

The causes and results of internal migration from rural areas: case of Eastern Anatolia

Příčiny a výsledky interní migrace z venkovských oblastí: případ Východní Anatolie

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Abstract: Migration from rural has been an important problem in Turkey for the last four decades. This issue has been investigated with regard to its different aspects since the late 1970's. Research studies focused on its impacts on urban areas. Although the studies on migration in urban areas are more extensive, unfortunately, the studies of migration in rural Turkey are very poor and the effects of this phenomenon on the farms have been untouched. Migration from rural areas starting in the 1950's was supported, since it was regarded as the locomotive for the rapid urbanization, industrial improvement and development until the late 1970's. The conventional wisdom in the 1970's concluded that the best way to eliminate lower incomes was helping farmers to move to urban jobs but nowadays there is widespread agreement that incentive for migration to urban areas does not solve the problem of rural or urban poverty in Turkey. For that reason, Turkish Government spends millions of dollars annually on agricultural policies, and additional funds on rural development to hold people in the rural. In this study, causes and result of migration from the rural was investigated with regard to the mobility of the resources and the success of the farms in a city of Eastern Turkey, Erzurum. The results of the study showed that some causes of migration such as economical, social, and cultural from rural in Turkey are different than the causes in other countries. As a result, it can be concluded that migration from rural areas has not reached the point at which migration has a negative effect on the success of agribusiness.

Key words: causes of migration; result of migration on farms

Abstrakt: Migrace z venkovských oblastí je v posledních čtyřech desetiletích významným problémem Turecka. Od 70. let 20. století je tento problém zkoumán z různých aspektů. Výzkumné studie se zaměřují na jeho dopad na městské oblasti. Ačkoliv studie zaměřené na migraci do městských oblastí jsou poměrně rozsáhlé, studie migrace z tureckého venkova jsou bohužel nepočtené a efekt tohoto fenoménu na zemědělství zatím zkoumán nebyl. Migrace z venkovských oblastí, která začala v 50. letech, byla podporována, poněvadž byla až do 70. let považována za hnací moment urychlené urbanizace, industrializace a ekonomického rozvoje. Obecnou ekonomickou úvahou 70. let bylo, že nejlepší cestou k odstranění chudoby a nízkých příjmů je pomoci farmářům k zaměstnání ve městech. V současné době je však obecně uznáváno, že podpora migrace do městských oblastí neřeší problém venkovské či městské chudoby v Turecku. Turecká vláda proto ročně vynakládá miliony dolarů na zemědělskou politiku a další zdroje na rozvoj venkova, aby udržela osídlení venkova. V tomto příspěvku jsou zkoumány příčiny a dopady migrace z venkovských oblastí ve vztahu k mobilitě zdrojů a úspěšnosti farem v oblasti města Erzurum ve Východním Turecku. Výsledky studie ukazují, že některé ekonomické, sociální a kulturní příčiny migrace z venkovských oblastí se v Turecku liší od jiných zemí. Lze konstatovat, že migrace z venkovských oblastí zde nedosáhla bodu, kdy by měla negativní dopad na ekonomické výsledky agrokomplexu.

Klíčová slova: příčiny migrace, dopady migrace na zemědělské podniky

INTRODUCTION

The nature of migration is differentiated by sector and by region in Turkey. Migration from rural to urban can have the aim to join the industrial or service labor in cities as well as social life in cities. The common result reached by the studies is that the migration has a destructive effect on urban areas on the view of socio-economic aspects, and there is a need of urgent arrangements in agriculture to stop the internal migration from rural to

urban in Turkey (Güllülü et al. 1997; Erman 2001). While the negative effects of the migration are the case in Turkey, its positive effects on the urbanization and a possible increase in farm income are reported in various countries according to the studies carried out. For example, rural households earning higher incomes from the production of agricultural goods for non-local markets spur demand for food and other consumer goods. This leads to the creation of non-farm jobs and the diversification of urban activities, especially in small towns close

to areas of agricultural production. This, in turn, absorbs surplus rural labor; raises demand for rural produce and, once again, both agricultural productivity and rural incomes (Evans 1990). Some studies have shown that high and middle-income households constitute a significant and growing proportion of urban farmers, who often engage in this activity for commercial purposes (Mbiba 1995). Urban agriculture can be an efficient way of recycling urban waste and of contributing to resource conservation in surrounding rural areas, for example through urban-based production of fuel wood (Smit, Rattu and Nasr 1996). On the other hand, it may also have potentially negative impacts on the environment. Small-cultivated areas can involve intensive use of fertilizers and pesticides by untrained farmers, affecting consumers as well as underground and surface water both within and outside the urban boundaries (Diallo 1993).

