DIVORCE IN CONTEMPORARY JAPAN

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Summary. Data from the 1985–86 Japanese census are analysed to explore the determinants of the divorce rates in Japan's forty-seven prefectures, using two theoretical models: (a) the social integration model, which is shown to have a greater utility in predicting Japanese divorce levels than (b), the human capital model. Female emigration patterns play a significant role in affecting the divorce rate. Population increase and net household income are also important predictors of the Japanese divorce rate and urbanization has a great influence in modern Japan. Demographic and aggregate variables such as migration, urbanization, and socioeconomic factors are useful when organized under a social integration model.

Introduction

As occurred in other advanced nations, the industrialization of Japan, termed since the middle 1950s Japan's economic miracle, was accompanied by social problems (Glickman, 1979; Shoji, 1988). One of these was an increase in the divorce rate, which increased by one-third between 1975 and 1988. It still remains low, however, in comparison to other industrialized nations (Kumagai, 1983), being 1·22 per thousand population (1980) in contrast to the United States 5·30 (1980), Russia 3·47 (1977), United Kingdom 3·47 (1977), and Denmark 2·51 (1978).

The divorce rate in a country may be influenced by its legal system as well as its social conditions. For example, in the United States some states have less stringent divorce laws than others (Kalback, 1975; Pang & Hanson, 1968). This may complicate the study of regional variations in divorce rates. This difficulty does not occur in Japan, however. Prefectures, equivalent to states in the United States or provinces in Canada, differ socially and economically, but the legal system dealing with divorce is nationally uniform and centralized. Differences in divorce rates among regions of Japan cannot therefore be attributed to variation in the legal system, so Japan provides an advantageous setting for the analysis of social and economic factors in divorce.

The secular changes in divorce rate in Japan are shown (Table 1) by data from the *koseki* records (Census Registers). High at the beginning of the century, it dropped in the early 1940s to the lowest divorce rate experienced in Japan in its modern history. It then increased during Japan's post-war stage of industrialization (Goode, 1971) to a level that was the same as in the early 1900s and double that in the early 1940s.

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Table 1. Divorce rate in Japan, 1900–86* (per 1000 total population)

Pre-war period	Divorce	Post-war period	Divorce
1900–04†	1·4	1947	1·0
1905–09	1·2	1948	1·0
1910–14	1·1	1949	1·0
1915–19	1·0	1950	1·0
1920–24	0·9	1951	1·0
1925–29	0·8	1952	0·9
1930–34	0·8	1953	0·9
1935–39	0·6	1954	0·9
1940	0·7	1975	1·07
1941	0·7	1980	1·22
1942	0·6	1985	1·39
1943	0·7	1986	1·37

