# The Effect of Return Migration on Provincial Wellbeing: Evidence from Turkish returnees from Austria and the Netherlands[1]

Ayşe Abbasoğlu Özgören[2], Hilal Arslan[3], Alanur Çavlin[2], Peter Meister-Broekema[4], Becky Arnold[5]

## 1. INTRODUCTION

The return migration-development nexus has been approached by optimistic and pessimistic theories and the dominant approach has changed in time. Besides differences in the theoretical explanations, the empirical evidence has been inconsistent (King, 2022). As King and Kuschminder (2022:314) state, the impact of return migration on development depends on "*time, place and circumstances of return*". Although academic interest on return migration has been increasing in the last two decades and return migration makes up a high proportion of total migration flows in the world, the share of studies focusing on the impact of return migration on countries of origin is low and most of them are based on small-scale surveys or qualitative data (Waddella and Fontenla, 2015).

In line with the suggestions given in for example the work of Andy Pike et al. (2006), this study aims to contribute to the literature by analyzing the impact of return of Turkish migrants from Austria and the Netherlands on provincial well-being in Türkiye using various indicators not limited to economic dimension, but include for example indicators on health-related and environmental dimensions. The main migration movement to Austria and the Netherlands from Türkiye started with the bilateral labor agreements between Türkiye and the respective host country, both signed in 1964. These countries are among the top four destination countries for Turkish migrants in Europe (the others are Germany and France). In the 1970s and 1980s, migration to the two host countries continued in the form of family reunification. This period also saw continued labor migration from Turkey to these countries. In the meantime, as a result of the oil crisis of 1973 and the stricter immigration policies in the 1980s, return migration of Turkish migrants back to Türkiye was also taking place. Mainly due to data limitations, up to our knowledge no study quantitatively assessed the effect of return migration on local development in Türkiye in a longitudinal setting.

In order to understand and explain the relationship between the return migration and regional well-being, our study employs an aspirations and capabilities framework (De Haas, 2021), rooted in Sen's capability approach (Gasper, 2007), to understand how return migrants' aspirations influence and are influenced by their capabilities to achieve well-being in their region of return.

## 2. DATA AND METHODOLOGY

To estimate return migration from Austria and the Netherlands, NUTS3 (province)-level stock data retrieved from Turkish Statistical Institution (TURKSTAT, 2024) is used. Other publicly available data from TURKSTAT, OECD and Eurostat on well-being indicators at the province

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[2] Hacettepe University Institute of Population Studies (HUIPS)
[3] Middle East Technical University (METU)
[4] Hanze University of Applied Sciences
[5] Netherlands Interdisciplinary Demographic Institute (NIDI)

level are used to construct a well-being index. To analyze the places of destination of return migration of these migrants in Türkiye, data from the original sending country should be used. However, the main limitation of international migration data in Türkiye is that information about the country of origin and country of destination for immigrants and emigrants, respectively, are not available. Rather, main classifications are based on country of birth and/or country of citizenship. Hence, we had to set up an operational definition to define return migrants from these countries. Our operational definition versus ideal is presented in Table 1.

**Table 1: Ideal and operation definitions used for return migrants with Turkish origin from Austria and the Netherlands**

| | *Ideal definitions* | *Operational definitions* |
|---|---|---|
| *First generation* | who was born in Türkiye, moved to AU/NL and moved back to Türkiye | AU/NL citizen who was born in Türkiye and currently lives in Türkiye |
| *Descendant* | who was born in AU/NL with Turkish origin (parents) | Turkish citizen who was born in AU/NL and currently lives in Türkiye |

The time frame used in the study is the 8-year period between 2014 and 2021.
Our methodology is similar to Waddella and Fontenla's (2015) study where they investigate the impact of return migrants on health, education, income, and political participation in Guanajuato, Mexico for years 2000 to 2010. Our specification is a Generalized Least Squares (GLS) estimation to account for autocorrelation and heteroskedastic error structure, where the dependent variable is the Well-Being Index (WBI) constructed by using variables of three domains: economic, environmental and health-related. The variables used to form each domain and their expected relationships to well-being are listed in Table 2.

