Some economists, especially regulationists, combine Taylorism as a piece-based wage system and Fordism as a capital accumulation system. But Fordism also has been developed as a time-based wage system which could be mainly bounded not by individual worker’s productivity but by whole company’s profitability. This paper argues on the outcomes from these facts.

A Thought of Regulation School

The times when Frederick Taylor advocated his differential piece-rate wage system and when Henry Ford introduced his doubled time-based wage system were almost the same (or very close) ones from late 19th to early 20th centuries.

Therefore, it is easy to be thought that Taylorism and Fordism stemmed from the same extension line of intensification of labour and/or the same payment system. For example, Michel Aglietta, a representative of Regulation School, says, “Fordism took up the principles of Taylorism and put them more effectively into practice, to obtain an ever greater intensification of labour.”

Takayuki Miura
Regulationists emphasize that Taylorism and Fordism contributed to shrink the “pores” of labour. “These are such losses of time as result from the organization of the labour process and the capacity of the workers to sustain the pace of work.” The pores of labour arise from two kinds of time period: (1) time periods bound up with the coordination of different segments of the labour process and (2) time periods bound up with the partial reconstitution of labour power at the workplace. Undoubtedly, synchronization, mechanization and automation have helped these pores shrink.

Under Taylorism and Fordism, however, the workers who worked hard were not forced to do more but the workers who resisted (or pretended) to work hard were eliminated (or had to be given up to do so). There were rationally allotted rest times workers would take and occasional stop buttons they could push. Nevertheless, Aglietta says, “Taylorism, and later Fordism, adapted to the restriction of the working day by sharply increasing the intensity of labour and systematically compressing wasted time. The result was the disappearance of any time for recuperation at the workplace itself. The increased exhaustion of labour-power in the labour process had to be entirely repaired outside the workplace.”

Meanwhile, even Aglietta, who conceptualizes wages in most abstract respect or analyses what all wages have in common, acknowledges that “the dominant character of the organizational principles of Taylorism, and subsequently of Fordism, can be perceived in the importance assumed by certain forms of wages relative to others for those industries that underwent changes in their labour process.” Yet still he does stress on the continuity or succession of Taylorism and

2) Ibid., p.50.
3) Ibid., p.158.
Fordism, does not stress on the difference between them.

By tying the basic wage explicitly to the job, Taylorism created far more opportunities for individual wages to be differentiated, and the capitalists took advantage of these to link remuneration to a stimulation of labour intensity. Piecework thus makes it possible both to lower the basic wage to the extent that the productivity of partial tasks increases, and to individualize wages in such a way as to sharpen competition among workers to a maximum. As piecework productivity evolves, its piecework rate is revised as following. “If the number of items produced in the working day doubles, then the basic piecework rate is divided by two; the daily reference wage is unchanged.” This means that there is no fair link between the increase in individual earnings and the increase in productive efficiency of a worker in a particular job position.5)

For Aglietta, piece wage is a derivative form of time wage. He said, “The most venerable and classical form of wages in large-scale industry is hourly payment.”6) I admit the both of piece-rate and time-rate wages are mainly restricted by the daily reference wages. Historically, however, the most venerable and classical form of wages in industry was piece-rate wage. And time-rate wage has been widely spread as the almost only possible form of wage after synchronization of jobs inside factories was introduced. Taylor’s piece-rate wage system was introduced in the last but flowering time of piecework. Precisely, “piecework can only be practised in labour processes that are sufficiently mechanized for the cycle of each worker’s actions to be simple and repetitive enough to be readily reducible to pure duration, though insufficiently integrated for output still to be measurable

5) Ibid., pp.141-146.
6) Ibid., p.138.
individually for each job.”

On the other hand, the characteristic labour process of Fordism is semi-automatic assembly-line production. The integration of different segments of the labour process by a system of conveyors and handling devices ensures the movement of the materials to be transformed and their arrival at the appropriate machine tools. The individual worker thus loses all control over his work rhythm. In this mode of organization workers are unable to put up any individual resistance to the imposition of the output norm, since job autonomy has been totally abolished.