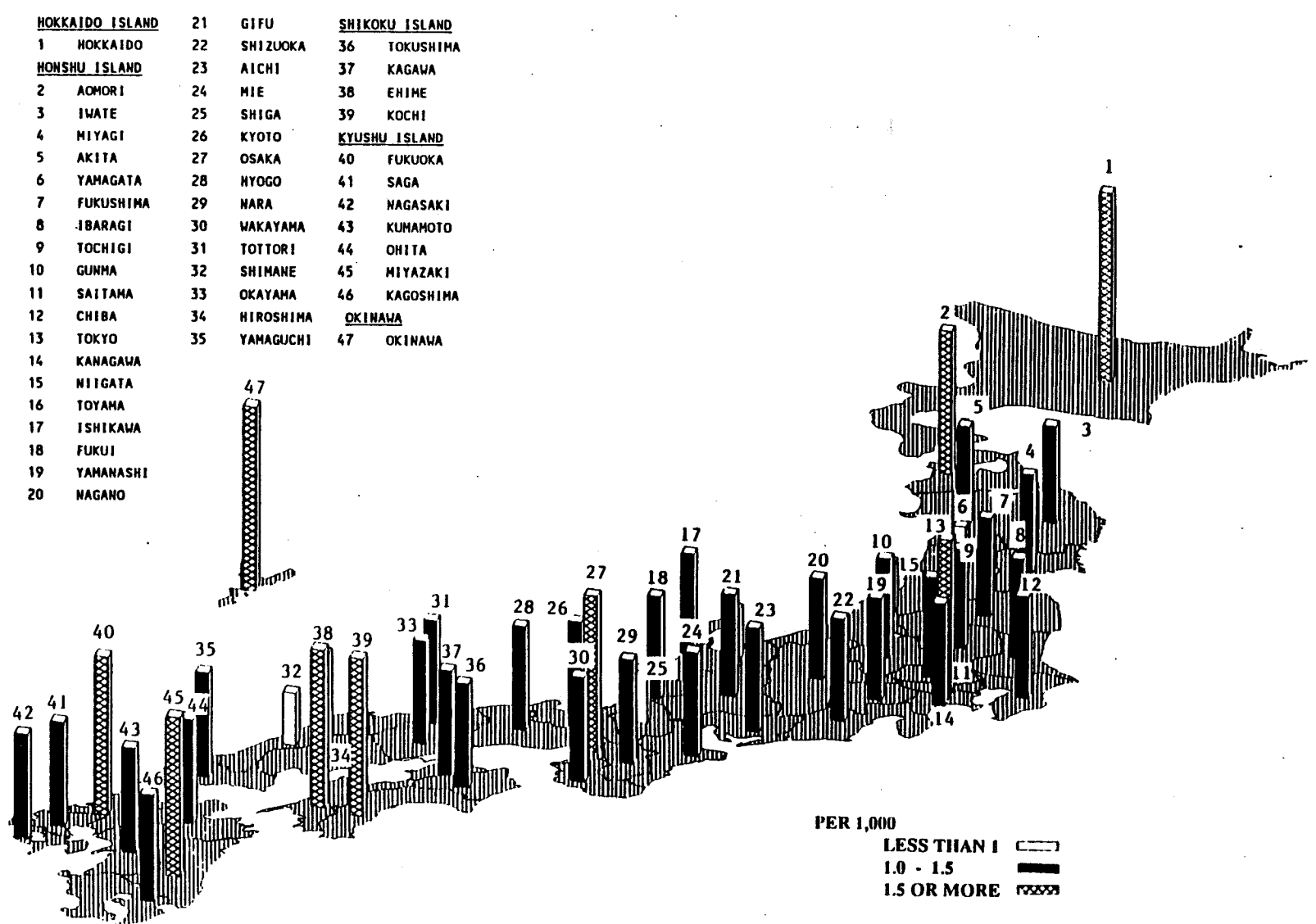Sources: Taeuber (1958), Table 84; Statistics Bureau (1988), Table 22.
* Data are numbers of divorces of Japanese in Japan recorded in *koseki* (census registers) during the individual years, related to the total population of the country. Koreans, other people from the colonies, and aliens are included in the population base, but their divorces are not included in the vital reports. This has little effect on the divorce rate, since they represent less than 1% of the total population of Japan.
† Japan including Okinawa, 1900–43.

Presumably this post-war increase is primarily due to a decline in the importance of the traditional values of the extended family, an increase in married women's employment, and their decreased role in family building (Kessler & McRae, 1982; Lee, 1982; Morioka, 1987). This reasoning, however, does not explain Japan's high divorce rate at the beginning of the century (Kumagai, 1983). The aim of the present study is to examine prefectural variations in the Japanese divorce rate in relation to demographic and socioeconomic variables, in order to identify the factors responsible.

