

Introduction

Labour Market Flexibility and Social Security in the People's Republic of China

Arbeitsmarktflexibilität und Sozialversicherung in der VR China

Jutta Hebel and Günter Schucher

From the very beginning, Chinese labour reforms have aimed at eliminating everything that chains the development of the productive forces¹ – quite an ambitious goal given that China previously had the most rigid labour system in the socialist world. Subsequently, China has succeeded in the liberalization of its labour system but has so far fallen short in the protection of its labour force. Flexibility of the labour market conflicts with social security. The emerging labour market regime calls for a new institutional arrangement of social security in order to maintain coherence and stability in the society.

In the following section we will briefly outline the labour reforms implemented from the beginning of the 1980s until today and highlight the increase in informal or irregular labour in China. In the subsequent section we will – relying on the employment regime approach – characterize the induced institutional change as a transition from a socialist labour regime to a labour market regime. Core institutions have to be rearranged. Due to the accelerated pace of late industrialization and the accompanying transformation from plan to market, however, China is a case of compressed development: its development has not always been staged or sequential, and some institutions have changed faster than others, so that old and new exist simultaneously.

Flexibility and security are the central parameters of modern labour markets. Both are highly significant in China's labour market regime. China has developed

¹ So Hu Qili (1986), then member of the Political Bureau of the CCP, said in the theoretical flagship journal of the party, *Hongqi* (Red Flag).

a high degree of labour flexibility and has ruled out its former socialist welfare system. Therefore, new social protection systems have to be erected and a new balance between flexibility and security has to be found. The problem is not unique in the world. European countries are also challenged by the discrepancy between flexibility and security and seek a solution in guidelines of “flexicurity”. In the third section we will briefly outline the underlying idea of flexicurity and discuss whether the European debate on flexicurity can provide some useful insights for the Chinese situation. In the final section we will introduce the different papers of this issue and show how they contribute to the discussion of the flexibility versus security conundrum.

1 Labour Reforms: Flexibilization, Privatization, Informalization

Beginning in the 1950s China developed a rather rigid labour system that strictly separated rural from urban labour by household registration (*hukou*) and concentrated almost 100 percent of urban workers and staff (*zhigong*) in state- and collectively owned enterprises. Employees were subject to the state’s labour planning but enjoyed lifelong job tenure and social security from cradle to grave, provided by their work unit (*danwei*). Enterprises had almost no flexibility in answering to changes in production requirements² – except for small parts of the labour force “outside the plan” – and relied on labour hoarding, which produced a huge amount of surplus workers.

This socialist labour regime was characterized by a very low level of adaptability and a very high level of job, income, and social security, connected to the *danwei*. Labour reforms aimed to raise flexibility in order to support the economic growth strategy, the growing service industry, and the increase in consumer goods production. China’s first national work conference on labour market issues in 1980 adopted a more flexible strategy. Urban job seekers were allowed to find work themselves to ease pressure resulting from youth “waiting for jobs” (*daiye*). In order to improve labour efficiency, enterprises were granted more autonomy in hiring their workforce according to their needs and in deviating from pre-set wage grades. Practically speaking, permanent employment had to be eliminated; increased labour mobility challenged the *danwei*-bounded safety net. The first

² The cycles were determined by five-year and annual plans as well as political events such as party congresses.

round of labour reforms therefore consisted of four new labour regulations concerning the introduction of fixed contracts for all newly employed workers; the selection, engagement, and dismissal of new employees; and provisions for unemployment benefits (for initial reforms see Hebel & Schucher 1992).

These regulations were limited to state-owned enterprises and the newly employed – a restriction that was certainly conducive to social stability, but reduced the effectiveness of the regulations. The same kind of path dependency – the design of reforms according to the needs and demands of the thus far privileged group of state factory workers – also shaped social security reforms (Solinger 2005). Nevertheless, labour reforms helped China to undergo a structural change from a predominantly agrarian to a modern industrial and service economy as well as a systemic change from a planned to a market economy. By 1995, the share of jobs in agriculture had decreased from 70.5 percent (1978) to 52.2 percent, whereas the shares of jobs in industry and service had increased from 17.3 percent to 23 percent and 12.2 percent to 24.8 percent respectively (ZTC 2007). In the same period the share of jobs in state- and collectively owned enterprises decreased from 99.8 percent to 75.6 percent as a result of rising employment in foreign- and privately owned firms and, especially, increased self-employment (already 10.5 percent) (ZTC 2007). The changes in employment patterns were made even more obvious by the growing number of rural migrants that filled the ranks of construction workers and home helpers.

The adoption of a new labour law in 1994 (effective from 1995) marked the transition from the planned labour system to a labour market. The legislation recognized the disparity of interests between workers and management, abolished previous distinctions among different categories of workers, and shifted the financial burden of welfare away from the state-funded *danwei* and onto the employers and workers themselves by stipulating a contribution-based social security system (Lee 2005:9). For the very first time, a labour law addressed all kinds of workers in institutions with all types of ownership and set a uniform legal framework.

Although the prevalence of labour contracts was still limited and the implementation of the law fell short of proclamation, the new labour law definitely helped to focus reforms on the formerly privileged group of state workers. The newly sanctioned instrument of lay-offs enabled the still overstaffed state-owned enterprises to remove surplus labour (*xiagang*) – even though the terminated workers still had to be paid a small living allowance (Chiu & Hung 2004).

With the complete termination of state-planned labour, labour had become a commodity.

By 2006, the socialist forms of labour organization had been remarkably reduced. Workers and staff in state- and collectively owned working units accounted for only 25.4 percent of the urban labour force, that is, less than 10 percent of the total Chinese workforce. Of the urban labourers, 40 percent worked in units with private (domestic and foreign) or mixed ownership or were self-employed, i.e. they worked on own account. In the countryside, the same share of labourers (41 percent) worked in township and village enterprises, private firms, or on own account (ZTC 2007). This dramatic transformation of the socialist labour system has had far reaching implications for the institutional setting of the Chinese labour regime in general, especially in the realms of industrial relations, social control, social security, and welfare.

