoubtedly observed in the area between Italy and Switzerland, moving out from the former to the latter.

Good quality data are available on this flow owing to the peculiar nature of the Italian-Swiss border, which differs from all the other Italian land borders as it is the only one which is also an external border of the EU. In fact, while people can move freely within the EU according to the principle of non-discrimination between foreigners and nationals, the Swiss Confederation though in principle allowing the free movement of persons has a peculiar system of residence and work based on the granting of work permits.

The primary reference source on in-flows and out-flows from Switzerland is the Federal Statistical Office (FSO), which is part of the Federal Department of Home Affairs, and is in charge of the production and dissemination of official statistical data on the status and development of the country. Swiss data can be accessed via the FSO web site, fully available in both French and German; time series are available as well as metadata on the different surveys.

Tables can be produced by using individual combinations of the variables, i.e. of the characteristics of the selected data, and they can be exported in various electronic formats. As the FSO is a producer of official statistics, the quality of its data is guaranteed by internationally accepted standard methods and procedures.

Information on the flow of cross-border workers from Italy to Switzerland is provided quarterly by the 'Cross-border Commuters Statistics' (CCS), for which data have been updated regularly since 2004 and retrospective overall figures have been calculated from 1996⁽⁵³⁾. The CCS are summary statistics prepared using data from the Central Migration Information System (SYMIC), AHV/AVS data (concerning social insurance), the vocational education database, and for time series prior to the 4th quarter 2010, the Job Statistics (JOBSTAT). From 2010, the main sources for the cross-border statistics are exhaustive registers. Hypotheses are made for the groups of cross-border commuters who are not or only partially included in AHV/AVS data (these groups represent only 2-3% of all cross-border commuters).

The data accessible on the official Swiss web site almost always provide information on the phenomenon as a whole. It is however possible for some tables to obtain information on commuters by country of residence, by gender, by canton of work and by age class. Data are disseminated on a quarterly and annual basis.

The unit of analysis is each foreign cross-border worker, that is an employed person of foreign nationality bearing a specific category of work permit ('G permit' holder) and gainfully employed in Switzerland. The G permit, i.e. the cross-border commuter permit, is issued by the competent Swiss canton only on the basis of an employment contract secured with a Swiss employer; its type and duration are linked to the

⁽⁵²⁾ Namely 'bilateral agreements'. For Switzerland see:

https://www.eda.admin.ch/dam/eda/it/documents/publications/EuropaeischeAngelegenheiten/FS-Bilaterale_it.pdf

⁽⁵³⁾ <https://www.bfs.admin.ch/bfs/en/home/statistics/work-income/surveys/ggs.html>

characteristics of the contract. Self-employed workers also need a work permit, which is issued to them according to only slightly different rules. Rules for issuance mainly differ according to the duration of the activity, the following three cases being foreseen:

- if the period of employment is less than three months per calendar year, then no work permit is needed but the notification procedure applies;
- if a fixed-term employment contract is valid for less than a year but for more than three months, then a 'short permit' is issued with period of validity identical to the duration of the contract;
- if the contract has a duration of more than a year or in case of a permanent employment contract, then a 'long permit' called 'G permit' is issued with validity of five years.

It should be highlighted that most cross-border commuters are G-permit holders, since Swiss employers are more likely to hire workers on a permanent basis, much more often than in Italy at least, as they retain a substantial freedom to lay off employees with relative ease.

Given the importance of the G permit for estimating the flows of commuters, it is important to note that there is a possible risk of overestimation of these flows relying on the data on permits, for two reasons. Firstly, workers who lose their job before the end of validity of the permit tend not to declare it, though communication is in principle compulsory. The lack of communication is not sanctioned and the worker is not encouraged to abide by the rule; rather the opposite is true, because in case he/she resumes employment before expiration, the formalities for the issuance of a new permit could be avoided. Secondly, if the workload changes in terms of hours worked, the worker is similarly not encouraged to declare it. Therefore, for instance, if the workload becomes lighter and is carried out only for some days over the week, the estimate of the total number of cross-border workers should not change but there would be a risk of overestimation of the total labour input (or risk of underestimation in the opposite case).

