

Unemployed Chinese workers: the survivors, the worried young and the discouraged old

Richard H. Price and Liluo Fang

Abstract The forces of globalization and the wave of economic reform in the People's Republic of China have led to government policies to downsize state-owned enterprises and support a competitive labour market. Chinese workers who have been laid off (*xiagang*) are leaving the 'iron rice-bowl' security of the socialist state. Unemployment produces personal challenges for laid-off workers and human resource policy challenges for the government. For workers, *xiagang* and unemployment status mean they must cope with the unfamiliar challenges of job search and the threat of economic hardship. But how unemployment influences workers' lives is strikingly diverse in its impacts. Distinctly different patterns emerge for workers depending on: 1) their position in the social structure and stage of life, 2) their available skills and coping resources, and 3) their experience of economic and psychological distress. The present study reports survey responses of a sample of 2,412 laid-off Chinese workers in seven cities in China and identifies three distinct sub-groups of unemployed workers: 1) 'Survivors': more confident and better educated workers, 2) 'The Worried Young': distressed younger workers with few coping resources, and 3) 'The Discouraged Old': older workers with less education looking towards retirement. Each of these groups of workers views their circumstances and life prospects in quite different ways. Our results are examined in the context of the literature on social change and the life course. Our findings also suggest different human resource policies for each of these groups of workers.

Keywords Chinese workers: life course: unemployment.

Globalization, economic restructuring and political reform are producing job losses and changes in the economic and psychological contract between employers and workers (Price *et al.*, 1998). The impact of these changes on workers depends both on the worker's position in the social structure and the degree to which organized systems of social support are available in a particular economy. In many cases unemployed workers will experience distress and will be compelled to compete in new and sometimes unfamiliar labour markets. The economic transitions occurring in the People's Republic of China are particularly dramatic, and are producing powerful demands on individual workers, their families and communities (Lee, 1998; Perry and Selden, 2000; Riskin, 1999; Tang and Parrish, 2000; Zhou *et al.*, 1997; Warner, 2000, 2001).

Before 1980 urban workers in China benefited from what has been called the 'iron rice-bowl' (Hughes, 1998). Typically, workers were assigned jobs by state authorities

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and employment was often guaranteed for life. The state-owned enterprise for urban Chinese workers was intended to serve as a kind of overall health and welfare agency. Wages were more or less guaranteed, and the state-owned enterprise also arranged for housing, health insurance, pensions, childcare and, in some cases, education for children. State-owned enterprises in this era were intended to be a major source of economic security for Chinese workers and the goals of productivity and economic efficiency were subordinated to those of economic security. It is important to note that Wong (1998) argues with good evidence that these state-sponsored welfare arrangements may not have been nearly as universal or as supportive as has been claimed. Nevertheless, economic reform has altered them powerfully.

The Fifteenth National Congress of 1997 was a watershed event changing these arrangements (Chan and Qiu, 1999). By 1997 state-owned enterprises faced 'hard budget constraints'; some enterprises faced bankruptcy, restructuring or merger and it became critical to produce workforce reductions. Workers began being placed 'off duty' on furlough (*xiagang*). In the context of these workforce reductions, most workers retained a contractual relationship with the state-owned enterprise and also continued to receive a subsistence allowance, usually about 20 per cent of previous pay. Typically, workers experienced very high levels of uncertainty on *xiagang* status, had no job-seeking skills and little idea about what the future would bring.

There have been government efforts to establish human resource policies to respond to the needs of laid-off Chinese workers. Wu and Wang (1998) report that since 1993 the Chinese government has attempted to mount a programme of re-employment aimed at the urban unemployed and redundant labour in state-owned enterprises. The policy is a multi-pronged one aimed at: 1) encouraging the establishment of employment service enterprises designed to find jobs and provide training for the unemployed, 2) encouraging employees to engage in self-employment or to take part in various job recruitment activities and, finally, 3) 'requalification', an activity set up by recruiting firms to give occupational training to unemployed workers.

In describing the circumstances of economic transformation in the People's Republic of China, we might speak of 'policy induced life events' (Zhou and Hou, 1999), induced by the downsizing of state-owned enterprises, the reduction of iron rice-bowl benefits and the furlough status of urban Chinese workers. These policy-induced events often mark the beginning of a cascade of stressful individual life events for workers and their families, including changes in the internal family economy, economic hardship, job search efforts, stressful reallocations of family roles, participation in the irregular economy and increased reliance on personal and family networks for economic support (Price, 1993; Price *et al.*, 1998). The impact of policy-induced unemployment influences not only the immediate economic and psychological well-being of individual workers, but also their life trajectory over the long run (Elder, 1974, 1995).