Moreover, the Chinese employment structure is profoundly influenced by China's urbanization patterns. According to the official statistics, the ratio of urban to rural employment had only changed from 23.7 percent urban / 76.3 percent rural at the beginning of reforms in 1978 to 37.1 percent urban / 62.9 percent rural in 2006. But this figure does not include rural-to-urban migrants, who are estimated to number between 115 million (Ministry of Agriculture) and 200 million (National Development and Reform Commission). Of these migrants, 24.2 percent are employed in industry, 21.1 percent in construction, and approximately 50 percent in trade and services. Of those employed in construction, 80 percent are rural residents. In dangerous industries such as mining, chemical engineering, or firework production, 56 percent of employees are rural residents (Schucher 2006:126ff.).

Another feature of the Chinese employment structure is the process of labour informalization. With the term "informal" we enter a slippery area. *Prima facie*, the meaning of informal work stands in contrast to "formal work", which connotes gainful labour, lifelong and full-time work in a contracted relationship to an employer, tax paying, and access to social security benefits. The present European understanding of formal work underlines the fact that:

the basic difference between formal and informal does not hinge on the character of the final product, but on the manner in which it is produced and/or exchanged. (Portes 1994:428)

Under the general term "underground economy", informal work can be distinguished from illegal, unreported (circumvents fiscal rules), and unrecorded work

(not submitted to statistical accounts). Yet, there is significant overlap between the various types of non-formal work. Erlinghagen (2000) denies the possibility of an internationally valid definition of formal and informal work because the degree of formalization varies considerably, not only between but also within a society. He points to the contradiction between informality of work being valued as an appreciated dynamic element of the economy on the one hand, and the call for increased formalization in order to diminish unwanted informal work and include the worker in the legal framework on the other. For our purposes, informal work in China includes all productive, commercial, and professional activities in rural and urban areas that are – *de jure* – not subject to labour legislation and administrative rules. Part-time jobs or self-employment can be either formal or informal. Informal work is irregular or atypical with reference to a particular understanding of “normal”. Our definition is not suitable for statistical purposes, but the Chinese term “not classified labourer” does not reveal more.

As Chinese statistics state, rural migrants comprise the biggest share of those in informal (or irregular) employment, a number which increased dramatically in the second half of the 1990s (for detailed calculations see Anne J. Braun’s contribution in this issue). Official labour statistics show a share of 11.6 percent for not classified labourers in urban areas in 1995. This figure rose to 42 percent in 2002, a level which has remained constant until today (ZTC 2007). Again, these figures do not include rural residents. This points to the fact that Chinese labour policy uses informal employment as a way out of urban unemployment. According to Ghose (2005:6), employment growth during the period 1990-2002 is entirely accounted for by the growth of urban employment, and this is wholly attributable to the rapid growth of irregular employment (of migrant workers and laid-off urban workers). Employment conditions in urban areas actually deteriorated. Hou and Chen (no year) present a survey that reveals that:

all types of enterprises have increased their hires of rural migrant workers, agency workers and temporary laborers which displays enterprises’ choice of employment flexibility in coping with reforms and economic globalization. (Ibid.)

The special features of informal employment have added new weight to the persisting challenge of building a new system of social protection (Kumar & Li 2007).

However, informalization of employment does not only take place in China.

China's opening up to the world economy, which led to its WTO accession in 2001, exposed its economy to competitive pressures. Informal labour is also prevalent in other countries, for example, East Asia, Africa, and European transition countries. To Lee and Eyraud (2007), the "conventional" wisdom of employment and labour policies can be summarized as:

the positive employment impacts of globalization, the need for flexibilization and deregulation to reap the benefits of globalization, and the strengthening of market principles in the operation of the labour market. (Ibid.)

They state that the "most intriguing development in the region" is the informalization of labour, that is, the spread not only of traditional types of informal employment but also of informal jobs within formal enterprises, and not only in developing countries but also in industrialized ones. In Japan, for example, the proportion of non-regular staff, the biggest share being part-time workers, has risen from 16.6 percent of all employees in 1986 to 32.6 percent in 2005 (JIL 2006:19). South Korea exhibits a disproportionately high percentage of self-employed workers (34 percent in 2004; Japan 15.4 percent) and a continually rising number of irregular workers; in 2004, 48.8 percent of the employed had only temporary or daily positions (Phang & Ko 2007:24ff.). This general trend seems to have been amplified by the transition from planned to market economy in China.

The growth of informal employment as a common phenomenon in East Asia has contributed to a widening of income inequality and the creation of a two-tier labour market, where non-regular workers not only earn less money than regular workers do but are also denied the perks and social-insurance coverage that regular workers receive. In other words, low entitlement to social security is not compensated by higher wages. Moreover, informality and insecurity extend to living and working conditions as well – with cruelly high figures for work accidents (especially in the mining sector) and slavery-type work constituting the most extreme excrescences.³

Since its first steps towards labour reforms, China has developed the major elements of a system of labour protection: labour relations (labour contracts, collective contracts), labour standards (working hours, wages, work safety, job

³ See the contribution of Bill Taylor and Li Qi on mining accidents as well as that of Bettina Gransow on informal living conditions in this issue.

training, protection for women and juvenile workers), social insurance, and labour law enforcement (labour dispute regulation). All these elements, however, have only been developed with regard to formal employment.

Only recently has labour legislation taken a new turn.⁴ In 2007, legislators adopted the new Labour Contract Law as well as the Employment Promotion Law, both of which are characterized by an inclusive approach, whether it is the inclusion of non-regular employment or that of private work units. For some time already, a debate has been developing in political and academic circles which sees migrants as an indispensable part of the workforce who need to be granted citizenship. As a first step they should enter into labour contracts, like formal employees. Foreign companies have definitely overreacted by arguing that this would be a revival of the “iron rice bowl”, that is, permanent employment, but they have succeeded in scaling back protection for employees and in curtailing the influence of trade unions. The revised and adopted version of the new law leaves room for flexible employment (see the contribution of Wang Qian in this issue).

Rural migrants are also targeted to become members of the official trade unions (see the contribution of Sergio Grassi in this issue). Kumar and Li (2007) regard the organization of workers as essential to ensuring social protection. Since state policy and institutional arrangements do not provide sufficient protection, workers’ ability to successfully contest work-related injustices is quite important. According to the authors, the state – recognizing the special needs of a highly mobile migrant community – has begun to allow rural-urban migrants to set up separate unions that are not embedded in the workplace. Compared with migrants, however, urban informal workers are much less organized, especially those working for private and small enterprises (*ibid.*:118).