Currently, about 35% of Turkish population lives in rural areas and this is a key element in their population problems. Agriculture is regarded as important sector providing grain and other agricultural products for the whole population. But, most rural residents have less income than urban residents due to the limited land and capital resources. Agricultural sector employs almost 42% of economically active population, contributes approximately 14% to the Gross National Product (GNP) and accounts for almost 11% of the total value of exports too in Turkey (Anon 2002). It has been recognized that there is surplus of rural laborers, almost 50% of total active labor in farms, who are not needed for agricultural production and need to be transferred to other sectors such as industry, and services (Esengün 1987; Peker and Ayyildiz 1996; Kara 2000). The introduction of agricultural machinery such as tractors, which dates to the 1950s in Turkey, reduced the need for labor input. The use and maintenance of farm machinery are usually men's jobs while women and young children are forced to perform other manual tasks (Ilcan 1994). Excess labor on farm may push people to migrate to urban areas and causes problems in cities.

Today, sociologists, economists, administrators, urban and population scientists are interested in subjects such as the possible causes and results of the migration, the structure of the communities giving or receiving migrants. When the studies in Turkey are categorized by the sciences, those results get several attentions. For example, according to sociologists, the migrants from rural areas have problems adapting to traffic, clothing style, and eating, so they are reluctant to leave the four walls of their homes. Environmental scientists explain the negative effects of migration by stating that having the intention of leaving the place where they were born, and living temporarily in another place, people do not preserve the environment, misuse resources, and ignore the local problems. Another negative result of the migration is explained by psychologies related to human psychology: livings in the rural area, people are happy to some extent because the living standards are generally homogeneous in terms of eating, accommodation, and clothing.

When they migrate to urban areas, they may tend to commit crimes such as burglary, robbery, etc., due to the feeling of living in poverty in the midst of wealth since they see some people with higher income level in urban areas.

In Turkey, the most important factors influencing migration decisions of potential rural migrants is the following: There is an increasing population pressure on limited rural resources, especially available agricultural land, which leads to high unemployment and declining quality of life. The ratio of cultivated land per capita of population has declined from 767.84 ha in 1970 to 490.09 in 1990 (Franz 1994). A suggestion was made in a comprehensive study in which the dimensions of migration on cities were researched, that this subject should be examined with regard to agriculture in Eastern Anatolia (Güllülü et al. 1997). Eastern Anatolia Region has the highest net out-migration rate with regard to the population movements between 1980–1985 and 1985–1990 (Çakmak 1995). Also, with regard to the order of Eastern Anatolia in the rating of 73 cities, this region is highly undeveloped. Of the cities rated in the region, Erzincan is 42th, Erzurum is 57th, Kars is 65th and Agri is 70th (Güllülü, Gerni 1995).

Interregional labor force migration has generally been studied in the context of neoclassical economic theory. In this concept, local differences in wages and employment opportunities cause labor to migrate to the areas of economic growth and away from the lagging regions (Richardson 1969). Aggregate and individual level studies of migration in Turkey have paid more attention to low-income squatter dwellers (Tunali 1996). The model in the present study tries to shed some light on two questions. First, how prevalent is migration and who are the migrants in order to estimate the characteristics of migration. Second, what are the causes of migration? The unit of analysis here is the household. It is assumed that the factors affecting such a decision are the demand for labor by the household (D) and the supply of labor by the household (S) (Haberfeld et al. 1999).

