Institute of Economic Decelopment and Research
SCHOOL OF ECONOMICS
University of the Philippines System

Discussion Paper No. 75-13 August 1975

SEARCH FOR THE JUST WAGE IN CHINESE INDUSTRY IN COMPARATIVE PERSPECTIVE

by

Roberto M. Bernardo

NOTE: IEDR Discussion Papers are preliminary versions circulated privately to elicit critical comment. References in publications to Discussion Papers should be cleared with the author(s).

SEARCH FOR THE JUST WAGE IN CHINESE INDUSTRY IN COMPARATIVE PERSPECTIVE

by

Roberto M. Bernardo*

"The teaching of religion and morality is generally that a man should have not what he can get but what he ought to have."

E. H. Phelps Brown, Economics of Labor

Non-market Pay Differentials

Communist China has never accepted the market principle of wage determination used widely, no matter how imperfectly, say, in the Soviet Union or in the United States. When its central economic managers first tried their inexperienced hands at reforming wage structures inherited from China's semi-capitalist past, they ignored the principle of looking for wage rates that balanced supply of applicants with the demand for vacancies in specific sections of the labor market.[1] Their most important concern was the formation of complex skills and the encouragement of work effort in given places of employment within much narrower wage ranges than existed formerly. True, China adopted the eight-grade scale for workers, and it adjusted this for slight regional and industrial differences,

---

*I am thankful for support from the Institute of Economic Development and Research of the School of Economics, University of the Philippines. This article is Chapter II of my book manuscript, "Development Management and Remuneration in China: A Comparative Analysis," (mimeograph, August, 1975). The writer is Associate Professor at the University of the Philippines and Fellow at the Development Academy of the Philippines.

to reflect cost-of-living differences and to encourage the movement of labor to places and occupations desired by the central planners. But these adjustments did not go even approximately as far as market-determined pay differentials would have reached. The wage system's labor-allocating function thus remained secondary, especially from 1958 onwards and moral incentives and pressure from various groups to which citizens belonged and administrative assignment played the significant roles in the deployment of labor. Pay was not, as a general rule, adjusted market-like to deploy labor to its highest-yielding uses. The eight grade scale survives to the present time, of course, and the current anti-bourgeois cultural movement merely seeks to restrict and slowly compress pay differentials. Current official policy fully recognizes its necessary role as provider of material incentives, especially for skill formation. But the use of the eight-grade system for piecework and overtime pay have been discontinued as a whole, although the vastness of China and the pursuit of greater administrative decentralization means that there are bound to be some or many exceptions here and there. In addition, pay differentials have been compressed and top executive pay is even occassionally dominated by the pay of veteran skilled laborers; it is frequently dominated by top professionals inside the enterprise, contrary to the universal historical pattern. The otherwise centralized application of industrial wage administration has also changed in favor of participation by workers. These are all significant reforms of the old industrial wage system.

We are surprised, therefore, to read one of the West's leading labor economists, E. H. Phelps Brown write: "The indications from recent years are of a reaffirmation of the occupational pay structure even a widening of its span, with 'responsible comrades' earning 5 to 7 times as much as the unskilled." Chinese pay differentials intrigue him and others because the "Soviet-type economies have arrived at pay structures very similar in their gradations and range to those of the West, and adjusted differentials so as to bring about a desired allocation of labor through the response of workers following their self-interest. But what of China, in which the pursuit of self-interest has been execrated?"[2]

The primary reliance on private material interests in the allocation of resources is indeed, eschewed and so is the labor market. In the official ideology, one of the main vehicles for the expression of inegalitarian, and what are held to be socially divisive monetary incentives, is the labor market. The use of labor markets in the Soviet Union is one of the main reasons why the official Chinese ideology. We read: "....the fact is clear that Soviet workers and peasants have been reduced to purely hired laborers and the labour force in the Soviet Union has become a commodity [a marketed product]." We read, too, that "All Soviet enterprises are run on capitalist management lines.... with emphasis on profits and other material incentives."[3] Thus, in the Chinese view, an economy claiming to operate primarily on moral incentives

can be recognized on whether its pay differentials, as we shall see, are comparatively severely compressed at the present time as to preclude its span from being set by market forces. Even the rare occupational span of 7 to 1 Howe found in the aircraft industry pales into comparative insignificance when compared with comparable market economies. The writer was recently told by a flight supervisor of the Philippine Air Lines in August, 1975, that its top experienced international pilot earns 30 times its beginning pilot.

I conclude that Phelps Brown's opinion, which seems to imply that Chinese wage patterns and policy resemble the Soviet Union's, reflects misleading opinion and data he was supplied with by Christopher Howe's recent book on the subject, one of whose main message is that "the fundamentals of the pre-1966 /wage/ system have remained unaltered to the present time."[4] Robert A. Scalapino gave a similar judgment, too, in an article where he tells us that "...economic incentives are very much the order of the day, and the desire for material benefits is growing, indeed, is encouraged by the new regime."[5] These opinions puzzle us even more in the light of recent headlines in the Chinese press decrying material incentives, urging over watchful vigilance against the spontaneous resurgence of capitalist forces, and calling for the restriction of bourgeois inequality-fostering rights.[6] Nor does Charles Hoffmann's recent book on The Chinese Worker help us to settle the puzzle above.[7] I shall argue here, on the basis of the information available, that the similarity between the pre-1966 wage system and the present one is

superficial. But before we do this, let us enlarge our perspective by considering some preliminary comparative remarks.

Similarity with Job Evaluation

The search for the just wage in the capitalist West is, interestingly, the main task of job evaluation, that administrative yet imprecise art, often mistaken by its users as objective science. The main goal of job evaluation is to derive a structure of wages that administrators can persuade employees to accept as "just." The search for acceptable wage differentials comes from the fact that corporations often cannot, as a rule, merely take over an externally supplied structure of market-determined wages. When one leaves the textbook world of markets one often finds a plethora of wage-prices for the same jobs. There is rarely an external well-defined wage structure given by actual, live markets. For example, a wage survey conducted by the San Francisco Chronicle in early 1974 for the San Francisco Metropolitan area showed that a city government maintenance machinist in early 1974 made $18,220 a year. But this contrasted with 12,500 for Hunters Point in the same city. An electrical inspector made $20,000; this contrasted with about $15,000 paid for the same job in that same city. And the city government paid its plumbers $1.32 an hour more than private contractors were paying. In the summer of 1974, this writer taught the same subject in two different schools in the Manila Metropolitan area and earned three times as much in one insti-

tution as in the other.

Another reason why many firms employ elaborate and formal job evaluation schemes comes from a fact not appreciated enough by academic economists. Myriads of intrafactory jobs are so highly specialized, or so unique to the firm that no external labor markets exist for them. Hence the need for an administratively set internal wage structure to reward fairly various workers. These undifferentiated mass of workers may be hired at going market rates, but they are immediately trained and promoted to various specialized jobs.

One principal Chinese view of the just wage is that it be payment according to work. That is what the new constitution of January, 1975 states--more as ideology or formality than as fact, as we shall see. In spite of the economic theorist's reminder that no scientifically valid way of deriving or isolating one's total work contribution exists (since many other factors of production cooperate jointly with labor), there are two main crude approaches to measuring work contribution. The first way attempts to measure work contribution from the point of view of the input requirements of a given job as compared with others. The job evaluation art referred to in the preceding paragraph takes this approach. The basic assumption of quantitative methods of job evaluation, especially the most widely used one, is that the important requirements of each job can be aggregated and expressed in terms of a common denominator of abstract points. This belief in a common measuring

rod for jobs is similar in spirit to Karl Marx's assumption of common units of simple socially necessary labor that could be used for comparing different qualities of labor.

The point-rating method widely used in large United States enterprises allots points to a job according to the various defined degrees of each of several technical ingredients required by each factory job. A real-world example illustrates this. An insurance company assigns 20 points to a particular job for the factor called supervisory responsibility. This is a job with very little responsibility, which is the given definition of degree 1, to which 20 points correspond. For degree 2 of responsibility, which receives 40 points, supervision of one to three persons is the criterion. There are five degrees of supervisory responsibility each with its prescribed number of points. There are, however, other job factors, such as job knowledge, and its first and second degrees, by comparison, receive 100 and 130 points respectively. For the job factor called education, 60 and 75 points corresponds to its first two degrees. Job knowledge is the most prized job ingredient in this variant of the quantitative points system, receiving a maximum of 310 points.

At this point the curious onlooker might suspect the arbitrariness of the criteria above. So he or she asks how the list of job factors, nine in this points plan, came about. And how do we decide, anyway, the relative amounts of points to allot to the

various perceived degrees of the evaluative criteria? No ultimately objective answer valid for everyone can be given. The fact is that an administrative supervisory staff, a committee of evaluators, decides these questions. Or it may borrow a well-known points plan from the outside. That administrative committee, having decided these questions, then studies each job's specification and description. Then the committee assigns to each blue-collar or white-collar job the various degrees of the list of factors (and their corresponding points) it agrees inheres in each job examined.