Researchers have begun to address the question of how major social changes such as the economic reform in China influence the experience and trajectory of adult lives. For example, Elder (1974) has described the impact of the Great Depression on the development and life trajectories of individuals and families in that period of dramatic economic and social change. Studies of the life course have begun to emerge with a focus on the 'interaction of biography with social structures and social change' (Elder and O'Rand, 1995). The substantive focus in life-course analysis is on the critical moments of historical change and the social forces that produce *heterogeneity* in the impact of events and the course of lives. For example, social and historical events such as the Great Depression or World War II had dramatically different impacts on individual lives depending on age, social roles and available material, social and

psychological resources. Furthermore, unexpected major transitions, such as job loss and shifts in the labour market, may actually magnify heterogeneity among individuals or groups. As Elder and O'Rand observe, 'Social transitions vary in the degree to which they enable individual differences to manifest themselves. Non-normative, less socially regulated or unexpected transitions permit greater individual heterogeneity, while more highly regulated or normative transitions permit less' (1995: 463).

The downsizing of state-owned enterprises in the People's Republic of China would have, we expected, precisely these kinds of impacts. Transformation from a planned to a market economy means that security offered by the state-owned enterprises has been replaced by economic uncertainty, dramatic drops in income and demands to engage in job search in an unfamiliar competitive labour market. Our previous research has indicated that job loss produces a cascade of such changes (Vinokur *et al.*, 1996).

Following Elder and O'Rand's (1995) proposition on the heterogeneity of impact on the life course, we expected that the impact of unemployment on Chinese workers would not be uniform, but would vary substantially. Our previous research on the effects of job loss (Price *et al.* 1998b) suggests that we should expect to see distinctly different sub-groups emerging that represent unique combinations of characteristics in three major domains: 1) *social background characteristics* such as age, education, gender and marital status, 2) *perceived need for coping resources* such as job-search and financial coping skills and 3) *financial and psychological distress*.

Background characteristics of workers, such as age and education, represent markers of human capital in the labour market apparent to potential employers and to the workers themselves. They also represent differences in life stage and position in the social structure that can influence worker perceptions of their own life chances and their likely trajectory in the labour market. In the context of the recent history of China, many older workers have the Cultural Revolution and the security of state employment as their base of experience (Zhou and Hou, 1999), while young workers face the uncertainties of the market economy and a competitive labour market at the beginning of their working lives. We also expected that workers would vary in how well or poorly equipped they felt to cope with the challenges of job search and reduced income during a period of unemployment. Finally, our previous research (Price *et al.*, 1998; Vinokur *et al.*, 2000) indicated that unemployed workers show large variations in financial and psychological distress.

We hypothesized that we could identify *distinctive sub-groups* of unemployed Chinese workers along these three dimensions. In order to do so, we employed cluster analysis, a method that identifies homogeneous population sub-groups by maximizing between-group differences and minimizing variation within groups on a specified set of variables. In the present case we focused on four social background characteristics (age, education, gender and marital status), two coping needs reported by unemployed Chinese workers (job search and financial skills) and two measures of distress (financial strain and depression). Furthermore, we hypothesized that the sub-groups we identified would also differ in their work motivation and perceptions of future job opportunities.

Method

Sample

The present investigation draws on a large field study, the Jobs in China project, conducted in the People's Republic of China in 1999–2000. The Jobs in China project

is a co-operative effort between the Michigan Prevention Research Center at the Institute for Social Research, University of Michigan, the Institute of Psychology at the National Academy of Sciences in the People's Republic of China and the Ministry of Labour and Social Security in the People's Republic of China.¹ The goal of the project was to conduct surveys of Chinese workers furloughed from state-owned enterprises in several Chinese cities and to conduct demonstration projects of re-employment programmes developed by Michigan Prevention Research Center (Caplan *et al.*, 1997; Price *et al.*, 1998; Vinokur *et al.*, 1995).