The major objective of this study is to determine the relationship between observed rates of out-migration and its social, economical, and cultural factors. In the study, the causes of migration, and their comparison with the causes of migration in some countries, the impacts of the migration on the success of agricultural enterprises and suggested solutions of the migration problems were determined.

MATERIALS AND METHODS

The data collected through questionnaires from the farms and village record make up the major material of the study. The research area was limited to the boundaries of Erzurum province because of taking into consideration the time required and existing financial mean as well as suggested area size for studies on migration. If the choice of region is too small, the movement within may be the local residence change rather than the economically motivated

employment change. On the other hand, the choice of large regions such as states or multi-state regions may ignore large differences within regions. The final choice was to use county data as basic units of observation (Pfeiffer, Braschler 1977). Four districts from which migration occurs the most out of 19 districts in the province were selected for the study purpose. The number of sample farms was calculated as 186 through the Simple Randomized Sampling Method with 90% of confidence level ($Z = 1.645$) on the basis of farm size of all farms (8 654 unit) in Çat, Hınıs, Karayazi and Narman districts.

The number of sample farms to represent the population was calculated using the following equation (Yamane et al. 2001).

$$n = \frac{N \cdot \sigma^2 \cdot t^2}{(N-1) \cdot d^2 + \sigma^2 \cdot t^2}$$

Where:

n = number of sample farms

σ^2 = variance of the population

d = acceptable error (taken to be 10% of the population average in this study)

t = list value of the normal distribution at 90% of confidence level ($= 1.6445$).

In the study, the priority causes of the migration were determined with multiple regression model by focusing on the common reasons reported in the previous related studies in Turkey (Kocaman 1998) and additional neo-classical economics theory and socio-cultural factors, so three groups of variables were chosen such as economic, social, and cultural factors. Data were analyzed in the framework of a multiple regression model. The dependent variable was the out-migration rate determined from the villages' record while independent variables were determined from 186 farms by the questionnaire.

The regression model was determined as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + U$$

Y = Out migration expressed as the number of out migration per farm

X_1 = Excess labor per farm. Excess labor was determined by considering the labor supply minus the need in farms as well as other activities (Peker, Ayyildiz 1996)

X_2 = Distance between rural and urban (km)

X_3 = Previous out-migration of the farmer's relatives. People who have moved to urban area desire to have their relatives and friends there too

X_4 = Amount of the farm land (km^2)

X_5 = Education level expressed as the number of persons 25 years and older having completed elementary school or more

X_6 = Number of persons in the (18–35) year age

U = random variable

In addition to the above factors, a number of factors could theoretically affect a family's ability to move. However, the effect of the others factors such as marriage, gender, safety, health conditions, family feuds, natural disasters, shelter, desire for freedom, thought for providing a higher life standard for the next generation, and more favorable climate, could not be determined in the study. Limit variables were chosen by consideration to minimize autocorrelation between independent variables in the model in the study.

RESULTS

The causes of migration

The causes of migration in the farms in the study area were examined using a multiple regression model explained section; the estimation results of the model are given in Table 1.

As it is stated in the neoclassical theory, unemployment challenges people to migrate, but economic reason is not the only factor for migration. There are also social and cultural causes of migration in the area. Excess of labor in the farms (X_1), the distance between rural and urban (X_2), previous out-migration of the farmer's relatives (X_3), and amount of the farmland (X_4) were estimated as the significant factors in migration (Table 1).

Excess labor per farm in rural areas exerted some pressure for out-migration having job hope in urban areas, so the results of the model suggest that much of the movement observed among regions is motivated by employment opportunities. Since there were no social facilities in rural areas, the distance between rural and urban (X_2) was a significant factor in the area. An increase in the population in the area brings about investments such as public plazas, post office, bank, health center, school, library, and markets. The villages in which the population decreased due to migration cannot receive the infrastructure and social services of the governments. A third independent variable (X_3) was a significant factor too. The past migration of farmer's relatives seems to be an important factor on migration, since there is a strong relation-

Table 1. Regression analysis results for the model

β_0	β_1	β_2	β_3	β_4	β_5	β_6	R^2
126.5	0.896*	0.678*	0.515*	0.874*	0.635	0.471	0.918
	(0.188)	(0.233)	(0.242)	(0.256)	(1.617)	(1.534)	

*Significant at the 0.05 level, and standard errors are shown in parentheses.

ship between relatives in Turkey, culturally. The amount of farmland (X_4) was an important factor in out-migration by considering agriculture as main sector in rural areas that could be seen in the result of model. For example, the closed and reverse relation between the land assets of the farms and the migration was observed from that 68.51% of the migration in the region occurred from the farms having less than 5 hectare of farm size.