**Table 2. Indicators used in Well-Being Index (WBI) components:**

| *Economic* | | *Environmental* | | *Health-related* | |
|---|---|---|---|---|---|
| GDP per capita | (+) | Heat stress | (-) | Infant mortality rate | (-) |
| Upper secondary enrolment rate | (+) | | | Suicide rate | (-) |
| Share of working age population (age 15-64) | (+) | | | Active physicians per 1.000 inhabitants | (+) |
| | | | | Practicing nurses per 1.000 inhabitants | (+) |
| | | | | Hospital beds per 1.000 inhabitants | (+) |

For each indicator a ranking is conducted, from the best performing region and year for that indicator to the worst. For example, the best score for heat stress was Ardahan in 2014 and the worst was Şanlıurfa in 2021. These score one and zero respectively, with all other results distributed between those values according to their ranking. The development indexes for a given region and year are calculated by averaging its scores for the indicators of each index (e.g. income level, working age fraction, and upper secondary enrolment rate scores are averaged for the economic index). The overall well-being score of the province in a given year is the average of its development indexes in the three dimensions.

Our model specification is as follows:

$$\boldsymbol{WBI_{i,t} = \gamma Rtrn\_Migr_{i,t-1} + \beta' X_{i,t} + v_i + u_{i,t}} \quad (1)$$

where subscripts refer to province *i* where *i*=1,….81; at year *t* where *t*=2015,….,2021, and *Rtrn_Migr* denotes our explanatory variable, the share of return migrants from Austria and the Netherlands. $\boldsymbol{X_{i,t}}$ represents the matrix of control variables (ln(population size)), $\boldsymbol{v_i}$ is the time-fixed parameters and $\boldsymbol{u_{i,t}}$ is the standard error. To solve the endogeneity problem of return migration, we use it in lagged form so that causality can only run in one direction. In this GLS estimation, depending on the process of $\boldsymbol{v_i}$, the specification becomes either fixed-effects of

random-effects model.

We estimate three models where in Model 1 our variable of interest is share of total return migrants, while in Model 2 share of first generation return migrants and Model 3 uses share of descendant return migrants from Austria and the Netherlands.

We estimate separate models where dependent variable is overall well-being score and its three domains; namely, economic, environment and health, respectively.

## 3. PRELIMINARY RESULTS AND CONCLUSION

The results of our preliminary analyses are presented in this section.

### *3.1. Descriptive results for return migration:*

When we look at the share in total population of the province including both first generation and descendants in the year of 2021, Yozgat, Aksaray, Karaman, Kırşehir and Gümüşhane rank as the first five provinces with Turkish return migrants from Austria and the Netherlands (Figure 1, Panel c). All these provinces are in the Central Anatolia region except Karaman and Gümüşhane, which are in the West Anatolia and East Black Sea regions, respectively, according to NUTS2 classification. The shares of Turkish return migrants from Austria and the Netherlands by generation are also presented in Figure 1. Our results on the size of return migrants from Austria and the Netherlands show that the migrants return to metropolitan cities or cities where they originate from (results not shown here). The top destination provinces in Türkiye are consistent with the findings of Gelekçi (2014) on Austria and Exter (2010) on the Netherlands.

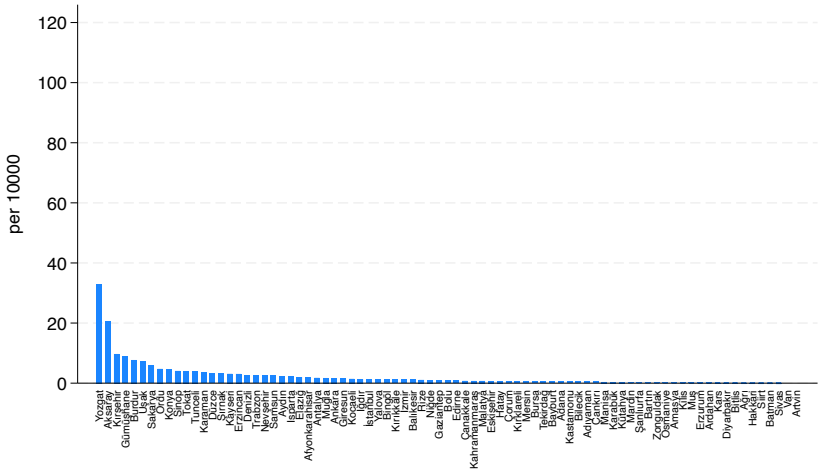
### *3.2. Descriptive results for the well-being index:*