The Adecco Institute appraises the new turn in labor market reform as the “biggest ever modernization of labor laws and labor market regulations”, which will “move China closer to labor regulations which reflect international best practice”. The Employment Promotion Law sets a clear framework for future labour market development and introduces measures to combat discrimination against internal migrants, while the Labour Contract Law seeks balance between better employment protection and flexibility for firms to compete in the market

⁴ Some even argue that this is a response to the exposure of slavery work, but the new legislation has been under way for quite some time and seems to be the result of longer-term contemplations.

(Adecco Institute 2007). The Labour Dispute Law – adopted by the National People’s Congress in December 2007 and taking effect on 1 May 2008 – will shorten and professionalize the resolution process for the continuously increasing number of disputes and will lower the cost of safeguarding labourers’ rights (Xinhua, 29.12.07).

The future arrangement of social security, however, will depend to a large degree on the new Social Security Law, which was to be published as a draft in 2007. Undisclosed problems, however, might have slowed the pace of its release.

Before we turn to the question of flexibility and security, we will take a look at the institutional change that has taken place with the transition to a labour market.

2 The Emergence of the Labour Market Regime in China and the Growing “Normality” of Informal Labour

China’s transition to a market economy has primarily been a process of basic institutional changes and institution building. The changes in labour (market) institutions are particularly important to the success of economic reforms, since they can act as catalysts or obstacles. This has proven to be all the more true as China has exposed its economy to the world market (see Hebel & Schucher 2008).

When focusing on the macro-level of labour reforms, a set of institutions has to be taken into account: (1) the system of social control, (2) the production system, (3) the system of industrial relations, (4) the welfare system, (5) the private household, and (6) the educational system. The outcome of the interplay between these different institutions characterizes a certain “labour regime”, a concept influenced by Esping-Anderson’s contribution on welfare-state regimes (Esping-Anderson 1990). This concept is broader than Burawoy’s concept of “production regimes”, which refers to the political apparatus that regulates the organization of work. Studies based on Burawoy’s work, however, also point to the trend towards deregulation and informalization, as well as the accompanying reduction of social security (Deyo & Agartan 2003; Nichols et al. 2008).

Labour reforms in China have induced an institutional change from the pre-reform socialist labour regime to the present-day labour market regime:

- Sociopolitical control of the Chinese population has been slackened, at least with respect to the dismantling of the *hukou* and *danwei* systems, but a new basis for societal cohesion has yet to be developed. The “invisible Great

Wall” between countryside and cities has become more permeable. The growing private employment sector has opened up an unexpected degree of job mobility and regional migration. Rural migrants who are flocking to the cities, however, remain second-class citizens and face discriminatory treatment in a number of ways. Estimations that urban labour will become scarce around 2015 have raised awareness about the necessity of a unified labour market and an unrestrained inflow of workers from the countryside. This has strengthened the attempt to entirely abolish the *hukou* system and grant civic rights to rural migrants.

- The production regime has changed in various respects. Not only did the abolishment of central planning reverse the conditions of economic activities, but rural industrialization, an emerging service sector, state-owned enterprise (SOE) restructuring, privatization, etc. all generated new types of gainful labour, new work relations, and new management styles. Greater economic freedom of action enhanced new business and labour strategies within the public sector. Chinese SOEs, such as textile firms, that were exposed to world market competition were at the forefront of moves to establish hierarchical control systems (Hebel 1997; Zhao & Nichols 1996). More notorious for devastating labour conditions, however, were the foreign-funded enterprises in southern and eastern China that made use of the abundantly available cheap labour. Production is now based on a wide range of different technology levels with different labour demands. Work control, incentives, and payment have become crucial elements in labour organization.
- The decrease in the state’s role in labour allocation and employment gave way to a new type of dependent and contracted work. Despite the Chinese legislation, only embryonic attempts at worker representation are currently being undertaken. The admittance of free trade unions is not on the reform agenda. The weaknesses of the official All-China Federation of Trade Unions (ACFTU) – 170 million members strong in 1.32 million grassroots unions – caused by its dual role as representative of workers interests and promoter of national economic and political interests have been exacerbated by market reforms. Due to industrial restructuring and the rise of non-state sectors, ACFTU membership is shrinking.
- The renewal of the welfare system is taking place under conditions of an aging population and in accordance with different goals: on the one hand, the new system has to comply with the entitlements of employees and workers

under the old labour regime and, on the other hand, new guidelines have to be established to cover new groups within the workforce. Urban state- and collectively owned enterprises have “socialized” their welfare functions. Flexibility of labour has been increased at the expense of social security. Since most laid-off workers have refused to terminate labour relations with their work units out of fear of losing their social security entitlements, the reform of the welfare regime seems to be a decisive step towards a unified labour market. Welfare reforms, however, also show the continuing influence of the *danwei* and pre-reform urban-rural segmentation. The reform of pension and health insurance as well as the introduction of unemployment insurance aimed to set workers free from the *danwei* dependency and to open up social mobility between enterprises and jobs. Nevertheless, the reform followed along the same lines as the planning system. Coverage is restricted to urban residence and to formal employment. Rural welfare institutions are still embryonic. Consequently, coverage is still limited and locally divergent and uneven social welfare provisions serve to restrict cross-regional mobility. Since the end of the 1990s, the emphasis has been on standardizing local practices into one national system. It remains to be seen whether the forthcoming social security law will accomplish that goal.

- Without comprehensive social security, the Chinese family remains an essential backbone institution. A considerable proportion of the Chinese population is left alone with the financial risks and shocks of the life course. They thus need to fall back on their family and kinship networks. The nuclear family, dual wage earning, and a renewed gender order conflict with the new type of dependent work. There is no clear tendency marking a transition from traditional to so-called modern values. The government states that:
under the influence of China’s traditional culture, there is a time-honoured tradition of provision by the family, security coming from self-reliance and help from the clan. (State Council 2004b)
- The educational system and professional training have become more sophisticated and better adapted to general labour market demands. Nevertheless, a low return on higher educational investments can be observed as well as a mismatch between the offer of and demand for qualifications. Despite significant progress, as measured by enrolment rates in all levels of the educational system and by the expansion of the tertiary sector since 1999, skill shortages are prevalent. One reason is the low level of government spending

on education – still far below the goal of 4 percent of GDP. For long-term improvements to labour force quality, China has to improve basic education in rural areas, develop vocational education, and switch higher education from a theoretical to a practical curriculum (Adecco Institute 2007:28).