Therefore, it seems that any perceptible tie between the collective output of the work force and the expenditure of energy by the individual worker is abolished. Its drawback is that it makes it difficult to divide the workers against themselves, and induce them to participate in the degradation of their own conditions of labour by means of individual output bonuses. Since the work of semi-automatic and/or automatic operatives has no direct effect on output, the workers can be paid simply by the hour, thus dispensing with all problems related to the determination of output. This was the starting point to form the particular Fordism very different from Taylorism. Nevertheless, Aglietta did not examine how Henry Ford devised a quite new method to induce workers to participate in the collective production. Aglietta avoided taking up Henry Ford’s steady sharing time wage system and took up only the useful aspect for a striking illustration of the Marxist thesis according to which the technical division labour is determined by the deepening of the social division labour. For Aglietta, Fordism marks a new stage

7) Ibid., p.142.
8) Ibid., pp.117-119.
9) Ibid., p.121.
10) Ibid., p.126.
in the regulation of capitalism, the regime of intensive accumulation in which the capitalist class seeks overall management of the production of wage-labour by the close articulation of relations of production with the commodity relations in which the wage-earners purchase their means of consumption. “Fordism is thus the principle of an articulation between process of production and mode of consumption, which constitutes the mass production that is the specific content of the universalization of wage-labour.”  

With respect to the wage system of Fordism, Aglietta repeated the trend to loosen or even completely dissolve the relationship between wages and output. Yet he skipped over Henry Ford’s device of a new wage system and pointed out the “collective output bonuses” developed in the course of the Second World War and particularly in the 1950s, the period in which Fordism became the dominant form of work organization in the United States. And he tried to find the logic of Fordism inside the recent development of Neo-Fordism.

The core framework of Regulation theory is as follows. Regulation theorists distinguish between the combination of production processes that forms the department producing means of production (Department I) and hence those commodities that are elements of constant capital, and the combination of production processes that produces other commodities and forms the department producing means of consumption (Department II). The motive impulses in the transformation of the forces of production, in effect, derive from Department I. But relative surplus-value represents a raising of the rate of surplus-value by a reduction in the time needed to reconstitute social labour-power. It can only be

11) Ibid., pp.116-117.
12) Ibid., p.138.
13) Ibid., pp.147-150.
produced by transforming the conditions of production of the commodities produced in Department II. For this to happen, Department II must be able to absorb the commodities produced in Department I, and incorporate these as constant capital in those production processes that lower the value of means of consumption. The development of the two departments must thus necessarily proceed in a certain harmony.14)

Aglietta says, “Advances of productivity in Department I find their outlets in the expansion of Department II. The fall in unit exchange-values in this department sufficiently increases the production of relative surplus-value to enable real wages to rise. Accumulation can thus progress at a rapid pace in both departments. Commodity production invades the entire life of society; all social relations become commodity relations. The limits to this accelerated and regular accumulation are those of the extension of capitalist relations of production to the whole field of social production.”15)

In so far as Fordism increased the rate of surplus-value by developing an overall set of social relations that closely combined the labour process with the social consumption norm, Department II appeared to be endowed with a dynamic arising from consumption itself. Since accumulation managed to preserve a relatively regular rhythm thanks to a certain harmonization of development between the two departments, at the price of a planned obsolescence and a permanent devaluation of capital, the problem of effective demand was not too serious. The consumer society appeared to have definitively resolved the contradictions of capitalism and abolished its crises. Such was the pattern of the two decades after the Second World War. In this period, a relatively regular rise

14) Ibid., pp.56-57.
15) Ibid., 86.
in real wages was made possible by a continuing fall in real social wage costs that reflected a rise in the rate of surplus-value.16)

Like this, regulationists explain Fordism solely through capitalist relations of production. Aglietta added a further hypothesis to the dynamic characteristics of capital accumulation as a whole. This concerns the division of surplus-value into a portion which is accumulated and a portion that is consumed by the capitalists or allocated to finance the general overheads of society.17) Aglietta says, “To the extent that the centralization of capital progresses, so too does the sum of surplus-value that is not accumulated, and in particular the dispersion of this portion of surplus-value among a larger number of individuals. It is essential therefore to note that the centralization of accumulated surplus-value has as its corollary the dispersion of the surplus-value spent as revenue. This is how a growing social demand is created for consumer goods that were previously considered as luxuries, so that these goods can now be produced by capital.”18)

Aglietta explained the possibility of a relatively regular rise in real wages. But that is a relative rise in comparison with the fall in unit exchange-values of the commodities produced in Department II and is made possible by a relative fall in real social wage costs. Aglietta interpreted Fordism as developed on the extension line of Taylorism. Taylor set a lower piece-rate as productivity