We collected data in the overall project from unemployed Chinese workers and their spouses in nine employment agencies in seven Chinese cities (Beijing, Guangzhou, Chongqing, Shiyao, Yichang, Luoyang and Yantai). The respondents were 2,412 unemployed Chinese job seekers who had been unemployed for approximately eighteen months and had worked for an average of seventeen years before they had lost their last job. Unemployed workers in the sample represented a mix of workers on furlough (*xiagang*) and those who were registered as unemployed (*shiye*).

Measures

The survey measures were based on items used in earlier investigations on unemployment, stress and mental health (Abby *et al.*, 1985; Caplan *et al.*, 1989; Vinokur *et al.*, 1995). The items were translated by a group of Chinese researchers knowledgeable about the subject matter and part of the collaborative research team for the project. Additional translation checks included back translation by a second team and detailed analysis of item content. Except for the demographics, all the measures are based on multiple items with Cronbach alpha reliability coefficients in the acceptable range and are shown in Table 1.

Respondent demographics included age, gender, and education. Education was measured on a 5-point scale (1=0–6 years, 2=7–9 yrs, 3=10–12 yrs., 4=13–16 yrs and 5=17+ yrs). Job seeker marital status was scored 1=never married vs. 2=married, separated, divorced or widowed.

Two types of coping needs were measured: job search coping needs and financial coping needs. Respondents were asked to report their need for specific types of information in each case. Items in the *job-search coping needs* index included expressed need for: 'skills in finding new sources of job leads', 'locating jobs by networking with other people', 'creating and writing a good resume', 'getting a job interview', and 'identifying skills you have that could be used in a job application'. The job-search coping index included fifteen items and had a Cronbach alpha of .79.

Items included in *financial coping needs* index included expressed needs for skills in: 'examining your current financial debts and expenses', 'identifying financial needs during the job search period', 'assessing your financial resources and savings', 'preparing a financial plan', 'staying within a planned budget' and 'living on the same money for longer periods of time'. The financial coping index had twelve items and had a Cronbach alpha of .87. Both the coping and job search need indexes were measured on a 4-point Likert scale.

Financial hardship was measured using a three-item index (Cronbach alpha=.86) measured on a 5-point scale ranging from 'not at all', 'difficult' to 'extremely difficult' (Vinokur and Caplan, 1987). Items measuring financial hardship asked, 'In the next two months, how much do you anticipate you and your family will experience actual hardship such as inadequate housing, food or medical attention?' And, 'in the next two

Table 1 Means, standard deviations and Cronbach alphas of measures of job-search coping needs, financial coping needs, financial strain and depression

<i>Measure</i>	<i>M</i>	<i>SD</i>	α
Job-search coping needs (15 items)	2.81	.48	.79
Examples:			
'Information should cover how to			
... find new sources of job leads			
... locate jobs by networking with other people			
... handle difficult questions on a job application			
... find hidden skills that could expand employment options			
... identify skills you may already have that could be used in a job application or résumé			
... create and write a good résumé			
... write a persuasive letter of introduction to an employer			
... get a job interview			
... prepare and practise for a convincing job interview			
... answer tough questions during a job interview			
... write a thank-you letter to the employer after a job interview			
... deal with being turned down by a job prospect			
... deal with doubts about job-seeking abilities			
... deal with frustration, doubts and insecurities about the future			
... deal constructively with spare time'			
Financial coping needs (12 items)	2.43	.69	.87
Examples:			
'Information should cover how to			
... examine your current financial expenses and debts			
... prioritize financial needs during the job-search period			
... identify your financial resources and savings			
... find extra sources of income or savings during this period of unemployment			
... prepare a financial plan to get through this job search period			
... stay within a planned budget			
... monitor expenses and cut back on spending during this job-search period			
... stretch your money further			
... deal with differences between you and your spouse/partner about how to handle finances during this period of unemployment			
... talk with your child/children about your current finances and gain their co-operation			
... deal with creditors, restructure loans and/or avoid foreclosure			
... find information about applying for programs that provide help with food, housing, heat, etc.'			
Financial hardship (3 items)	3.39	1.08	.86
Examples			
'In the next two months, how much do you anticipate you and your family will experience actual hardships such as inadequate housing, food, or medical attention?'			
'In the next two months how much do you anticipate having to reduce your standard of living?'			
'How difficult is it to live on your household income right now?'			