The mean well-being scores and scores of the three domains among provinces of Türkiye by year are presented in Figure 2. The figures indicate that there has been steady improvement in the economic and health dimensions, and the overall well-being score. However, the trend in the average environmental index shows a more ambiguous picture.

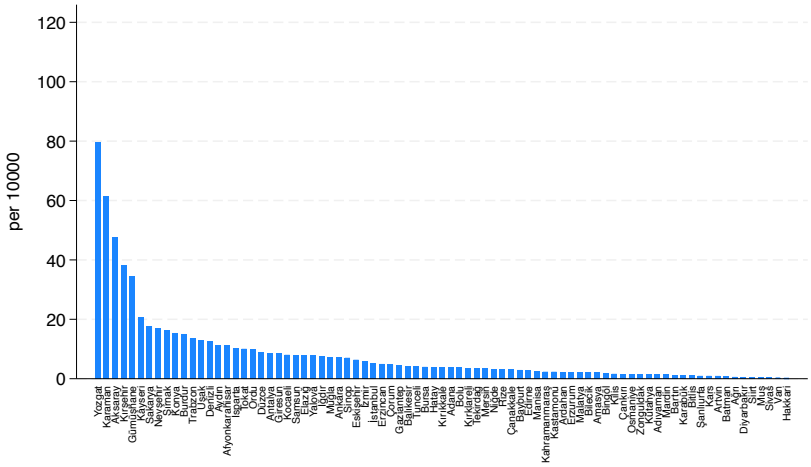
### *3.3. Two-way descriptive results:*

Scatter plots of well-being index, its domains, and share of return migration with a one-year lag by provinces, and by provinces and years are shown in Figure 3, Appendix Figure A1, and Appendix Figure A2, respectively. Linear prediction plots are also shown in these figures. The results indicate a positive relationship between economic index and share of Turkish return migrants from Austria and the Netherlands. Health index and share of returnees also show a similar pattern. Parallel to this finding, the overall well-being index also appears to be positively related to share of return migrants from the two countries.

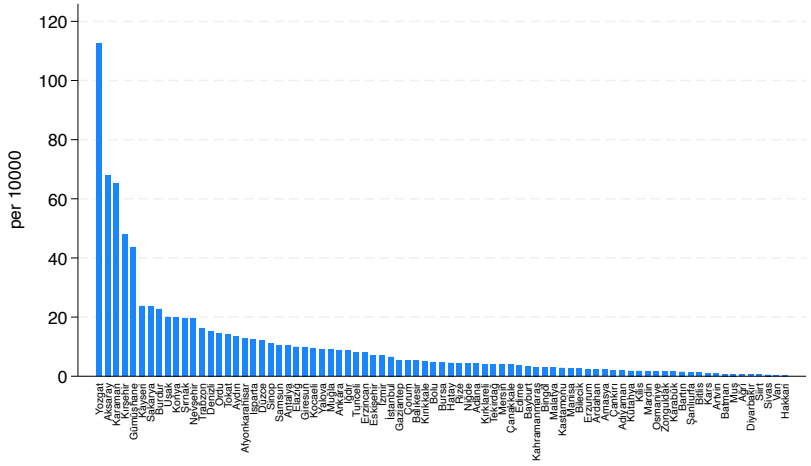
**Figure 1: Share of Turkish return migrants from Austria and the Netherlands in provinces of Türkiye (per 10,000) (NUTS3 level), 2021**