Another source providing official data is the Statistical Department of Canton Ticino (USTAT) of the FSO located in Bellinzona, that is the competent authority for cantonal official statistics. USTAT elaborates its own data for cross-border workers in Canton Ticino by processing the data released by the FSO. With reference to the territory of Lombardy and Piedmont, this information is very valuable because nearly all Italian commuters from these two Italian regions crossing into Switzerland are employed in Ticino. The data released provide highly detailed information such as, for example, the Italian province of residence of cross-border workers (NUTS 3 level)⁽⁵⁴⁾.

As far as Italian sources are concerned, in Italy at present there is no official ad hoc data collection and no ad hoc register, either statistical or administrative, to measure the phenomenon of cross-border workers. Data on cross-border workers are collected every ten years by ISTAT with the Population Census and, more frequently, with the Labour Force Survey (LFS), which is a sample survey; the use of the LFS data is thus subject to the constraints and limitations of the sample results⁽⁵⁵⁾. LFS data at the level of one entire country are not very significant at the local level due to the sampling nature of the statistical survey and the small scale of the phenomenon analysed. The design of the sample involving the rotation of small municipalities can affect its capacity to measure adequately and constantly through time highly concentrated phenomena at territorial level.

It should be pointed out that the IWGCW identified also a number of additional administrative sources on cross-border workers, namely the tax files, the Survey on tourism (Bank of Italy), the Balance of Payments and other sources at local level. The information potential of all these sources to analyse the phenomenon under consideration is however limited, as they have been designed to fulfil different needs.

⁽⁵⁴⁾ Data are available at

<http://www3.ti.ch/DFE/DR/USTAT/index.php?fuseaction=temi.dati&p1=35&p2=151&p3=160&prold=159>

⁽⁵⁵⁾ Official data from the last Population Census and the Labour Force Survey are available in the ISTAT data warehouse:

<http://dati.istat.it>. The data on cross-border workers presented in this paper are the results of the elaborations of the authors.

3. Main findings from official statistical sources

This paper presents the estimates of the flows of cross-border workers between Italy (Lombardy and Piedmont) and Switzerland obtained for different years by integrating Italian and Swiss sources; further, it analyses the distribution of cross-border work across economic activities as well as demographic variables obtained from population census data.

Several factors may contribute to the decision of cross-border commuting. In general, the greater the difference in average earnings or the availability of work, the more likely the border country with more favourable labour market conditions will be to attract cross-border commuters. Cultural affinities and most of all a common language also do play a role in influencing cross-border flows in the Swiss-Italian alpine border area. However, so do other important factors such as good transport infrastructures and the characteristics of the mountain relief, which are very favourable between the Swiss Italian-speaking Ticino and the Italian provinces of Varese and Como.

From the juridical point of view, in recent times flows have been facilitated by bilateral agreements on the free movement of persons between Switzerland, EU and Member states. Nevertheless, Switzerland in practice still maintains a peculiar regime of administrative rules for cross-border workers. Therefore, specific legal rules apply to them and more data are available to monitor the flows in this area as compared to the other border regions in the Alps.

In the following paragraphs we present the estimation of the out-flows of frontier workers from Italy to Switzerland (source: FSO) and their demographic and socio-economic characteristics (elaboration on Italian Population Census data). We also introduce a focus on Italian frontier workers in Canton Ticino (source: USTAT) and on the Swiss frontier workers in Italy (source: FSO, Swiss Population Census).