Table 1 *continued*

<i>Measure</i>	<i>M</i>	<i>SD</i>	α
Depression (7 items)	2.00	.80	.89
Examples:			
'In the last two weeks, how much were you bothered or distressed by			
... crying?			
... feeling hopeless about the future?			
... blaming yourself for things?			
... finding no interest in things?			
... feeling sad?			
... feeling low energy?			
... thoughts of ending your life?			

months how much do you anticipate having to reduce your standard of living to the bare necessities in life?'

Depression was adapted from the Hopkins Symptom Checklist (Derogatis *et al.*, 1974) using a seven-item index (Cronbach alpha=.89) using a 5-point Likert scale ranging from 1=(not at all) to 5=(extremely), asking questions such as 'In the last two weeks, how much were you bothered or distressed by: "crying", "feeling hopeless about the future", "blaming yourself for things", "feeling no interest in things", "thoughts of ending your life"?'.

In addition, respondents were asked whether they agreed with statements about *future job mobility*, including 'I expect to be doing the same work in 5 years', 'I expect to be in a higher level job in 5 years', and 'I view my job as a stepping stone to other jobs'. Respondents were also asked about agreements with statements about financial *motivation for work and retirement motivation*: 'I am eager to retire', 'My main reason for working is to support my family and life style'. Respondents responded on a 4-point Likert scale. Finally, respondents were asked about *pay and benefits from the last job*. Specifically, they were asked (yes/no) whether they had received any benefits from their last employer, whether they were currently receiving government benefits (yes/no) and their monthly income from their last job.

Data analysis

We employed cluster analytic techniques to identify sub-groups of laid-off Chinese workers who were similar in their patterns of demographic characteristics, coping needs and levels of financial and psychological distress. Cluster analysis is an iterative statistical method that calculates similarities among individuals on a set of variables and identifies homogeneous population sub-groups by maximizing between-group differences and minimizing variation within groups. In the present case eight variables were used to conduct the cluster analysis, four demographic characteristics (age, education, gender and marital status), two coping needs (job search and financial) and two measures of distress (financial strain and depression). Data were analysed using the K-means cluster analytic algorithm. Distances are computed between clusters using a measure of Euclidean distance. Variables were transformed to Z-scores before clustering to standardize them for analysis. Of the 2,412 respondents in the sample, 1,950 had data complete enough for analysis. The number of clusters was determined

by choosing a solution that had no fewer than 10 per cent of the cases represented in any particular cluster.

Results

A total of 1,950 respondents were included in the cluster analysis, and yielded three clusters of approximately the same size (cluster 1=679, cluster 2=575, and cluster 3=696). Figure 1 shows the results of the cluster analysis of respondent demographics, coping needs and measures of financial hardship and psychological strain. In addition, for descriptive purposes, Table 2 reports the means and standard deviations for each of the three clusters. A *post hoc* analysis of differences between means (Bonferroni method) indicated all cluster means for all eight variables in the analysis were significantly different from one another ($p < .05$).

Cluster 1: *Survivors*. This cluster consisted of 679 unemployed workers who had the highest average education level and who reported the lowest job search and financial coping needs, as well as the lowest levels of financial strain and depression. For descriptive convenience we label this cluster 'survivors' because they seem best equipped by far to weather the transition to a newly competitive labour market.

Cluster 2: *Worried Young Workers*. This second cluster consisted of 575 unemployed workers who were markedly younger and much less likely to be married than workers in the other two clusters. While having slightly higher than average educational levels, these workers expressed the highest levels of need for job-search skills and skills in coping with financial matters. In addition, these young workers reported the highest levels of depression of the three groups.

Cluster 3: *Discouraged Older Workers*. Cluster 3 consisted of 696 workers who were much older than average, and with the lowest average level of education. These workers expressed only average levels of need for job-search and financial skills, but reported the highest level of financial strain.

Respondent characteristics most strongly associated with cluster membership

Not all of the eight variables included in our cluster analysis contributed equally to cluster membership. To assess the relative importance of each variable in defining clusters, we conducted one-way analyses of variance for each variable comparing cluster classifications. We computed η^2 for each one-way analysis of variance to provide an estimate of the variance accounted for in each variable by cluster membership (Rosenthal and Rosnow, 1991). Results of these analyses indicated that cluster membership accounted for most variance in age and education (30 per cent and 28 per cent). The remaining variables accounted for smaller proportions of the variance (financial coping 22 per cent, marital status 21 per cent, financial strain 19 per cent, depression 16 per cent, job-search coping 14 per cent and gender 7 per cent). Thus, while all variables contributed significant amounts of variation in the specification of cluster membership, age and education were most salient.

