
Social Exclusion and Earlier Disadvantages: An Empirical Study of Poverty and Social Exclusion in Japan

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This paper is one of the first attempts in Japan to define and measure the extent of poverty and social exclusion in the country. It makes use of data from a 2006 survey of 600 households which was carefully designed to capture incidents of different dimensions of poverty and social exclusion, such as income poverty, material deprivation, exclusion from public services, lack of social relations, inadequate housing, lack of activities and subjective poverty. The paper's main findings can be summarized as follows. First, sections of the population which are most vulnerable to social exclusion are not necessarily vulnerable in terms of income poverty. Second, disadvantages at earlier stages of life seem to exert influence on some aspects of current social exclusion, even after controlling for current income, occupation and household type. One of the most interesting results of the analysis is that the variable indicating poverty at age 15 has a positive and significant effect on one's current lack of basic needs (food, clothing and medical care), even after controlling for current income, age, sex, household type and experiences of divorce and layoff. This indicates that poverty during childhood not only influences adult well-being via education and occupation (and thus, income) but there is also a path which connects childhood poverty and adult social exclusion directly.

1. Introduction

In Europe and the US, the attempt to scientifically measure poverty and social exclusion has become an established task of researchers. Many countries publish official poverty rates using large-scale survey data and use the statistics to examine the current economic status of the nation. Many countries, notably European Union (EU) nations, have set a political agenda to combat social exclusion. For example, France established the Anti-Social Exclusion Law in 1998, and the UK set up the Social Exclusion Unit in 1999. The EU, at its Lisbon Summit in 2000, mandated its member states to enact biennial National Action Plans to Combat Poverty and Social Exclusion.

In Japan, however, the government has been reluctant to acknowledge poverty—let alone social exclusion—as a social issue and has not put any effort into measuring poverty or social exclusion. This is mainly due to a false sense of assurance that poverty, as we know it, had been eradicated in contemporary Japan. In recent years, the debate on economic inequality has renewed interest in poverty studies among social science scholars. Some researchers, who have managed to get access

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to government-owned large survey data or who have conducted their own surveys, have calculated the poverty rates and the take-up rates of public assistance (Abe 2005; Komamura 2005 to name a few). Yet, there has been little empirical study of social exclusion so far. A handful of researchers have introduced the concepts of social exclusion and inclusion and interpreted them in a Japanese setting (e.g. Fukuhara, ed. 2007; Iwata 2008). Some have tried to apply the idea to understanding issues of specific groups of people, such as the homeless, disabled persons and ethnic minorities (Iwata 2008, etc.). However, there has been no attempt to measure the extent of social exclusion in the general population.

The purpose of this paper is to define and measure the extent of poverty and social exclusion in contemporary Japan, to identify at-risk groups within the population and to capture the effects of earlier disadvantages in life on social exclusion later on. The paper draws data from a 2006 survey of about 600 households which was carefully designed to capture incidents of different dimensions of poverty and social exclusion: material deprivation, exclusion from public systems, lack of social relations, inadequate housing, lack of social activities and subjective poverty. The survey was designed exclusively to capture incidents of social exclusion, from its survey location to the selection of survey items, thus, it is possible to refine the working definition of social exclusion, perhaps more precisely than surveys designed for more general use [e.g. the European Community Household Panel (ECHP) and the European Union Statistics on Income and Living Conditions]. The findings both confirm some of the results of earlier work done in Europe and also show some aspects of social exclusion that are potentially Japan specific.

2. Measuring Social Exclusion

In Europe, the measurement of social exclusion is a fairly well-established branch of social science. Many scholars and institutions such as the EU have tried to capture the essence of this multifaceted phenomenon by analyzing existing or newly designed social surveys (e.g. Burchardt, Le Grand and Piachaud 1999; Bradshaw *et al.* 2000, Gordon *et al.* 2000; European Commission Social Protection Committee 2001; Barnes *et al.* 2002; Moio 2002; Muffels *et al.* 2002; Tsakoglou 2003; Pantazis *et al.* 2006 to name a few). Table 1 shows but a few of these attempts. These studies use not only economic indicators but also various social indicators such as health, education, housing, social participation and service exclusion. However, none of them use all these dimensions, but only a selection of dimensions which happen to be available in existing data. All of them include some indicators of low income, mostly defined as less than 50% of the median income. Also, most of them include some indicators which represent detachment from the labor market (unemployment, living in households with no worker and working part-time or less).

While indicators for low income and detachment from the labor market are often used in traditional poverty studies and are fairly easy to find, it is much harder to do so for dimensions of social exclusion. Many studies include some (albeit a limited number of) indicators representing a low level of social participation, engagement or integration into society, but the number and selection of indicators seem to be more influenced by the availability of data than theoretical considerations. Burchardt, Le Grand and Piachaud (1999) is notable because it specifically defines social exclusion as not being able to participate in four key activities of human existence: consumption, production, political engagement and social interaction (p. 31). Yet, as Levitas (2006) and Saunders, Naidoo and Griffiths (2007) point out, its selection of indicators from the British Household Panel Survey to represent these activities is rather limited.

Table 1. Selected Empirical Studies of Social Exclusion.

	European Commission Social Protection Committee (2001)	Burchardt, Le Grand and Piachaud (1999)	Burchardt, Le Grand and Piachaud (2002)	Bradshaw <i>et al.</i> (2000), Gordon <i>et al.</i> (2000), Levitas (2006)	Tsakoglou (2003)	Moisio (2002)	Saunders, Naidoo and Griffiths (2007)	This paper
Data	Mostly ECHP or Statistics on Income and Living Conditions (SILC)	British Household Panel Survey (BHPS)	British Household Panel Survey (BHPS)	PSE survey (UK)	ECHP (EU)	ECHP (EU)	CUPSE survey (Australia)	The 2006 LCS (Japan)
Definition of social exclusion	12 Primary indicators and 9 secondary indicators, not aggregated	5 Dimensions, not aggregated	4 Dimensions, not aggregated	4 Dimensions, not aggregated	Cumulative disadvantage = those suffering from more than two dimensions	4 Dimensions, not aggregated	3 Dimensions, not aggregated	8 Dimensions including income poverty, not aggregated
Dimensions: •Impoverishment	Low-income rate after transfers (threshold at 60% median) by gender, age, activity status, household type and housing tenure Distribution of income (income quintile ratio), Gini coefficient Persistence of low income Median Low income gap Low income before transfers, low income anchored at a fixed time point	Low income (less than 50% median)	Consumption: low income (less than 50% median)	Impoverishment (low income, deprivation of socially perceived necessities)	Low income (less than 50% median)	Low income (less than 50% median)	Economic exclusion (lack of savings or assets, inability to raise money in emergency, not having 'treats', not having enough to get by on)	Low income (less than 50% median) Subjective poverty

Table 1. Continued.