Each job so evaluated ends up with a global points-total. But, as in the case of Chinese agriculture, points-totals require translation into monetary terms in dollars and cents. This is where certain key jobs for which external markets exist and which the evaluation group considers to be "on the market" come into play as benchmarks. Assume that the rate for an insurance file clerk is $2.50 an hour, for a janitor, $1.75. Both are "on the market." If the clerk's job previously yielded a total of 410 points and the janitor's 260 points, then the difference of 75 cents is correlated to the corresponding difference in points of 150. So a point corresponds to half-a-cent. A uniquely specialized intra-company job for which no external market exists and which scores 300 points, or 40 points more than 260, then gets a base rate of pay of $1.95 per hour, or 20 cents above $1.75. But note how the external market really dominates the internal wage structure and governs notions of the just

wage. And so note how much easier it is for the capitalist and Soviet firm to look for seemingly just wage differentials with which to control its workers' wage complaints. The capitalist and Soviet firm have surrounding external labor markets to blame for any alleged inequalities in the internal wage structure. And their formal job evaluation process gives the illusion of some kind of justice because of its consistent and superficially objective basis and rules.

Piecework and Market Approaches

The other main way of measuring work so as to arrive at a presumably just internal wage structure looks at the output or product side of each job. One difficulty here is that not all products of the various specific jobs in a company can be measured, as the Chinese themselves experienced in the 1961-65 piecework period. They could not count the products of all workers, especially indirect workers and technical staff. And so only about 42% of all industrial workers were paid on piecework.[9] But a more serious objection, from the point of view of the just distribution of wages, is the impossibility of disentangling a worker's total output contribution when, as is generally the case, his output also depends in one way or another on the joint services of other workers and of factors of production. Suppose I drill seven tons of coal a day. What portion of it is all mine and what part is the drill's? There is no way of settling the problem, since there is no way of

isolating my separate total contribution from the drill's.

Some will say, that a man's added contribution to a firm's revenues can be measured by freezing momentarily the levels at which jointly cooperating inputs are used. Then we can set up what each additional laborer contributes to the value of a firm's products. Indeed, this procedure yields an employer's demand schedule for successive amounts of labor. Which wage on this added value-productivity curve the market will settle depends on the supply schedule of applicants. The point or zone so intersected determines, in fact, the market supply and demand wage. It reflects the value-productivity of the last worker. Since, under sufficiently competitive market conditions, intra-marginal laborers as well as the last additions are mutually substitutable and expendable and are therefore treated alike, everyone receives the same marginal wage rate.

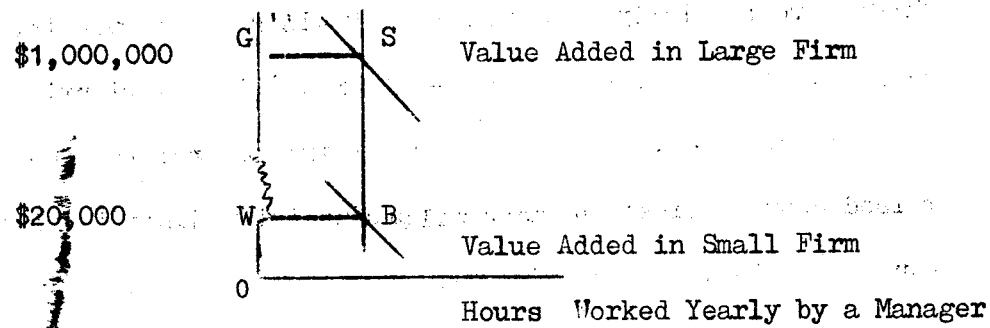
From the point of view of social justice and ethics, why should intra-marginal laborers with higher marginal productivities receive the wage rate of the last additional man? Secondly, and independently of the first objection, this method of measuring work contribution for purposes of just remuneration is not immune from the impossibility of disentangling an input's total separate contribution to the output of the job in question. A well-known text stresses that a worker's or rare basketball player's added products depends not only on his own abilities and effort "but on the quality and

quantity of other resources with which a laborer works jointly." It means working not only with a truck if one is a trucker, and "it means also to work within the environment provided by the equipment and resources of the whole economy." The text's authors conclude that "if it is said of the capitalist system that people are paid according to their produce, that, too, is a meaningless statement,...."[10] Elsewhere in a 1973 issue of Journal of Philosophy Kenneth Arrow remarks that the moral criterion of distribution he finds more popularly held than John Rawls's moral rule (of inequality only if it helps the worst-off group) is distribution according to one's creation. That, too, is not immune from the two objections raised above against the marginal productivity justification for inequalities in wealth and income.

In the end what one gets even in a competitive market is merely a supply and demand wage, and it is quite morally arbitrary as this example shows. Assume you were born Wilt Chamberlain with exceptional natural aptitudes for basketball. Better still, you were born, luckily, into a wealthy family and became the president of a modern large enterprise. Because of your working association with a highly capitalized firm your added value-productivity is a million dollars a year. This may partially explain why top American executives earn a total pay package of one million dollars or more a year in good years.[11] But if you were not as well connected and you ended up in a small firm that required the same effort, your added value-productivity would necessarily drop to, say, $20,000 a year, or one-

fiftieth as much. In China, a manager so transferred from a small firm to a large one receives the same wage, more or less, pretty much in the manner of an American civil servant, Grade 14, transferred to a larger government bureau.

I would like to put the previous argument in diagrammatic form for clarity and for future reference. Also, the graph shows us some additional aspects of the continuing search for the just wage in the Chinese economy.



Let us represent our single executive talent here by the fixed number of hours he supplies per year, merely for simplicity. Note that at the larger firm, our example has a far higher added productivity than what he would have at a much smaller firm. The starting position, therefore, of the productivity curves above depends directly on the quality and quantity of the human and non-human resources our executive works jointly with, as well as on the surrounding social overhead capital such as transportation, security and educational facilities. The broken line OWBS presents our executive's supply of labor in the market for managers: at a

wage lower than the height OW, he leaves this market. From the point of view of social justice, there is no compelling intuitive reason why the lucky executive (or basketball player) should get the supply and demand wage of one-million dollars, since that depends, too, on other jointly cooperating factors. In China, the rent element of high wages, WG, a surplus wage unnecessary in eliciting further supplies of labor, is reduced as much as possible or eliminated by current wage ceilings. The Chinese policy-makers justify this by claiming that the resulting distribution of income comes closer to their morally preferred criterion of justice. Note that our criticism of the market productivity theory of the just wage is clearer than John Rawls's very vague and somewhat tautologous attack, as suggested by this sentence from him: "But as we have seen, the extent of one's contribution (estimated by one's marginal productivity) depends upon supply and demand. Surely a person's moral worth does not vary according to how many offer similar skills, or happen to want what he can produce."[12]

Merit Evaluation

A related aspect, but conceptually distinct from the job evaluation and pricing process is merit evaluation. This refers to the periodic assessment of the man himself, not the job requirements, after he has started employment. These qualities inhering on the worker, as distinct from the job itself, are such things

as promptness, accuracy, attitude, cooperation, and sense of responsibility. Again, in the typical American firm, merit evaluation is administered from above by a worker's supervisor. Judgments of the worker's attitude or competence may often depend on an insecure and incompetent boss who prefers pliant men above all else. So long as supervisory staff administer job and merit evaluation questions of equity pertaining to its implementation and calculation will arise. This was true in China during its Cultural Revolution when the relatively unskilled and lower-paid workers and others ventilated their dissatisfaction with both industrial and agricultural wage and work administration. In the old agricultural points system, for instance, the team leader and his immediate staff evaluated points allotted to various farm tasks and often assigned their favorit to the best rated jobs, which led to grumbling. As we shall see later, the Cultural Revolution also transformed the job and merit evaluation process in industry into a "semi-participatory" process, at least.

Fundamentals of Pre-1966 Wages

With the preliminary remarks above in mind, we can more meaningfully compare and contrast the post-Cultural Revolution wage evaluation patterns with the old. Let us start with the essential characteristics of the pre-1966 industrial wages in order to appreciate more deeply where the new breaks away with the old.

How did a worker seeking work obtain it and its corres-

ponding wage during the 1961-65 period and for much of 1966. Let us follow this hypothetical example of a job-seeking smith and imagine ourselves in the China of that period or in the Soviet Union. In China, there is no fully working job market as we know it in America. Our worker goes to the local labor bureau. It may ask him to work in an industry or place where his skills are critically needed. The state's labor-allocating representatives may give applicants several choices of employment.[15] Let us assume that after negotiating with the labor bureau, our smith accepts an assignment in a particular factory of the machine-making industry. His grade level within his occupation of smith depends upon how the factory authority evaluates his job knowledge, experience, and previous education and training. The overall ratings in his official biographic file comes in handy. According to our example, let us place our smith at Grade 2. There are eight skill-grades or wage-ranks. To obtain his monetary base rate of pay, we consult the wage manual for his region, Hunan Province. Being a low-cost-of-living area, the otherwise uniform wage for grade 2 smith in the machine-making industry is adjusted to reflect that fact.