The pre-reform socialist labour regime was marked by relative consistency. The set of institutions mentioned above formed a highly inclusive labour regime, producing full employment and comprehensive welfare, high rates of female employment participation due to the strict rural-urban divide, and authoritarian dependency on the part of the workforce. It represented a trade-off between the goals of sociopolitical control and state-led industrialization in the urban regions. It favoured the urban working class, based on unfavourable terms of trade between the countryside and cities and the extraction of resources from rural areas. This consistency did, however, have its price. The proclaimed socialist equality remained a chimera, and the prevalent regular and lifelong employment pattern in state- and collectively owned enterprises was only possible at the expense of the rural population. The deep and nearly insurmountable rural-urban divide shielded urbanites from rural labour competition. Consumption levels were extremely low, although the basic needs of the urban population were met. Rural labour was tethered to agriculture and the countryside. Poverty persisted in many rural counties of the socialist country. And, what is more, the labour regime relied heavily on the old family and kinship order that the socialist system had intended to alter.

During the reform era, the fundamental restructuring and the policy of opening up the country paved the way to economic productivity and higher living standards. Within the context of liberalization, industrialization, technical modernization and, last but not least, WTO membership and globalization, those institutions maintaining the socialist labour regime gradually eroded, albeit in a path-dependent way.

For most observers, the rapidity with which the socialist labour regime has been dismantled in the past two decades verges on the fantastical. The present labour market regime, however, is still influenced by its socialist past, having inherited a considerable inequality between different segments of labour: rural and urban areas, south-eastern coastal and inner provinces, public/core sector of the economy and private/petty informal economy, as well as between cadres and workers, young and old, and male and female workers. Nowadays, rural labourers experience greater economic freedom as strong limitations on non-

farm activities and mobility are loosened, but they continue to be discriminated against as second-class citizens. Limited implementation of labour law and failing compliance with existing rules on the one hand and the creation of new jobs due to economic growth prospects on the other hand stabilize the conditions of formal and informal work. The absence of labour protection and the right of political association and the prohibition of free unions is sustained by the continued influence of socialist ideology on the workers' position in society. Although the party-state has declared itself in favour of a unified labour market (State Council 2004a) and the new labour laws seem to reflect this intention, institutional heterogeneity is still prevalent.

The new labour regime is no longer a socialist one; nor is it based completely on a true labour market. The socialist institutions such as *danwei*, labour planning and allocation have eroded and given way to changes in the set of institutions as a whole. Processes of institution building, however, lag behind market developments, and old and new institutions exist simultaneously. Whittaker et al. describe this element of development as being "compressed":

It is not only that in the scramble for development some attitudes and institutions inevitably change faster than others, creating disjunctures and paradoxes, however. If the sequencing of development stages is shortened sufficiently, the practices and institutions of earlier stages may begin to interact directly with those of later stages instead of being superseded or gradually transformed. Institutions normally associated with later stages of development might even be established before those of earlier stages. (Whittaker et al. 2007:2)

One consequence is the simultaneous occurrence of industrialization and deindustrialization, when "workers come into factories from farms through the front door, while others leave for the service sector through the back" (ibid.:8). This picture extends to social development as well. One example might be the "double challenge of education": the bifurcation resulting from rural dropouts and an increasing number of university graduates (ibid.:20f.) – another one of the opposite trends due to the flexibilization of labour conditions in public sectors and standardization in private sectors (Hou & Chen no year).

Concerning the rise of irregular and informal work, a crucial question is whether this is a transitional phenomenon due to the opening up of a traditional economy to the world market or rather a general trend in globalized economies. We have already pointed to the development in other East Asian countries, but the

“normal work pattern” (*Normalarbeitsverhältnis*), that is, full employment on the basis of an unlimited labour contract, has also lost importance in industrialized countries, including those in Europe. “Actually, what is ‘normal’?”, Hoffmann and Walwei (2000) ask, showing the different levels of “atypical” employment in the EU. The same question holds true for China, and the answer will be decisive for the future design of social security measures.

Evidence suggests that irregular and informal work is not a transitory, but rather a persisting phenomenon.⁵ And this is not only true because of globalization, low-cost production or an active labour policy. Flexible and irregular labour relations also seem to suit the interests of many migrants (Guang 2005) and urban residents and might occupy an ever larger arena in the future. It seems to be the intention of the Chinese government to gradually integrate informal workers into the existing formal social security system.⁶ This, however, might no longer match the reality in the labour market and could be one reason for the so far not very successful reform of the security system. To exemplify this, we will turn to the European debate on “flexicurity”, which bids farewell to the idea of job security and focuses on employment security instead.

3 From Job Security to Employment Security

As described in the previous sections, China has experienced the dismantling of its highly segmented socialist labour system, with its core segment of stable employment and security in the urban public sector. Labour reforms have strived for enhanced growth and paved the way towards opening up the country to the world market. This has resulted in increased competitiveness and flexibility in enterprises and the workforce. Yet, institution building for an adequate and consistent safety net for the population lags behind. Given the huge population to be covered by a social security system and in the face of the difficulties of a transitional society under development, the process is extremely difficult and no blueprint for how it could be managed exists.

Labour flexibility has been promulgated in different dimensions and through various procedures and came into being as the state abandoned its monopoly over labour allocation and reallocation in the public sector and allowed private economic activities to expand. Low pre-reform economic outcome put significant

⁵ See the contributions of Braun and Gransow in this issue as well as ILO (2004).

⁶ See the contribution of Cai Heping and Hua Yingfang in this issue.

pressure on the rigid labour system and the overstaffed state-owned enterprises. The labour contract system (1986) gave the starting signal for public employers to adjust their labour force to their production needs. State regulations allowed enterprises to part with their surplus labour by way of dismissals, outsourcing of services, and production lines. As discussed, workers lost their permanent jobs and were pushed into inferior jobs, unemployment or second jobs and moonlighting in order to earn their living. The private sector began right from the start with flexible employment and hardly any binding restrictions.

Flexibility proves to be a very complex process. Through a general assessment model, Zhou (2007:10) provides a useful tool by distinguishing four dimensions of flexibility:

- external flexibility (e.g., flexibility of hiring and firing),
- internal flexibility (e.g., flexibility of working hours, overtime, and part-time work),
- functional flexibility (e.g., possibility of holding more than one job and flexible organization of work), and
- wage flexibility (e.g., the absence of binding minimum wages or wage indexation).