Materials and methods

From Japanese census data for 1985–86, the divorce rate, measured by the number of divorces per thousand population during 1985, was calculated for each of the 47 prefectures. The prefectures form the basic administrative unit below the national government, each is a self-governing subautonomous political and economic unit responsible for providing social services (welfare, health, police, etc.), governed by officials elected by popular vote. Their boundaries were drawn during the late 19th century to reflect social and historical distinctiveness, and still today the prefectures show a wide variety of social customs and values recognized and honoured by government officials. Nevertheless, contemporary Japanese society is relatively homogeneous as regards social class, income, and educational, social and linguistic divisions. So the high regional variations in divorce rate ranging from 2·13 per

HOKKAIDO ISLAND		21	GIFU	SHIKOKU ISLAND	
1	HOKKAIDO	22	SHIZUOKA	36	TOKUSHIMA
HONSHU ISLAND		23	AICHI	37	KAGAWA
2	AOMORI	24	MIE	38	EHIME
3	IWATE	25	SHIGA	39	KOCHI
4	MIYAGI	26	KYOTO	KYUSHU ISLAND	
5	AKITA	27	OSAKA	40	FUKUOKA
6	YAMAGATA	28	HYOGO	41	SAGA
7	FUKUSHIMA	29	NARA	42	NAGASAKI
8	IBARAGI	30	WAKAYAMA	43	KUMAMOTO
9	TOCHIGI	31	TOTTORI	44	OHITA
10	GUNMA	32	SHIMANE	45	MIYAZAKI
11	SAITAMA	33	OKAYAMA	46	KAGOSHIMA
12	CHIBA	34	HIROSHIMA	OKINAWA	
13	TOKYO	35	YAMAGUCHI	47	OKINAWA
14	KANAGAWA				
15	NIIGATA				
16	TOYAMA				
17	ISHIKAWA				
18	FUKUI				
19	YAMANASHI				
20	NAGANO				

PER 1,000
LESS THAN 1
1.0 - 1.5
1.5 OR MORE

Fig. 1. Divorce rate per 1000 population, Japan, 1985. Sources: data—Population Census of Japan (Statistical Bureau, 1988); map—Fukurai, Alston, Park, Son, Pacific Rim Projects, Texas A & M University.

Table 2. Descriptive statistics for structural variables

Variable	N	Mean	SD	Minimum	Maximum
Structural variables					
Prefecture income*	47	5264·13	6225·93	1016·90	35615·80
Net monthly income†	47	452·82	44·44	343·00	542·00
College education (%)	47	1·46	1·18	0·43	6·44
Urbanization‡	47	65·66	10·65	46·37	86·15
Age group 15–54 (%)	47	55·52	31·23	50·25	63·70
Immigrants (female) (%)	47	42·39	18·42	38·25	48·15
Emigrants (female) (%)	47	56·30	15·02	47·14	75·89
Population increase 1980–85 (%)	47	2·92	2·23	−0·20	8·70
Population density/km²	47	613·65	1080·38	72·00	5496·00
Dependent variable					
Divorce rate/1000 population	47	1·28	0·28	0·87	2·13

* Billion yen.
† 1000 yen.
‡ % non-farm lands in privately owned areas.

thousand in Okinawa to 0·87 in Shimane (Fig. 1) are of interest. To examine them data were collected on the following variables.

There were five demographic variables. Population increase is represented by the percentage change in a given prefecture between 1980 and 1985. Population density is the number of persons per km². The third demographic variable is the proportion of population between 15 and 54 years of age. The last two demographic variables were immigration and emigration of females in 1985, measured as the percentage of the total number of females.

Of the socioeconomic variables, urbanization was not measured in the usual way as the ratio of the population living in towns of more than a given number of inhabitants (because of the high population concentration which results in slight interprefectural variation), but instead it was measured by the proportion of non-farm land in privately owned areas in the prefecture. Income was measured by two

Table 3. Pearson correlation coefficients among structural variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Prefecture income									
(2) Net monthly income	0·088								
(3) College education	0·704**	0·022							
(4) Urbanization	0·211	0·064	0·224						
(5) Age group 15–54	0·812**	0·091	0·610**	0·048					
(6) Immigrants (female)	−0·141	0·046	−0·046	0·083	−0·189				
(7) Emigrants (female)	0·320*	0·374**	0·199	−0·073	0·587**	0·142			
(8) Population increase	0·203	0·188	0·078	−0·237	0·573**	0·004	0·878**		
(9) Population density	0·917**	0·096	0·661**	0·233	0·738**	−0·041	0·336*	0·187	
(10) Divorce rate	0·301*	−0·532**	0·256	0·059	0·290	−0·138	−0·219	−0·005	0·287

* $P < 0.05$; ** $P < 0.01$.

variables, the total prefectural income and the net monthly income per working household (in thousand yen). Education level was measured by the percentage of the prefecture's population aged 25–54 who had obtained a college qualification. The overall means, standard deviations, and ranges of these variables are shown in Table 2. Several are clearly skewed in distribution, e.g. prefecture income and population density. In view of the intercorrelations between several of the variables (Table 3), a multiple regression analysis was applied.

