



Influence of Development of Transportation Facilities on Migration in Haryana

KEYWORDS

Development, Transportation, Migration

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ABSTRACT *In the present study the influence of development of transportation facilities on migration, which emerged the period 1981 – 2001 in Haryana have been analyzed. The estimation result of the study was found to be satisfactory. The state has been experiencing that with the increasing number of registered vehicles has decline in the proportion of overall rural-urban male female migrant since 1981. The district-wise analysis for the period 1981-2001 has revealed combined trends in the state. Some districts experienced increase in the proportion of these migrants, while in other this proportion has declined gradually. In 2001 a majority of the districts have experienced a decline in the proportion of these migrants. However, in 2001 the number of motor vehicles has increased during the passing of time in every district.*

Introduction

It is well documented in literature that migration is emerging as a significant livelihood strategy for poor households in several regions of India. Transportation facilities related migration is a crucial factor affecting mobility. Migration is one of the most fundamental and important problems in national land planning. Distance is usually considered as discouraging people mobility since moving on long distances implies non negligible costs. However, empirical evidence on the impact of developing roads networks and transportation system on migration in developing countries remains scarce and generally provides mixed results.

Although people mobility and transport are intuitively closely linked, there is no theoretical or empirical consensus of the sign of this impact: "Whether easier or cheaper transportation promotes or diminishes outward movement is not obvious" (Lucas, 2000, citing Connell et al., 1976).

It can promote migration as transport improvements help to reduce distance which is found to have a deterrent effect on migration. The Ravenstein's first law of migration shows that migrants usually move to proximate destinations. Since then extended gravity models have shown a regular negative impact of distance on migration flows (Lucas, 2000).

As a consequence improving road conditions could help to reduce both the financial cost of migration thanks to a reduction in transport cost, but also the informational and the psychological costs incurred by migrants.

The results are robust to the various specifications and sample designs and highlight that the impact of the upgrading of roads on migration differs according to the destination region (Gachassin, 2010)

Transport infrastructures can as well help to create employment and new job opportunities (Jacobs and Greaves, 2003).

Hugo (1981) shows that improved transport in Indonesia increased population mobility. Hugo (1982) has "no doubt that the extension of road has led to greatly increased spatial mobility for a wide spectrum of Indonesia's rural dwellers". Findley (1981) concludes that the expansion of rural road networks in low developing countries tends to increase migration in the short run but the effect is reversed in the long run as commuting and local development improve.

Kondo (2005) has analyzed that that transportation factors play a major role in formation of population distribution. Through these analyses, the influence of transportation links which are formed by transportation facilities and degree of relationship between regions on migration is clarified.

Objectives of the Study

The main objective of the study remains to:-

To analyses the influence of development of road transportation facilities on migration of each districts of Haryana.

Research Methodology

Present study has carried out detailed analysis of influence of transport facilities on migration of each district of Haryana. The present study based on secondary data. So the methodology of proposed research plan shall include various tools to present and portray the information drawn from the collected data. Information such as number of motor vehicles district-wise was collected from Statistical Abstract of Haryana, 1981-2001. The data about migration, migration tables of 1981 and 2001 have been collected from Census of Haryana and Punjab, Chandigarh. The year 1991 has not been included in the present study since the district-wise data relating to migration flows were not available. The entire analysis is based on the study of twelve districts that existed in 1981. Seven districts (Panchkula, Yamunanagar, Kaithal, Panipat, Fatehabad, Jhajjar and Rewari) created after 1981 have been included in their original districts to make the data comparable for 2001 census. The collected data is tabulated and processed with the help of simple statistical techniques. The processed data is cartographically represented by maps prepared in ARC G.I.S. 9.3.



Source : Statistical Abstract of Haryana, 1981

Discussion

In 1980-1981, a total number of 24009 registered vehicles were existing in Haryana and among them Hisar 3781 have highest number of registered motor vehicles while the district Bhiwani 675 have lower number of vehicles. But in 2000-2001, this has been increased with the numbers of 204047. The absolute number of vehicles of district Rohtak has increased from 1997 to 28701 which is highest number of increase in vehicles in Haryana. The absolute number of vehicles in district Sirsa was 7168 in 2001 which is quite higher as compared to 1981.