Cluster differences in pay and benefits, future job mobility, financial and retirement motivation

The clusters of 'survivors', 'worried young' and 'discouraged older workers' clearly reflect different patterns of status, life stage, coping and distress. However, we expected these groups also to differ in other important ways that have implications for their work life trajectories. For example, one might expect their perceptions of future job

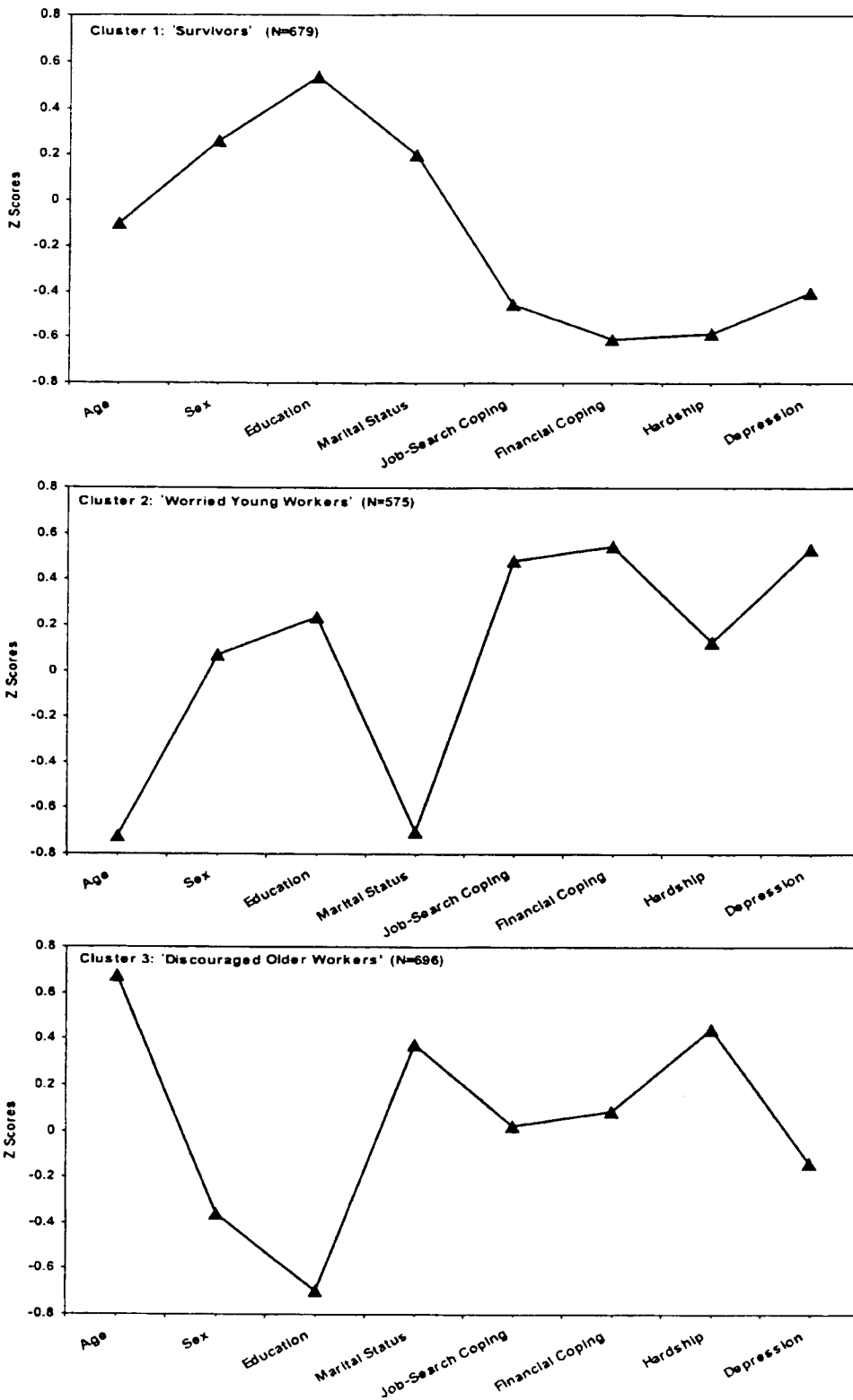


Figure 1

Table 2 Means and standard deviations of clusters for 'survivors', 'worried young workers' and 'discouraged older workers'