3.1. Cross-border workers from Italy to Switzerland

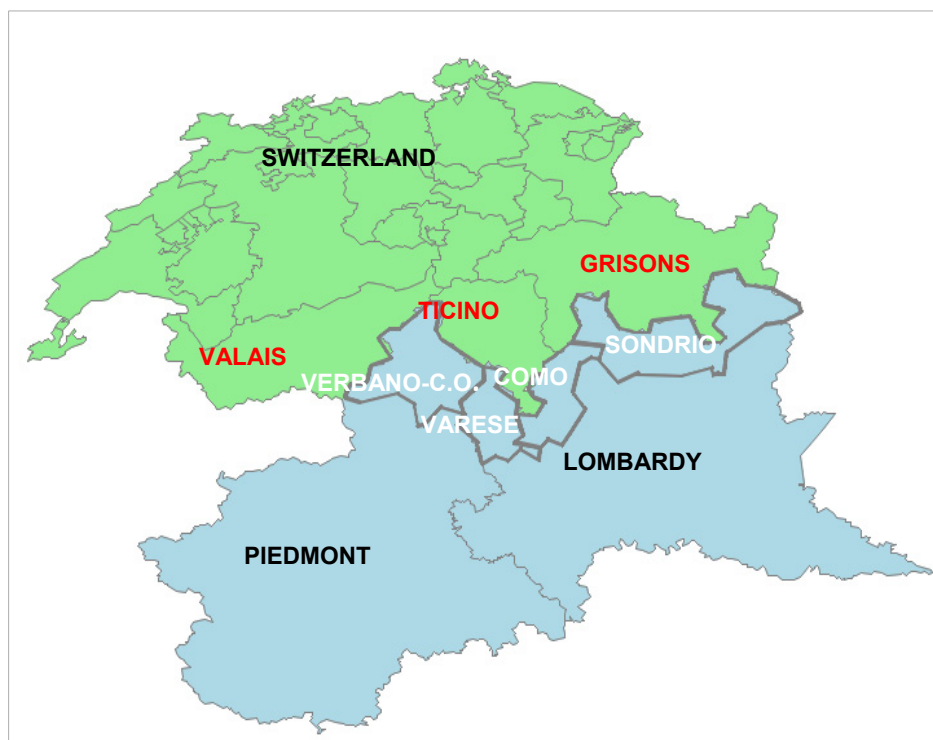
According to Swiss official sources, there were 69 761 cross-border workers from Italy to Switzerland in 2015 (up from 41 072 in 2006). This outbound flow mainly originates from a few provinces in border areas, where it represents a relatively significant share of the employed population in the local labour market, as compared to the national level. In fact evidence from Italian LFS data shows that while the overall figure nationwide only reaches about 0.3 % of the total employed population, in the most affected border provinces percentages are definitely higher: 8.8 % for Verbano-Cusio-Ossola, 8.1 % for Como, 6.0 % for Varese, 5.2 % for Sondrio.

The main destinations are three Swiss cantons: Ticino, Grisons, Valais (Figure 2).

In the same year 2015, Canton Ticino received 62 564 of total cross-border workers from Italy (i.e. 90 % of the total). By far less significant numbers of Italian workers were commuting to the other two main cantons of destination: around 5 000 to the Canton Grisons and around 1 300 to the Canton Valais.

The proportion of cross-border workers in the three cantons has remained almost stable in the last decade (Table 1).

Figure 2: Map of border area between Italy (Lombardy and Piedmont) and Switzerland with provincial borders



Source: Elaboration of the authors using SAS mapping software

Table 1: Out-flows of Italian cross-border workers by canton of destination: trend in the last decade (absolute values)