The educational level of family members or rate of literacy (X_5) did not signify on the migration in the study area as the study carried out them as unimportant factors on migration (Pfeiffer and Brascher 1977). Also, the age of migrants (X_6) did not signify on the migration too in the study area. Theoretically, educational achievement (X_5) and age (X_6) were accepted as significant factors on migration. It is generally recognized that education level and mobility are likely to be associated. Also, young people are believed to be more mobile. A prior research has shown this to be an important indicator of mobility (Pfeiffer and Brascher 1977). We assume that educational achievement (X_5) and age (X_6) were not push factor on migration, because the family president mostly father or older person, makes decision regarded with migration as well as other issues in the area.

Briefly, the results show the neoclassical economic theory is still true in the area while migration patterns observed in the United States have not been consistent with this theory since 1970's (Pfeiffer, Brascher 1977).

The results of migration on the success of farms

Some important results of the migration on the success of farms were determined from the questionnaire as follows:

1. Arable land assets of the migrants in the village are 19.71% of the total field land of the village. This proportion is 16.94% for the pasture land. Of migrants, 65.48% of the field land and 57.37% of the pastureland is abandoned. Nevertheless, the abandoned land due to migration does not exceed 15% of the total land asset of the village. In addition, 13.32% of the field land of those living in the village, is not used.
2. Even though family labor force cannot be utilized effectively, farms employ off-farm labor in the amount of 23.48% of the family labor force. In conclusion, although there is a labor loss due to migration from the study area, it can be inferred that this labor loss is not to the extent that it affects agricultural activities negatively. Population decrease in agriculture is at a level of increasing labor productivity. So, a positive effect of the migration on the labor use can be reported.
3. It was observed that female entrepreneurship in agriculture had an increasing inclination in time since primarily males migrate from the region. Since farmers having insufficient farm land and well-off families migrate due to low farm income and social attractiveness of the urban life respectively, people with an entrepreneurial nature have gone away from agriculture.
4. The tendency of investing in agriculture is low in the region because of migration. 58.26% of the farmers interviewed stated that they could not save money. Of those who stated that they could save money through limiting the necessary expenditure, 28.32% and 22.46% reported that they utilize their saving in buying building plots and houses in the cities respectively, 15.81% keep their savings in foreign currency and gold, while 12.13%, 4.28%, 3.26% and 2.12% used their savings on buying animal, investment for irrigation, agricultural equipment and state debenture bond respectively. So, only 28% of the savings in the region are reinvested in agriculture.
5. Migration from the study area has not had a significant effects on the change of production pattern, that is, a change from family consumption oriented production to market oriented production. In Turkey, especially in the study area, it is said that "agriculture is a traditional sport inherited from the ancestors" since it keeps its traditional structure and practices. Thus, farmers keep up the former production pattern heavily dependent on grains. This production pattern is rooted in the desire to cover the family agricultural products need, and it did not change although much progress has been achieved in many areas over time, such as marketing, use of money, and improved transportation possibilities. For example, there is no difference observed between the production pattern determined in 1966 by Aksöz, and that current in the study area except for the decrease in fallow land.
6. As an important effect of the migration with regard to the processing of the agricultural products, it was reported that a factory of the collective company was established to package and kiln the dry agricultural products such as sunflower, chickpea and bulgur produced in the village of a wealthy family which migrated in 1986. The factory was established in 1992 in Erzurum central district.
7. It was determined that 36.43% of the migrants kept their relations with the village through short visits, participation in funerals, part time agricultural production, motivation of the related governmental organizations which conduct public services to the village, and mediation in marketing the agricultural products. The fact that the migrants cover their family consumption from the village and their effort in marketing the products of those living in the village is an important progress in reducing the number of brokers in marketing. However, the percentage of those making this positive contribution is only 3.62% of the total migrants.