Each of the seven or eight grades of every occupational classification then corresponds to a stated base rate of pay. Another example of an occupation in the machine-making industry is metal drilling, which also ran the wage-ladder from grade 1 to

8. There were about a dozen other occupations listed under the machine-making industry at this time,but the list of occupations is expanded as the industry advanced in technical complexity or, as finer occupational distinctions were desired. Also, not all eight grades were, in practice, used by each occupation. Occupations well-known to require more skills than others started their workers at grade 2 or 3. Occasionally, grades 1 through 4 are ignored in some occupations. In the mid-1950s, for instance, a smith in the machine-making industry started at grade 5. Drivers meanwhile started at grade 2 and its top grade was only grade 4.[14] Note then the presence of some flexibility in the use of the centrally set wage-grade system to reward for the relatively difficulty of recruiting skilled workers in some occupations.

Here is a fifteen year-old unskilled and semi-skilled and semi-literate teenager fresh off the farm. Let us follow him on his way up the eight-grade hierarchy. The first two or three years, depending on his progress, are spent as an apprentice, or student-worke He gets from 16 to 26 yuan a month, and other benefits in kind. Upon graduation, he moves to grade 1, which corresponds to 33 yuan at the Shenyang No. 1 Lathe Factory. And it will take him 15 or more years to reach the eight rank, whose base of pay is 104 yuan a month. Meanwhile, as with the full-time workers of large industrial enterprises in Japan, he has lifetime employment and continuous training to look forward to. Seniority, really, is the main

consideration for his promotion to higher ranks, provided he shows the normal skill-improvement and attitude toward work.

A point, on apprentices. I agree with Joan Robinson and Ruth Sidel's comparison of them to students in a technical institute or college who receive monthly allowances and many free services such as haircuts, film shows, medical services, bus fare, and clothing.[15] Most of them are very young teenagers with a junior high educational level or less who regard their two or three years of apprenticeship as vocational technical education. The factory administration regards them in that light. Their numbers also include semi-literate peasants eager to learn an industrial skill. Those apprentices who do not live with their families live in dormitories provided by the factory around its premises. It is hard to estimate the apprentice's real monthly pay in view of the many student-like services he receives freely. Ruth Sidel writes that an apprentice gets an allowance of 16 yuan a month during the first year, and 18 during the second year. Since the Cultural Revolution, the usual length for apprentices seems to have dropped to two. This compares with the 19 yuan a college student gets, but these figures omit free services. The Chinese enterprise is self-consciously an educational institution, aside from its principal role as economic producer. To regard the apprentice's allowance as wages for the purpose of calculating the ratio of the highest factory wage to the lowest seems, therefore,

unjustified and fraught with qualifications that need to be made Later, when we discuss wage differentials, we shall resurrect th point.

The eight-grade job evaluation scheme above differs from the quantitative points schemes widely used in American industry It resembles more closely the non-quantitative grading system use by the United States Civil Service with its eighteen pre-determi grades. In this system, an employee gets his grade rating from a staff committee which examines his qualifications and the job des cription of his official position. Aside from the Chinese nation wide grade scale for workers, there were separate scales for tech nical staff and for administrative personnel.[16] There seem to have been, at this time, fifteen grades for technical personnel and twenty-five for administrative functionaries. Thus a tenth grade technician was rated a base monthly pay of 96 yuan and a fifteenth grade leading cadre 135 yuan monthly.[17]

What determined the pre-1966 monetary span of the occupa- tional grade-structure? The ratio of the legal maximum to the lowest pay for grade 1 was typically slightly above three to one. This compares to the pre-1949 period when intra-enterprise moneta spans of 40 to 50 times the lowest pay were quite common.[18] Such intra-enterprise differentials, one might add, are still quite common in large Asian firms outside China, based on this writer's Asian field experience. Clearly then, right from the very begin-

ning of the Communist regime, a strong egalitarian impulse expressed itself in the new grading system. The differentials that remained were concessions to the practical need to provide material incentives for the formation of skills. Even in 1972, "although managerial differentials have declined, the wage range for the occupations in civil aircraft is still sixfold."[19] For a comparative perspective on how large this differential is, an Asian standard of comparison is instructive. This writer knows from several Philippine pilots and airline managers he has put the question to that the 1974 wage range in the civil aircraft industry between a top pilot and an entering co-pilot can sometimes be in the order of a 30 to 1. Intra-enterprise differentials between the highest-paid executive and the lowest-paid worker are, of course, many times that ratio.

To preserve the average of 3 to 1 occupational monetary span, intergrade variations in pay ranged from an ascending 9 to 18 percent.[20] Base pay corresponding to occupational grades, moreover, are adjusted in some instances to account for special hazards in some occupations. At the Kailan Coal Mine in Tangshan, for example, those working underground at the coal face earn some 14 yuan a month more than those working safely aboveground. At the Wuhan Iron and Steel Works, those who worked in dangerously high places, receive an extra ten yuan a month.[21] When a worker transfers for some reason from one factory to another, he keeps his grade and corresponding real base pay, as well as pension rights, pretty

much alike the United States federal government employee who transfers to a different regional office of his agency. This is not generally true of the private American employee.

Use of the Eight-grade Structure for Piecework

Once base rates of pay for the worker's time per month were set in the manner described above, they were used to calculate rates of pay per piece. Since piecerates cannot clearly apply to many jobs--of an automatic, indirect, and highly technical nature --only about 42 percent of the industrial workforce were put on piecerates, as we mentioned earlier, I shall also call piecerates as regular bonus plan. To set a piecerate, one first finds out, through some kind of a time study, how long it takes a worker to accomplish the task at "normal" pace. Normal pace is not the top pace but one a reasonably good worker can beat by about 15 percent. Note that time standards, which are still taken in many Chinese enterprises at the present time in spite the abolition of piecerates, do not necessarily indicate piecework. Time standards serve other management and control functions. In China standard outputs were set to enable the average worker to earn from 15 to 20 per cent of his total pay as a regular bonus.

Suppose a worker produced 10 frames per hour at standard performance. His base rate per hour, as set by the job evaluation process, is $3 per hour. Then it is easy to see that the wage per

piece is 30 cents. Workers who turned out fewer than 10 pieces an hour received proportionately less pay just as he received a proportional bonus for each output above the standard. But in the pre-1966 Chinese wage system, workers below the third grade often received their basic time rates of pay so long as they fulfilled at least 90 per cent of their standard outputs. In a few situations, they received 75 per cent of their basic time wage even if they failed to meet their standard quotas by more than 25 per cent.[22] Progressive piecerates were used only sparingly in very limited ways we need not explore here, since our interest focuses on current practise.

The following table, taken from Hoffmann's cited work, presents the basic wage scales in nine industries and the ratios between the highest and the lowest pay grades. Note that in priority industries, where skills were relatively more scarce, wage levels and differentials were slightly higher than in other industries. Some industries only had seven grades.

Special Bonus Plans

Obviously piecework applies only when workers have some direct control over their work pace. When the pace depends on the speed of a conveyor belt or some other machine, strict piecerate incentives are inapplicable. A modified piecework method, or special bonus plan, is then indicated. Such a special

incentive might be a premium pay for above-quota output or for quality, or for saving specified inputs of certain special materials.

TABLE I

BASIC WAGES BY WAGE GRADES, SELECTED INDUSTRIES, CHINA, 1958 (Yuan)

Industry	Grade 1	2	3	4	5	6	7	8	Ratio of 8 to
Coal Mining	34.5	40.74	48.13	56.82	67.10	79.25	93.60	110.40	
Steel	34.5	40.74	48.11	56.82	67.10	79.25	93.59	110.40	
Machinery	33	38.9	45.8	54	63.6	74.9	88.20	104.0	
Electric Power	34	40.05	47.19	55.59	65.48	77.15	90.88	107.10	
Petroleum	34	39.88	46.78	54.88	64.36	75.48	88.54	103.70	
Lumber Milling	33	38.61	45.17	52.85	61.83	72.34	84.64	99	
Chemicals	33	38.61	45.18	52.87	61.84	72.37	84.68	99	
Flour Milling[2]	29	34	39.9	46.8	54.9	64.4	75.4	....	
Construction[2]	33.66	39.95	47.43	56.28	66.82	79.44	92.40	....	

Source: Chugoku Kenkyu Sho, Chugoku Nenkan 1959 (China Yearbook 1959), (Tokyo: Iwazaki Shuter, 1960), p. 310.

It can apply to individuals and to groups alike.