	European Commission Social Protection Committee (2001)	Burchardt, Le Grand and Piachaud (1999)	Burchardt, Le Grand and Piachaud (2002)	Bradshaw <i>et al.</i> (2000), Gordon <i>et al.</i> (2000), Levitas (2006)	Tsakoglou (2003)	Moisio (2002)	Saunders, Naidoo and Griffiths (2007)	This paper
Dimensions:								
•Financial instability		Financial Instability (savings less than £2000, not subscribing to private pension, self-employed)						
•Labor market attachment	Long-term unemployment rate (more than 12 months; more than 24 months), jobless households		Production; Not employed or self-employed, in education or training or looking after family	Joblessness, Being in a household with no worker		Non-integration to the Labor Market (25- to 55-year olds who work less than 15 hours/week)	(Unemployed, being in jobless household—part of economic exclusion)	
•Material deprivation					Lack of consumer durables, deprivation of necessities			Lack of consumer durables, deprivation of necessities
•Exclusions from systems and services				Service exclusion [utility (water, gas, electricity and telephone) disconnections or low usage, unavailable or unaffordable; lack of access to public services (libraries, public sports facilities, museums, doctor, dentist, post office, etc.), or private services (worship, bus, train, shops, pubs, etc.)]	Lack of amenities		Service exclusion (lack of access to medical treatments, child care, frail elderly care, banking or utility payments in arrears)	Exclusion from public systems (such as voting, social insurance, public services and facilities, public utilities)

Table 1. Continued.

	European Commission Social Protection Committee (2001)	Burchardt, Le Grand and Piachaud (1999)	Burchardt, Le Grand and Piachaud (2002)	Bradshaw <i>et al.</i> (2000), Gordon <i>et al.</i> (2000), Levitas (2006)	Tsakoglou (2003)	Moisio (2002)	Saunders, Naidoo and Griffiths (2007)	This paper
Dimensions: •Lack of social relations or social participation		Non-participation in activities recognized by others (e.g. employed, self-employed, student, housewife, retired); Non-participation in decision making (neither voting nor participating in political activities); Lack of support from friends, family and community	Political Engagement: Does not vote; Social Interaction: Lacks someone to offer support (listen, comfort, help in crisis, relax with, appreciate them)	Exclusion from social relations [(a) non-participation in common social activities (holidays, pub, visiting friends and family, etc.), (b) isolation = lack of social contact with family and friends, (c) lack of support, (d) disengagement from civic activities and (e) confinement]			Disengagement (from social contacts, social life, non-participation in community activities, no holidays, children not participating in school outings, children not having leisure and hobby, cannot attend weddings, cannot get transport to important events)	Inactivity (lack of activities and participation in various activities which construct personal spheres, e.g. sports, neighborhood groups, holidays, eating out, religious groups) Lack of social relations (person-to-person contacts and human networks which one can draw upon when in need)
•Inadequate housing						Housing deprivation		Housing deprivation

Table 1. Continued.

	European Commission Social Protection Committee (2001)	Burchardt, Le Grand and Piachaud (1999)	Burchardt, Le Grand and Piachaud (2002)	Bradshaw <i>et al.</i> (2000), Gordon <i>et al.</i> (2000), Levitas (2006)	Tsakoglou (2003)	Moisio (2002)	Saunders, Naidoo and Griffiths (2007)	This paper
Dimensions: •Health	Life expectancy at birth; self-defined health status (by income level)							
•Education	Early school leavers not in education or training					Inadequate education, household head's education level is less than ISCED0-2		

Note: Statistics on Income and Living Conditions, SILC.

Studies using survey data specifically designed to capture social exclusion have incorporated fairly extensive lists of social indicators. These include the Poverty and Social Exclusion (PSE) survey in the UK (Bradshaw *et al.* 2000, Gordon *et al.* 2000, Levitas 2006) and the Community Understanding of Poverty and Social Exclusion (CUPSE) survey in Australia (Saunders, Naidoo and Griffiths 2007). The PSE survey has pin pointed the measurement of social exclusion in several respects. First, it operationalizes the concept of not being able to participate in key activities in society. Second, the PSE survey includes a range of questions on (not being able to have) social relations. Third, following the tradition of measuring relative deprivation in Townsend (1979) and subsequent *Breadline Britain* surveys, the PSE survey directly measures impoverishment or deprivation, not merely a lack of resources such as income (which can be a strong indication of deprivation but not necessarily the same phenomenon). Fourth, it has paid attention not only to the economic constraints of social inclusion but also to other constraints, such as health or disability, lack of interest, time or family constraints.

The PSE survey measures social exclusion in four dimensions: impoverishment and material deprivation, labor market exclusion,¹ service exclusion (including lack of access to gas, electricity, water or a telephone at home) and exclusion from social relations (non-participation in common activities, the extent and quality of social networks and isolation, support available on a routine basis and in times of crisis, disengagement from political and civic activity and confinement resulting from fear of crime, disability or other factors).

The CUPSE survey in Australia includes indicators similar to the PSE survey but its grouping and selection of items are slightly different. One notable fact is that the CUPSE survey's selection of indicators is based on the public's perception of necessary activities, similar to socially perceived necessities for deprivation indicators (as in Mack and Lansley 1985). By taking this extra step in refining the list of activities, the CUPSE survey manages to give much more credibility to selected social exclusion indicators. It measures social exclusion in three dimensions: (a) economic exclusion (lacking savings, assets, the ability to raise money in an emergency, not having 'treats', not having enough to get by on, being unemployed and being in a jobless household); (b) service exclusion (lacking access to medical treatment, child care, frail elderly care, banking and utility payments in arrears); and (c) disengagement (lacking social contacts, social life, participation in community activities, holidays, children not participating in school outings, children not having leisure or hobbies, inability to attend weddings and inability to obtain transport to important events).

3. Data

3.1 Survey Sample

The data analyzed in this paper comes from the 2006 Living Conditions Survey (LCS),² conducted by a team of researchers at the National Institute of Population and Social Security Research in

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1. Although Levitas (2006) claims that 'treating either labour market exclusion (not in the labor force) or being in a jobless household as in themselves indicative of social exclusion is problematic' (p. 136).
 2. The survey was conducted as a part of the *Empirical Study of the Effect of the Social Security System on Social Exclusion* (Principal Researcher: Abe Aya), funded by a Ministry of Health, Labor and Welfare Grant for Health and Labor Science.