As a result, it can be concluded that migration from rural areas has not reached the point at which it has a negative and significant effect on the success of agribusiness.

DISCUSSION

This study differs from the earlier ones in that an attempt was made to connect independent variables as well

as the results of the migration on the success of agribusiness. The results are important with regard to the determination of the causes of migration and its results on the success of farms such as land use, labor use, marketing, and agricultural industrialization.

Migration has occurred in more than half of the farms and with an increasing tendency in the area. Most families decide to migrate because of job necessity followed by other reasons such as lack of social facilities and farmland, and also hope of joining their relatives who had already moved to urban areas. Infrastructure, health, social, and economic problems of the urban areas cannot be solved unless the countryside has the minimum standards to provide an honorable life. It is a reality that this phenomenon will continue as long as rural areas have repellent sides while urban areas have attractive sides such as social facilities and employment opportunities. In the development of rural areas, agriculture should be given first priority since it is the basic activity and the livelihood, but development of the rural areas is delayed since there have been legal obstacles for public services to under-populated areas because of migration. Some regulations in the body of current law can be done to enable social investments in rural areas losing population, as was the case in most countries. There should be regulation for receiving the infrastructure and social services of the governments in rural areas. The following regulations attract attention, when the problem of insufficient population prevents the investments for public services are examined in different countries over the world; for example, in the Philippines, rural centers are established in places having populations exceeding 1000 people. In the rural areas, to make investments such as post office, tax office, public treasury, bank, running water supplies, electricity, health center, and secondary school are necessary (Tingbe-Azalou 1997). However, the countries with over-population like China and India have to change the population limits so often for such investments.

Social security such as retirement income and health insurance for the farmers engaged in agriculture could be considered priority subjects. Even in the seasons of higher labor demand, sowing and harvesting times, it is not a problem to find off-farm labor. In densely populated rural settlements in Turkey, marginal productivity would be minimal. Therefore, the transfer of labor from rural agriculture to urban industry could occur without declines in agricultural productivity, but the in best way for the employment to hold employee in rural areas. For the farmers, the focus could be on the application of irrigation, pasture-meadow, and village handicrafts projects providing employment opportunities.

Necessary regulations for the profitability of the agricultural activities could be done in order for the savings from agriculture to return to the agricultural investment. For that purpose, determination of the optimum production plans and their putting into action is of importance. It can be considered to lessen the migration by building regional boarding schools too.

In general, agricultural production activities are taking place in rural areas, as product processing and services in urban areas. For this reason, exchange of goods between urban and rural areas is an essential element. As is the case in the whole country, higher shares of the brokers due to the very long marketing chain are one of the most important problems in the study area. The recent studies carried out in different countries revealed that due to the difficulty in marketing agricultural products; contrary to the usual phenomenon, urban population engages in agriculture, while rural families turn towards non-farm activities to earn their family incomes (Bryceson, Jamal 1997). The number of brokers in the marketing chain could be lessened through marketing organizations established by the migrants from the countryside. Community Supported Agriculture (CSA) can be useful for the financing and marketing in agriculture (Sabih 1998).

Of course, it should be noted that it is most important to erect the agricultural industry plants in rural areas. By migration, there have been interactions between agriculture and industry. When one or more members of the family migrated, they keep their strong relations with the other family members left in the village. Strong links with their relatives can help to provide the processing of raw agricultural materials, the manufacturing of agricultural equipment, tools and inputs. In China, government promotion of rural industries is explicitly aimed at creating employment opportunities for surplus labor force in the countryside while reducing migratory pressure on cities. In 1994, industrial production in rural areas was double the output of agriculture and the number of workers employed in the sector increased from 30 million in 1980 to 123.5 million in 1993 (Zheng 1995).

Consequently, it is possible to suggest that tackling agricultural problems and building social facilities in rural may lessen the migration from rural areas.

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