Jobs of indirect workers are not so easily counted and piecerated since they comprise a heterogeneous lot with widely varying skill requirements, work methods, and outputs. Three broad groups of workers comprise indirect laborers: material handlers who unload and move supplies from place to place; inspectors who check the quality of inputs and output; maintenance workers such as carpenters and maintenance machinists who perform a variety of hard-to-measure tasks. Chinese industrial engineers and personnel administrators devised a rich variety of complicated special bonuses for such workers and for staff similarly situated. Special bonuses for such workers were thus premium payments chiefly for managerial, professional, and indirect workers—over and above their set salaries—for performance equal to, or better than planned targets and set norms. In China, enterprise directors, vice-directors and party chiefs were legally forbidden to participate in such incentive plans in the 1960s. But managerial officials such as department, shop, and group chiefs did participate. There were many dozens of special bonuses the best-known ones being those for above-quota output, for quality, savings of various precious raw materials, for plan fulfillment ahead of time, for safety, for a new design, for a technical innovation, for economy of labor, and so on.

These special bonuses do not differ in kind and intent

from the various gain-sharing plans that proliferate in America industry and substitute for piecework. The well-known Scanlon plan, for example, shares labor cost saving with workers as a group. The Kaiser plan shares labor cost savings as well as savings from reductions in material and supply costs. Material and supply cost savings are awarded to workers to the extent of 32.5 per cent. The Halsey plan is similar to the Chinese premi for above-quota work. Workers are guaranteed a base rate of pa Performance above the standard quota was encouraged with extra pay.[23]

There were monthly, quarterly, and yearly special bonuse or premiums, for the various activities above. Although offici regulations stipulated a maximum of 15 per cent of the wage bil for special bonuses—taken out of profits—it rose to about 20 50 percent of the wage bill in the 1960s.[24] Note how the finan of the special bonus fund exerted some pressure to increase wag costs. Being a percentage of the total wages bill, this gave t enterprise an interest in raising total wage costs, all other th being held constant.

Lower-paid workers resented the regular and special bonus schemes most strongly. The relatively unskilled temporary contr workers from the surrounding countryside comprised a significant portion of the non-agricultural workforce, and they resented the second-class treatment by better-off co-workers who formed the

backbone of the relatively conservative trade union. Together with other low-paid workers and assorted student groups, they became the most active Red Guards in the Cultural Revolution. Resentment of the special bonuses of skilled workers and the privileges of technical and professional staffs played a prominent part in the Cultural Revolution.

Aside from vocal complaints stressing the inequities of the piecework and special bonus system, another common complaint dwelt on their administrative cumbersomeness and the confusing plethora of special bonuses that often encouraged false reporting of outputs, the sacrifice of quality for quantity, the easing of norms that could then be met more easily. That wage system, it was said repeatedly, divided employees into various classes and groups, an outcome incompatible with social harmony. All these combined with pent-up egalitarian passions to topple the managerial and professional staffs and well-off workers from their customary seats of relative power and wealth. Regular and special bonuses and payment for overtime work disappeared, with some qualifications mentioned below.

The Post-Cultural Revolution Wage Reform

The Cultural Revolution of 1966-69 brought profound changes in the job and merit evaluation process. During that period itself Christopher Howe tells us that the radicals tried to abolish the

formal wage-grading system, along with the old managerial distinctions and rules. But he adds that the "extreme forms of democratization" did not persist for long. Moreover, "The future of bonus and supplementary wage systems may also be bright,...."[25]

The last statement is a conjecture based on the deplorably scanty data available. Joan Robinson, in the 1972 edition of her work on Chinese economic management, does mention that "A group bonus to an enterprise as a whole, distributed to the workers, is not unknown but to dispose with this kind of incentive for improved production is held to show a higher level of political consciousness." In the 1975 edition of the same work, she amplifies on this: "Roland Berger reports that, towards the end of a discussion with members of the Revolutionary Committee of an engineering factory in Sian, in November 1972, a casual reference was made to the payment of bonuses of the old type but were collective each member receiving the same amount based upon the work team's performance over a period of time. With the Sian experience in mind, he raised the question of bonus payments a few days later at a machine tool factory in Peking, to be met with a forceful rejection of any such unthinkable idea. Clearly, if there was a tendency towards a softer attitude to material incentives, it was not universal."

We know that in later 1973 and early 1974, a few wall posters exposed the partial rehabilitation of piecework bonus

schemes in a scattered number of enterprises. But the Cultural Education Movement of late 1973 and 1974 known officially as the anti-Confucius and anti-Lin Piao movement, severely criticized these material incentive schemes and rolled them back. I interviewed Roland Berger in mid-February, 1975 and asked him the current state of the group and individual bonus schemes mentioned above. To the best of his knowledge, he said that these were most probably swept away by the recent cultural movement. These pro-rated group bonuses may also have been absorbed in higher base wages. The 1972 Philippine Economic Study Mission to China supports this view when it reports a substantially adjusted set of workers' base wages. Apprentice allowances are now from 20 to 35 yuan per month, and grade 1 from 35 to 45 yuan, depending on the industry, region, riskiness of the occupation, and whether the enterprise is directly managed and owned by the "state" or are in the "collective" sector consisting of small and medium-sized industries. Base wages of grade 8 workers are now higher, too, ranging from 95 to 130 yuan.[26]

Compression of Wage Differentials

It does seem, then, the permissible ratio of the top worker's pay to the lowest-paid worker in grade 1 dropped somewhat slightly—from about 3.25 to 2.9. In practise, however, occupational monetary spans were compressed even more by the post-Cultural Revolution policy of promoting those in the first three grades more rapidly than those in the higher grades.

Another method by which occupational monetary spans were effectively compressed came about from the eliminations of the top grades in the technical and cadre salary scales and the virtual disuse of Grade 1 in the worker's wage scale. We guess that the above is so because British visitors to China tell us that a Central Committee ruling of August 1971 raised "the wages of many of the workers in the lowest three grades of the eight-step scale by raising monetary income...."[27] American visitors, such as Lloyd G. Reynolds and his group of Yale economists report in the same vein: "The ratio of the highest to the lowest wage is about three to one, from about 40 yuan a month at the bottom to 110 yuan at the top." They add: Wage increases are relatively infrequent. There was apparently a round of increases in 1971 and again in 1973. These took the form of increases for the lowest two or three grades, with no increase for higher grades. The effect was rather like that of a minimum wage increase—a deliberate compression of the occupational wage structure in order to reduce income inequality."[28]

What is slightly confusing in the various reports is that other travellers, such as the economists James Tobin and John Kenneth Galbraith report first-grade wages at 35 to 36 yuan, which seems significantly below the 40 yuan reported by Reynolds and others.[29] Add to this discrepancy Joan Robinson's report and Roland Berger's communication to me that promotions to higher

grades of those in the first three were decreed in August 1971 but back-dated to July 1971 and we become unsure as to how wages of the lowest three grades were really raised. Was it by raising the base rates of the first three grades? Or was it by promoting those in these grades to the next-higher ones? Were both ways used? My reading of the Chinese press up to the end of May 1975 gave me no firm answers. I lean, however, on Tillman Durdin's report from Peking to the New York Times that "more pay for extra output and overtime work appears to have been eliminated everywhere and it has been a fairly general policy to increase base pay to some extent to make up for the disappearance of incentive pay."[30] But promotions, too, of those in the lowest ranks seem to have been used to narrow the gap between the higher and lower-paid workers. We suspect, too, that Grade 1 is hardly used, since "On termination of training, apprentices are put into Grade 2."[31]

The salaries of technicians and administrative personnel dropped through two principal ways. Their salary scales were respectively compressed to nine grades ranging from 90 to 200 yuan monthly and to 20 grades ranging from 37 to 200 yuan.[32] Moreover, high wages were effectively levelled through the continuing policy of keeping the top pay grades nearly vacant. Thus Tobin tells us that in a Shanghai hospital average wages for doctors was only 85 yuan monthly although some veteran physicians and surgeons earned 200 yuan, and some even 300. Let us quote at length from Tobin's

mentioned article, since he reflects current Chinese thinking on this subject:

> We were given to understand that the high wages paid to older engineers, doctors, craftsmen, and professors are obsolete vestiges of the past, maintained for present incumbents out of humanity and charity but certainly not anticipated for their successors. At the hospital, for example, it was implied that the current generation of physicians, properly inculcated and motivated by Maoist thought, would not expect to advance much beyond 100 yuan.

Galbraith, too, reported similarly from his visit. The highest salaries, he noted, are now frozen and destined to die away with their holders. Yet another way by which professional and administrative salaries suffered compression was through the voluntary or forced renunciation of part of one's pay. Mao Tse-tung himself set the example by cutting his pay by 20 percent, from 482 yuan a month or $200, to 386 yuan or $160.[33] The very highly paid army top brass took an even larger cut of 30 percent, according to Edgar Snow.[34] A full general now earns 362 yuan or $150. Reynolds notes that teachers at the university level earn from 70 to 350 yuan and that the top salary in China is 450 yuan a month, a figure that exceeds Mao Tse-tung's substantially.