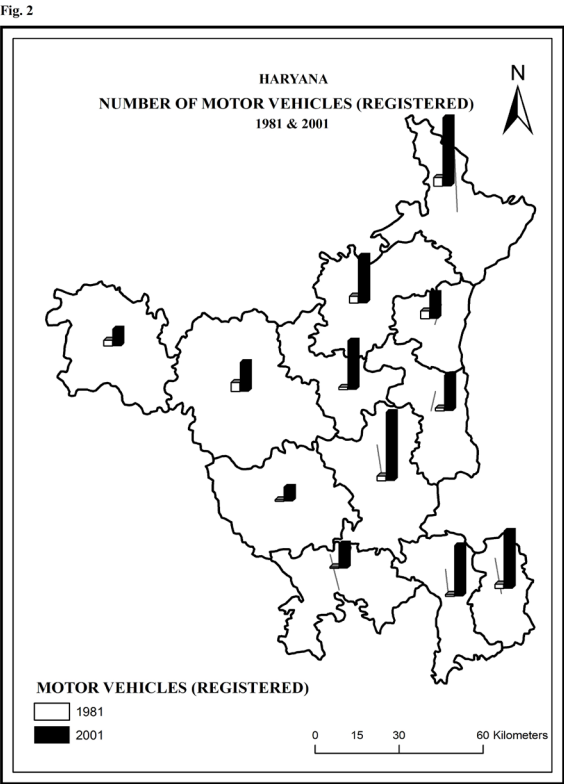
Table 1 Haryana: Total Number of Motor Vehicles Registered 1981-2001.

Districts	1980-1981	2000-2001
Ambala	3612	28624
Kurukshetra	2859	19704
Karnal	3251	10640
Jind	1038	20499
Sonipat	1184	14949
Rohtak	1997	28701
Faridabad	1812	24010
Gurgaon	755	21241
Mahendragarh	633	10297
Bhiwani	675	6021
Hisar	3781	12193
Sirsa	2412	7168

Source: Statistical Abstract of Haryana, 1981-2001.

Table 1 shows that the total number of registered motor vehicles during 1981 and 2001. This table shows that the numbers of motor vehicles were increased during 1981 and 2001.

The highest increase rates were found in districts Gurgaon and Faridabad. The total increasing number of registered vehicles in Ambala during 1981-2001 is 25012, Kurukshetra is 16845, Karnal is 7389, Jind is 19461, Sonipat is 13765, and Rohtak is 26704 while in southern part of Haryana the districts Faridabad and Gurgaon have increased the numbers of 22198 and 20486 respectively. The south western districts Mahendragarh and Bhiwani have increased by 9664 and 5346 respectively. The western districts Hisar and Sirsa have increased low numbers of vehicles as compare to other districts of Haryana which are 8412 and 4756.



Source: Statistical Abstract of Haryana, 1981-2001

	1981			2001		
Districts	Male	Female	Total	Male	Female	Total
Ambala	7.64	4.88	5.43	15.26	9.2	10.56
Kurukshetra	12.02	11.67	11.74	9.1	11.4	11.1
Karnal	12.66	10.86	11.22	6.31	6.87	6.75
Jind	7.71	12.63	11.65	6.05	9.19	8.65
Sonipat	5.69	9.01	8.34	11.35	12.2	12.07
Rohtak	10.04	13.62	12.91	11.26	12.8	12.6
Faridabad	7.59	3.95	4.67	8.14	3.42	4.22
Gurgaon	5.36	6.92	6.61	5.92	5.76	5.79
Mahendragarh	4.61	5.08	4.99	3.93	7.02	6.47
Bhiwani	6.79	8.23	7.95	4.2	6.64	6.24
Hisar	13.56	10.75	11.31	14.77	13.02	13.31
Sirsa	6.33	2.41	3.18	3.71	3.42	2.24

Table 2 Haryana: Proportion of total male female migration in 1981 & 2001.