Generally speaking, the call for labour flexibility undermined the prevailing normal work regime of the socialist period. This former normal work regime remains the general point of reference and allows the distinction between the various new types of formal and informal work under way. Atypical employment proves to be an omnipresent phenomenon.

From a macroeconomic perspective, the four elements of flexibility mentioned above shape the present Chinese labour regime. Yet, the Chinese government intends to control the proliferation of insecure labour conditions through its recent labour legislation. Working contracts are now enforced in order to limit arbitrary dismissals and hiring under unsuitable conditions. Working conditions are to be specified in the written labour contract (for example, content of work, place of work, occupational hazards, and labour compensation). What is more, the earlier eradication of lifelong job tenure proved to be too radical, and the new law explicitly defines three types of employment contracts: “fixed-term employment”, “open-ended employment”, and “employment to expire upon completion of a certain job” (Art. 12 Law of PRC on Employment Contracts 2007/8). Recent labour policy in China refrains from enforcing total flexibility and intends to tame the market forces.

As described above, the labour policy of the reform period did away with the iron rice bowl, for example, job stability, income protection, and *danwei*-based social security. Social security includes, if we refer again to Zhou (2007:10), four elements:

- job security (high probability of retaining one's current job);
- employment security (high probability of finding another job quickly in case of layoff);
- income security (income protection in the event of job loss); and
- "combination" security (the ability to combine paid work with other social responsibilities and obligations).

We may add a fifth element, that is,

- protection against basic risks, for example, health, old age.

From the worker perspective, labour policy undermined social security in terms of all of the five elements. Even former staff and workers in the public sector with a guarantee of permanent tenure faced dismissals. Although the state provided basic income protection for a certain period, new jobs and a decent standard of living came to be out of reach for a considerable proportion of public workers. The *danwei*-related safety net ceased to provide security for the working population, and attempts at a new social security system remained insufficient. The rural population, the migrant population in the cities, and unemployed or self-employed urban dwellers do not have any access to a safety net beyond their families and basic livelihood guarantees such as minimum living subsidies.

When summarizing China's recent development, the problem of institution building has to be clearly on the agenda in order to avoid any ensuing crisis. A new connection between the labour market and social security, that is, flexibility and security, has to be established. China has to reconcile increased flexibility with the need to provide security for its population at large. The willingness of the population to accept flexibility is connected to the safety net and the social security provided by the society. Social cohesion and stability depend on a successful reconciliation of flexibility and security. Are there any valuable insights for China stemming from the "flexicurity" debate in the European Union?

We feel bound to introduce some insights from the European discussion on the relation between flexibility and security which has been advanced by the EU during the Lisbon process (2005). In the face of globalization challenges and the economic heterogeneity of its member states, the European Union has

raised the problem and launched guidelines for the future labour market. In all European countries there has been a decline in the post-war normal-work regime, that is, lifelong tenure, often meaning only one employer, a male breadwinner, and work-related social security. Atypical employment has spread as the labour market has broken down, and unemployment, informal work, or discontinuous work biographies are prevalent. The post-war social security system has been challenged for different reasons and, in particular, no longer fits the various types of atypical employment. Present and future old-age poverty is plausible.

A new vision and working model has been developed in the EU. It matches flexibility and security with the premise that flexibility need not be adverse to security. The basic idea of the discussion is expressed in the term “flexicurity” and encompasses a balanced policy that aims to make the European economy more competitive vis-à-vis global competitors on the one hand and that reconciles the centrifugal social and territorial forces on the other. Competition implies continued changes in production techniques, communication, services, etc. An enduring structural change in the economy and continued innovation of products and techniques requires a highly flexible and qualified labour force. Younger age groups, less qualified or handicapped people, women with childcare interruptions, and persons beyond their fifties face difficulties entering or re-entering the labour market. In Germany, they lack security in relation to the five elements above due to the work-related welfare regime. Job security for insiders is detrimental to employment and income security (re-entries) for outsiders. German labour legislation and trade union labour policy is in line with job security, income security and welfare protection for labour market insiders. In view of the present unevenness of the labour market, the German post-war welfare state needs to be rebuilt as it runs out of funds and coverage.

“Flexicurity” is the basic idea of the European social model and is a guideline for remaking the labour regime. It is a response to the increase in atypical employment in most European countries. We do not advocate a transfer of models – as is already stated for different pioneering European countries (e.g., Zhou 2007, “Danish for all?”) – but we think the debate may provide fresh impetus in the discussion on China (see also Hebel & Schucher 2006). China has shown impressively that high growth per se is not sufficient to promote worker security. However, there is evidence that employment growth does not require the denial of all forms of security for workers, as Boyer points out. According to him, there is no single best way for the organization of welfare, and the

configuration of flexicurity cannot be copied easily – not among closely linked European countries and less so by developing countries (Boyer 2006:12f.)

The term “flexicurity” is confusing and the various definitions are varied in their helpfulness. We refer to the European Union Employment Guidelines and sum up the content of flexicurity in eight statements (Commission 2007):

- 1) Implement employment policies aimed at achieving full employment, improving quality and productivity at work, and strengthening social and territorial cohesion.
- 2) Promote a lifecycle approach to work.
- 3) Ensure inclusive labour markets, enhance work attractiveness, and make work pay for job seekers, including disadvantaged people and the inactive.
- 4) Improve matching of labour market needs.
- 5) Promote flexibility combined with employment security and reduce labour market segmentation, having due regard to the role of the social partners.
- 6) Ensure employment-friendly labour cost developments and wage-setting mechanisms.
- 7) Expand and improve investment in human capital.
- 8) Adapt education and training systems in response to new competence requirements.

In short, the aim of flexicurity is to combine flexibility with appropriate security in order to enhance growth and overcome segmentation of the labour market on the one hand, and to create a safety net for people, respecting the individual’s life course and periods of social engagement, on the other hand.

The flexicurity concept is new in so far as it does not advocate job stability for the worker at all costs. It favours conditions under which the laid off are able to find another job quickly. The focus switches from job to employment security. The worker has to be kept “employable”, that is, involved in a process of continued qualification, and he must be flexible without losing his safety net.

A flexible employment system needs various flexible transition labour markets that combine regular employment with other activities such as learning or social activities and buffer unemployment. Flexible labour legislation has to favour exits and re-entries in the labour market. A high multipurpose qualification of workers enables them to remain employable and to adapt to the structural changes in the economy. The focus is on the worker, the qualification that keeps him employable, and the portability of security. Therefore, labour legislation has to shift its centre from securing a person’s “hereditary” job to keeping the

person involved in the labour market.⁷

China also faces the problem of mitigating flexibility and security. Which are plausible insights from the flexicurity debate for China? We will respond to this question with three examples.