16) Ibid., p.161. According to Aglietta, the statistical indicator most appropriate to represent the evolution of the rate of surplus-value is the evolution of the real social wage cost. This index is calculated with the index of average real hourly wages divided by the index of value added per man-hour (or the index of average hourly productivity). This indicator varies in the opposite direction to the rate of surplus-value over the long run, but exhibits the same changes of rhythm. Even if both of the indices of value added and real hourly wages increased, gradually the former has not increased as much as the latter. And eventually the index of real social wage cost has decreased. Ibid., pp.87-100.
17) Ibid., p.61.
18) Ibid., pp.85-86.
proceeded. Under Taylorism, you can say, “The workers are rendered homogeneous by the capitalist labour process, but simultaneously isolated by the wage contract as individual labour-powers in mutual competition.”19) Ford didn’t set a lower time-rate as productivity proceeded. On the contrary, he set a higher time-rate as profitability increased without any kind of the pressure from workers’ movement. Under Fordism, you can say, “The workers are rendered homogeneous by the capitalist labour process, and simultaneously integrated by the wage contract as collective labour-powers in mutual cooperation and for outside competition.” But this particular case contradicts the regulation theory in which “the determination of the basic hourly wage itself is social in nature, and follows from the nature of the wage relation. This is a determination that escapes the individual capitalist.”20)

As mentioned above, Aglietta omitted the Henry Ford case completely from his analysis of Fordism. Ironically he had to omit the real Fordism from his analysis of Fordism, because Henry Ford introduced the possibility for a new wage system which was completely different from Taylorism. We must fill in the “pore” of his conceptualization of Fordism.

The wage system in Taylorism was quite different from one in Fordism. Having raised productivity in Taylorism was certainly based on the ratchet of production norm. It was achieved mainly through raising density in the expenditure of labour-power during each work in the absence of any synchronization among jobs. It was a dexterous strengthening of labour. However, having raised productivity in Fordism was largely depended on the development of mechanical synchronization and the introduction of a sharing type

19) Ibid., p.154.
20) Ibid., pp. 142-143.
Taylor’s Differential Piece Rate Wage System

While the age that productivity was entirely depended on human factors has been converted to the age mainly dependent on mechanical factors, the form of wage also has to be greatly converted from piece-based to time-based. There might be a time lag between the two. Taylor’s differential piece rate wage system was advocated during this time lag.

In 1884 Taylor applied his differential piece rate to part of the work in a machine completed their assignment in the allotted time and a low penalty rate for all others. On one job, for example, each machinist had received a rate of 50 ¢ per piece and usually turned out four or five finished pieces per day. After time studies Taylor concluded that the machinist there should produce ten pieces per day. He set a new rate of 35 ¢ per piece if the machinist finished ten acceptable pieces per day (or a wage of $3.50 rather than $2.00 to $2.50 per day), and 25 ¢ if he completed nine or fewer pieces (or a maximum of $2.25 per day).

The machinist can earn 1.4 or 1.75 times of the past daily wage only if he finished 2 times of the past amounts, otherwise he will get a half of the past daily wage even if he finished the same amounts of the past. Taylor might intend the elimination of idle machinists. If the company needed 50 pieces a day on that job, the company can achieve them with the hands of 5 machinists under such new rate system. But what happens if all 10 machinists finished their ideal tasks? The company will hold and accumulate an extra volume unneeded and pay $10 to $15 more for the total daily wages every day.

When he went to Bethlehem Steel, Taylor had every intention of introducing the differential piece rate at any early date. He decided to introduce piecework at Bethlehem in early 1899. The labourers in the metal-working shops were the poorest paid and least efficient of all the Bethlehem employees. A group of labourers to load the iron on railroad cars were put on piecework. Ten of the very best men were selected and ordered to load a car at their maximum speed. Each man could load the equivalent of 75 tons per day, nearly 6 times the previous average of 13 tons. But they were too exhausted. Therefore, Taylor set the amount to be loaded by a first class man at 45 tons per day. The task was set at 40% deduction of the maximum.

After consulting several officers, he set a piece rate of 3.75¢ per ton, a rate that would enable a first class pig iron handler to earn $1.68 a day, the average wage of the 3,100 employees (including supervisory workers) at Bethlehem in 1899. The day rate for labourers was $1.15, so a man who loaded 45 tons would receive a 46% wage increase. In this case, Taylor did not set a second, lower rate, the distinctive feature of the differential piece rate. This probably seemed unnecessary since the pig iron loader whose output was not at least 2.5 times the former average would earn less than $1.15. For example, men who merely doubled their former output (26 rather than 13 tons) would earn 91¢ per day, or 21% less than the going rate.22)

Again, what happened if all labourers applied this wage system achieved their tasks? The company might hold more than 3 times the required amount of finished goods and pay nearly 1.5 times of the day rate before. Apparently, Taylor intended to drive the not-first class handlers out from the company. Inevitably, as

22) Ibid., pp.91-93.
a result, there had to develop not a little resistance on the side of the employees against the piece work system.