Typical intra-factory differentials, however, are typically narrower than the figures above might imply. Tillman Durdin reported in mid-1971 that wages of some 5,000 workers in one of the biggest plants in China he visited "were given as ranging from $21 to $42 a month."[35]

That is a range from 50.61 yuan to 101.22 yuan. It suggests strongly the effective abolition of grade 1, by keeping these slots empty or nearly so. At the same time, it suggests higher base rates of pay in the lower grades. Howe tells us that in 1971-72 the lower paid workers were raised by two grades and Scanlon reports that "On termination of training apprentices are put into Grade 2."[36]

In regard to top factory wages, Barry Richman found barely at the start of the Cultural Revolution, in June 1966, that these were reduced, probably through the elimination of the top salary grades. Thus he found that a chief engineer's monthly pay in a Canton chemical firm had just been reduced from 240 yuan to 200; a chief engineer at Peking First Machinery Tool likewise had his pay cut from 200 to 180 yuan; the top engineer at Wuhan Iron and Steel took a salary cut from 230 to 180 yuan. Richman found that in 8 of the 38 industrial enterprises he visited, workers were the highest paid. In 14 of them, the top engineers and technicians were the highest paid.[37]

More recent data on top factory wages confirm Richman's observations. In mid-1971, Seymour Topping reported that "According to government sources, monthly wage in urban areas range from 34 yuan to 108 yuan.... Only a relatively few technicians, managers and senior officials get salaries substantially higher than this scale. The head of a mine in Anshan was earning 108, while a

political chief of a big Shenyang machine-tool plant was getting 140.... A master iron carver in Peking who worked at this bench for thirty years was earning 100 yuan. In a Chengchow textile plant the chief engineer is paid 188 while the head of the plant gets 166." Topping's low reported wage for grade 1 was made before the August 1971 and 1973 increases noted previously. At any rate, Topping concludes from his visit: "Under this system a skilled worker with long experience may be earning more than his younger department head."[38] Tillman Durdin, Topping's fello correspondent from the New York Times, reports similarly: "A senior worker in factory,... makes about as much as a production manager, and a member of a Revolutionary Committee that runs a large commune gets nothing for committee duty, only the income from the regular job he continues to do--often that of a laborer

Other visitors like Klaus Mehnert concur. He wrote from his well-known 1971 China visit that at a small factory with onl 820 workers to the north of Peking, "The pay in the lowest categ is 40 yuan; in the highest it is 100 yuan." There were only two in the eight category here, an old master craftsman and the fact manager. At this factory, no separate scale for administrators was used, as witness this exchange between Mehnert and his "Does the director, who is in the eight category, receive the sa as the old master of his craft who is also in the eight category are there two different pay scales, one for workers and another for administrators? The director of the factory who is in the

eight category gets exactly the same amount of money as the old master who is also in the eight category."[40] At a silk factory in Hangchow with 1,700 workers, Mehnert tells us that only one person received the highest pay of 100 yuan, but he was not the enterprise manager. This trend, however, seems more applicable to commune factories and the numerous collective factories not officially classified as state property. There, rural factories with work-forces of 600 or so have wages ranging from 34 to 76 or so. More recently, Lloyd Reynolds and his team of four other Yale economists, whose report we cited earlier, confirm the reports of widespread wage-levelling: "The manager usually earns a little more than the most skilled worker, and may even earn less."

A Historically Unique Wage Pattern

The widespread equality and notable occasional dominance of top professional pay over top managerial salaries within the enterprise in China is historically unparalleled. And the notable occasional dominance of skilled workers' wages over top managerial salaries inside a significant number of factories is even more startling, even if this occurs mainly in medium and small enterprises. This relative downgrading of managerial salaries began in the early 1960s when enterprise directors, vice-directors, and party secretaries were proscribed from direct participation in the many dozens of special bonuses opened to everyone else. The Cultural Revolution and its aftermath continued this trend and

made the world aware that top managers do not necessarily have to be the highest paid person inside the organizations they head. Th do not necessarily have the highest value contributions to the fir

A United States compensation policies authority, Eli Ginzberg, writes in this regard: "I know of no industrial corporation where the top scientist is remunerated at a rate that even approaches that of the chief executive officer. There is a great need for basing remuneration on contribution, not on title."[41] Th sharp contrast between salaries of top professionals and top executives has been noted by many other compensation students. In one study that is merely suggestive because it omits the more important aspects of managerial salaries such bonuses, stock options, fringe benefits and other benefits in kind we read that "The median for the third highest-paid among the top executives was seven times this amount [the highest median for professionals] and that for the highest-paid officer was eleven times as much." Leonard R. Burgess then asks the perennial question: "Can differences of such magnitude really be justified on the basis of performance?"[42] That such a practise is mainly a deep rooted feature of institutionalized class power hallowed by immemorial time and not based on any market principle that managers contribute the largest added values to the firm, another survey suggests. In a very recent study of 53 American executives, investigators found that in 66 percent of the cases, no statistically significant

relation between changes in salaries plus bonuses and changes in the company's return on equity existed.[43] Another compensation expert reminds us: "Even if contributions could be [so] distinguished andcorrectly measured, what about the implications of the fact that the funds available for added incentive payments are a function of total rather than individual performance? In view of these considerations, it can at least be argued that incentives for individual [executive] performance reflect dubious assumptions."[44]

If we add the more important aspects of the total salary package such as bonuses, special monetary awards, benefits in kind and other aspects of top managerial salaries designed to mislead the eye of sensitive stockholders and tax authorities, we arrive at more staggering and widening differentials between higher-paid professional and managerial personnel and lower-paid nonsupervisory workers, since 1958. This, Peter Henle's well-known statistical investigation shows.[45]

Historically Distinctive Job Evaluation

Yet another distinctive mark of the Chinese modernization process is its conversion of the formal and administratively centralized job and merit evaluation process into an informal and relatively decentralized one. Workers at the lowest factory level, that is to say the production group, discuss the qualifications and performance of each member for the purpose of placing each one

in the proper slot in the eight-grade structure.[46] Our main sourc in this respect are British and American visitors. For example, a group of British engineers who visited China at the end of 1972 te us that workers are "placed in the appropriate grade by democratic discussion within their work group ...."[47] And an American visito in July 1973 reports the widely publicized and endorsed wage eva- luation process of the vanguard Shanghai Machine Tool plant. Its revolutionary committee, whose majority are workers' representativ propose a general wage policy and makes it public for discussion b workers. "The workers discuss the policy and also the wage level of each individual. The results of these are then sent back to th Revolutionary Committee for final approval and action."[48]

Goldwasser and Dowty, who visited 16 factories in April and May of 1972, note that "workers themselves decide who gets assigne to each grade. We found that the range of wages varies from place to place. There are also differences in what criteria are used fo assigning grades." They inform us that at the Wuhan Sewing Machin factory, "they hold discussions in their work units or shop groups and suggest a specific grade for each person ... There is no fixe schedule regarding when or how often these discussions take place Seymour Topping notes another way workers participate in salary administration: "Skill tests for promotion are given each year by committees of workers."[50]

These evaluation sessions are authorized by superior econo

bodies, when production processes change markedly, or upon the request of workers who want to discuss their grades. The recommendations and group consensus in regard to these matters and other related ones are taken to the Revolutionary Committee. It either approves them or sends them back with comments for further discussion by workers, who may or may not decide to send it up again.

Evaluation Criteria

Worker participation in the job and merit evaluation process meant that slight variations in wages and grading criteria take place among the multitude of state and collective enterprises. Three criteria, of course, dominate all others, since they constitute the general policy of revolutionary committees and the Party. These are: seniority, skill, and political attitude. But how does one apply these criteria and how does one weigh the importance of each criterion? Because of the informality of the evaluation meetings, which are not held at fixed intervals of time, one group decision is likely to differ by degrees from the decision of other groups both inside and outside the enterprise. As in the Japanese large industrial firm, the most important consideration is seniority. But many groups probably evaluate skill vs. political attitude differently. Visitors to China have often reported differences among production groups and enterprises in regard to the relative weights they place on skill as against attitude.

Political or ideological attitudes needs some clarification. Chinese officials and travellers alike explain the term 'political attitude' or 'consciousness' too often to include performance of a familiar set of productive actions that used t be formally remunerated during the 1961-66 period: "At the Loyang Tractor Works, they mentioned ...that a person with 'hig political consciousness' overfulfills his tasks, has good relations with his fellow workers, and has a clear understanding of political struggle ..."[51] With the abolition of piecerates and special bonuses went the abolition of overtime payment. With bonus abolition, however, went a pro-rata distribution of regula and special bonus funds as wage supplements. These seem to have been absorbed in higher base rates of pay.) Political consciousness often meant, in practise, the offer of unpaid overtime.

The remaining component of political consciousness is unrelated to productivity-enhancing behavior: reverence for Maoist thought as exemplified, say, in attendance at political study sessions. It is impossible to generalize on the relative importance of political attitude for job pricing within the eight-grade structure insofar as that term stands for mere reverence for Maoist thought. Again, owing to the relatively decentralized job and salary administration process, individual enterprise practises contain a rich variety of variations on the participatory theme.

Intrusion of Relative Needs

The preceding statement suggests that the relatively decentralized group evaluation may informally allow other criteria to creep in unconsciously or consciously. We should not be surprised to learn from travellers' reports that group leaders and workers are sometimes predisposed to promote a worker whose material need is comparatively larger than others in the group.[52] The implicit recognition of relative needs does not just enter this part of the total pay package. It shows up in the other portion of the total wage package under the heading of fringe benefits and wages-in-kind.