	Clusters					
	1		2		3	
	'Survivors'		'Worried young workers'		'Discouraged older workers'	
	(N = 679)		(N = 575)		(N = 696)	
	M	SD	M	SD	M	SD
Age (years)	36.34	6.53	31.54	6.88	42.28	6.65
Sex 0 = male, 1 = female	.71	.45	.61	.49	.40	.49
Education (1-5 scale)	3.11	.54	2.91	.57	2.29	.60
Marital status (1 = married)	1.92	.28	1.59	.49	1.98	.15
Job-search coping (1-4)	2.59	.45	3.05	.44	2.82	.44
Financial coping (1-4)	2.01	.57	2.81	.60	2.49	.63
Financial hardship (1-5)	2.76	.95	3.54	1.03	3.86	.94
Depression (1-5)	1.68	.56	2.43	.92	1.89	.66

opportunities, their reasons for working and their perceptions of their future work or retirement might differ as well. Given the differences in age and income of the three groups, we also expected their pay and benefits from their last job, which represent financial resources available during unemployment, to differ as well.

In order to examine these possibilities, the individuals in the three cluster groups were compared on job mobility, retirement motivation and pay and benefits using one-way analyses of variance followed by *post hoc* multiple comparisons of means. These analyses (Table 3) throw further light on the financial and career motivation of each of the clusters of workers.

Results in Table 3 indicate worried young workers were significantly less likely to receive benefits from their last employer than discouraged older workers, who were, in turn, significantly more likely to receive government benefits than survivors. Finally, not surprisingly, younger workers reported significantly lower monthly incomes than either group of older workers.

Table 3 also reveals a number of cluster differences in worker expectations about future job mobility. For example, discouraged older workers were significantly more likely than either of the other two groups to expect to be doing the same work in five years. Worried younger workers had significantly greater expectations of a higher-level job in five years than workers in the other two clusters. Finally, younger workers were significantly more likely to see their next job as a stepping-stone than either survivors or older discouraged workers.

Members of each of the three clusters also differed in their financial and retirement motivation. Older discouraged workers reported strongest endorsement of financial motivation for work and survivors endorsed this item least. In addition, older discouraged workers expressed a substantially greater eagerness to retire than the other two groups. Older discouraged workers may see retirement as a refuge from the financial strain and lack of career mobility they are experiencing in their lay-off status.

Discussion

A key empirical generalization emerging from the study of the impact of large-scale social change on the trajectory of individual lives is that *heterogeneity is the rule*. We

Table 3 Cluster differences in expectations and future job mobility, work and retirement motivation and pay and benefits from last job

	Cluster 1 'Survivors'	Cluster 2 'Worried young workers'	Cluster 3 'Discouraged older workers'	F	p<
Future upward job mobility					
'I expect to be doing the same work in five years'	2.15	2.19	2.37	7.60	<.001
'I expect to be in a higher level job in five years'	2.59	2.76	2.35	25.06	<.000
'I view my job as a stepping stone to other jobs'	2.36	2.57	2.32	10.18	<.000
Financial and retirement motivation					
'I am eager to retire'	1.96	1.88	2.46	44.13	<.000
'My main reason for working is financial'	2.97	3.12	3.35	31.21	<.000
Pay and benefits from last job					
Benefit from last employer	.63	.57	.67	6.36	<.002
Benefit from government	.26	.33	.37	7.18	<.001
Monthly income of last job	5.46	4.74	5.13	6.05	<.002

suggest that economic reform in China and the downsizing of state-owned enterprises represents a major social change that produces diverse impacts on individual lives of workers who become unemployed as a result. The nature of the impact depends on individual life stage and status, availability of personal and social resources and the psychological response to the social change. Our findings indicate that unemployment and the emergence of a competitive labour market in China produced distinctively differing patterns of response from unemployed workers.