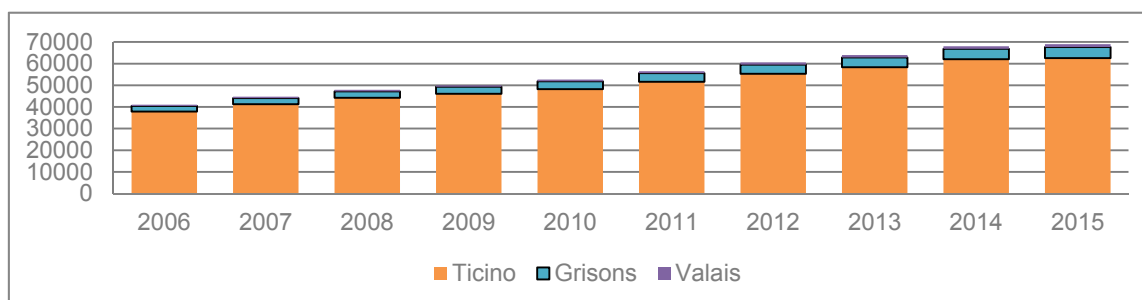
Year	Ticino	Grisons	Valais	Total
2006	37 835	2 588	638	41 072
2007	41 262	2 823	695	44 800
2008	44 195	3 021	677	48 006
2009	46 056	3 255	679	50 224
2010	48 206	3 624	791	52 963
2011	51 618	3 987	928	56 892
2012	55 300	4 256	1 032	60 976
2013	58 358	4 506	1 071	64 439
2014	62 042	4 796	1 212	68 753
2015	62 564	5 072	1 321	69 761

Source: FSO - Federal Statistical Office

The total number of Italian residents commuting to Switzerland for work has increased in the last ten years by around 70 %. Frontier workers to Grisons and Valais in particular have doubled (Figure 3).

To help understand and explain the differences of the flows between the Cantons, it is useful to mention here that transit is not so easy at the Swiss border of Valais and Grisons with the other Italian border provinces. In fact, especially during the winter, travelling by road from Italy into these two cantons can become impossible or extremely difficult owing to the adverse topography and weather conditions, namely heavy snowfall. Besides language barriers, this is therefore an area unlikely to attract high rates of commuting; as such a decision may often involve a relatively time-consuming and potentially risky journey.

Figure 3: Out-flows of Italian cross-border workers by canton of destination: trend in the last decade (absolute values)



Source: FSO - Federal Statistical Office

Using data from the last Italian Population Census, it is possible for the year 2011 to cross check the estimations of the flow and to investigate further the profile of Italian outbound commuters. Since the primary reason for Italians to commute to Switzerland is work (97.7 % of cases), the analysis of census data will only focus on cross-border workers.

The total out-flow of Italian cross-border workers is about 55 000, of which about 21 000 are women. These figures seem quite consistent with the Swiss side (approximately 56 900, of which about 22 000 are women) in terms of measuring the phenomenon as a whole and by gender breakdown, with due allowance being made for the fact that in the two countries the estimations are derived from two different statistical sources. The higher figure provided by the FSO, derived from summary statistics, could be linked among other reasons to the overestimation of the number of valid G permits.

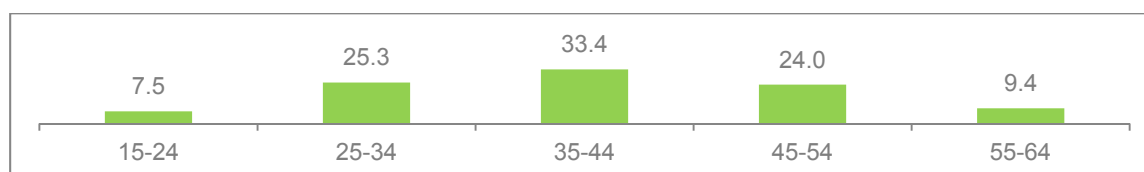
From the data analysed (Figures 4, 5 and 6), we can observe that cross-border workers are mostly men (61.8 %), middle-aged (33.4 % is between 35 and 44 years old), married (50.1 %), with low education (6.5 % completed only primary school, 41.3 % completed only the lower secondary cycle). In Lombardy they mainly reside in the provinces of Varese and Como, in Piedmont in the province of Verbano-Cusio-Ossola (frontier workers from this province are also likely to commute to Ticino). It should be noted that the percentage of people commuting from the province of Sondrio (commuting most probably to Grisons, which is the closest and most accessible canton to them) is not insignificant, and so is the percentage from Milan, which has good rail and road connections. Generally speaking (in 85 % of cases), travel times do not exceed the one hour threshold. A noteworthy exception is the case of workers coming from the city of Milan, which is quite far away from the border but benefits of fast rail connections to Ticino. For instance, travel times by rail from Milan to Bellinzona and Lugano take both approximately one hour and a half.