Most factories provide low-cost, heavily subsidized free housing, day-care centers and nurseries, and free schooling. Medical care is free to the employee and available to family members at half-cost. Factory-subsidized cafeterias are open to entire families who may want to take most of their meals there. Many factories provide cheap transportation from city to factory and they provide cultural and recreational facilities. At the model Taching Oilfield, as in Tachai, these benefits in kind have been extended to haircuts and laundry and other services at nominal cost, and they have been widely emulated. Other factories are following and expanding this equalizing part of total wages. Another employee benefit is the newly established regional minimum guaranteed incomes. When family income now falls below the

relevant per-capita minimum--12 to 14 yuan a month per person i a low wage area, for example--the employing factory is required to pay the family's sole income-earner the appropriate subsidy.

Finally, the intrusion of relative just needs is found i the subsidies on many other wage-goods and high taxes on luxur That this "non-salary" aspect of a worker's total real wage is significantly larger than the worker's direct money salary, Reynolds' suggests in a revealing study of an urban Chinese family's consumption bundle at U.S. prices. "At the outset, w converted their monthly income of 166 yuan to dollars at the official exchange rate, and got a miserly $87 a month. But looking at the things which the Tans actually consume, and asking how much this bundle of goods would cost an American family, gives a respectable $422 per month, or more than $5,00 a year." This large figure from the more economically valid way of estimating a Chinese family's real income results from the large number of wage-goods distributed publicly or collec- tively--freely or at nominal cost.

The informed and aware reader has by now noticed the similarity between the agricultural and industrial wage-setti process. Whereas job and merit evaluation in agriculture is done with self-evaluated and group-ratified points at fixed intervals of time during the year, in industry it is done dir at uncertain intervals through the mechanism of promotions. W

know from the voluminous literature on the social science of small groups that group evaluation processes lead to grade-and-reward-levelling.[54] A most recent official hint pointing to this tendency comes from this report from a Chinese village. Not long ago, two-thirds of the male labor force gave themselves the maximum of ten points at the annual group evaluation meeting. Only one strong woman asked for 9.5 points; none asked for ten; and no other woman dared bid over eight points. Feeling inequity here, the brigade Party committee asked for more detailed evaluation in smaller groups and asked workers to link their evaluation with the national campaign aimed against the Confucian-inspired doctrine of the natural superiority of educated administrators, including males. Consequently, ten women out of 136 got ten points and 40 got 9 or over. A total of 116 women received a higher rating than previously and two-thirds of the men still got ten points.[55] The same wage-levelling effect of group job evaluation operates in industrial enterprises, but that effect is weaker there since job evaluation in industry is clearly less participatory than it is in agriculture.

Many rationalizations are of course offered to justify group-initiated promotions. In our agricultural example, the women argued that sheer strength and technical skill were not the only determinants of capability and productivity. Solicitude for one's work, organizational ability, and overtime

donations mattered, too, the women argued. What is important here is not so much whether these additional criteria carry sufficient weight or not. Rather, do the majority of employees consider the resulting differentials now more just? A virtue of the informal group evaluation process produces is that it produces that conviction among the majority, thus providing a social machinery for answering and specifying quantitatively the search for the just wage structure. Moreover, we know from studies on cooperation in small groups that increased voluntary cooperation results from the reduction of intra-group inequities. At the village in question, the same result was eagerly reported. The women showed greater enthusiasm for their tasks, often cutting grass for the brigade compost heap during their spare-time at no extra pay. And they have plunged into learning technical jobs, hitherto an activity monopolized by men.

We have partial data pointing to wage-levelling in industry. Recall the tendency to keep employees away from grade 1 and from the highest-paid grade, and the compression of professional and administrative pay scales. Combine that information with travellers' reports of wide variations among enterprises and variations in the relative weighing of promotion criteria. These sets of forces push larger numbers of employees up the wage-hierarchy than would otherwise be the case. Tobin and Leontief tell us that average industrial wages are 60 and 70

yuan respectively. That suggests an average grade of five. These figures are significantly higher than pre-Cultural Revolution reports on average industrial wages and average grade. The wage-levelling effect of group evaluation is one explanatory mechanism for the heavy concentrations around the average income figures observed in China. Wassily Leontief wrote sometime ago, "The 'average' figures in present-day China, however, are not abstractions; with little variation, they apply to nearly everybody."[57]

This preceding discussion suggests a hypothesis. When job enlargement and working out of traditional job classifications according to one's best abilities is widely promoted, as it has been since the Cultural Revolution of 1966-69, the formal rating of each employee is harder to prescribe in detail because the combination of tasks performed by each worker cannot be mapped out in advance. In such situations, centralized formal rating procedures are likely to increase workers' grievances and resentments. For instance, how does one rate 'fairly' spinners at a cotton mill who, in their spare-time political study groups, spend part of it studying ways to assemble and install mobile chairs on tracks, so that they can sit while working? For seven months, amidst difficulty and challenge, and after a crash training course, our informant tells us, they worked at enlarged jobs as both spinners, drillers, semi-skilled mechanics and operatives. Or, how does one now rate workers with newly enlarged

jobs of "self-inspection...and mutual inspection within the group...."[58] Or tourist guides who unashamedly double as porters? The informal group method of job and merit evaluation seems more accurate process of using as much information as available in grading a worker than the old formal and centralized administrative procedure. More important, because of its participatory nature, it is perceived by the majority as the more equitable way of setting workers' wages and rank with minimum friction, especially in complex situations where workers do different occupational tasks. The "correct" value a job or group of jobs cannot, of course, be calculated by any job evaluation process using even the most sophisticated points and statistical methods and criteria approved by management consultants. As we know from market economics, a wage is "correct" if market participants agree it is correct. Wages are unethical or unrealistic because people will agree that they are so, not because of some formal evaluation of the relative worth of various jobs by a managerial committee whose criteria and weights must ultimately be subjective. An advantage of Chinese participative and informal job evaluation is that it is not only easier to implement, but it allows workers to express their opinions on the just wage for themselves and for others. The process produces wages likely to be warmly accepted inside an organization, so long as the wages maxima and minima centrally set are also accepted by the working population.

Ideological Motivation in Abolishing Bonuses

Are the administrative and dysfunctional costs of piecework really so large as to outweigh the gains from it? These costs have been stressed by many China specialists. They imply that these costs weighed heavily in the decision to abolish piecerates during the Cultural Revolution. It appears, however, that all things being equal, piecerates result in larger output and smaller average total costs. This is so because large fixed overhead costs are spread over a larger number of pieces of output.

It is obvious that the condition suitable for piecework must apply for it to work as intended. The critics of piecework and the supporters of piecework both agree on not piecerating most jobs. "It is only in a fraction of the jobs--perhaps one-third of those assigned--that piecework provides an incentive to tap the full productive capacities of workers. In this case the incentive really works only on those jobs that seem to promise earnings slightly over 15 cents beyond the day (hourly) rate."[59]

Comparative data from other countries support the hypothesis that the net gains from piecework in terms of greater utilization of capacity outweigh its costs. Franklin Moore perhaps overstates when he writes: "Consultant Phil Carroll says incentive workers turn out two thirds more work than hourly paid men. This checks with my own experience years ago as an hourly paid

employee, and as a pieceworker, and later as a time study engineer." Although piecework has been gradually losing ground to time payments in the United States, he adds "probably, even today, half of all large companies use incentive (piecework) plans for factory workers."[60]

From Sweden, where piecework and related premiums and bonus provide for the major part of workers' earnings, recent data show the comparative effectiveness of piecework in increasing output. Lester Slezak found that "A drop in efficiency of between 15 and 27% occured in most companies that switched from piecework to fixed salaries." He notes, moreover, that those companies that switched from fixed salaries to a premium pay system experienced increased production averaging from 25 to 35%.[61] No wonder then that a basic principle of the Yugoslav pay system stipulates: "As far as possible piece rather than time rates are to be used whenever a worker's production could be conveniently counted."[62] Finally, the laborious calculation of norms or production standards is not as administratively unnecessary or wasteful as the critics of the Chinese piecework system imply. These labor and output standards are, after all, not measured merely as a necessary step in setting piecerates. Several other reasons compel a large efficient enterprise to measure time and output (as well as motion) standards. These standards provide information for accurate scheduling of work, for planning the number of machines

and men for the various production runs, for estimating costs and budgets, and for pricing the various production jobs. Moreover, time standards provide a benchmark for monitoring and improving the performance of men and machines alike.

The comparative data suggest that the Chinese abolition of piecework owes more to ideology than to economy. Piecework's assumptions are plainly incompatible with the Maoist strategy of using the production units as training grounds in assuring progress towards communism. To use a possibly sentimental phrase the Chinese press uses frequently, its assumptions contradict "the communist style of loving the collective."[63] Piecework after all is a theory of reward and punishment based on the assumption that money is the strongest motivator of work performance. Man is naturally lazy and the worker naturally resents management's pressure on him to intensify work. Piecework imparts a bias toward work simplification and excessive specialization, thus alienation. It encourages competitive individualism in the work process instead of synergy and collective team efforts.