(a) First generation return migrants



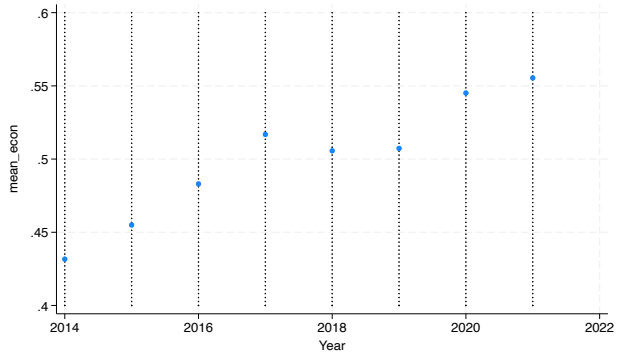

(b) Descendant return migrants



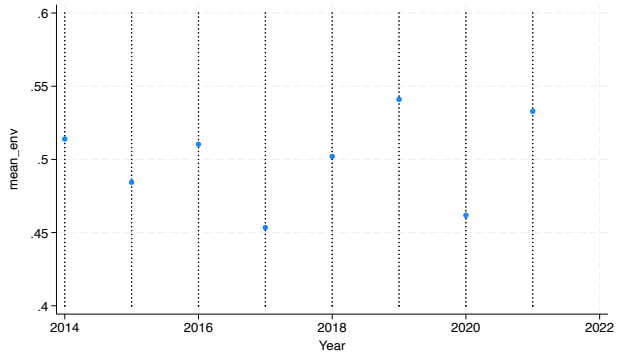

(c) Total (G1 + Descendant) return migrants

*Source: own graph, TURKSTAT, 2024*

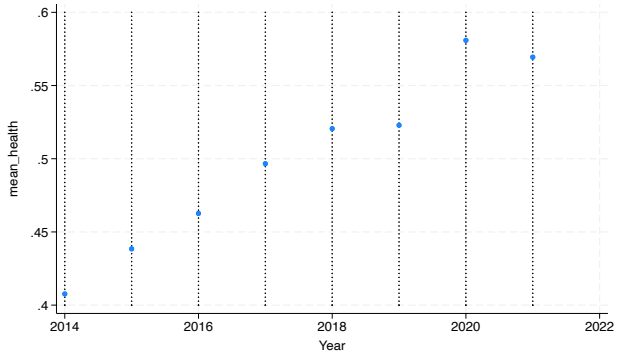
**Figure 2: Average scores for wellbeing domains and overall wellbeing for provinces of Türkiye, 2014-2021**



