

Labor Migration in Japan: a 20-year review

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研究要旨

This study aims to show trends in inter-prefecture migration in Japan from year 1991 to 2011; and investigate reasons of migration for Japanese teenage, middle aged, and elderly, respectively. Using nationally representative repeated cross-sectional data, the National Survey on Migration (人口移動調査(国立社会保障・人口問題研究所)), from 1991 to the latest 2011, we first show trends in migrations. Specifically, we stratify inter-prefecture migration into three types: the U-type migration, the I-type migration, and no migration.

We denote U-type migration for a respondent who *currently* lives in the prefecture of his/her birthplace, and has an experience of out-migration to other prefectures. Put another way, a respondent migrates U-type if he/she has moved from his/her prefecture of birthplace to other prefectures but returned back. No migration is defined for a respondent who is living in the prefecture of his/her birthplace and has never been out of this prefecture. I-type migration, correspondingly, represents a respondent migrating from his/her birthplace to another prefecture, say prefecture i , and currently lives in this prefecture i .

We confirm that people migrating in different type follow different reasons, in particular U-type migrants are more likely to come back to their hometown for work or co-residence with family members. These reasons indicate that policy on promotion of employment, health care services, and long-term care services ought to be strengthened in these destination prefectures of U-type migration. This finding reveals a hint for policy makers in lower GDP prefectures who have been dedicated to attract immigrants to solve the severe depopulation issue.

A . 研究目的

This study aims to show trends in inter-prefecture migration in Japan from year 1991 to 2011; and investigate reasons of migration for Japanese teenage, middle aged, and elderly, respectively. Using nationally representative repeated cross-sectional data, the National Survey on Migration, from 1991 to the latest 2011, we first show trends in migrations. Specifically, we stratify inter-prefecture migration into three types: the U-type migration, the I-type

migration, and no migration (Figure 1).

B . 研究方法

We denote U-type migration for a respondent who currently lives in the prefecture of his/her birthplace, and has an experience of out-migration to other prefectures. An experience of out-migration means that the respondent has been move out from his/her birthplace at least once at the following time: junior high school graduation, high school graduation,

university/college graduation, finding the first job, before his/her marriage, after his/her marriage, five years ago, one year ago, and before the latest migration to the current residence.

Put another way, a respondent migrates U-type if he/she has moved from his/her prefecture of birthplace to other prefectures but returned back. No migration is defined for a respondent who is living in the prefecture of his/her birthplace and has never been out of this prefecture. I-type migration, correspondingly, represents a respondent migrating from his/her birthplace to another prefecture, say prefecture i , and currently lives in this prefecture i . Figure 2 also intuitively illustrates the abovementioned three-type migrations.

To investigate trend of the three-type inter-prefecture migrations, we categorize the 47 prefectures in Japan into 5 groups with respect to the ranking of prefecture-level GDP. We derive average prefecture-level GDP giving equal weight to each survey year as equation (1) shows,

$$p(GDP_i) = \sum_y \frac{GDP_{i,y}}{\sum \sum GDP_{i,y}} = \sum_y \frac{\sum_i GDP_{i,y}}{\sum \sum GDP_{i,y}} \cdot \frac{GDP_{i,y}}{\sum_i GDP_{i,y}} \quad (1)$$

where

$$i = 1, 2, \dots, 47; y =$$

1991, 1996, 2001, 2006, 2011. The GDP ranking is reported in Table 1.

We track inter-prefecture migration trend regarding prefecture-level GDP by age groups (i.e. respondents who are teenage, middle aged,

and elderly) and migration types in Figure 3. Three panels “Aged 15-30”, Aged “30-65”, “Aged 65+” represent respondents in each age groups, respectively; within each age group, “I-type (from)”, “I-type (to)” and “U-type” is for birthplace of I-type migrants, current residence of I-type migrants, and birthplace (current residence) of U-type migrants.

C. 研究結果

We find that I-type migration takes a pattern such as move outward from prefectures with lower GDP level inward to those with top-10-level GDP, regardless of age; and I-type migration tends to be cooling off with year. On the contrary, U-type migration gets popularized with years (in particular for teenagers) and frequently happen in comparatively lower GDP prefectures. Regarding migrations in each age groups, Japanese teenagers show considerably lower rates of outward migration from their birthplace (i.e. I-type migration), compared to middle aged and elderly Japanese. In the latter two cohorts, middle aged respondents are more likely to experience I-type migration than the elderly. After review trends in inter-prefecture migration during last two decades, we further investigate reasons for respondents to migrate. We categorize reason for the latest migration to current residence as Table 2 illustrates.