China was previously a socialist country which tried hard to include its huge population in gainful work through central labour planning and administration. With the economic reforms, the agriculture sector changed and declined, industry experienced completely new production regimes, and the service sector mushroomed. Migration and mobility of the workforce upset the entrenched work regime. The Chinese government outlined its intentions for the structural change through the use of the label “knowledge society”. The rough outline of the structural and institutional regime change described in the previous section highlights the fact that the goal of full employment for China’s still increasing population has to be achieved in a different way. The workforce has to be prepared for market needs, that is, qualified with respect to economic restructuring and the continuously changing modes of production under conditions of globalization. Therefore, we suggest that China has to take up the idea of the “employability” of each member of the workforce. This central issue in the flexicurity debate points to the necessity of a steady upgrading and adjustment of worker qualification. The present debate on bottlenecks in qualified manpower for the flourishing industries underlines the problems. Migrants from the countryside who are presently the backbone of the construction boom will have to be (re)qualified in the long run. Not only is the upgrading of new technical knowledge, for example, IT qualification, essential, but also the acquisition of social and psychological abilities in the service and production sectors. The Chinese government is aware of the deficits in the educational system and professional training. Fostering the “employability” of the workforce provides employee security with respect to the five different elements mentioned above. Labour policy has to extend and develop the educational system and implement conditions for lifelong learning in transitional labour markets. Some examples, such as the efforts undertaken for the requalification of the *xiagang* in special centres, are appropriate, although this practice is an element of the old labour system.

A second example refers to the problem of social security as safety net. We

⁷ In a limited sense, the re-employment programme for laid-off workers in China holds the idea of employability (see, e.g., Wong & Ngok 2006).

have already described the dismantling of the *danwei*-based social security system and paternalistic protection of the socialist period. The strict connection between workplace and safety guarantees was crucial for the former regional and social immobility of the Chinese population. Decollectivization in the countryside and the restructuring of the public urban sector has disconnected the safety net from the workplace. Meanwhile, the labour market has become fragmented and a considerable proportion of the workforce labours under averse conditions. We advocate that the idea of “portability” of the safety net, taken from the flexicurity debate, has to be disseminated. The safety net has to be based on transferable rights for every worker. In a mobile labour market, the worker must be able to safeguard his rights when changing from one employer to another or when beginning self-employment. Again, we can observe that the Chinese government is responsive to these ideas. The promulgation of a system of social security points in this direction. Given the Herculean task of implementing a social security system in a society of China’s dimension, the problems of funding and coverage are tremendous. What is more, the Chinese government has to overcome the separation of the population into a privileged urban component and an underprivileged rural component. In practice, the labour market is already united, but migrants are still treated as second-class citizens.

Our third example concerns labour legislation. During the socialist Chinese past, labour legislation was inspired by the idea of non-controversial labour relations. Individual protection rights appeared to be obsolete in view of the fact that workers were the masters of the enterprise. Reform legislation started to strengthen the idea of protecting the individual worker, although this conflicted with the official labour policy of restructuring the public sector. In general, the labour law in market economies is clearly protective in favour of the less powerful worker vis-à-vis his employer. Job security, that is, retaining one’s present workplace, is the greatest good. This is contradictory to the conditions of a dynamic economy and changing production regimes in Europe and in China. Therefore, labour policy and legislation must promote both employment and income security. Under Chinese working conditions, high worker protection needs have yet to be supported. Nevertheless, the idea, taken from the flexicurity debate, should be to focus the labour law on:

flexible and reliable contractual arrangements [...]; collective agreements and work organisation; comprehensive lifelong learning (LLL) strategies to ensure the continual adaptability and employability of workers [...];

effective active labour market policies (ALMP) that help people to cope with rapid change, reduce unemployment spells and ease transitions to new jobs; modern social security systems that provide adequate income support, encourage employment and facilitate labour market mobility [...]. (Commission 2007:31)

Under Chinese conditions, the road to success will be much longer than in the EU countries. Nevertheless, first attempts and corrections are already being made through the new legislation. Besides the tremendous work to be done in labour legislation, an even greater challenge is the implementation of the law. The solution of the flexicurity problem will be crucial for social cohesion in both China and the European countries.

4 Contributions in this Issue

Due to deregulation and growing international competition, recent decades have seen a dramatic increase in informal employment in nearly all parts of the world, including industrialized countries. Current labour market statistics suggest that this is also true for China. Within two decades, the level of informal employment has risen enormously. Today, the overwhelming majority of rural migrants and retrenched and laid-off urban workers, and also a growing share of graduates, are informally employed in enterprises or run their own micro-businesses. Concrete figures about the true level of informal employment, however, are hard to attain, not least because of diverging concepts and statistical flaws. *Anne J. Braun* comes to the conclusion that approximately one-half of urban labourers are informally employed. Due to the decades-long predominance of state-owned enterprises and China's specific course of structural adjustment and economic transformation, the number of self-employed is rather small; contrary to other countries, most of the informal labourers are wage earners.

The Chinese state promotes informal – “flexible” – employment as a way of reducing unemployment, alleviating poverty, and even “breeding” new entrepreneurs. These socially stabilizing effects are thwarted, however, by the destabilizing impact of insufficient social protection. Nevertheless, informal employment is no longer a transitory, but rather a permanent, phenomenon. The boundary between informal and formal employment has become blurred and both types are more like the ends of a continuum.

This idea is further explicated by *Bettina Gransow*, who analyses five dimensions of informalization in relation to rural-to-urban mass migration in the Pearl

River Delta: the household registration system as the basis of discrimination against migrants; informal employment of migrants (outside and within the formal sector); and other fields of their livelihood such as housing, health care and education for migrant children. Informalization accompanies migration and urban development and influences practically all areas of migrants' life and work. To better understand the complex interactions of informalization and formalization, Gransow develops a theoretical framework by drawing on the "formality-informality span" (Norbert Elias). It is argued that the expansion of informality is triggering processes of formalization which may offer opportunities to implement and sustain the innovative aspects of informal development. Thus, new rules and regulations that are inclusive of the situation of migrants will narrow and may even help to vanquish the existing rural-urban dualism.