On the managerial side, piecework puts control of the work process firmly in the hands of a managerial group of experts and disciplinarians who set up norms and enforce them and who presumably are the only ones who fully understand the broader nature of enterprise work. The workers, in this Taylorist thinking, do not. Managers here strip workers' jobs of its

managerial aspects of planning, innovation, scheduling, and so on. Workers simply execute simple procedures under the main stimulus of money. By encouraging the routinization and further division of work, individual piecerating tends to divorce creative thinking from work performance. Piecework and the whole time study apparatus linked to it pictures the workplace as a machine process whose major goals are production and product efficiency. The prevailing Maoist line seeks to convert the production unit into a kind of community center and integrated socio-technical system based on group teamwork, and on the relative primary of egalitarian collective incentives. Although moral incentives are ideologically preferred to material ones, the latter is by no means shunned. So long as material gains are collectively or equitably shared, it becomes moral thereby--ideologically speaking.

Some quick comparison with American managerial practises and attitudes come to mind at this point. An industrial expert recently noted of American industry: "In a series of interviews with production managers and industrial engineers charged with the design of assembly line work at 15 diverse companies, one of the authors noted an overwhelming concern with the technological features of the processes and indifference or downright disdain for the psychological, sociological, and physiological needs of the workers involved. ...it comes as no surprise that a good number of older workers, as well as youthful members of the

work force, are 'turned off' by many modern jobs."[64] This comes as no surprise. A recent writer in Harvard Business Review noted in this respect: "Frequently, I have asked executives this question: What is the dominant philosophy of motivation in American management? Almost invariably they quickly agree that it is the carrot-and-stick philosophy, reward and punishment."[65]

How Large Are Substantial Differentials

Walter Galenson and Robert Scalapino typify noted China experts who write that wage differentials are still surprisingly high there.[66] Such remarks seem meaningless because nothing is small or large, good or bad, except by comparison. Both writers do not mention a standard of comparison. Accordingly I provide here a rough quantitative framework of comparison. That framework is the United States. But it could just as well be India or the Soviet Union where "(gross) incomes of successful top managers, engineers, architects, scientists, actors and writers are up to a hundred times, and even more, the incomes of unskilled workers."[67]

Let us assume conservatively that lower-paid workers were raised by two grades since the Cultural Revolution and that hardly anyone is in Grade 1. Combine this information with Hoffman's tables in his cited work, of the percentage distribution of workers by wage-grade in the ten major Chinese industries in 1955 and their corresponding base wages in 1958. These partial data enable us to

give a crude estimate of the average ratio between the highest-paid fifth of all urban workers to the lowest-paid fifth.[68] I deduce conservatively from these data that not quite 20 percent of all current industrial workers are in grades 6, 7, and 8, with current base wages of 79, 93, and 110 yuan a month respectively. The lowest-paid fifth of all workers seem to be in grade 2 and 3 with corresponding wages of about 41 and 48 yuan. We ignore so-called wages of apprentices here for reasons stated earlier, since we argued these were more in the nature of student allowances. Using Hoffman's weights, I arrived at a probably conservative estimate of the ratio of the highest-paid fifth of all workers to the lowest-paid fifth of 2 to 1.

Is this large or small? And, is it egalitarian? The answer depends on the standard of comparison you choose. I suggest that a fair comparative yardstick should be any contemporary economy since it tells us what is achievable in practise. So let us take Christopher Jenck's ratio of the best-paid fifth American white workers to the lowest-fifth for 1968. It was nearly 7 to 1.[69]

Now let us compare the equitableness of intra-enterprise income differentials. From the partial and scattered reports available, it seems fair to cite a monetary span of 40 to 240 in China's largest industrial enterprises. This estimate probably exaggerates current intra-enterprise spans in view of

the various partial data previously cited of wage-levelling and the retirement of the highest earners. For example, the salary of Kailan Coal Mine's chief administrator is about 150 yuan a month, and yet Kailan is comparable to one America's largest corporations in that Kailan in Hopei Province is one of China's largest enterprises employing probably more than 90,000 workers.[70] However, Christopher Howe found some traces of larger spans, especially in the aircraft industry. And Reynolds notes that: "The range for university teachers is about 70-350 yuan, but there are very few at the top rate."[71]

Is this a large or egalitarian intra-enterprise salary span? As before, the most practical answer to the question comes from a comparison to spans found in other contemporary economies. Business Week, in its 1971 survey of top executive pay, noted: "In terms of salary and cash bonus, Harold S. Geneen, chairman of International Telephone and Telegraph Corporation, drew in $812,494 in 1971 ....GM's James Roche had a salary of $275,000 and a cash bonus of $275,030, but the latter figure was only half of Roche's actual 1971 bonus. Another $274,970 is payable in company stock, and GM contributed $13,750 to Roche's stocks and savings purchase account, so he ended the year with a total pay package of $838,750. But Geneen also exercised stock options with paper gains of $795,850 during 1971 for a total of $1,608,344."[72] If we assume that IT&T's poorest paid worker

in 1971 earned $5,300, then we have an intra-enterprise wage differential of 303 to 1. These are pre-tax figures but are probably fair indicators of retained total salaries since the figures in question exclude important benefits in kind open only to top executives such as representation expenses, company-provided limousines, financial and legal advice, and many others that Business Week of the same date termed as "big-money in the fringes." These narrowly defined total salary figures were exceeded in 1972 by Ford's top two officers and by others.[73]

Finally, let us make an educated guess at society-wide income differentials in China for the early 1970s. Mao Tse-tung's mentioned monthly salary of 385 yuan of some years ago does not seem to be the highest salary. Nor does the very well-paid top army brass seem to have the highest pay. A full general in 1971, according to Edgar Snow, earned 361 yuan a month. Reynolds does not tell us which government official receives the highest pay when he reported: "The highest salary in the country, that of top government officials, is reportedly 450 yuan; but the number of enjoying these high salaries is small." (Note another interesting wage pattern: the pay of top government officials dominate the pay of top managers, the opposite of the American case.) At any rate, taking 40 yuan as the lowest worker's wage, we have a society-wide salary span of little over 11 to 1. But there are probably a few whose ratio is twice that, especially from

among the diminishing capitalist-rentiers.

For a capitalist market economy, we don't have a ready figure for a society-wide comparison between the lowest and the highest annual income. The possibilities are suggested however, by the previous discussion of the salary span between the top American Executive and the least skilled. The truth seems to lie between that figure of 303 to 1 and an upper limit merely suggested by Newsweek's recent account of Aristotle Onassis' annual consumption spending in the recent past: "During his years with Jackie, the high-living couple spent an estimated $15 million annually...."[74] This gargantuan figure, we can only suppose, represents some undetermined depletion of wealth. At any rate, the more important reform of income redistribution in China does not pertain to the compression of salary differentials but to its non-salary aspects: the redistribution of power, status, job satisfaction, and income in kind inside the typical Chinese organization. This extremely important point, however, requires separate treatment.[75]

- NOTES -

[1]Dwight H. Perkins notes similarly: "Wages have played only a very minor role in allocation of the urban labor force." In Market Control and Planning in Communist China (Cambridge: Harvard University Press, 1966), p. 146. Allocation should be understood here in the sense of deployment to the various sectors.

[2]See his review of Howe's book mentioned in Note 3 in The Political Quarterly, January-March, 1974, Vol. 45, No. 1, pp. 125-126.

[3]See the unsigned "Serious Fluidity of Manpower in Soviet Union," Peking Review, September 27, 1974, p. 34; "Who is to Blame for Ukraine's Economic Trouble?," Peking Review, September 27, 1974, p. 35. Also, "The Workers are the Masters," Peking Review, July 6, 1973, p. 11.

[4]Christopher Howe, Wage Patterns and Policy in Modern China 1919-1972 (Cambridge: Cambridge University Press, 1973), p. 28.

[5]See his "China and the Road Ahead," Survey, Autumn 1973, Vol. 19, No. 4 (89), p. 20.

[6]See, for example, "People's Daily Decries Material Incentives," and "Kunming PLA Discusses Elimination of Bourgeois Rights," in People's Republic of China: Daily Report. See the issues of April 2 and 4, 1975. This valuable source of the most recent media releases is made available with very little time lag through the auspices of the U.S. Department of Commerce.

[7]Published by State University of New York Press, Albany, New York, 1974.

[8]See on job evaluation and this example, Leonard R. Burgess, Wages and Salary Administration in a Dynamic Economy (New York: Harcourt, Brace and World, Inc., 1968), p. 33.

[9]Howe, op. cit., p. 119.

[10]Armen A. Alchian and William R. Allen, Exchange and Production: Theory in Use (Belmont, California: Wadsworth Publishing Co., Inc., 1968), pp. 455, 444.

NOTES....