Tokyo, with the author as the head of the team. The LCS was conducted by distributing questionnaires to a randomly selected sample of 1,600 persons above 20 years old [chosen from the residential registry (*jūminhyō*)]³ in the southern half of the city of Kawasaki. Kawasaki City is in Kanagawa Prefecture and shares a border with Tokyo. It developed as part of the industrial belt connecting Tokyo and Yokohama and has traditionally hosted many medium to large factories in the southern section of the city, with a flux of migrant laborers from rural areas. Thus, the southern section of Kawasaki is characterized as an area of blue-collar workers and former blue-collar workers who are now retired. The location was chosen because, by doing so, we expected to capture more low-income, low social class people. Due to a limited budget, the research team felt that the survey would not collect enough observations of poor people in a randomly chosen national sample. Thus, the results of the analysis may not be representative of the overall population of Japan. However, the main purpose of this paper is not to measure the average extent of social exclusion in the general population but is to assess the relative positioning of different populations of subgroups in terms of social exclusion. For this purpose, this sampling methodology was deemed to be adequate.

Out of 1,600 questionnaires distributed, 584 were collected (effective response rate 36.5%). Although the response rate is low, it is within the bounds for social surveys in Japan in recent years, as response rates have been dropping rapidly due to heightened public concerns about privacy. Compared to the general population, the sample collected slightly over-represents low-income people and the elderly (over 65 years old).

3.2 Survey Design

The LCS follows the methodology developed by the PSE in the UK, modified to fit the specific Japanese setting. The items chosen are those commonly owned or done by the general public in Japan. However, the length of the questionnaire and the sample size had to be reduced considerably due to budget limitations.

The survey was designed with the following rationale. First, it should capture not only economic impoverishment but also social impoverishment (such as lack of social relations and networks and inactivity). Second, it should capture how an individual is excluded (forced out) from various public constructs within society, e.g. public schemes such as public pensions and public health insurance,⁴ public services such as transportation and utilities and public spaces such as libraries and sports facilities. Third, it should also capture exclusion from private spheres, e.g. a lack of social relations (communication with others, meeting family obligations and having friends) and social networks (support in need). Fourth, it should measure the degree of an individual's activities within the society, e.g. activities such as being active in local communities [neighborhood organizations, women's clubs,

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3. The residential registry is a list of all residents residing within a municipality. All residents of Japan are mandated to register at the office of their residing municipality, and the registry serves as the official base for local taxes, voting, public schools and other public services.
 4. Japanese public pension and public health care systems are social insurances, and individuals have to pay premiums in order to subscribe to pension insurance and health insurance. Failure to pay premiums means not being able to receive pension payments and medical payments (i.e. individuals must pay 100% of the medical costs out of pocket). The premium default is becoming an increasingly big problem (see Abe 2003 for details).

Table 2. Eight Dimensions of Social Exclusion.

Dimension	Description
Basic human needs	Lack of materials required for human survival
Material deprivation	Lack of material possessions owned by most of the general population
Exclusion from systems	Exclusion from various public constructs (social security schemes, public services and public spaces)
Lack of social relations	Lack of person-to-person connection with others, lack of human networks which one can draw upon when in need
Lack of adequate housing	Inadequate standard of housing
Lack of activities	Lack of activities and participation in various activities which construct personal spheres (including activities done alone)
Subjective poverty	Perception of being deprived
Income poverty	Inadequate income (defined as below 50% of the median income)

Parent–Teacher Association (PTA), etc.], civic activities (political involvement, etc.) and personal communities (alumni clubs, sports and hobby circles, etc.). Fifth, any exclusion or lack of these items must be *involuntary*, rather than *voluntary*. Thus, the lack of the item is indeed an enforced deprivation, not a preference of the individual. Sixth, it should not only capture involuntary exclusion due to economic constraints but also due to other constraints.

To clarify, the survey classified items used as social exclusion indicators into eight dimensions: (lack of) basic human needs, material deprivation, exclusion from systems and services, inadequate housing, (lack of) activity, (lack of) social relations, subjective poverty and income poverty. The description of each dimension is briefly described in Table 2.

The number of items used for the construction of these indicators amounts to 50. As mentioned above, the survey specifically distinguishes between the lack of a certain item due to deprivation and lack of an item due, merely, to a preference; the confusion of the two was a criticism made by Piachaud (1981) against Townsend's (1979) pioneering work on measuring relative deprivation. This criticism was overcome in the 1983 and 1990 *Breadline Britain* surveys by distinguishing those who 'do not have but do not want' from those who 'do not have and cannot afford' (Mack and Lansley 1985, Gordon *et al.* 2000). In this survey, we used a similar approach. Except for those items which are widely considered basic needs (such as adequate food, clothing and medical care), we asked whether items 'are wanted but cannot be obtained (or achieved)', 'not wanted (or not interested)' or 'are obtained (or achieved)'. Here, the survey expands the idea of deprivation from 'cannot afford' in the UK surveys to 'not being able to have for any reason'. This is because our survey team recognized that there are non-economically driven deprivations. For example, there might be an elderly person who cannot vote because she is not physically well, a man who cannot enjoy social activities because he has to work until late at night or a housewife who cannot enjoy social life because she has to take care of children or frail elderly at home. All these cases are a form of social exclusion, but they are not economically driven (i.e. they may be able to 'afford' to do these items but cannot for some other constraints). They cannot be mitigated simply by having more 'resources' (i.e. money). Non-economically driven social exclusion is particularly thought to be extensive in Japan since public

perception and social norms often restrict individual behavior.⁵ For this reason, it was especially important in Japan to capture the reasons a person is deprived of an item. Thus, for most items, the survey also asks why that item cannot be obtained (or achieved) in a multiple-choice question.⁶ The respondents are given four options: economic, work and family related (or access and facility related), health-related and other. No matter what the reason for the deprivation, if involuntary it is considered to be a form of exclusion.

Income data used for the analysis is household income. The survey asked the respondents to fill in the sum of the after tax (and social security premiums and benefits, including pensions and other social security benefits) incomes of the head of household (respondent) and his/her spouse (if any) in increments of one million yen.⁷ The 'equivalent household income', e.g. the value of household income adjusted for household size, was obtained using the equivalent scale of the square root of the household size.