Results

The zero-order correlation coefficients show that the divorce rate is significantly associated positively with the prefectural income and negatively with the net monthly income of families but not significantly with any of the other variables. The regression coefficients, however (Table 4), tell a different story. Three variables show highly significant effects on the divorce rate. First, there is a positive relationship with population increase from 1980 to 1985—a 1% population increase was associated with an increase of 104 divorces per thousand population (as shown by the unstandardized coefficient). Secondly, the emigration of females, increasing the relative scarcity and greater demand for females in a given prefecture, leads to a reduction of the divorce rate. Thirdly, monthly household income is negatively associated, so that the greater the household income the lower the divorce rate. Comparison of the coefficients of all the other variables with their standard errors shows that they are all far from reaching a significant level. The multiple correlation

Table 4. Regression analysis of the divorce rate: unstandardized and standardized regression coefficients

Variable	Unstandardized coefficients	Standardized coefficients	SD
Prefecture income	−1·042†	−0·022†	15·588
Net monthly income	−0·002	−0·349	0·000**
College education	0·139‡	−0·058‡	0·377
Urbanization	0·272	0·102	0·313
Age group 15–54	2·185	0·241	2·536
In-migrants (female)	1·151	0·075	1·857
Out-migrants (female)	−2·005	−0·966	0·550**
Population increase	0·104	0·826	0·037**
Population density	0·799§	0·305§	0·732
Intercept	−1·043		
R²	0·576		
R² adjusted	0·473		

† Unstandardized coefficients and standard deviations are based on E-07.
‡ Based on E-03.
§ Based on E-04.
* P < 0·05; ** P < 0·01.

Table 5. Divorce rate per 1000: predicted values, residuals and standardized residuals

Prefecture	Predicted value	Residual	Standardized residual*
Hokkaido Island			
1　Hokkaido	1·855	0·195	1·418
Honshu Island			
2　Aomori	1·359	0·291	1·694
3　Iwate	1·440	−0·410	−2·118
4　Miyagi	1·435	−0·235	−1·237
5　Akita	1·354	−0·264	−1·397
6　Yamagata	1·025	−0·105	−0·558
7　Fukushima	1·273	−0·113	−0·566
8　Ibaragi	1·169	−0·089	−0·473
9　Tochigi	1·069	0·111	0·573
10　Gunma	1·284	−0·144	−0·747
11　Saitama	1·165	0·075	0·430
12　Chiba	1·474	−0·194	−1·089
13　Tokyo	1·627	−0·077	−0·693
14　Kanagawa	1·234	0·196	1·187
15　Niigata	1·332	−0·432	−2·214
16　Toyama	0·982	−0·042	−0·235
17　Ishikawa	1·318	−0·138	−0·737
18　Fukui	1·369	−0·309	−1·651
19　Yamanashi	1·036	0·064	0·354
20　Nagano	0·994	0·016	0·084
21　Gifu	1·127	−0·097	−0·539
22　Shizuoka	1·254	0·016	0·088
23　Aichi	1·180	0·020	0·110
24　Mie	0·979	0·151	0·775
25　Shiga	1·208	−0·248	−1·319
26　Kyoto	1·315	−0·045	−0·415
27　Osaka	1·802	−0·102	−0·795
28　Hyogo	1·323	0·037	0·206
29　Nara	1·121	0·029	0·195
30　Wakayama	1·462	0·018	0·098
31　Tottori	1·006	0·224	1·169
32　Shimane	1·030	−0·160	−0·886
33　Okayama	1·084	0·135	0·682
34　Hiroshima	1·381	−0·081	−0·425
35　Yamaguchi	1·186	0·134	0·688
Shikoku Island			
36　Tokushima	1·298	−0·197	−1·012
37　Kagawa	1·138	−0·028	−0·146
38　Ehime	1·331	0·169	0·851
39　Kochi	1·366	0·253	1·388
Kyushu Island			
40　Fukuoka	1·534	0·326	1·684
41　Saga	1·118	0·102	0·554
42　Nagasaki	1·326	0·084	0·436
43　Kumamoto	1·290	−0·010	−0·052
44　Ohita	1·260	0·229	1·145
45　Miyazaki	1·416	0·214	1·103
46　Kagoshima	1·227	0·203	1·101
Okinawa			
47　Okinawa	1·900	0·230	1·510