An often neglected aspect of workers' security is the prevention of accidents. Anita Chan has described in appalling detail how migrant workers fall victim to unsafe and insecure working conditions (Chan 2001). An industry that hits the headlines again and again with high counts of casualties is coal production. *Li Qi and Bill Taylor* use the case of coal mining accidents to illustrate an incentive structure which neglects workers safety. Following a major increase in the number of coal mining accidents, the central government has developed many policies and directives to improve the mining safety record. Words and actions, however, differ markedly. Growth in consumer demand has been the driving force behind the rise in coal production, which often exceeds not only production capacity limitations but also production safety limits. This holds true not only for small mines but also for large state-owned producers, which are being put under pressure as a result of the cheaper coal from small mines on the one hand and production gaps after closures of unsafe mines on the other.

Li and Taylor are not able to answer the still open question of whether the central government has little control over local cadres or whether there are factional politics between ministries at the central and provincial levels that impede the implementation of welfarist measures. However, they provide evidence that there is no political will to replace economic incentives for coal production with incentives to produce coal more safely. Especially in depressed areas, coal has often become the major source of government revenue, a fact that considerably weakens the local governments' will to follow orders to halt production and overhaul safety systems. And in the course of privatization, collusion between officialdom and subcontractors has become the biggest obstacle

to the implementation of every policy to manage coal mine safety. On the other side of the issue, individual coal miners – mostly from rural areas – have no way to organize themselves and to pressure mine owners to improve safety systems.

Workers' organization is an indispensable condition for achieving social security, but to date the official ACFTU have tended to stick to their role as the party's transmission belt. Economic restructuring, and especially the privatization and informalization of employment, however, have put the organization under tremendous pressure, as *Sergio Grassi* shows. On the one hand, its collusion with the political and economic leadership is increasingly challenged by the necessity of representing workers' interests against enterprise management; on the other hand, it is losing influence with its traditional membership as the formal socialist industry sector declines. Encouraged by party and state leaders, the ACFTU (to some extent successfully) is trying to establish branch offices in foreign-funded and private enterprises and to organize migrant workers. While much of its future representative role will depend on the enterprise unions and their factual independence from the party and management, at the state level unions have already become more involved in the drafting of new labour laws.

One of these new laws, which came into effect on January 1, is the Labour Contract Law (LCL). Its first draft had been heavily criticized by foreign companies as a regression to the times of lifelong employment. The final version maintains the balance between strengthened protection and standardization on the one hand and the use of more flexible types of employment on the other. *Qian Wang's* article focuses on part-time work. By comparing the new legislation in the LCL with a former regulation from the Ministry of Labour and Social Security (MoLSS), she discusses in detail issues related to the definition of part-time work, the conclusion and content of contracts, the remuneration and social security of employees, and the termination of employment relationships. In her opinion, the lawmaker has intentionally defined part-time work in a flexible way in order to compensate employers for the higher degree of standardization in full-time employment.

Since the beginning of economic reforms in China, the number of rural migrants flocking to the cities to find work has been increasing constantly. In 2006 these migrants accounted for almost 50 percent of all urban employees. Typical to this type of worker is a high degree of flexibility and mobility, which makes it rather difficult to establish a social insurance system that guarantees their rights. After the adoption of the labour law in 1994, the Chinese government

formulated guidelines to either integrate rural migrants into existing urban systems or establish a separate system for them. The reality, however, is somewhat different, as *Cai Heping and Hua Yingfang* demonstrate. Only a very small percentage of migrants – between 10 percent and 20 percent depending on the type of insurance – are covered. Most problematic is the retirement insurance. Different insurance systems between regions and cities, the high mobility rate of migrants, and the problem of insurance transfer, together with eminent hurdles for employers as well as migrants to pay into the system because of high contributions, encourage short sighted attitudes. Individuals either stay outside the system or take out individual contributions at the end of each job. This can be exemplified by the two models of Shanghai and Shenzhen, both of which also demonstrate the problems regarding the management of social insurance funds. It is possible that the experience of the EU with cross-regional insurance transfers could help China to find an adequate solution to the ever more pressing problem of stopping discrimination against rural migrants with respect to social insurance.

References

- Adecco Institute (2007), *China's Future Labor Market and the Impact of New (Globally Inspired) Labor Laws*, Adecco Institute White Paper, December
- Andersen, Torben M. & Michael Svarer (2007), *Flexicurity – Labour Market Performance in Denmark*, CESifo Working Paper No.2108. Online: www.CESifo-group.org.wp (accessed 17 February 2008)
- Boyer, Robert (2006), *Employment and Decent Work in the Era of 'Flexicurity'*, DESA Working Paper No.32, DESA, September
- Chan, Anita (2001), *China's Workers under Assault. The Exploitation of Labor in a Globalizing Economy*, Armonk/N.Y.: Sharpe
- Chiu, Stephen W.K. & Eva P.W. Hung (2004), "Good Governance or Mud-dling Through? Layoffs and Employment Reform in Socialist China", in: *Communist and Post-Communist Studies*, no.37, pp.395-411
- Commission see Commission of the European Communities
- Commission of the European Communities (2007), *Integrated Guidelines for Growth and Jobs (2008-2010)*. Online: http://ec.europa.eu/growthandjobs/pdf/european-dimension-200712-annual-progress-report/200712-annual-progress-report-UK_en.pdf (accessed 30 January 2008)
- Deyo, Frederic C. & Kaan Agartan (2003), "Markets, Workers and Economic Re-