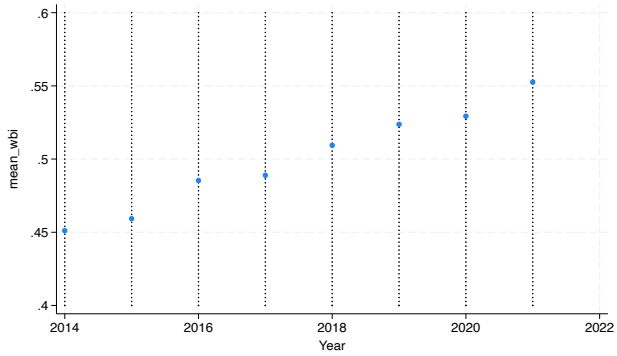

(a) Average economic index




(b) Average environmental index



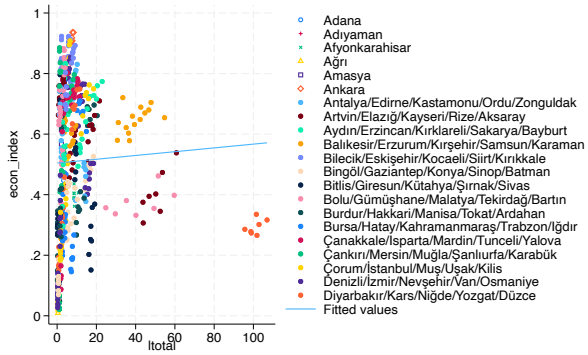

(c) Average health index



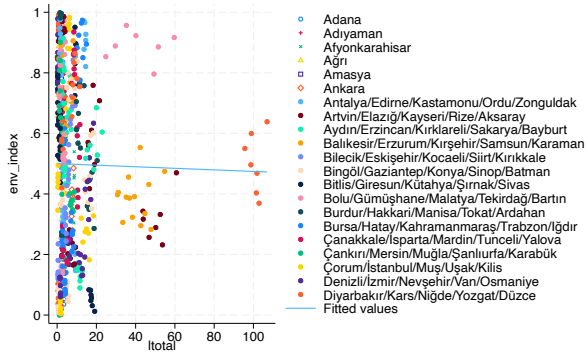

(d) Average overall wellbeing index

*Source: own graph, Eurostat, 2024; OECD, 2024a; OECD, 2024b; TURKSTAT, 2024*

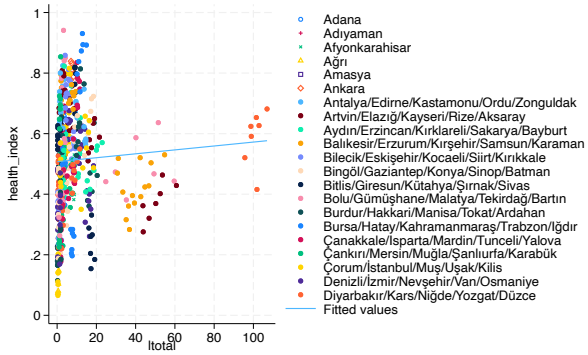
**Figure 3: Scatter plots of wellbeing scores and (lagged) share of total return migrants from Austria and the Netherlands by provinces, pooled data covering all observations from 2015 to 2021**



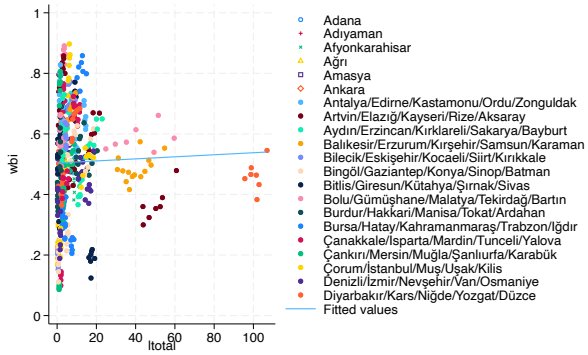

(a) Economic index by share of return migrants




(b) Environmental index by share of return migrants




(c) Health index by share of return migrants




(d) Wellbeing index by share of return migrants

*Source: own graph, Eurostat, 2024; OECD, 2024a; OECD, 2024b; TURKSTAT, 2024*

*3.4. Multivariate results based on GLS estimations, Türkiye 2015-2021:*

Our results based on GLS estimations indicate that return migrants from Austria and the Netherlands have a positive and significant effect on the provincial wellbeing in Türkiye. This finding is consistent when we estimate the models with only first generation or descendant return migrants. On the economic dimension, there is again a positive effect of total return migration, however this is due to the effect due to the descendants' migration, that is the return of Austria or the Netherlands born individuals who have Turkish citizenship. Not surprisingly, the migratory moves do not appear to be related to environmental dimension, indicated by the sole indicator of heat stress. On the other hand, health dimension improves with return migration from Austria and the Netherlands.