Source: Census of Haryana and Punjab, Migration Tables 1981 and 2001.

Table 3 Haryana: Proportion of rural male female migration in 1981 & 2001.

	1981			2001		
Districts	Male	Female	Total	Male	Female	Total
Ambala	7.07	7.45	4.73	14.02	8.69	9.12
Kurukshetra	13.79	12.01	12.25	9.84	11.73	11.57
Karnal	14.31	10.71	11.19	6.26	6.92	6.86
Jind	8.17	13.28	12.59	5.25	9.67	9.30
Sonipat	6.04	9.67	9.18	9.43	12.14	11.91
Rohtak	10.58	13.86	13.42	9.42	12.88	12.58
Faridabad	2.32	3.06	2.96	1.88	2.38	2.34
Gurgaon	4.53	6.84	6.53	6.70	5.70	5.79
Mahendragarh	5.78	5.43	5.47	6.35	7.91	7.77
Bhiwani	7.32	8.24	8.12	4.73	6.86	6.68
Hisar	13.88	10.62	11.05	21.49	13.50	14.15
Sirsa	6.20	1.92	2.50	4.63	1.61	1.86

Source: Census of Haryana and Punjab, Migration Tables 1981 and 2001.

Table 4 Haryana: Proportion of urban male female migration in 1981 & 2001.

	1981			2001		
Districts	Male	Female	Total	Male	Female	Total
Ambala	8.25	7.10	7.55	15.88	12.45	13.67
Kurukshetra	10.15	10.18	10.17	8.73	10.38	9.77
Karnal	10.95	11.55	11.32	6.34	6.72	6.58
Jind	7.21	9.83	8.81	6.46	7.70	7.24
Sonipat	5.33	6.13	5.82	12.32	12.49	12.42
Rohtak	9.47	12.59	11.37	12.28	12.91	12.63
Faridabad	13.12	7.76	9.86	11.27	6.67	8.33
Gurgaon	6.25	7.25	6.86	5.52	5.44	5.78
Mahendragarh	3.38	3.59	3.51	2.72	4.27	3.69
Bhiwani	6.24	8.19	7.43	3.94	6.03	5.27
Hisar	13.23	11.34	12.07	11.42	11.52	11.47
Sirsa	6.43	4.49	5.24	3.23	2.94	3.04

Source: Census of Haryana and Punjab, Migration Tables 1981 and 2001.

Table 2 shows that total male and female migration rate from 1981 to 2001 in every districts of Haryana. The highest total migration rate was found in district kurukshetra, jind, karnal and Hisar whereas the districts Sirsa, Faridabad and Mahendragarh have lowest migration rate. The highest male migration rate was found in districts Hisar and Karnal whereas the districts Gurgaon and Sonipat have lower male migration rate. The female migration rate has a high component of marriage mobility. In 2001 the districts Hisar and Sonipat have largest migration rate in which districts Hisar again largest male migration rate. The districts Sirsa and Mahendragarh have lowest male migration rate. (Fig. 3)

Table 3 shows that total rural male and female migration rate from 1981 to 2001 in every districts of Haryana. In 1981 the districts Jind and Kurukshetra have largest rural migration rate whereas the districts Sirsa and Faridabad have lowest migration rate. The highest rural male migration rate was found in

Karnal and Kurukshetra whereas the districts Faridabad and Gurgaon have lowest migration rate. In 2001 largest male migration rates was found in Hisar and Ambala whereas the districts Faridabad and Bhiwani have lowest migration rate. The largest rural female migration rates were found in Hisar and Rohtak districts. (Fig.4)