3.3 Basic Statistics

Table 3 shows the distribution of answers for the 50 items used to construct social exclusion indicators. For each of the 50 items, a fraction of the respondents said they could not obtain, or achieve, the item. The fraction has a fairly wide range, from less than 1% (television and refrigerator) to nearly 50% (volunteer or charity activity). The least deprived are consumer durables. The deprivation rates for this category range from a television (0.5%) or a refrigerator (0.5%), to stereo speakers (3.6%). The rates are all very low, yet, put together, about 10% of respondents lack at least one of the 10 items. The deprivation of medical access (not being able to see a doctor when needed) is also low, at 2.2%, which is an accomplishment of the Japanese public health insurance system. However, it is worrisome to see that 2.2% of the population cannot receive health service, even though the Japanese public health system upholds universal coverage as its principle.⁸

The items which show the highest deprivation rates are those belonging to 'lack of activities'. Nearly half (49.1%) of all respondents answered that they cannot participate (even though they want

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5. For example, a man without a job (even if he does not need a job economically) may be reluctant to be seen outside his house during daytime because not working is considered 'inappropriate' for men. A woman who has enough money to hire a nurse to take care of an elderly mother at home may be compelled to stay at home to take care of her because 'it is the duty of a daughter' to take care of an elderly mother. These are but a few examples of how individuals may be excluded from society for non-economic reasons.
 6. For items in basic human needs, material deprivation, housing and income poverty, it was assumed that economic constraints are the main reason for deprivation, and they can be 'solved by money'. Thus, the reason was only asked for items in systems exclusion, lack of activities and social relations.
 7. Ideally, it would be necessary to ask the incomes of all members of a household in order to accurately determine the household income. However, considering the limitations of an interview survey and the lack of information on the part of the respondents themselves, we believed that the most reliable values would be obtained by limiting data to the income of respondents and their spouses.
 8. In Japan, the public health insurance system is supposed to cover the entire population. However, the National Health Insurance, which covers non-employed persons and their families (excluding dependent family members of employees), such as the self-employed, farmers, retired people, etc., is going through a crisis, as 19% of its subscribers are late in paying their insurance premiums (taxes), and as many as 330,000 households have dropped out of the system completely (i.e. have no insurance coverage) [Ministry of Health, Labour and Welfare (MHLW) homepage (<http://www.mhlw.go.jp/houdou/2008/10/h1030-2.html>) accessed 19 October 2009].

Table 3. Percentage of Deprivation (Exclusion) for Eight Dimensions of Social Exclusion.

		Deprivation rate (%)	Economic reasons (%)	Family or work reasons (%)	Health reasons (%)	Other reasons (%)
Basic human needs						
Food	In the past year, could not afford food that the family needed ('often', 'sometimes', 'once in a while')	10.3	10.3			
Clothing	In the past year, could not afford clothes that the family needed ('often', 'sometimes', 'once in a while')	19.4	19.4			
Medical care	Cannot receive medical care when needed	2.2	2.2			
Material deprivation						
Consumer durables (all 10 items are chosen to be 'socially perceived necessities' by the '50% rule')	Could not afford two or more of the following 10 items:	9.9	9.9			
	Television	0.5	0.5			
	Refrigerator	0.5	0.5			
	Micro-wave oven	2.1	2.1			
	Air conditioners	1.4	1.4			
	Hot water heater	2.4	2.4			
	Telephone	2.6	2.6			
	Video recorder	3.3	3.3			
	Stereo	3.6	3.6			
	<i>Reifuku</i> (special clothes for formal occasions)	3.1	3.1			
	Futon (bedding) for all members of the family	2.7	2.7			
Exclusion from systems						
Voting in elections	'Never', 'almost never' (total 16.8%), minus those who are not interested (9.6%)	7.2		4.0	1.4	1.9

Table 3. Continued.

		Deprivation rate (%)	Economic reasons (%)	Family or work reasons (%)	Health reasons (%)	Other reasons (%)
Pension insurance	Subscribing to neither public nor private pension	9.2				
Health insurance	Subscribing to neither public nor private health insurance	4.3				
Public service and facilities	Cannot use at least one of the following services or facilities:	45.2				
	Public libraries	25.4	0.0	11.6	2.2	11.6
	Public sports facilities (public pool, etc.)	32.4	1.5	16.1	4.5	10.3
	Public offices	7.6	0.0	2.6	1.2	3.8
	Public health centers	16.5	0.0	4.5	2.1	9.9
	Community centers, <i>chonaikai</i> centers, etc.	14.2	0.2	5.1	2.2	6.7
	Public parks	10.7	0.2	4.1	2.1	4.3
	Public transportation (bus, train, etc.)	4.0	0.2	0.9	1.0	1.9
Public utilities	Utilities (electricity, gas, water)	7.0	7.0			
Lack of social relations						
Communication with others	Does not communicate with others (including family) more than once in 2–3 days (including telephone and e-mail)	5.7				
Social life	Cannot meet with friends, family and relatives for economic reasons	5.1	5.1			
	Cannot attend weddings, funerals, etc. of relatives for economic reasons	3.3	3.3			

Table 3. Continued.

		Deprivation rate (%)	Economic reasons (%)	Family or work reasons (%)	Health reasons (%)	Other reasons (%)	
Social network	Does not have anyone (besides coresiding family) for any one of the below items	20.5					
	Someone who takes care of you when sick	8.1					
	Someone to help out around the home for things you cannot do alone (e.g. moving furniture)	11.6					
	Someone who you can talk to about important decisions in life (jobs, marriage, etc.)	8.6					
	Someone to talk to when feeling lonely	9.7					
	Someone to talk to about family troubles	5.6					
	Someone who takes care of children or frail elderly once in a while	14.1					
Inadequate housing	Unstable housing						
	In the past year, failed to pay rent	4.2	4.2				
	Housing amenities	Do not have more than three of the following six items:	3.6	3.6			
		Family's own toilet	1.2	1.2			
		Family's own kitchen	1.7	1.7			
		Family's own bath	3.3	3.3			
		Washing room separate from kitchen	7.4	7.4			
		Bedroom separate from living room	8.6	8.6			
		More than one bedroom for multiple-member family	17.3	17.3			

Table 3. Continued.

		Deprivation rate (%)	Economic reasons (%)	Family or work reasons (%)	Health reasons (%)	Other reasons (%)
Lack of activities						
Holiday	Less than one overnight family trip a year (excludes not interested)	35.1	16.4	18.4	5.0	5.0
Eating out	Eating out less than once a month (excludes not interested)	37.4				
Social activities	Cannot participate in more than one activity among the six below (excludes not interested):	66.1				
	Neighborhood groups, PTA, women's or senior groups	38.6	1.7	23.4	5.9	9.3
	Volunteer and charity activities	49.1	2.6	31.0	7.2	10.3
	Hobby or sports	26.2	3.3	16.5	5.9	3.3
	Religious groups	6.9	0.5	2.2	1.6	2.1
	Political groups	12.2	1.4	5.0	3.1	3.3
	Labor unions	20.6	1.2	6.8	2.6	9.3
Subjective poverty						
Subjective poverty	Living conditions are 'extremely harsh'	10.0				
Household budget	Run into debt every month	20.0				
Savings	Cannot save ('at all', 'depleting savings')	41.9				
Relative income poverty						
Household income	Equalized household income below 50% of median	10.9				

Source: Living Conditions Survey 2006.

to) in ‘volunteer and/or charity activities’, and 38.6% responded that they could not participate in ‘local activities’ [such as *chōnai-kai* (neighborhood associations) or the PTA]. The overall deprivation rate of this dimension (defined as the percentage of those who cannot participate in more than one activity among the six listed in the category) amounts to 66.1%. The deprivation rate for ‘overnight family trip at least once a year’ is 35.1%, and the rate for ‘eating out with family at least once a month’ is 37.4%.