[11]See the annual surveys of Business Week on top executive pay cited in notes 70 and 71. The reference here is to the total yearly pay package, including fringe benefits and benefits in kind. On the probable large contribution of the power and status hierarchy to the total pay package of the techno-managerial class, see John Kenneth Galbraith, Economics and the Public Purpose (Boston: Houghton Mifflin Company, 1973), p. 204.

[12]John Rawls, A Theory of Justice (Cambridge: Harvard University Press, 1971), p. 311.

[13]"I was told that the state usually gives graduates several choices when it asks to fill a position." See Ira Shor, "Education to the People: Higher Education in China," Social Policy, November to December, 1974, Vol. 5, No. 4, p. 35.

[14]Howe, op. cit., p. 71.

[15]Joan Robinson, Economic Management (London: Anglo-Chinese Educational Institute, 1975), p. 2; Ruth Sidel, Families of Fengsheng (Baltimore: Penguin Books, 1974), p. 104.

[16]Betty Patterson, "Talking About Wages," China Now (London), July 1971, p. 2.

[17]Joan Robinson, op. cit., p. 1.

[18]Howe, op. cit., p. 36.

[19]Ibid., p. 83.

[20]Charles Hoffmann, Work Incentive Practices and Policies in the People's Republic of China 1953-1965 (Albany, New York: State University of New York Press, 1967), p. 19.

[21]Mentioned in Janet Goldwasser and Stuart Dowty, Chinese Factories are Exciting Places (N.Y.: Mand Russell Publisher, 1973), p. 8.

[22]My main source here is Hoffmann, op. cit., p. 27.

NOTES....

[23]On this see Richard B. Chase and Nicholas J. Aquilano, Production and Operations Management (Homewood, Illinois: Richard D. Irwin, Inc., 1973), pp. 468-69.

[24]Howe, op. cit., p. 122.

[25]See Christopher Howe, op. cit., p. 147; also his "Labour Organization and Incentives in Industry Before and After the Cultural Revolution," in Authority, Participation and Cultural Change in China, ed. Stuart R. Schram (Cambridge University Press, 1973), p. 252.

[26]See their collective account in Twenty Days in China (A Report of the CED Economic Study Mission to the People's Republic of China), published by the Council for Economic Development, Makati, 1973, p. 56. They add on page 94 that most plants they visited reported an average of 65 to 70 yuan per month, which indicates a rise in average industrial wages. This book was based on an earlier mimeographed report issued by the same organization.

[27]Betty Patterson, op. cit., p. 2.

[28]See his short but informative report representing the consensus of five economists which included John C. H. Fei, John M. Montias, Robert Triffin and Bruce L. Reynolds, "China's Economy: A View from the Grass Roots," Challenge, March-April, 1974. This report is based on a longer, more detailed discussion paper "Observations on the Chinese Economy," December 1, 1973.

[29]See James Tobin, "The Economy of China: A Tourist's View," Challenge, March-April 1973; John Kenneth Galbraith, China Passage (Boston: Houghton and Mifflin, 1973), p. 136.

[30]Tillman Durdin, "Wage Level is an Unsettled Problem," in New York Times Report from Red China (New York: Avon Books, 1972), p. 184.

[31]Hugh Scanlon and others, "Shop Floor Discussions: British Engineers in China" China Now, April-May, 1973, p. 2.

[32]Ibid., p. 2.

NOTES....

[33]Newsweek, February 21, 1972, p. 51.

[34]See his "Mao's Revolution," The New Republic, April 10, 1971, p. 20.

[35]Durdin, op. cit., p. 184.

[36]Scanlon, op. cit., p. 2.

[37]See his Industrial Society in Communist China (New York: Random House, Inc., 1969), pp. 239-240, 804-805; see also Ronald Berger, his report in China Now, June, 1971, p. 11.

[38]Seymour Topping in the cited New York Times Report from Red China, pp. 262-63, 188.

[39]Durdin in New York Times Report..., p. 177.

[40]Klaus Mehnert, China Returns (New York: New American Library, 1972), pp. 71-78.

[41]In his "Man and His Work," California Management Review, Winter, 1962, p. 27.

[42]Burgess, op. cit., p. 13.

[43]K.R. Srinivasa Murthy and Malcolm S. Salter, "Should CEO Pay Be Linked to Results?," Harvard Business Review, May-June 1975, p. 66.

[44]Kenneth R. Andrews, The Concept of Corporate Strategy (Dow Jones-Irwin, Inc., 1971), pp. 209-10.

[45]Peter Henle, "Exploring the Distribution of Earned Income," Monthly Labor Review, December, 1971, Vol 95, No. 12. He predicts a persistent trend toward inequality in the distribution of income among American salary earners in favor of already high-paid professions. "If, in addition to the income effect of the more specialized benefits available only to higher-paid salaried personnel, such as expense account privileges, stock options, and deferred compensation, could somehow be calculated... the statistics would undoubtedly show a further drift toward inequality." (p. 25).

[46]Goldwasser and Dowty, op. it., p. 7.

[47]Scanlon, op. cit., p. 2.

[48]Robert Allen, "China's Trade Unions," U.S.-China Friendship Newsletter (San Francisco), January, 1974, p. 9.

[49]Goldwasser and Dowty, op. cit., pp. 7-8.

[50]Topping in New York Times Report ..., p. 188.

[51]Goldwasser, op. cit., p. 8.

[52]Ibid., p. 8.

[53]Topping, pp. 188-89.

[54]See, e.g., Gerald Marwell and David R. Schmitt, Cooperation: An Experimental Analysis (New York: Academic Press, 1974); Group Processes, ed. Peter B. Smith (Baltimore: Penguin, 1970).

[55]Chou Keh-Chou, "How our Village Got Equal Pay for Equal Work," China Reconstructs, March, 1975, pp. 8-9. This egalitaria bias of participatory group evaluation is mentioned casually by Maria Antonietta Macciocchi in her Daily Life in Revolutionary China (New York: Monthly Review, 1972), pp. 246-56.

[56]This is one of the main findings of Marwell and Schmitt, op. cit.

[57]See Tobin's cited report and Wassily Leontieff, "Socialis in China," Atlantic, March, 1973, p. 75.

[58]Hu Chin, "Mobile Chairs for Spinners," China Reconstructs March, 1975; Hsing Jung and Mei Tien, "Socialism Ours: Report from the Kailan Coal Mine," Peking Review, October 11, 1974, p. 2

[59]William Foote Whyte, Money and Motivation: An Analysis of Incentives in Industry (New York: Harper and Row, 1955), p. 2

NOTES....

[60]Franklin G. Moore, Manufacturing Management. Fifth edition. (Homewood, Illinois: Richard D. Irwin, 1969), p. 444, 443.

[61]See his "Effects of Changes in Payment System on Productivity in Sweden," Monthly Labor Review, Vol. 96, Number 3, March, 1973, p. 51.

[62]See Adolph Sturmthal, Workers' Councils (Cambridge: Harvard University Press, 1964), pp. 105-106.

[63]See, e.g., Union Research Service (Hong Kong), December 1, 1970, pp. 243, 245.

[64]See Chase and Aquilano, op. cit., p. 429.

[65]Harry Levinson, "Asinine Attitudes Toward Motivation," Harvard Business Review, January-February, 1973, p. 73.

[66]See Galenson's review of Christopher Howe's mentioned book in China Quarterly, No. 56, October-December, 1973, p. 765.

[67]R. Scalapino, op. cit., p. 13.

[68]Charles Hoffmann, op. cit., p. 19. See also Table 1 cited earlier.

[69]Christopher Jenks and Associates, Inequality (New York: Harper and Row, 1972), p. 14.

[70]Hsiang Jung and Mei Tien, "Cadres Are Ordinary Workers: Report from the Kailan Coal Mine," Peking Review, October 4, 1974, p. 33. The estimate comes from the statement that the top administrator's pay was about 30 per cent more than that of a veteran miner." The 90,000 estimate of its total employees comes from similar information on Kailan's tens of thousands of employees and from the information that 30,000 were recruited by this nearly century-old mine from 1970 to 1974.

[71]See the Reynolds report cited earlier.

[72]See the informative "Compensation Survey '71: Top Pay Soars," Business Week, May 6, 1972, p. 41.

NOTES....

[73] See the unsigned article "There's Big Money in the Fringes," Business Week, May 6, 1972; also "Executive's Compensation: Who Got Most in '72," Business Week, May 5, 1973, p.

[74] Newsweek, March 24, 1975, p. 53. The same comparative approach applies to reports on lavish meals and entertainment served by high Chinese officials for foreign and domestic dignitaries and visitors at public places set aside for such occasions. The writer has interviewed a dozen such visitors, including a remarkably informed and well-connected Swiss representative of a European consortium who recently spent two months in China helping his hosts layout plans for an integrated steel mill at Wuhan. None of them would compare these parties and privileges to the opulent private parties elsewhere in Asia or Europe that they had tasted in the course of doing business.

[75] This topic is discussed in Chapters IV and V of my book manuscript, Development Management in China: A Comparative Analysis, mimeographed, August, 1975.