In total six reasons for migration are defined, which are “Work”, “Marriage”, “House”, “Family”, “Education”, “Others”. We implement ANOVA method to analyze whether the reasons are statistically significant different among migration types, ages, and migration types (Table 3).

All investigations are separately

implemented by reason and gender. We recognize that work-related issues are more likely to be the reason for people to migrate U-type (i.e. come back to their birthplace) than for those migrate I-type, regardless of gender. Concretely, men and women who migrate U-type are 7% more likely to move for work-related issues. Similarly, living with parents or children, i.e. “Family”, is also a reason attract migrants come back to their hometown.

For I-type migrants, on the other hands, reasons such as “Marriage”, “House”, and “Education”, are statistically stronger than for U-type ones. Specifically, women migrating for marriage related issues are 8% more likely to migrate I-type compared to U-type.

D . 考察・E . 結論

We confirm that people migrating in different type follow different reasons, in particular U-type migrants are more likely to come back to their hometown for work or co-residence with family members. These reasons indicate that policy on promotion of employment, health care services, and long-term care services ought to be strengthened in these destination prefectures of U-type migration. This finding reveals a hint for policy makers in lower GDP prefectures who have been dedicated to attract immigrants to solve the severe depopulation issue.

F . 研究発表

- 1 . 論文発表
特に無し .
- 2 . 学会発表
特に無し .

G . 知的財産権の出願・登録状況 (予定を

含む)

- 1 . 特許取得
特に無し .
- 2 . 実用新案登録
特に無し .
- 3 . その他
特に無し .