Deprivation (or ‘exclusion’) from public facilities is also prevalent (public library 25.4%, sports facilities 32.4%, etc.). Overall, 45.2% of respondents are excluded from one or more type of public facility.

The most striking finding is that a significant portion of the respondents answered that their basic human needs, such as food and clothing, are not met. The percentage of those who answered ‘frequently’, ‘sometimes’ or ‘once in a while’ to the questions, ‘In the past year, have you experienced not being able to afford food that your family needed?’ and ‘In the past year, have you experienced not being able to afford clothes that your family needed?’ are 10.3% and 19.4%, respectively. Of course, such numbers should be treated with care, as it is left to each respondent to decide ‘what food/clothes are needed’, but it is a striking finding nonetheless.

Let me add some comments on the ‘reasons why’ these respondents answered that they are unable to obtain or participate in the listed items since this will provide us with a glimpse of social exclusion and/or deprivation which arises from non-financial reasons. Distinguishing non-financial reasons from financial reasons should reveal some understanding on why there is not much overlap between income poverty and social exclusion, as found in many previous studies (e.g. Bradshaw and Finch 2003). In this paper, I will not go into a detailed analysis of social exclusion by different reasons but briefly mention the differences between dimensions.

Looking at Table 3, the causes of deprivation are quite divided between dimensions. Almost no respondents stated ‘economic reasons’ for exclusion from public facilities and voting. ‘Access- and facility-related reasons’ and ‘other reasons’ are the most often stated reasons for exclusion from public facilities. This might be due to the fact that many Japanese public facilities are not accessible to wheelchairs and those who have trouble walking. Distance to such facilities may also be a problem. For activities, a similar trend can be seen, but for this category, a small but significant number states economic reasons for their inactivity. For example, 3.3% of respondents cannot engage in a hobby or sports activities due to economic reasons. But by far, the most often stated reason is ‘family or work’. In these cases, time is probably the limiting factor. Health reasons are also stated for activities.

4. Construction of Social Exclusion Indexes: Methodology

Social exclusion indexes for the seven dimensions are constructed as follows. For each of the 50 items in the seven dimensions of social exclusion, a value of 1 was assigned if the item is deprived, and a value of 0 if the item was not deprived. Then, for each dimension, the values were summed and then standardized, so that no matter how many items in each dimension, the aggregated index assumed a value from 0 (all items in the dimension are satisfied) to 1 (all items in the dimension are deprived).

$$EX_i^d = \frac{\sum_{j=1}^{J^d} d_{ij}^j}{J^d},$$

$EX(1, 2, 3, \dots, 7)_i$ = social exclusion index of dimension (1, 2, 3, ..., 7) for individual i

J^d = number of items in dimension d

$d = 1, 2, 3, \dots, 7$

$d_{ij} = 1$ if individual i is deprived of item, otherwise 0.

The last dimension, income poverty, is defined in a standard method as those whose household income is below 50% of the median income.

Table 4. Basic Statistics: Social Exclusion Indexes.

Dimensions	<i>n</i>	No. of items	Social exclusion indexes (standardized)		Percentage of respondents who are excluded (deprived) ^a	
			Average	Standard deviation	Threshold (no. of items)	%
Lack of basic needs	584	3	0.106	0.227	1	20.9
Material deprivation	584	10	0.022	0.095	1	9.9
Exclusion from systems	584	10	0.141	0.173	4	11.0
Lack of activities	584	9	0.075	0.166	4	10.8
Housing deprivation	584	6	0.061	0.139	2	11.8
Lack of social relations	584	8	0.247	0.210	4	17.6
Subjective poverty	584	3	0.237	0.310	2	18.0
Income poverty	456	1	479.8	338.457	198	11.6

^aThe thresholds for determining who is 'excluded' were determined by the author, to ensure that the exclusion rates will be roughly 10–20% of the respondents.

Table 4 shows the basic statistics of the social exclusion indexes for the seven dimensions and income poverty. Comparing absolute values of the indexes between the eight fields or assessing whether each of these values is 'too high' or 'too low' is not meaningful since these values depend on the set of items that are used for the construction of the indexes. For example, if one item in the category is replaced with another item whose deprivation rate is much lower, then the average index for the category will decrease. What is important is the distribution of indexes. If there is a large fraction of the population whose index is much lower than the median, it means that these people may be excluded from normal activities that are commonly enjoyed by the majority of the population. In this respect, social exclusion is a relative concept. Also, these indexes are helpful in comparing subgroups of the population and identifying who are most likely to be excluded and in what dimension.

The right side of the table shows the social exclusion rate (or in the case of income poverty, poverty rate). As with income poverty or the relative deprivation rate, the social exclusion rate is defined as those who are excluded in more items than the cutoff line. The problem is how to set this cutoff line. In most cases, the determination of the cutoff line seems rather arbitrary. Apospori and Millar (2003) define the cutoff line as 60% (or 80%) of the median (of the social exclusion index). Tsakloglou and Papadopoulos (2002) call the bottom 20% of the population in the index 'the risk group'.⁹

9. Tsakloglou and Papadopoulos (2002) also identify those 'at high risk of social exclusion' as those 'at high risk of chronic, cumulative disadvantages' (p. 146). Using the ECHP, they constructed four deprivation indicators: income (poverty), living conditions, necessities of life and social relations. Then they constructed an indicator for 'cumulative disadvantage' as those suffering from two or more deprivations. Adding a dynamic dimension for this indicator, they defined those at high risk of social exclusion as those at high risk of cumulative disadvantage at least twice during a period of three years or three waves of the ECHP.

There is no ‘correct’ way to define the cutoff line, and as long as a consistent approach is taken, it should suffice. For the purpose of this paper, which is to identify risk groups and to analyze the effects of earlier disadvantages on current social exclusion, we decided it was best to have about the same size of the fraction of the population which are excluded in each of the eight dimensions, and thus, the cutoff line was chosen so that the exclusion rate lies somewhere between 10% and 20%.