- forms: Reconstructing East Asian Labor Systems”, in: *Journal of International Affairs*, vol.57, no.1, (Fall), pp.55-79
- Erlinghagen, Marcel (2000), “Informelle Arbeit. Ein Überblick über einen schillernden Begriff”, in: *Schmollers Jahrbuch*, 120, pp.239-274
- Esping-Anderson, Gøsta (1990), *The Three Worlds of Welfare Capitalism*, Princeton/New Jersey: Princeton University Press
- Ghose, Ajit K. (2005), *Employment in China: Recent Trends and Future Challenges*, Employment Strategy Papers, 14, ILO, Employment Analysis Unit. Online: <http://www.ilo.org/public/english/employment/strat/download/esp2005-14.pdf> (accessed 20 August 2007)
- Guang, Lei (2005), “Guerrilla Workforce: Migrant Renovators, State Power, and Informal Work in Urban China”, in: *Politics & Society*, vol.33, no.3, (September), pp.481-506
- Hebel, Jutta (2005), “Konturen einer neuen Arbeitsgesellschaft: Transformationsprozess in der VR China”, in: *Soziale Welt*, no.1, pp.17-38
- (1997), *Chinesische Staatsbetriebe zwischen Plan und Markt : Von der “Danwei” zum Wirtschaftsunternehmen*, Mitteilungen des Instituts für Asienkunde, No.277, Hamburg: Institut für Asienkunde
- Hebel, Jutta & Günter Schucher (2008), “The Emergence of a ‘Socialist’ Market Labour Regime in China”, in: Thomas Heberer & Gunter Schubert (Eds.), *Institutional Change and Political Continuity in Contemporary China*, London: Routledge (forthcoming)
- (2006), “Flexibility and Security in China’s Emerging ‘Socialist’ Market Labour Regime”, in: Michaela Baur, Bettina Gransow, Yihong Jin & Guoqing Shi (Eds.), *Labour Mobility in Urban China. An Integrated Labour Market in the Making?*, Berlin: LIT Verlag, pp.19-49
- (1992), *Zwischen Arbeitsplan und Arbeitsmarkt. Strukturen des Arbeitssystems in der VR China*, Mitteilungen des Instituts für Asienkunde, No.204, Hamburg: Institut für Asienkunde
- Hoffmann, Edeltraud & Ulrich Walwei (2000), *Was ist eigentlich noch „normal“? Strukturwandel der Erwerbsarbeit*, IAB Kurzbericht, no.14, (25.10.), pp.1-7
- Hou, Bao-qin & Lan Chen (no year), *The Employment Flexibility and Security under the Context of Globalization in China*. Online: https://www.kli.re.kr/_FILE/ENGFORUMBOARD/90177c66e528245f103b8772aa3e9b7.pdf (accessed 10 May 2007)

- Hu, Qili (1986), “Zhengque renshi laodong zhidu de gaige” (Understand labour system reform correctly), in: *Hongqi* (Red Flag), no.19, pp.10-15
- ILO see International Labor Organization
- International Labor Organization (2004), *Study on Labor Market Flexibility and Employment Security for China*, Institute for Labor Studies, Ministry of the Labor and Social Security of China, December 5. Online: <http://www.ilo.org/public/english/region/asro/beijing/download/training/flexicurity.pdf> (accessed 3 September 2007)
- JIL see The Japan Institute for Labour Policy and Training
- Kumar, Sunil & Bingqin Li (2007), “Urban Labor Market Changes and Social Protection for Urban Informal Workers”, in: Fulong Wu (Ed.), *China's Emerging Cities. The Making of New Urbanism*, London: Routledge, pp.108-125
- Lee, Ching Kwan (2005), *Livelihood Struggles and Market Reform. (Un)making Chinese Labour after State Socialism*, (Occasional Paper; 2), Geneva: United Nations Research Institute for Social Development
- Lee, Sangheon & Francois Eyraud (2007), *Introduction: Globalization, Deregulation, and Workers – Changes and Outcomes*, KLI. Online: http://www.kli.re.kr/AttachFile/emate-gw/seminar/63BF8D8B5F7E13434925727D001B2846/1-ILO_Introduction%20Lee%20and%20Eyraud.pdf (accessed 30 April 2007)
- Nichols, Theo et al. (2008), “Factory Regimes and the Dismantling of Established Labour in Asia: A Review of Cases from Large Manufacturing Plants in China, South Korea and Taiwan”, in: *Work, employment and society*, vol.18, no.4, pp.663-685
- Phang, Hanam & Young-Woo Ko (2007), “Labor Market Changes in Korea (1995-2005): Challenges and Policy Implications”, in: *e-Labor News*, no.70, pp.1-43. Online: http://www.kli.re.kr/kli/html_eng/08_mail/webzineboard/upfile/e_70.pdf (accessed 12. December 2007)
- Portes, Alejandro (1994), “The Informal Economy and Its Paradoxes”, in: Neil J. Smelser & Richard Swedberg (Eds.), *The Handbook of Economic Sociology*, Princeton, New York: Princeton University Press, pp.426-449
- Schucher, Günter (2006), “Mehr Rechte für Wanderarbeiter?”, in: *China aktuell*, no.6, pp.126-128
- Solinger, Dorothy J. (2005), “Path Dependency Reexamined. Chinese Welfare Policy in the Transition to Unemployment”, in: *Comparative Politics*, vol.38, no.1, (October), pp.83-101

- State Council (2004a), *White Paper: China's Employment Situation and Policies*, Information Office of the State Council of the People's Republic of China, Beijing, April. Online: <http://www.china.org.cn/e-white/20040426/index.htm> (accessed 20 August 2007)
- (2004b), *White Paper: China's Social Security and Its Policy*, Information Office of the State Council of the People's Republic of China, Beijing, September. Online: <http://www.china.org.cn/e-white/20040907/index.htm> (accessed 20 August 2007)
- The Japan Institute for Labour Policy and Training (2006), *Labor Situation in Japan and Analysis: General Overview 2006/2007*. Online: http://www.jil.go.jp/english/laborinfo/library/documents/Labor2006_2007.pdf (accessed 12 December 2007)
- Whittaker, D. Hugh, Tianbiao Zhu, Timothy J. Sturgeon, Mon Han Tsai & Toshie Okita (2007), *Compressed Development in East Asia*, ITEC Working Paper Series; 07-29, Kyoto: Doshisha University, ITEC, December
- Wong, Linda & Kinglun Ngok (2006), "Social Policy between Plan and Market: Xiagang (Off-duty Employment) and the Policy of the Re-employment Service Centres in China", in: *Social Policy and Administration*, vol.40, no.2, (April), pp.158-173
- Zhao, Minghua & Theo Nichols (1996), "Management Control of Labour in State-owned Enterprises: Cases from the Textile Industry", in: *The China Journal*, no.36, (July), pp.1-21
- Zhongguo Tongji Chubanshe (China Statistical Press) (2007), *Zhongguo Tongji Nianjian 2007* (China Statistical Yearbook 2007), Beijing: Zhongguo Tongji Chubanshe (China Statistical Press)
- Zhou, Jian-Ping (2007), *Danish for all? The Flexicurity Model*, IMF Working Paper No.07/36, February 1. Online: <http://www.imf.org/external/pubs/ft/wp/2007/wp0736.pdf> (accessed 17 February 2008)
- ZTC see Zhongguo Tongji Chubanshe