* Equivalent to a t-test statistic.

coefficient (R) shows that nearly 58% of total variance in divorce rate amongst the prefectures is attributable to variation in these nine variables.

To examine the remaining 42% of the variance unaccounted for, the residuals of the divorce rate after allowing for the effects of these nine variables are plotted (Fig. 2) and listed in Table 5. Not only are there variations among different prefectures overall and within major islands as well but also between islands. For example, the divorce rate of four prefectures, Iwate, Akita, Niigata and Fukui, is considerably below those expected from the regressions. In four prefectures also the divorce rate is considerable above those expected—in Hokkaido, Aomori, Fukuoka and Okinawa. The prefectures with positive residuals, i.e. divorce rates above those expected, are observed primarily in peripheral regions, including two islands physically separated from Japan's central islands, and these are viewed by the Japanese as frontier regions. Hokkaido and Okinawa are characterized by cultures and traditions distinct from the main stream of Japanese culture and values (De Vos & Wagatsuma, 1966); Hokkaido, the northernmost island with its non-Japanese Ainu inhabitants, is characterized in Japanese folklore and contemporary stereotypes as wild and untamed (De Vos, 1973). But there are other differences. Hokkaido and Okinawa constitute two single-prefecture islands where migration is intraprefectural and there is little inter-island migration, so these geographically separated prefectures are perhaps culturally more isolated from the rest of Japanese regions.

Discussion

Models of divorce

Studies of rates and causes of divorce have envisaged two theoretical models, the human capital and the social integration models. The first sees differences in divorce rates as being generated by human capital factors such as socioeconomic origins, educational investment, occupational status, women's participation in the labour force, and the changing roles of women; but it also identifies as being of relevance psychological and attitudinal variables, such as feelings of social isolation among women, and of distress and dissatisfaction among husbands which are particularly associated with their wives' work outside the home (Arnott, 1972; Pearlin & Johnson, 1977; Huth, 1978; Kessler & McRae, 1982; Roos, 1983; Reimers, 1985). Thus, accepting the factors and structure of society and stressing the importance of traditional sex roles, by this model urbanization and its related factors of modernization and industrialization are seen as promoting the disintegration of traditional norms and values, increase in married women's participation in the labour force, changes in their role in the family, changes in their own and their husbands' attitudes, and subsequently increase in the psychological stress among their spouses. Thus this model predicts that divorce rates will be higher in more urban areas than in rural areas and farming communities.