Analysing further the characteristics of Italian cross-border commuters, we observe that most of them are in employment (97.8 %), with permanent (86.5 %) and full-time contracts (86.5 %). The working week for 80 % of those who are employed is between 40 and 50 hours.

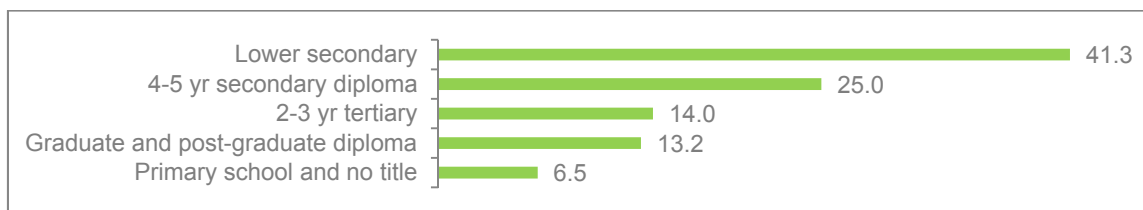
Almost half of the commuters are blue-collar workers, of which 27.1 % are skilled workers and 21.6% unskilled. Lower percentages are employed in service and sales activities (13.8 %) and as technicians and associate professionals (10.5 %).

In terms of sectors of activity, Italian cross-border workers are mainly employed in manufacturing, repair and installation of machinery and equipment (28.4 %), followed by the construction of buildings, civil engineering and specialized construction activities (20.1 %).

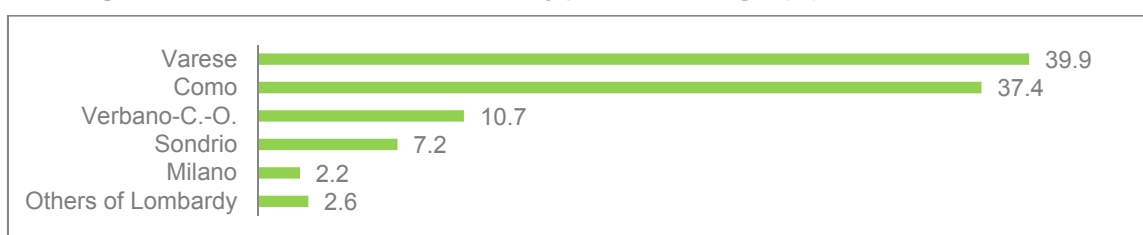
Figure 4: Italian cross-border workers by age group (%)



Source: Elaboration on data from ISTAT Population Census 2011

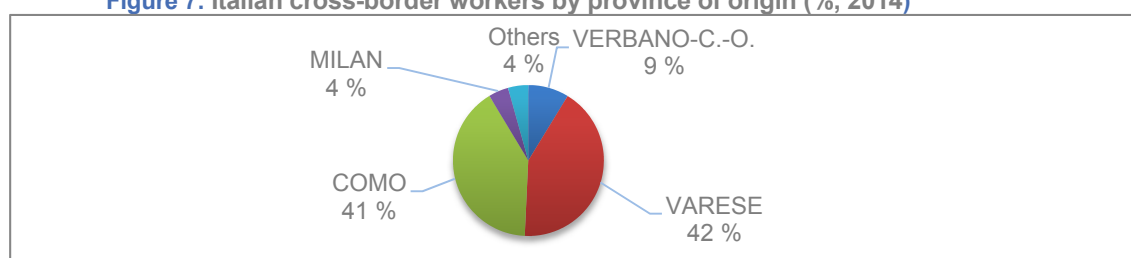
Figure 5 – Italian cross-border workers by educational level (%)

