

## **Leave or stay when conditions change? Relocation of firms in Ticino**

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### **Extended abstract**

Location and relocation decisions of firms are popular topics in regional economics, thanks to their importance from both a theoretical and practical point of view. In particular, relocation provides at the same time the best showcase of entrepreneurial decision-making with regard to location choice, and the ideal context to inspire goals for regional development policy (Van Dijk and Pellenbarg 2000).

Although a lot has been done on a theoretical point of view or using aggregated data, much less attention has been paid to empirical studies on relocation at micro level (Van Dijk and Pellenbarg 2000; Targa et al. 2006; Brouwer et al. 2004; Mariotti 2005). This is probably due to the difficulty of collecting complete individual data on firm migration.

This paper wants to contribute to the empirical literature on relocation of firms. We focus on the influence of company and territory characteristics on the probability of moving away from a region. In particular, we analyse the firms' propensity to relocate in the next five years out of Ticino, the southern Swiss canton. Our main contribution regards if and how this probability changes if there are some hypothetical external shocks, which are particularly relevant for the Swiss context. In particular, we take into account relocation decision in case an appreciation of the Swiss Franc will occur or in case there will be changes in the bilateral agreements between Switzerland and the European Union, introducing considerable restrictions to the free movement of people.

Since firm relocation is a particular form of locational adjustment to changes in markets, environmental regulations and technological progress (Pellenbarg et al. 2002), we focus on these two hypothetical events, that could impact business activities located in Ticino. In particular, an appreciation of the Swiss currency could strongly influence the export possibilities of firms, which could no longer consider Switzerland as a favourable location.

The same firm reaction could occur in case of changes in the bilateral agreements between Switzerland and the European Union, since they are particularly important for a border region like Ticino, whose labour market benefits from the proximity to Italy.

The analysis of previous studies underlines that the set of factors that could influence the relocation behaviour of firms is huge. In this paper, we take into account:

- Firm's characteristics. First, firm size is one of the key factors that influences moving costs and organizational tasks and therefore affects relocation propensity (De Bok and Sanders 2005; Bodenmann and Axhausen 2012; Pennings and Sleuwaegena 2000; Sleutjes and Beckers 2013; Nguyen et al. 2013). Also firm age has an impact on migration intentions: the older the firm, the lower the probability of moving (Strauss-Kahn and Vives 2009; Kronenberg 2011; Targa et al. 2006). Sector is another element frequently taken into account in the literature: tertiary sector companies are more "footloose" (Brouwer et al. 2004; De Bok and Sanders 2005; Bodenmann and Axhausen 2012; Sleutjes and Beckers 2013; Nguyen et al. 2013; Targa et al. 2006).

Organizational structure also affects propensity to move: firms belonging to a multinational group are often more inclined to relocate (Sleuwaegena and Pennings 2006; Strauss-Kahn and Vives 2009). Finally, market size (not only customers, but also suppliers) must be considered: companies that serve larger markets are more mobile (Brouwer et al. 2004; Bodenmann and Axhausen 2012; Targa et al. 2006).

- Competitive environment. Agglomeration economies are one of the key topic in regional economics and, in particular, in explaining firm location decisions. Agglomeration of the same industry firms, interdependence between companies of different sectors are often taken into account in relocation studies (Bodenmann and Axhausen 2012; Holl 2004; Targa et al. 2006; Kronenberg 2011).
- Accessibility. One of the older theories on firm location is based on considerations on transportation costs and accessibility (Weber 1909). However, also recent studies underlined the importance of this factor in explaining location and relocation decisions (De Bok and Sanders 2005; Van Dijk and Pellenbarg 2000; Bodenmann and Axhausen 2012; Sleutjes and Beckers 2013; Holl 2004; Targa et al. 2006; Holguin-Veras et al. 2005).
- Institutional environment. Previous studies show that institutional environment has a significant impact on firm location and relocation behaviour. In particular, moderate taxation, safety and quality of life tend to attract and restrain businesses (Pellenbarg et al. 2002; Salvesen and Renski 2003; Love and Crompton 1999; Bodenmann and Axhausen 2012; Sleutjes and Beckers 2013).

The current analysis concentrates on firms located in Ticino. The data used were collected with an online survey among Ticino firms in 2014. The questionnaire was explicitly addressed to the CEO/upper management of the firm.

654 questionnaires were completed. The survey was built following the most recent examples in the literature and could be divided into four main sections. The first one aims to collect general information about the enterprise: sector, age, spatial organization (head office and branches), size, as well as information on relevant geographic markets (where suppliers and customers are located). In the second section, firms are asked to rate the importance and presence in Ticino of some location factors, such as political stability, quality of life, legal safety, transparency and access to institutions, etc.

The third part is devoted to business relations, in particular to understanding frequency, destination and means of transport used for business trips.

Finally, the last section contains some hypothetical questions, which are formulated as Likert scales:

1. “How likely is it that your firm will relocate outside Ticino in the next five years? 1 (Very unlikely), 5 (Very likely)”
2. “How likely is it that your firm will relocate outside Ticino, in case an appreciation of the Swiss Franc will occur? 1 (Very unlikely), 5 (Very likely)”
3. “How likely is it that your firm will relocate outside Ticino, in case of changes in the bilateral agreements between Switzerland and the European Union, introducing considerable restrictions to the free movement of people? 1 (Very unlikely), 5 (Very likely)”

The resulting database has a panel structure: each firm has three observations, one for each question on the relocation behaviour. We estimate an ordered logit in order to model the relocation probability, taking into account the panel structure, using Python Biogeme software (Bierlaire 2003, 2016).

The ordered logit models are used when the dependent variable is ranked on a scale. In particular, they are applied in stated preferences choice experiments with Likert scales (Hess and Daly 2014; Greene and Hensher 2009). They allow an analysis of hypothetical situations: thanks to self-assessed probabilities, we could try to capture agent’s behaviour in a future situation. Many applied works can be found in the literature using this method on various topics, for example: education (Machin and Vignoles 2005; Cameron and Heckman 1998); health status (Riphahn et al. 2003); transportation (Hensher et al. 2010); but also firm location and relocation (Leitham et al. 2000; Van Dijk and Pellenbarg 2000).

Preliminary results show that firms having local clients and suppliers have a lower propensity for moving. On the other hand, branches and headquarters, but also start-up firms show a higher propensity toward relocating.

Concerning our curiosity on the influence of some hypothetical external shocks on the behaviour of firms, we find that if one of the two shocks occurs, the propensity to relocate will be higher than in the ordinary situation.

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