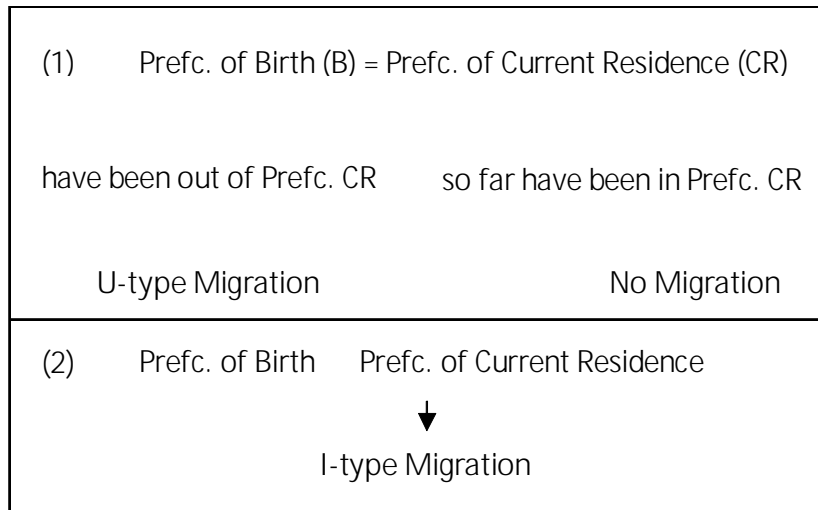


Figure 1 U-type migration, I-type migration, and No migration

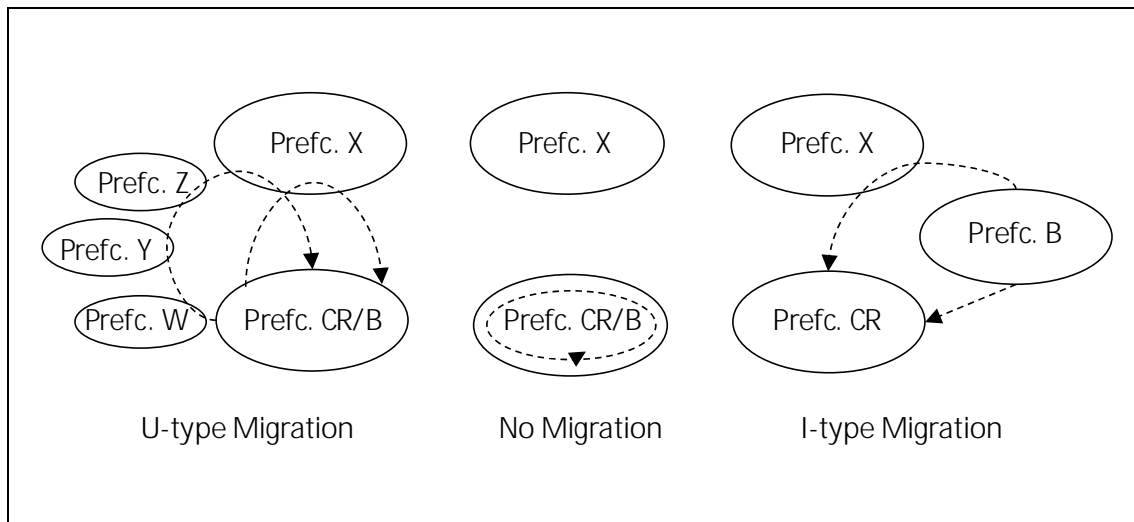


Figure 2 Trace of three-type Migrations

Table 1 Prefecture-level GDP Ranking

Group 1		Group 2		Group 3		Group 4		Group 5	
01	Tokyo	11	Hiroshima	21	Gifu	31	Aomori	41	Fukui
02	Osaka	12	Ibaraki	22	Mie	32	Nagasaki	42	Yamanashi
03	Aichi	13	Kyoto	23	Shiga	33	Oita	43	Saga
04	Kanagawa	14	Niigata	24	Yamaguchi	34	Yamagata	44	Tokushima
05	Saitama	15	Miyagi	25	Kumamoto	35	Kagawa	45	Shimane
06	Hyogo	16	Nagano	26	Kagoshima	36	Akita	46	Kochi
07	Hokkaido	17	Tochigi	27	Ehime	37	Nara	47	Tottori
08	Chiba	18	Gumma	28	Toyama	38	Okinawa		
09	Fukuoka	19	Fukushima	29	Ishikawa	39	Wakayama		
10	Shizuoka	20	Okayama	30	Iwate	40	Miyazaki		