**Table 3. Wellbeing and its domains in Türkiye by provinces, 2015–2021.**

| **Model 1** | **Overall wellbeing index** | **Economic index** | **Environment index** | **Health index** |
|---|---|---|---|---|
| ‰ Total return migrants | 0.002*** | 0.002*** | 0.000 | 0.001** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Population size (log) | 0.009 | 0.058*** | -0.109*** | 0.049*** |
| | (0.009) | (0.013) | (0.014) | (0.008) |
| Constant | 0.378*** | -0.264 | 1.932*** | -0.157 |
| | (0.126) | (0.175) | (0.182) | (0.111) |
| Number of observations | 567 | 567 | 567 | 567 |
| Prob. > $\chi^2$ | 0.0235 | 0.0000 | 0.0000 | 0.0000 |
| **Model 2** | | | | |
| ‰ First generation return migrants | 0.005** | 0.003 | 0.001 | 0.005** |
| | (0.003) | (0.003) | (0.004) | (0.002) |
| Population size (log) | 0.008 | 0.055*** | -0.109*** | 0.049*** |
| | (0.009) | (0.013) | (0.014) | (0.008) |
| Constant | 0.397*** | -0.209 | 1.922*** | -0.154 |
| | (0.125) | (0.174) | (0.181) | (0.110) |
| Number of observations | 567 | 567 | 567 | 567 |
| Prob. > $\chi^2$ | 0.1114 | 0.0001 | 0.0000 | 0.0000 |
| **Model 3** | | | | |
| ‰ Descendant return migrants | 0.002*** | 0.002*** | -0.001 | 0.001** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Population size (log) | 0.009 | 0.059*** | -0.109*** | 0.049*** |
| | (0.009) | (0.013) | (0.014) | (0.008) |
| Constant | 0.382*** | -0.27 | 1.936*** | -0.153 |
| | (0.126) | (0.174) | (0.182) | (0.112) |
| Number of observations | 567 | 567 | 567 | 567 |
| Prob. > $\chi^2$ | 0.0262 | 0.0000 | 0.0000 | 0.0000 |

**** p<.01, ** p<.05, * p<.1*

*Standard errors in parentheses.*

Source: *own estimations, Eurostat, 2024; OECD, 2024a; OECD, 2024b; TURKSTAT, 2024*

## 4. PRELIMINARY CONCLUSION

This work is still in progress. We expect to obtain important findings on the impact of return migration of Turkish migrants from Austria and the Netherlands on local development in Türkiye looking at their separate effects, too. We will also present policy implications of our research findings and suggestions for future work.

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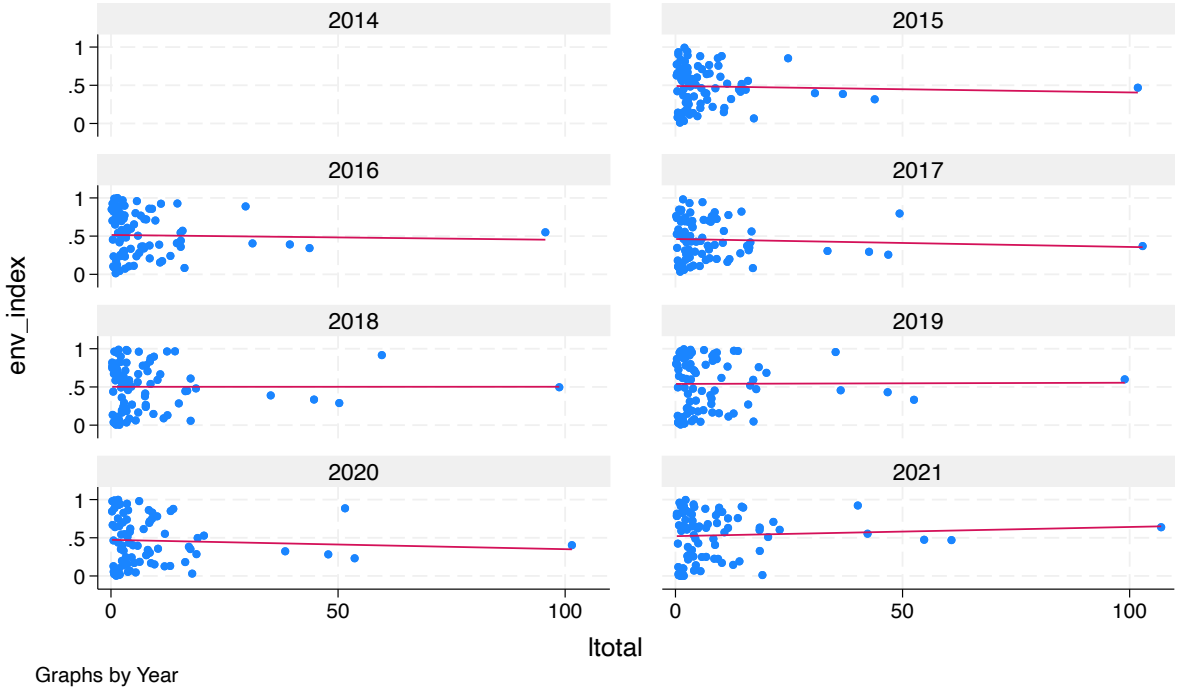
# APPENDIX