There has been empirical support (Cannon & Gingles, 1956; Glick, 1963) for this model. Kessler & McRae (1982) showed how married women's employment affected their spouses; the increase in earnings (from the wife) did not influence the men's marital satisfaction, but the men's negative attitudes were closely related to their failure to adjust to the changing activity pattern and led to subsequent increase in
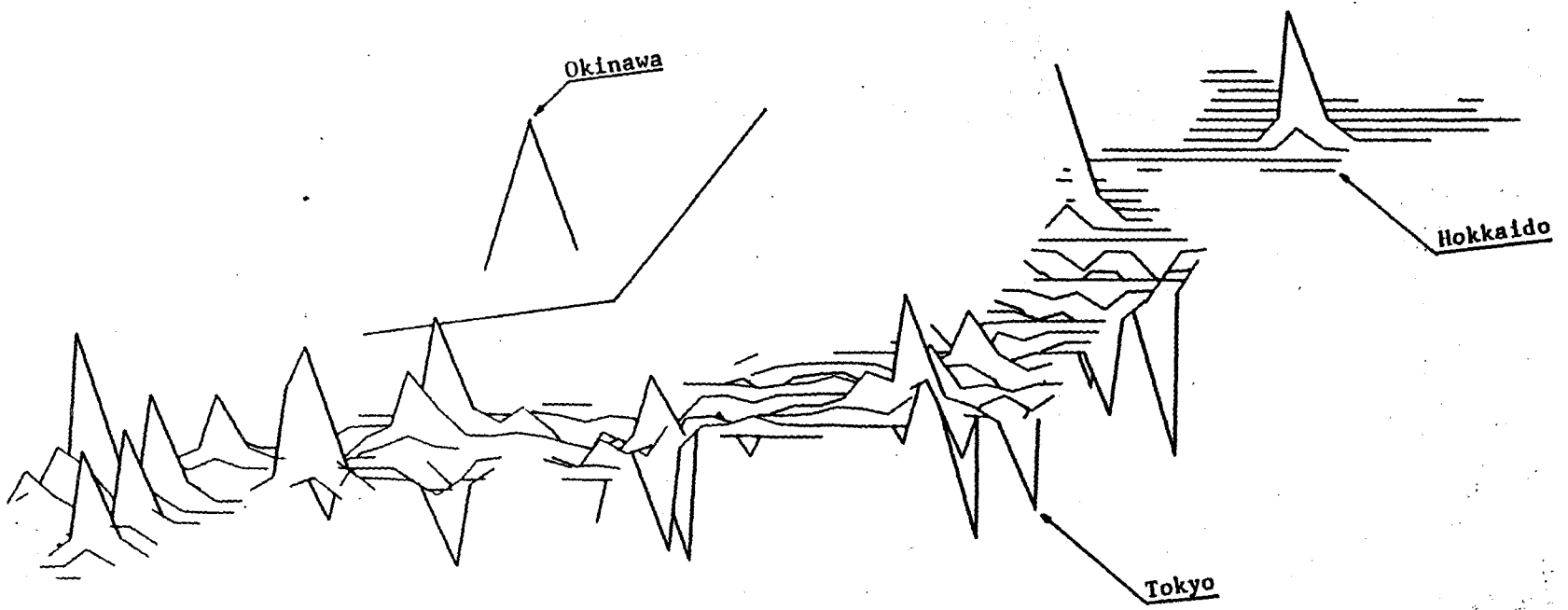
Fig. 2. Standardized residuals: Japanese divorce rate, 1985. Sources: as Fig. 1.

psychological distress among the men. Reimers (1985) studied marital stability and labour force participation among married women from six different ethnic groups. For instance, for Hispanic women in the US he found that the influences of Hispanic culture, with the maintenance of large extended family ties, educational attainment, the use of the Spanish language, and the ties to ethnic communities, were major predictors of both economic status and levels of marital stability. In other studies of the relation between marital stability and husbands' attitude and adjustment to wives' employment, Arnott (1972) and Pearlin & Johnson (1977) also showed the importance of cultural and psychological factors. In brief, on the human capital model, marital instability is seen as depending substantially on capital variables such as educational investment, occupational standing of women, the degree of their participation in the labour force, and cultural factors such as family structure and ethnic background. It places major importance upon the effects of the traditional sex roles on the attitudes of the spouses, which in turn influence the likelihood of divorce.