Source: Elaboration on data from ISTAT Population Census 2011

Figure 6: Italian cross-border workers by province of origin (%)

Source: Elaborations on data from ISTAT Population Census 2011

Focus on Canton Ticino

Figure 7: Italian cross-border workers by province of origin (% , 2014)

Source: USTAT - Statistical Department of Canton Ticino of the Swiss Federal Statistical Office

USTAT elaborations provide highly detailed data, such as the breakdown by Italian province of residence of the workers and by economic activity. Figure 7 shows the percentages of commuters with breakdown by main province of origin for 2014. We can see that the provinces with the most important out-flows are Varese (42 %) and Como (41 %), followed by the province of Verbano-Cusio-Ossola (9 %). We have also included the figure for the province of Milan (4 %), though its territory is not strictly located in the border area; nevertheless, good train and road connections to Switzerland facilitate commuting.

3.2. Cross-border workers from Switzerland to Italy

On the other hand, considering the flow of commuters from Switzerland to Italy, we can obtain data from the Structural Survey (SS), which has been implemented annually since 2010 within the framework of the new Swiss Population Census. The SS is a sample survey conducted on at least 200 000 people by means of a written questionnaire or through internet⁽⁵⁶⁾.

⁽⁵⁶⁾ Information on the new Swiss Population Census is available at:
<https://www.bfs.admin.ch/bfs/en/home/statistics/population/surveys/census.html>

Table 2: Swiss cross-border workers to Italy

Year	Estimate of number of persons	Confidence interval (95 %)
2010	1 067	25.2 %
2011	1 314	23.1 %
2012	1 170	24.9 %
2013	1 704	21.1 %
2014	1 004	25.3 %

Source: FSO - Federal Statistical Office

Swiss Population Census data show a small out-flow to Italy (table 2). In 2014, 1 004 Swiss citizens were commuting to Italy, with a considerable decrease from the previous year. Figures for recent years however do not show a steady trend.

4. Conclusions

Cross-border work is a topic of interest at European and national levels for a number of reasons. For EU integration, frontier workers are a testing ground, because they experience directly the difficulties which need to be addressed to fully realise the free movement of persons. At national level, improving knowledge of this phenomenon including its statistical measurement may be important to understand and portray correctly the dynamics of the labour market. From the national accounts point of view, it may contribute to improving the estimation of labour input underlying gross domestic product.

In large countries like Italy, the relevance of cross-border work on the total workforce is usually low. The focus of our research was deliberately on investigating its quantitative relevance at the local level. In Italy, cross-border workers are mainly found in the Alpine area and their number is significant at provincial level in terms of outbound flows to Switzerland. These flows show an increasing trend and can be monitored on the basis of Swiss official statistical sources, for which quality is guaranteed by standard techniques and procedures. This is not the case for other Italian borders, where no equally reliable sources are available (except for the census year) and estimates can only be attempted on the basis of unofficial information or expert opinions. Previous Istat research suggests that for other borders in Italy the number of commuters is not likely to be significant; nevertheless, this is a phenomenon that affects our ability to provide a correct picture of the local labour market and can help explain differences in wealth between peripheral provinces. Further, it could be subject to changes in accordance with the economic cycle or other drivers of the geographical mobility of the workforce.

Currently neither the Labour Force Survey nor the existing administrative sources allow us to obtain a reliable estimate of the flows of cross-border workers. Data from the population census do allow such estimate and also much more in terms of information on their demographic and socio-economic characteristics, but they are only available every ten years. For 2011, the only recent year for which data are available for the comparison, the integration of data on the Swiss and Italian sides has allowed to cross-check the total estimation of the flow and draw a profile of Italian commuters with fairly detailed demographic and socio-economic variables. The comparisons of Swiss and Italian sources carried out by the authors show that the Italian Population Census is a reliable source, providing consistent estimates in terms of level and gender breakdown for the phenomenon.