5. Identifying ‘At-Risk’ Groups

Table 5 shows the exclusion rate for different subgroups of the population. The asterisk shows the result of chi-square statistics for the subgroup and the subgroup comprising all other samples is statistically significant. Comparing men and women, in many dimensions, men show higher rate of exclusion than women. All previous studies of income poverty in Japan have shown that women are consistently at a higher risk of income poverty, but even for items such as basic needs and material deprivation, there seems to be some indication that men are more deprived than women, even though this is not statistically significant. For ‘lack of activities’ and ‘subjective poverty’, men are at a statistically significantly higher risk than women. The finding that men are more excluded than women in social participation and activities concurs with the findings from the PSE survey (Gordon *et al.* 2000).¹⁰ However, this tendency seems especially strong in Japan, and it could be a particular characteristic of Japanese men to be isolated and disengaged.

The relationship between age groups and social exclusion is also interesting. In terms of income poverty, the poverty rate is slightly higher at 20–29 years old, decreases as respondents age and then increases dramatically over 60 years old. This is consistent with findings on previous studies of income poverty in Japan (Abe 2008, Tachibanaki and Urakawa 2006). So it was expected that dimensions such as basic needs, material deprivation and housing deprivation would also exhibit a similar pattern, but this is not the case. None of the age groups are statistically significantly more at risk than the rest, and for Housing, younger groups (especially 20- to 29-year olds) have a higher and the elderly a lower risk of deprivation. This may be due to the fact that most elderly have already acquired their own housing, while young people are just starting to accumulate assets, the largest of which is housing. However, the elderly (those who are more than 70 years old) are statistically significantly more at risk of systems exclusion and lack of activities. In addition, those who are in their 50s are more at risk of many forms of social exclusion including housing deprivation, subjective poverty, lack of activities and social relations. In sum, the elderly are more prone to become income poor, yet that does not directly lead to a lack of basic needs or material deprivation. However, they are more at risk of exclusion from systems and a lack of activities, probably due to health and other reasons. Interestingly, the age group which is most at risk of multiple dimensions of social exclusion is the 50s. People in their 50s, presumably men, are at a higher risk of lack of activities and social relations. This may be due to the fact that those in their 50s, especially men, are overworked and have no time left for activities (other than work) and

10. In the PSE survey, women, compared to men, showed a little more contact with family and friends, received higher levels of support and were involved slightly more in civic organizations (Gordon *et al.* 2000), even though whether these are statistically significant differences or not is not certain.

Table 5. Share of Respondents ‘Socially Excluded’, by Key Social Variables.

	<i>n</i>	Income poverty	Lack of basic needs	Material deprivation	Housing deprivation	Subjective poverty	Exclusion from systems	Lack of activities	Lack of social relations
Overall	584	0.116	0.209	0.099	0.118	0.180	0.110	0.108	0.176
Men	290	0.117	0.228	0.114	0.114	0.224**	0.093	0.152***	0.200
Women	294	0.116	0.190	0.085	0.122	0.136	0.126	0.065	0.153
Age group									
20–29	113	0.137	0.195	0.097	0.168*	0.106*	0.106	0.106	0.097**
30–39	105	0.082	0.210	0.124	0.095	0.190	0.105	0.076	0.124
40–49	87	0.059	0.149	0.069	0.092	0.241	0.080	0.149	0.126
50–59	100	0.092	0.230	0.110	0.180*	0.260**	0.080	0.260**	0.160*
60–69	96	0.111	0.271	0.104	0.083	0.177	0.083	0.094	0.188
Over 70	83	0.226***	0.193	0.084	0.072	0.108*	0.217***	0.289***	0.060
Household type ^a									
Single elderly women	12	0.571***	0.250	0.000	0.000	0.083	0.167	0.000	0.083
Single elderly men	11	0.000	0.182	0.273*	0.182	0.273	0.091	0.273*	0.273
Single working-age women	43	0.023	0.093*	0.163	0.395***	0.023**	0.163	0.047	0.116
Single working-age men	54	0.130	0.407***	0.259***	0.370***	0.222	0.074	0.278***	0.222
Households with children ^b	121	0.116***	0.157	0.083	0.041***	0.182	0.083	0.083	0.107**
Working status									
Working	361	0.069***	0.188	0.097	0.122	0.202*	0.097	0.116	0.158
Not working (housewife)	98	0.136	0.214	0.061	0.071	0.102**	0.082	0.071	0.133
Not working (retired)	36	0.083	0.167	0.056	0.028	0.174	0.056	0.000**	0.194
Not working (other)	86	0.295***	0.291**	0.174**	0.186**	0.221	0.209***	0.151	0.302***

Table 5. Continued.

	<i>n</i>	Income poverty	Lack of basic needs	Material deprivation	Housing deprivation	Subjective poverty	Exclusion from systems	Lack of activities	Lack of social relations
Education ^c									
Junior high school	95	0.194**	0.326***	0.179***	0.189**	0.253**	0.158*	0.147	0.326***
High school	185	0.113	0.238	0.124	0.103	0.200	0.119	0.097	0.168
Specialty school	44	0.086	0.182	0.045	0.045	0.159	0.045	0.114	0.159
Junior college	103	0.092	0.175	0.068	0.107	0.136	0.117	0.117	0.146
College	138	0.092	0.116***	0.065	0.123	0.145	0.065***	0.094	0.094***

Note: Asterisk represents results of chi-square statistics of the group and all others: statistically significant at ***1%, **at 5%, *at 10%.

^aElderly = over 65 years old, working age = 20–64 years old.

^bHouseholds with children less than 16 years old.

^cJunior high school = 6 + 3 years schooling, high school = 6 + 3 + 3 years, specialty school, junior college = 6 + 3 + 3 + 2, college = 6 + 3 + 3 + 4 and over.

recommitting to social relationships. They are also prone to housing deprivation and subjective poverty. This concurs with other national statistics such as the suicide rate which peaks around the 50s for men [Ministry of Health, Labour and Welfare (MHLW) 2008],¹¹ and the demography of homeless persons, who are also overwhelmingly men in their 50s [Ministry of Health, Labour and Welfare (MHLW) 2007].¹²

Next, let us look at household types. Here some specific household types which are prone to income poverty were selected; namely households with only one member. Single-person elderly households, either male or female, have only a small number of cases, so the results should be taken with care. Single elderly women, who are often cited to have poverty rates as high as 50% (Abe 2008), do not seem to be deprived or excluded from any other dimensions. By far, the most at risk of deprivation and exclusion is working-age men in single-person households.¹³ They are at a higher risk of lacking basic needs, material deprivation, housing deprivation and a lack of activities. Households with children were suspected to be socially excluded because of the financial and time constraints of raising children, but they are at a lower risk of exclusion/deprivation in all dimensions, and for housing deprivation and lack of activities, they are at a statistically significantly lower risk.