Afterwards, the company did have difficulty finding first class men for a while. But Henry Noll (whom Taylor was later to make famous as “Schmidt”\(^\text{23}^\)) proved to be a first class worker and other labourers gradually joined Noll. Noll averaged between $1.35 and $1.70 per day. Although Taylor asserted that “they all lived better than they had before,” during Taylor’s final year at Bethlehem (April 1900-April 1901), yard labour costs were cut down to 3.3¢ per ton of material handled. After all, Noll had made only $1.72 per day in early June 1899, while the average labourer in 1900-1901 earned $1.84 which was 60% higher wages than formerly.\(^\text{24}\) It means that the latter usually loaded 55.75 tons a day.

Under such a piece-rate wage system, as a manual labourer raises his productivity up, his daily wage may rise too. But the rising rate of his wage is apt to be suppressed to much smaller than the rising rate of his productivity.\(^\text{25}\) A tense relationship between employers and employees can easily come into existence in the circumstances. This must be fatal. At Bethlehem, the average labourer loaded 3 times or more than before, but he earned about 1.6 times more than before. According to Taylor, the principle is just like that first-class men


\(^\text{24}\) Daniel Nelson, op. cit., pp.94-98.

\(^\text{25}\) Clawson pointed out, “In theory, piecework was simple. The company set a fair price for each unit of completed work ⋅⋅⋅ and workers were paid according to their output. If workers could increase output, either by extra exertion or by improved methods of their own devising, they would receive higher wages. ⋅⋅⋅ In practice, piecework never worked this way, since employers always cut the price they paid workers.” Daniel Clawson, *Bureaucracy and the Labour Process*, New York : Monthly Review Press, 1980, pp.169-170.
who are not only willing but also glad to work at their maximum speed should be paid from 30% to 100% more than the average of their trade\(^{26}\) and/or that “for ordinary day labour requiring little brains or special skill, but calling for strength, severe bodily exertion, and fatigue, it is necessary to pay from 50% to 60% above the average.”\(^{27}\)

Taylor's system could serve for the elimination of some lazy workers, but workers under his system could find lower wage rates as they raise their productivities up and no relations to their company’s economic performances as a whole. Whatever a company grows, it applies a fixed wage rate to its employees. In such a world, the economic interests between employers and employees would keep to oppose each other.

**Ford’s Steady Sharing Wage System**

In January 1914, Ford set a national precedent by introducing the eight-hour working and by doubling wages to $5 per day. The level of mechanization at Ford Assembly Plants was only 4\(^{28}\) among 1 to 17 levels on James Bright’s scale of machine mechanization. But Ford Assembly Plants had already achieved a high level of inside synchronization until that time. With the introduction of the moving assembly line the number of labour hours required in the final assembly process for a chassis decreased by an 8 to 1 factor: from 12 hours and 28


\(^{27}\) Ibid., p.26.

minutes in September 1913 to 1 hour and 33 minutes in March 1914.\textsuperscript{29}

Henry Ford antagonized a piece work system. “In his antagonism to piece work Ford was actuated not only by a conviction that hurry led to nervous workers and botched parts, but by the consideration that his company was changing its methods of production so frequently that piece rates would have meant endless negotiation. Of course, after the coming of mass production, a piecework system would have been meaningless where the new type of assembly was concerned, since the speed of the line controlled the speed of the worker.”\textsuperscript{30}

The economic performances of Ford Motor Company had been rapidly increasing up at that time. The net income went above $1 million in the accounting year 1907, above $3 millions in the calendar year 1909, above $4 millions in 1910, above $7 millions in 1911, above $13.5 millions in 1912, and above $27 millions in 1913. Dividends also aggregated $2.5 millions during 1908, $1.8 millions during 1909, $2 millions during 1910, $3 millions during 1911, $5.2 millions during 1912, and $11.2 millions during 1913.\textsuperscript{31}

As Henry Ford became colossally rich, as he paid executives higher salaries and bonuses, and as the company sold the public cheaper and cheaper cars, Henry Ford and the company had to ask themselves: “What of our workers?” Was it fair of a corporation which by 1913 had more than $27 millions in surplus to keep paying each worker only $2 or $2.50 a day?\textsuperscript{32}

Profit-sharing in the conventional sense of year-end bonuses ran back in Ford history to December 1905, when $10 was paid at Christmas to all office workers.