However, monitoring regularly and reliably frontier workers at less conspicuous intervals would require the design and implementation of ad hoc statistical methodologies allowing the integration of sample and administrative data, specifically aimed at estimating small-scale, locally concentrated phenomena. At the same time, an important issue for future consideration are the gains and losses in terms of measurement potential as new sources are designed and implemented.

References

- Alberton, S., Gonzalez, O. and Guerra, G., *Le trasformazioni nel mercato del lavoro ticinese*, CODE - IRE, Lugano, 2008.
- Bednarz, F., 'Lavorare in Svizzera, fra tradizione e nuove opportunità', in *Il capitale umano*, Centro Studi dell'Economia Comasca, Camera di Commercio, Industria, Artigianato e Agricoltura di Como, 2013.
- Fries Tersch, E. and Mabilia, V., *Annual Report on Labour Mobility*, European Commission, 2015.
- Gonzalez, O., 'La vigorosa progressione dei "nuovi" frontalieri' in *Ticino. Chi sono e dove trovano impiego?*, 'Dati', XIII, n. 01(45-53), USTAT, Giubiasco, 2013.
- InArco Project, *Information Actions for Cooperation regarding Cross-border workers in Alpine Arch Countries*, project co-financed by the European Commission, DG Employment, Social Affairs and Inclusion under the Call for proposals VP/2012/004.
- ISTAT Working Group on Cross-border Workers, *La stima del lavoro frontaliero: analisi fonti e rilevazione dei flussi in entrata e in uscita*, ISTAT internal report by the Territorial Office for Lombardy for the project *Development of an integrated data base on frontier workers*, April 2014.
- ISTAT, Territorial Office for Lombardy and USTAT, *Il mercato del lavoro dell'area transfrontaliera insubrica. Annuario statistico integrato*. ISTAT, Rome 2004.
- ISTAT, Territorial Office for Lombardy and USTAT, *Il mercato del lavoro dell'area transfrontaliera insubrica. Annuario statistico 2005*. Comunità di lavoro Regio Insubrica, 2005.
- ISTAT, Territorial Office for Lombardy and USTAT, *Il mercato del lavoro dell'area transfrontaliera insubrica. Annuario statistico 2006*. Comunità di lavoro Regio Insubrica, 2006.
- Istituto di Ricerche Economiche, Osservatorio delle politiche economiche O-Pol., *Competitività Economica 2011. Rapporto sulla struttura economica ticinese*, Università della Svizzera italiana, Lugano 2011.
- Jorens, Y., Minderhoud, P. and De Coninck, J., *Comparative Report: Frontier workers in the EU*, FreSco, European Commission, January 2015.
- Nerb, G., Hitzelsberger, F., Woidich, A., Pommer, S., Hemmer, S. and Heczko P., *Scientific Report on the Mobility of Cross-Border Workers within the EU-27/EEA/EFTA Countries*, Munich: MKW GmbH. 2009.
- Pierini F., *Les travailleurs frontaliers dans l'Union européenne*, vol. W – 16. Luxembourg: Parlement Europeen - Direction Generale des Etudes, 1997.
- Progetto Interreg III, ISTAT and USTAT, *Indicatori e fonti statistiche del mercato del lavoro transfrontaliero*, Documenti di lavoro USTAT n. 6, Bellinzona 2004.
- Progetto Interreg III, ISTAT and USTAT, *Rapporto metodologico: procedure di armonizzazione e proposte di integrazione*. Documenti di lavoro USTAT n. 8, Bellinzona, 2004.
- Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems.
- Stephani, E. and Mulatero, F., *Disoccupazione: Ticino e Lombardia si allineano. Una lettura transfrontaliera dei dati della rilevazione sulle forze di lavoro*, 'Dati', XIII, n.01 (35-43), USTAT, Giubiasco, 2013.
- Touring Club Italiano, *Guida d'Italia: Lombardia*, Milan 2008.
- USTAT, *Panorama statistico del mercato del lavoro ticinese*, December 2013.