The results by working status were more or less expected. For our analysis, non-working people were divided into three categories: housewives, retired people and other. Not being in the workforce, by itself, does not seem to indicate a higher risk of social exclusion. Actually, being a housewife or a retired person in Japan seems to indicate a lower risk of social exclusion for some dimensions (subjective poverty for housewives and housing deprivation and lack of activities for retired persons). This concurs with findings from the PSE survey (Gordon *et al.* 2000; Levitas 2006). However, not being in the workforce for reasons other than being a housewife or a retiree does indicate a higher risk of social exclusion in as many as six dimensions. Even for items not financially caused, such as exclusion from systems and lack of activities, they are at a statistically significantly higher risk than others. Thus, labor force detachment, by itself, does not seem to be associated with social exclusion, but *involuntary* detachment from the labor force does. On the other hand, working people are much less likely to be income poor but are more likely to be subjectively poor.

Lastly, the results by education level of respondent clearly show that those with low levels of education attainment are more likely than others to be socially excluded. Those with a junior high school level of education [compulsory education (up to age 15)] are statistically significantly at a higher risk of income poverty, lack of basic needs, material deprivation, housing deprivation, subjective poverty, exclusion from systems and lack of social relations. In fact, the only dimension where the result was not statistically significant was lack of activities, but they do show the highest percentage of social

11. In 2003, the suicide rate for 55- to 59-year-old men was 71.1 (per 100,000 persons) while that of 20- to 24-year olds was 21.5; 25- to 29-year olds: 29.2; 30- to 34-year olds: 32.9; 35- to 39-year olds: 37.2; 40- to 44-year olds: 49.0; 45- to 49-year olds: 56.3; 50- to 54-year olds: 66.0; 60- to 64-year olds: 58.4; 65- to 69-year olds: 49.4; 70- to 74-year olds: 39.5 (MHLW 2008).

12. In Japan, homeless people are mostly men in their 50s and 60s; 42.7% of homeless people are in their 50s and 95.4% are men (MHLW 2007).

13. This category does not necessarily mean 'unmarried working-age men' as many unmarried adults live with their parents in Japan.

exclusion in this dimension as well. On the other hand, those with a college degree or above are statistically significantly less likely to be lacking basic needs and less likely to be excluded from social relations and systems.

6. Social Exclusion and Earlier Disadvantages

6.1 Previous studies

One of the questions that the LCS attempted to address was whether, and by how much, earlier disadvantages in life affect social exclusion today. For this question, there exist few studies in Japan compared to other industrial nations, such as the US and the UK, because there are very few panel data sets available. There is only one data set, the Japanese Panel Survey of Consumers by the Institute for Research on Household Economics, which has been continuing long enough to study the impact of life events such as marriage, divorce and the birth of children on poverty status. Findings from this data set have shown that those who divert from the ‘standard life course’, such as those who divorce, do not marry, etc., are more prone to becoming income poor (Iwata and Nishizawa 2005). However, this data set only covers women in a certain cohort, and it may not be wise to generalize findings to the general population. There are virtually no studies on the effects of childhood poverty on adult outcomes.¹⁴

Of course, one can find a myriad of studies linking childhood poverty to adult outcomes (such as income, labor force participation, educational attainment and crime and/or welfare dependency) in other developed countries (e.g. Duncan and Brooks-Gunn 1997). There are also some studies linking earlier disadvantages and current social exclusion. Hobcraft (2002) directly addresses the influence of childhood circumstances on social exclusion during adulthood. Using the National Child Development Study, Hobcraft shows that childhood disadvantages, such as family structure, occupational class and employment status of father, and some indicators of poverty (‘financial hardship’ and free school meals) are correlated with negative adult outcomes. However, the outcome indicators that the study employs are somewhat disappointing and are missing some aspects of social exclusion. The study does include many indicators which *could* indicate social exclusion (such as low income, homelessness and unemployment) but does not include social aspects of social exclusion, such as social participation and exclusion from services.

6.2 Results

The LCS is the first attempt, at least in Japan, to see if there is any continuing effect of earlier disadvantages on not only the current economic status of individuals but also social exclusion. The survey was designed to capture major events which are likely to be disadvantages earlier in life (that is, earlier than the survey point, not necessarily childhood). The disadvantageous events considered were childhood poverty, divorce, prolonged illness or injury and involuntary

14. There is only one panel data set, the 21st Century New-Born Baby Panel Survey by the Ministry of Health, Labor and Welfare, which contains questions on the well-being of children in households, but this data set only started in 2000, and respondents have not yet reached adulthood.

Table 6. Results of OLS for Social Exclusion Indexes.

	Lack of basic needs	Material deprivation	Housing	Subjective poverty	Exclusion from systems	Lack of activities	Lack of social relations
Equivalent household income	-0.0212***	-0.0034**	-0.0053*	-0.0455***	-0.0006	-0.0091*	-0.0084**
Sex (male = 1, female = 0)	0.0178	-0.0024	-0.0277**	0.05808**	-0.02386	0.02293	0.04411***
20–29 year old ^a	-0.0050	-0.0170*	-0.0079	-0.082*	0.0122	-0.0219	0.0072
40–49 year old ^a	-0.0399	-0.0233**	-0.0190	0.0301	-0.0543*	-0.0538	0.0093
50–59 year old ^a	-0.0089	-0.0202*	0.0002	0.0848*	-0.0276	0.0445	0.0163
60–69 year old ^a	-0.0125	-0.0135	-0.0166	-0.0166	-0.0371	-0.069*	-0.0157
70–79 year old ^a	0.0052	0.0089	-0.0008	0.0130	0.0367	0.0747*	0.0014
Over 80 years ^a	-0.0750	-0.0243	-0.0429	-0.0910	0.0602	0.1111*	-0.0809*
Single-person household	0.0299	0.0246**	0.1034***	0.0090	-0.0077	-0.0158	0.0356*
Single elderly	-0.0395	-0.0289	-0.1164***	0.0851	0.0298	0.0397	0.0397
Work status (working = 1, not working = 0)	0.0062	0.0098	0.0073	0.0388	0.0429**	0.0396	-0.0071
Living with children	-0.0256	-0.0007	0.0041	-0.0059	0.0213	-0.0132	-0.0154
Experienced sickness and injury	-0.0019	0.0013	0.0051	-0.0041	0.0533***	0.0097	-0.0050
Experienced divorce	0.0727*	-0.0061	0.0616***	0.0354	0.0389	0.0343	-0.0295
Experienced layoff	0.0444	0.0348***	0.0686***	0.1546***	0.0515**	0.0844***	0.0449**
Living status at age 15	0.1346***	0.0082	0.0204	0.0119	-0.0027	0.0453	0.0305
Intercept	0.14645***	0.02554	0.05771***	0.3003***	0.10824***	0.22127***	0.06733***
Adjusted R ²	0.0815	0.0453	0.1624	0.1115	0.0311	0.0754	0.0423

Note: Asterisk represents results of chi-square statistics of the group and all others: statistically significant at ***1%, ** at 5%, * at 10%.