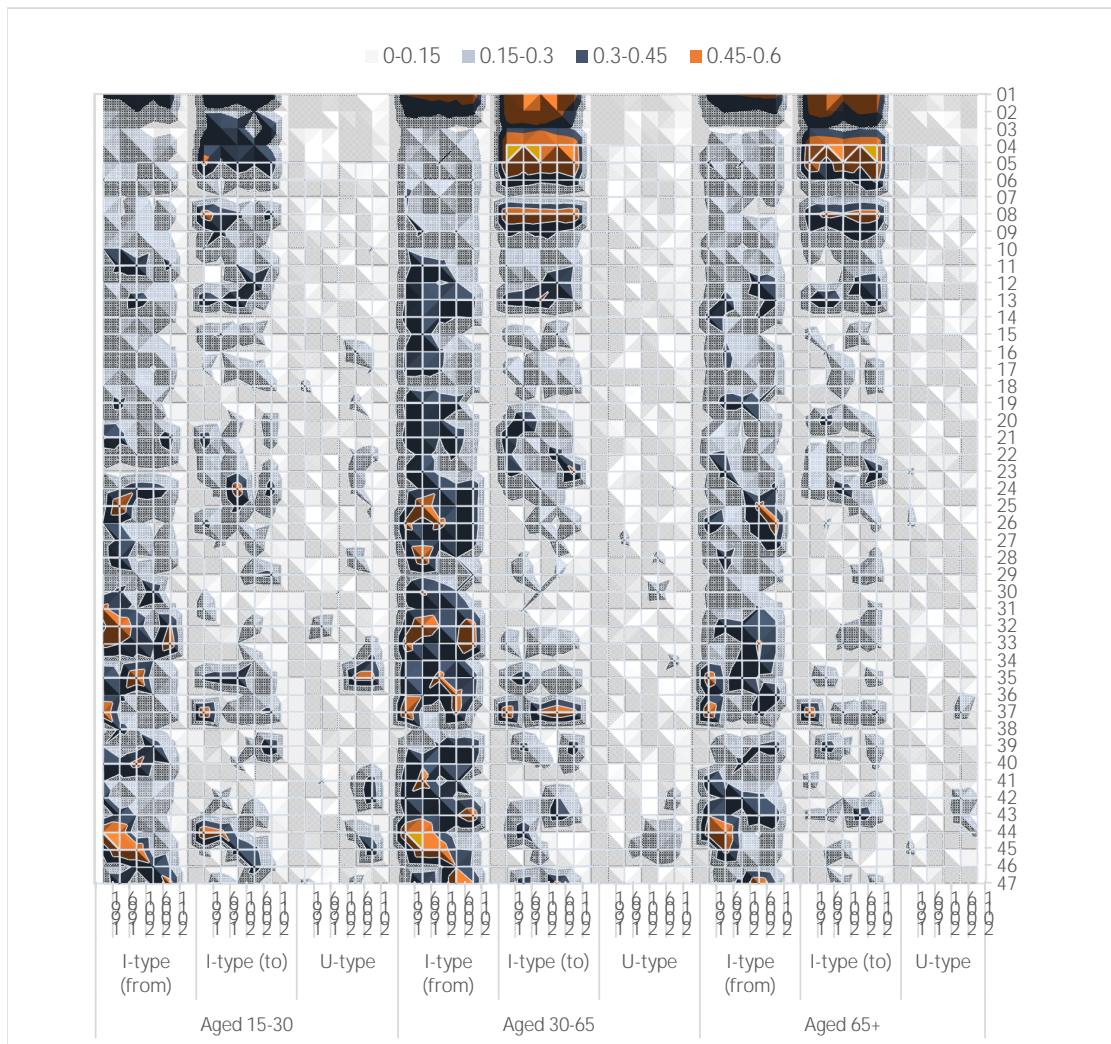


Figure 3 Trends in Inter-Prefecture Migration: by Age and Migration Types

Table 2 Reason for the Latest Migration to Current Residence

Aggregated Reasons	Detailed Choices
1 Work	Employment, job change, relocation, family business inheritance
2 Marriage	Marriage or divorce
3 House	House-related issues
4 Family	Live with parents or children
5 Education	Education
6 Others	Other reasons

Table 3. Reasons for the Latest Migration to Current Residence - ANOVA

		Men			Women		
		Coef.	t/F-value	P>t	Coef.	t/F-value	P>t
Work	U-type	0.07	2.82	***	0.07	4.23	***
	ANOVA		14.58	***		39.65	***
	U-type & 30-40	-0.07	-1.93	*	-0.02	-0.74	
	U-type & 40-65	-0.03	-0.96		-0.03	-1.63	
	U-type & 65+	0.01	0.23		-0.03	-1.26	
	ANOVA		1.74			0.98	
Marriage	U-type	0.00	-0.26		-0.08	-3.71	***
	ANOVA		21.70	***		129.02	***
	U-type & 30-40	-0.05	-2.75	***	-0.07	-2.24	**
	U-type & 40-65	-0.02	-1.56		-0.06	-2.33	**
	U-type & 65+	-0.03	-1.55		-0.02	-0.60	
	ANOVA		2.58	*		2.64	*
House	U-type	-0.01	-0.47		-0.02	-1.37	
	ANOVA		129.32	***		22.55	*
	U-type & 30-40	-0.03	-1.35		0.00	-0.02	
	U-type & 40-65	-0.13	-6.58	***	-0.02	-1.08	
	U-type & 65+	-0.19	-7.05	***	-0.04	-1.55	
	ANOVA		25.24	***		1.16	
Family	U-type	0.05	4.25	***	0.05	4.05	***
	ANOVA		133.57	***		70.29	***
	U-type & 30-40	0.06	3.24	***	0.05	2.64	***
	U-type & 40-65	0.07	4.77	***	0.02	1.52	
	U-type & 65+	-0.05	-2.70	***	-0.07	-3.93	***
	ANOVA		21.27	***		16.18	***
Education	U-type	-0.10	-9.26	***	-0.08	-7.53	***
	ANOVA		0.98			6.66	***
	U-type & 30-40	0.12	7.43	***	0.10	6.65	***
	U-type & 40-65	0.12	9.14	***	0.09	7.10	***
	U-type & 65+	0.12	6.58	***	0.07	4.79	***
	ANOVA		31.16	***		20.11	***