**Appendix Figure A1: Scatter plots of economic index and environment index, and lagged share of total return migrants from Austria and the Netherlands by provinces and year**

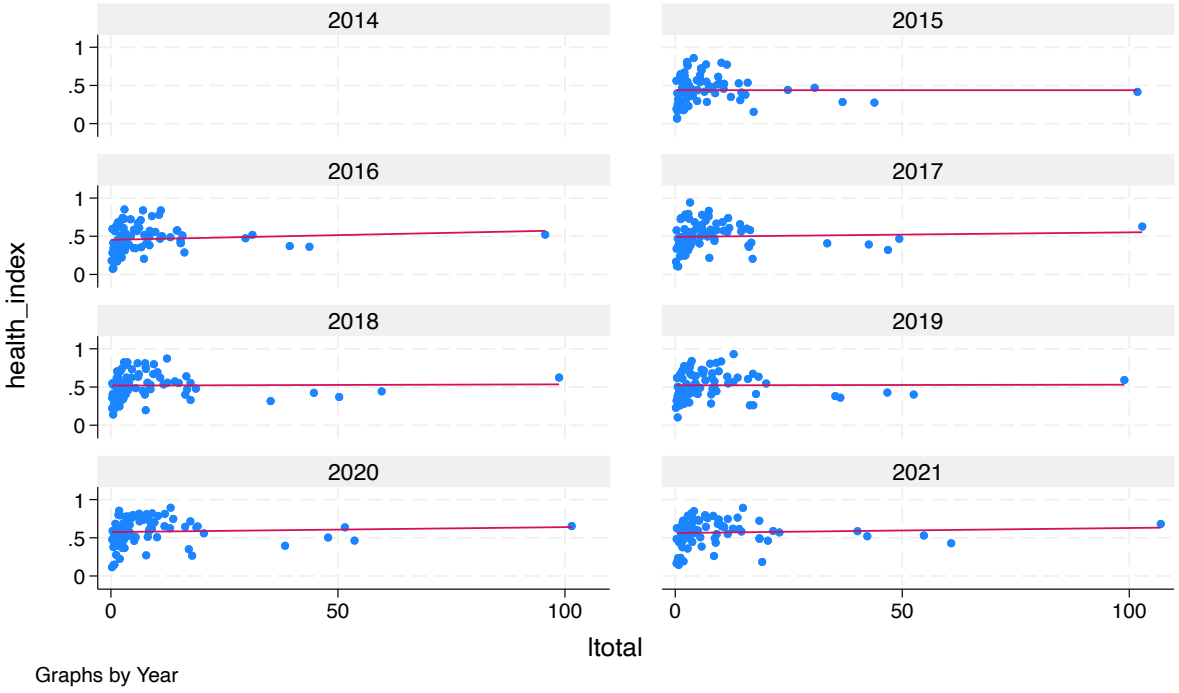

(a) Economic index by share of return migrants




(b) Environmental index by share of return migrants

*Source: own graph, Eurostat, 2024; OECD, 2024a; TURKSTAT, 2024*

**Appendix Figure A2: Scatter plots of health index and overall wellbeing index, and lagged share of total return migrants from Austria and the Netherlands by provinces and year**




(a) Health index by share of return migrants


(b) Wellbeing index by share of return migrants

*Source: own graph, Eurostat, 2024; OECD, 2024a; OECD, 2024b; TURKSTAT, 2024*