^aBase: 30–39 years old.

layoff. The survey asked the respondents to fill in a life history questionnaire on job status, marriage (and divorce), childbirths, major illnesses and injuries,¹⁵ and living standard¹⁶ and household type at age 15.

Table 6 shows the results of the ordinary least squares (OLS) estimation of Social Exclusion Indexes in seven dimensions. The independent variables in question are experienced sickness and injury (=1 if yes, =0 if no), experienced divorce, experienced layoff and low living standard at age 15 (=1 if answered 'low' or 'very low', =0 otherwise). The current status of social exclusion and deprivation is, of course, very likely influenced by current economic status and household type, as inferred from the analysis in the previous section. For this reason, the following variables are added as control variables: equivalent household income, sex, age, class, has child(ren),¹⁷ single-person household, single elderly and working (=1 if the respondent is working, =0 if not). By doing so, the estimation should indicate whether there is any remaining effect of earlier disadvantages which are not captured by the respondents' current economic status and household type.

The results were surprising. Having an experience of being laid off has a positive and significant effect on current material deprivation, adequate housing, lack of activities, lack of social relations, exclusion from systems and subjective poverty, even after controlling for current income, age, sex and household type. Similarly, having an experience of divorce has a positive and significant effect on basic needs and housing deprivation, even after controlling for current marital status. Having an experience of a prolonged illness or injury has an effect on exclusion from systems (this may be due to loss of health or becoming physically challenged due to the illness and/or injury). Of course, the OLS analysis does not indicate causality, but merely a relationship, and thus, for example, it might be that those lacking activities and social relationships are more prone to being laid off, instead of the experience of being laid off causing individuals to lose social relationships and become more inactive. However, it is certain that these earlier disadvantages and one's current state of deprivation and social exclusion are related somehow. The experience of involuntary layoff, especially, seems to have an irrevocable effect on the process of social exclusion.

One variable which strongly suggests causality is the living standard at age 15. Having experienced a low standard of living at age 15 has a positive and significant effect on one's current lack of basic needs, even after controlling for current income, age, household type and experiences of divorce, layoff, illness and injuries. It is hard to imagine how current basic needs could somehow effect past living conditions, and thus, the result suggests that there is a lingering effect of growing up poor on one's current outcome, even after controlling for its effect through current income, household type (e.g. more prone to being single), working status (e.g. more prone to having no work) and other disadvantageous events (such as divorce, layoff, illnesses and injuries).

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15. 'Major illnesses and injuries' was defined as those illnesses and injuries which caused the respondents to be out of work or school for more than one month.
16. For 'living standard', the question was 'Compared to other families in Japan, how do you characterize the living standard of your family when you were 15 years old?' The answer was multiple-choice, with 'very low', 'low', 'average', 'high' and 'very high' as possible answers. The distribution of answers was: 11.1%, 18.0%, 51.4%, 15.0% and 2.7%, respectively.
17. This variable refers to whether or not there is a child less than 17 years old living in the household and not to whether the respondent ever had a child.

Let me add a few remarks on control variables. The coefficient for equivalent household income is negative and significant for all dimensions of social exclusion, except systems exclusion, indicating that income does play a role in determining the risk of social exclusion. The fact that income's influence is seen on lack of activities and lack of social relations shows that today's social engagement does require some economic backup. The exclusion of systems, on the other hand, does not seem to be influenced by income. The coefficient for sex dummy variable is positive and significant for subjective poverty and lack of social relations and negative and significant for housing deprivation. Japanese men are, compared to women, more anti-social, it seems. The age effect, after controlling for other variables, is not as strong as it seemed in Table 4. Those in their 20s are less likely to be subjectively poor, and those who are above 70 years old are more likely to be lacking activities. Similarly, none of the coefficients for 'having children' are significant, and many of them are positive. This shows at least that the hypothesis that those raising children may be socially excluded due to the heavy cost of raising children does not hold.

Work status (Working = 1, Not working = 0) is only significant in exclusion from systems, and those working are more likely than those who are not working to be excluded from systems. This is probably due to the fact that those who are working are more time constrained than those who are not working. However, the results may be misleading because I have put together all those who are not working (including retirees, housewives and the unemployed) in a single category. A more detailed analysis of labor force attachment and social exclusion is necessary.

7. Conclusion

This paper is one of the first attempts to capture the extent of social exclusion in the general population of Japan. It has drawn data from a survey which was carefully designed to measure social exclusion after examining similar surveys abroad.

The findings of this paper can be summarized as follows. First, sections of the population which are most vulnerable to social exclusion are not necessarily vulnerable in terms of income poverty. Thus, the overlap of different dimensions is not large, a finding similar to previous literature on social exclusion in other developed countries (e.g. Bradshaw and Finch 2003, Saunders, Naidoo and Griffiths 2007). In particular, the age group of those most vulnerable shows an interesting discrepancy between income poverty and social exclusion. Young people face a higher risk of material and housing deprivation compared to other age groups. The elderly, who are by far the poorest in terms of income poverty in Japan, face less risk of material and other types of deprivation. On the other hand, one of the groups most at risk of social exclusion is men in their 50s. They face a high risk of lack of activities, lack of social relations, housing deprivation and subjective poverty, even though they exhibit the lowest risk of income poverty. From this, it is suspected that social exclusion may be one of the causes for the extreme over-representation of men in their 50s among those who commit suicide and the homeless.

The second finding of the paper is that disadvantages at earlier stages of life seem to exhort influences in some aspects of current social exclusion, even after controlling for current income, occupation and household type. Multiple regression analysis shows that an experience of involuntary layoff has a positive and significant effect on all but one dimension of social exclusion. Similarly, an experience of divorce has a positive and significant effect on material deprivation and housing deprivation, even after controlling for current marital status. The catchphrase of former Prime Minister Abe was 'a society in which one can start over', but it seems that Japan is *not* a society in which one can start over after a set back.

One of the most interesting findings is that the variable indicating poverty at age 15 has a positive and significant effect on one's current lack of basic needs (food, clothing and medical care), even after controlling for current income, age, sex, household type and experiences of divorce and layoff. The results indicate that poverty during childhood does not only influence adult well-being via education and occupation (and thus, income) but that there is also a path which connects childhood poverty and adult social exclusion directly.

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