'Survivors', with relatively high levels of education, have few needs for new coping skills and little economic or psychological distress appear to be least disturbed by their unemployed status and most sanguine about their future. On the other hand, 'worried young workers', at the beginning of their working lives, show higher levels of depression and little confidence that they possess necessary job-search and financial coping skills to move into the emerging competitive labour market, even though they hope for eventual upward job mobility. Finally, 'discouraged older workers' nearer the end of their working lives, with the least human capital in the form of educational background, look forward to the refuge of retirement.

Links between social change and individual lives

Elder and O'Rand, (1995) suggest several different ways large-scale social change can influence the course of individual lives. In the case of economic reform in the People's Republic of China, the transformation to a market economy and the emergence of competitive labour markets has suddenly emerged as a situational imperative for

Chinese workers. The new situation for workers demands a radical change in their assumptions about job security, health and welfare benefits, and what is required to find and hold a job.

At the same time, our results illustrate how the impact of this situational imperative depends on the life stage of the worker. For example, unemployment status and the emergence of a competitive labour market have quite different impacts on individuals' lives depending on age-related roles and resources available to workers. The career orientation, psychological strains and available personal resources are clearly quite different for younger unemployed workers in our sample compared to older less educated workers looking towards retirement.

Elder and O'Rand also suggest that, 'when social change creates a disparity between claims and resources, goals and accomplishments, the corresponding loss of control prompts efforts to regain control' (1995: 468). We see this particularly clearly when we examine our cluster of worried young workers. For this group, there appears to be a much stronger motivation to gain control expressed in a strong need for new coping resources such as job-search skills and financial coping skills. By contrast, the need to regain control seems considerably lower in the 'survivor' cluster where the availability of personal coping resources is greater.

Finally, Elder and O'Rand (1995) suggest that the salience of certain individual characteristics will become greater depending on the nature of the social change. In the case of our results, social characteristics such as education and age accounted for the largest proportions of variance among all the variables in our cluster analysis. It is not surprising that education would be highly salient in a transforming economy where career mobility and job security may depend ever more heavily on education. Seniority systems for hiring and upward job mobility are likely to diminish in their influence as education and technical skills become crucial human capital in the transformation from a socialist to a market economy. By the same token, older workers with little human capital in the form of education and technical skills may respond to the emerging market economy with resignation and eager anticipation of retirement.

Salience of education and age in China's move to economic reform

Our results indicated that age and education were particularly salient in defining cluster membership. Tang and Parrish (2000) have commented on the importance of education and age in the Chinese occupational opportunity structure during the period of reform. As economic reform in China evolved after 1985, job assignment and favouring kin began to be replaced by personnel exams and open hiring practices that favoured workers with better educational backgrounds. Thus, China began to turn more towards meritocracy in the reform period as education began to provide access to white-collar jobs and escape from harsher demands of manual labour.

In a similar vein, Zhou *et al.* (1997) studied job shift patterns in urban China from 1949 to 1994. Job shifts reflect access to workplaces as they are influenced by institutional change and individual characteristics. Education became increasingly important in job shifts and age was consistently negatively associated with job shift rates in the reform era, 'implying that job moves are more costly, less available, and/or less beneficial for older or senior individuals' (*ibid.*: 360).

Job opportunities in the context of China's political and cultural change

Our sample of unemployed Chinese workers covers the entire age range of working adults. As such, it contains young workers facing a future, unlike their parents' lives,

that requires agility in a competitive labour market. Our sample also contains workers from a much older generation towards the end of their work life, for whom the Cultural Revolution may have been the most important social change influencing their life course. This age group, now in the forties and fifties has sometimes been called the 'lost generation'. They most resemble our cluster of discouraged older workers. However, our data are drawn only from unemployed workers in this age cohort. It is possible that employed workers in this age group may have fared quite differently. Zhou and Hou (1999) note that the generation between 1967 and 1978 included urban youth who were moved to work in rural areas and whose later life experience was substantially influenced by this experience. Zhou and Hou offer the interesting speculation that youth sent down during the Cultural Revolution may in some cases have actually benefited from newly emerging economic opportunities as they returned to the urban workforce. Youth not sent to rural areas may have been locked into jobs in the state sector, 'making them less likely to take advantage of emerging opportunities during the period of economic reform' (1999: 32). However, since our sample includes only unemployed workers, it is not possible to make direct comparisons that would illuminate this question.