The second, social integration, model concerns larger scale variables such as can be measured in national and regional samples. Trent & South (1989), in a sample of 66 countries, found that the level of regional economic development was strongly associated with national divorce rates, and so too were changing demographic factors including population distributions. Intra-national migration in response to changes in the development and complexity of regional economies brings change in divorce rates by unbalancing the sex ratio in a region, changing the sex composition of available labour, and creating greater economic opportunities for women (Glenn & Supancic, 1984; Glenn & Shelton, 1985; Trovato, 1986; Shelton, 1987). Fukurai *et al.* (1989, unpublished) found that migration near the US–Mexican border was strongly linked to labour market growth, some economic activities requiring female rather than male labourers. This led to disintegration of traditional male-dominated values as females became more independent financially, enhanced by the high unemployment and under-employment amongst males. Shelton (1987) examined the relationship between migration patterns and divorce rates, holding cultural differences, religious affiliation and socioeconomic variables constant, and found that larger community size made possible more residential mobility, leading to lower levels of social integration and higher rates of divorce. Similar findings on divorce rate and economic activity were those of Huber & Spitz (1980), Cherlin (1981) and South (1985).

The present findings

Putting the present results in the perspective of these studies, it is almost a truism (Parsons, 1959; Rodman, 1965) that urbanization and its related factor of modernization promote the disintegration of traditional norms and values and create pressures or opportunities for higher divorce rates, and Glick (1963) and Goode (1963) found that urban areas are more likely to show higher rates of divorce. This is not supported by the present study, for urbanization made no significant contribution to the regression, though the coefficient was positive.

There is, however, some support for the findings of Shelton (1987) in the highly significant effect of the emigration of females; the more females that leave, the lower the divorce rate. Emigration leads to relative scarcity and greater demand for females

in a given prefecture, and so the reduction of divorce, as also Trent & South (1989) and South (1985, 1988) found in their American samples. As regards the direct effect of female immigration, the coefficient is positive but is not statistically significant.

There are two possibilities to account for the negative effect of monthly household income on divorce rates. First, the average monthly income may not truly reflect the extent of household income variations in the prefecture. The average monthly income is, however, likely to reflect the extent of household variations based on social class. The higher the average monthly household income in the prefecture, the more households in the higher social classes and vice versa. Prefectures with larger numbers of households in the higher social classes can be characterized as having more families who need not depend on female labour to supplement their income. A non-working wife still remains a strong asset among Japanese (Kitagawa, 1987). On the other hand, in prefectures with larger numbers of households in the lower social classes there is more likelihood of spouses working outside the home to support the family, and so lead to increased incidence of divorce. Thus the negative effect of income on divorce rates may be a reflection of social class variations.

Secondly, in Japan the common pattern is for a woman to work primarily before marriage and after the children have finished their education (Mosk, 1983; Alston, 1986). Such lack of occupational career opportunities or long-term work expectations both by firms and husbands, together with the limited occupational opportunities for women, may reduce the potential economic independence of a working woman in Japan, in contrast to working wives in other countries. The explanation of the negative influence of household income on divorce is not definite at present. But we suspect that the key to understanding the dynamics of divorce in Japan lies in household composition and social class, as measured by prefecture average level of household income, the migration pattern of these prefectures, and their urbanization.

As regards the regional variations, Kephart (1966) and Leslie (1976) suggested that the 'frontier' tradition in the American west, characterized by ruthlessness and non-conformity, are partly responsible for higher divorce rates in the western United States than in the east. In Japan the 'frontier' seems to be found in rural areas rather than elsewhere. The inter-prefecture variations among and within islands (especially Honshu, Shikoku and Kyushu) suggest that additional extraneous variables, and particularly those that are related to behaviour, need to be incorporated to explain the variance. These might include unique regional and island specific characteristics, different psychological and behaviourable variables related to intensity of economic activity in the region, and prefecture-specific traditional values and cultures.

Conclusion

This analysis of contemporary Japanese divorce rates shows considerable variation at the prefectural level and throws light on two theoretical models. In the human capital model, factors such as socioeconomic origins, educational investment, occupational status, women's labour force participation, and changing roles of women generate differences in divorce rates, while the alternative, social integration model, looks to demographic changes, economic activities, migration patterns, and the level of urbanization as predictors of the divorce rate.

The present analysis shows that female emigration patterns, population increase and net household income are important predictors, and the findings also are compatible with the hypothesis that urbanization has a great influence on divorce rates in modern Japan (Makabe, 1980) even though this effect could not be demonstrated conclusively.

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