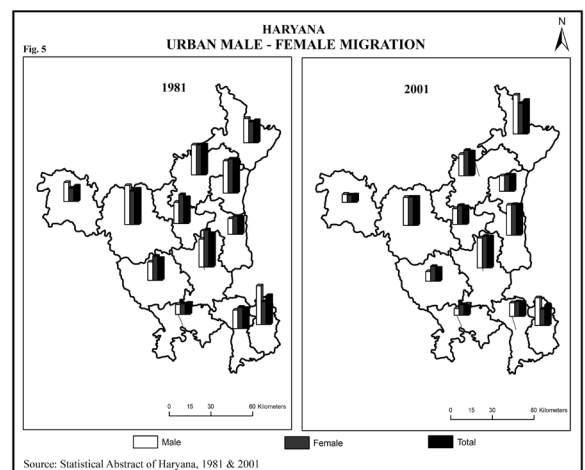
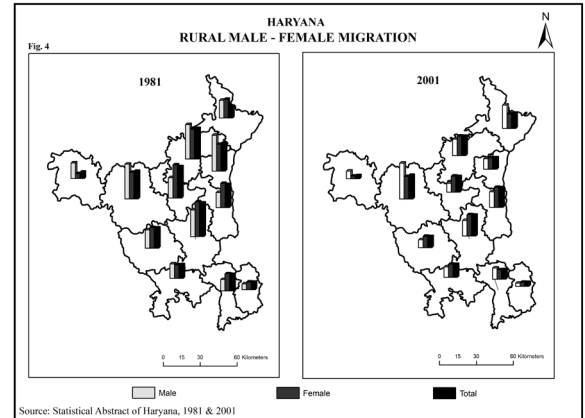
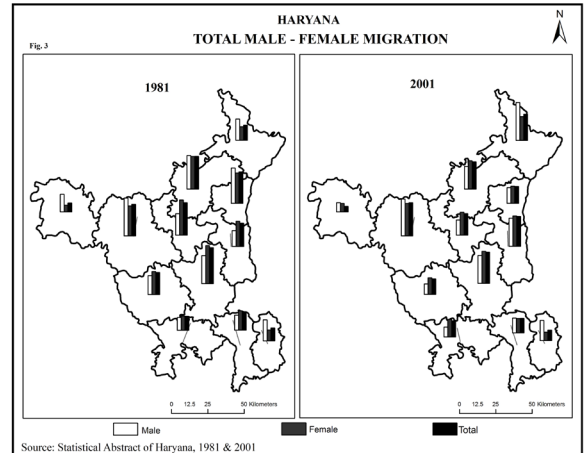


Figure 5 shows that urban male and female migration rate from 1981 to 2001 in every districts of Haryana. In 1981 the districts Hisar and Rohtak have highest migration rate whereas the districts Mahendragarh and Sirsa have lower migration rate. The urban male migration rate was found in Hisar and Faridabad districts similarly the districts Karnal and Hisar have highest urban female migration rate. In 2001 the dis-

tracts Ambala and Sonipat have highest urban migration rate similarly the districts Ambala and Sonipat have highest urban male and female migration rate.

Conclusion

This study was carried out with the aim of clarifying the influence of change in condition by development of transportation facilities and the existence of vehicles on migration. In order to achieve this aim, the district-wise migration data and number of existing vehicles was converted into percentage data. The study is found that most of districts have decrease in migration with increasing number of registered motor vehicles. Because such motor vehicles have increase the regional mobility. The proportion of the male and female urban migrants has declined since 1981. The major factors that have checked the movement of people to the rural area from the urban areas are increase in the number motor vehicles,

increasing in the employment opportunities in the rural area and development of other transportation facilities. The study shows that a majority of the districts, except Karnal, Kurukshetra and Jind districts have experienced an increase in the total male female migrants during this period. The districts Sirsa, Hisar, Jind, Kurukshetra, Karnal and Rohtak have decrease in rural male female migrants during this period. The foregoing analysis clearly brings out that with the increasing number of registered motor vehicles has been decreasing the proportion of the rural male female and urban male female migrants since 1981 in the state. The highest decreases in rural male female migrants were found in districts Jind, Kurukshetra, Karnal and Rohtak. The migration data of both decades has been successfully computed and shown with the help of suitable cartographic techniques.

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