Implications for human resource policies

Each of the three clusters we have identified suggests different emphases in human resource policies. For example, our cluster of 'discouraged older workers' appears to be strongly motivated for retirement and to recognize that their opportunities in the changing labour market are substantially constrained. A human resource policy for this cluster of workers might most appropriately focus on retirement rather than encouraging future attempts at job search and entry into the labour market. It is unclear how this group will fare in the changing social welfare context of China (Wong, 1998).

Workers in the 'survivor' cluster, on the other hand, appear to require less intervention. From a human capital perspective, they are clearly better positioned in terms of educational attainment and other personal and social resources and are the least distressed by their current circumstances. Nevertheless, even this relatively well-equipped segment of unemployed workers must compete with even more advantaged currently employed workers for jobs in the changing labour market.

Finally, the 'worried young workers' represent a key group for the attention of human resource policies and practices. It is clear that these young workers are concerned to learn new skills to cope in the new labour market. Furthermore, they appear most distressed by their circumstances, and human resource policies and practices that respond to their needs for job search and financial skills are also likely to reduce their distress (Price *et al.*, 1998a,b). Finally, worried young workers have, by definition, the most potential future years in the labour force, and, therefore, represent critical human resource investments. This group of young workers could be most readily recruited for programmes focusing on job-search skills, training on the job and other human resource practices to improve the capacity of the Chinese labour-force to respond to the dramatic social changes that it faces.

However straightforward these policy implications seem, they may require some qualification. While 'worried young workers' may appear to merit more policy attention, it is probably not warranted to suggest that 'survivors' and 'discouraged older workers' can be ignored. Unemployed workers at all stages of life may feel entitled to claim resources because of their unemployed status. In addition, it should be noted that

the discouraged older workers in our sample are only in their forties and fifties. While they may wish to retire, some may have the potential for productive employment for a considerable number of years into the future. Even 'survivors' may find themselves facing higher levels of job insecurity in the future as China's entry into the WTO places non-competitive industries at risk and threatens many jobs that now seem secure.

The Chinese government has made education a key priority in the development of a human resource development policy. Wu and Wang (1998) note that 'the Chinese government has attached great importance to the development of education' and that this general strategic policy is aimed at multiple institutional targets, including basic, vocational and adult education, senior secondary schools and institutions of higher learning. Thus, it appears that Chinese human resource development policy recognizes the importance of education in creating human capital. Our data suggest that this policy thrust is appropriate since education appeared to be one of the most salient characteristics distinguishing the three clusters of unemployed persons found in our sample of Chinese job seekers.

We should note some qualifications on the present findings. First, while our sample of unemployed Chinese workers represents a range of regions of China, the sample is limited to unemployed urban workers who have applied to employment agencies to find new jobs. Because the design of the study was aimed at collecting data from unemployed persons with spouses, we oversampled married job seekers and our sample contains a relatively high proportion of married persons. In addition, these data are cross-sectional in nature and therefore represent only a 'snapshot' of unemployed workers at different points in their life course. To understand how economic reform influences the life course of Chinese workers over time, longitudinal samples are needed.

The results we report here may represent only the 'first wave' of impacts on the Chinese urban labour market. As globalization continues and as WTO agreements are put into place, we may expect an even stronger 'second wave' of impacts on Chinese workers. During a second wave of changes in the Chinese labour market, we may expect even higher demands for scarce human capital in the form of education and technical skills. This increased demand for human capital may bring with it the possibility of increased inequality in both economic opportunities and rewards. These data suggest that economic reform in China will not fall uniformly on the lives of Chinese workers and that sweeping statements might be better tempered by attention to the heterogeneity of the workforce. Instead, the shift to a market economy will place unemployed Chinese workers on markedly divergent paths in their life course, and, depending on their life stage and available economic and human resources, they face quite different life chances.

Note

- 1 The Michigan Prevention Research Center team consisted of Richard Price, Amiram Vinokur, Steve Barnaby, Kathy Ives, Jin Nam Choi and Cody Engle. Sandy Lim and Chi-Ying Cheng provided expert translation and data analysis. Collaborators from the Institute of Psychology and the National Academy of Sciences included Fang Liluo, Liu Dawei and Ling Wenquan. The Chinese Ministry of Labour and social security team was led by Zhang Xu, Bai Li, and included twenty participating staff from agencies in Beijing, Guangzhou, Chong Xing, Shiyan Yichang, Luoyang and Yantai. Our sincere thanks to our collaborators whose generous co-operation made the Jobs in China project possible.

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