\begin{itemize}
\item \textsuperscript{30} Allan Nevins, \textit{Ford: The Times, the Man, the Company}, New York: Charles Scribner’s Sons, 1954, p.525.
\item \textsuperscript{31} From ibid., Appendices 6 and 8, pp.647, 649-650.
\item \textsuperscript{32} Ibid., p.527.
\end{itemize}
Beginning in 1908 the bonus was extended to the factory force on a seniority basis. Men with the company one year got 5% of their annual pay, men two years or more 7.5%. In 1909 and again in 1910, under a carefully revised scheme, the gradation ran 5, 7.5, and 10% for one-, two-, and three-year men respectively. Then in 1911 the management, apparently feeling that efficiency rather than length of service should be the basis, simply distributed $82,500 to select lists of employees, and in 1912 thus distributed $434,000. Branch managers, now a numerous body, were allotted a thick slice of these sums. A similar efficiency bonus of $275,000 was paid in 1913, along with a 10% of pay bonus for about 640 employees of three years’ standing or more who did not share in the lump sum.

It will be seen that this so-called profit-sharing had been erratic and partial, costing the company little. A reasonable generosity had been shown to successful executives, sales managers, and office workers, and had occasionally been extended to long-service employees. Even a half-million in bonuses in the calendar years 1912 and 1913 would have been modest in comparison with the net profits of more than $13.5 millions and $27 millions. The bonus system had no evident connection with the startling new departure in wage policy announced at the beginning of 1914.33)

Thrusting the opponent directors aside, on January 5, 1914, a directors’ meeting was held, with only three directors including Henry Ford. And the five-dollar wage was unanimously approved, to take force on the 12th. The average numbers of employees on rolls of Ford Motor Company were 14,366 in 1913 and 12,880 in 1914.34) If the 14,000 employees worked for 300 days a year, the
company would pay $10 millions in total with $2.5 daily wage and $20 millions in total with $5 daily wage. Approximately an additional expenditure for the same volume of business of $10 millions would be needed for the year 1914. If they keep this wage policy in the future, the additional expenditure of $10 millions would be needed every year. They kept this policy till the year 1922 when they set a further high wage of $6 a day. The average numbers of employees were 44,569 in 1919, 51,197 in 1920, and 32,679 in 1921. Since 1922, company was to pay total wages of $54 millions for 30,000 workers year after year.

The company was reducing the work day to eight hours, converting the factory to three shifts instead of two, and instituting a five-dollar basic wage. Every worker of twenty-two or over would receive a share in the profits of the company sufficient to make the minimum wage five dollars. Nine-tenths of the employees would get this increase at once. Young men under twenty-two might share if they had dependents. And the working force was thus expected to divide an additional ten millions in the current year, although nothing was said about salaried personnel and women employees. Henry Ford said to the press, “This is neither charity nor wages, but profit sharing and efficiency engineering.”

Henry Ford concluded, “if men could be induces to speed up machinery, there would be more profit in the high wage than at the low wage.” The company controled the income of its workers by making a crucial distinction between wages and profits. In the case of an unskilled worker, for example, his normal wage rate was $2.34 per day and his profit rate was $2.66. Each worker had the amount of his wages and the amount of his profits recorded separately on his pay

37) Ibid., pp.533-534.
With net income of more than $27 millions and dividends of well over $11 millions in 1913, the management felt that it had to share its wealth. And if huge slices of pudding went to consumers, and other slices to officers, a great slice logically had to go to workers. All the demands of efficiency engineering would have been satisfied by a moderate new wage increase of $10 millions in 1914.

Allan Nevins pointed out that some credit should be given the brilliant young Englishman, Percival Perry, who had made so great a success of the Ford factory at Manchester and of the wide sales organization controlled from the Shaftesbury Avenue offices in London. He may well have played an important part in preparing Ford for the decision. When Perry opened the factory in Manchester, he found the ruling wage-rate for unskilled labour to be 6.5 pence an hour for 56-hour week. This was a starvation wage, on which decent family life was impossible. By systematic investigation, he found that 1 shilling and 3 pence an hour, or £3 a week, would keep a family properly. He adopted the rule of paying no employee less. It worked admirably; in a happier factory he obtained better production. When in 1912 Ford visited the British Isles, Perry accompanied him to Ireland. Missing the boat at Fishguard, they had to spend the entire day there; and Perry explained to the interested manufacturer his plan of high wages in complete detail.39)

Thus the Ford Motor Company, which in 1911 had no labour policy at all, possessed three years later the most advanced labour policy in the world. The Ford Motor Company was something more than a successful manufacturing

enterprise. It was an exemplar, almost miraculous in its swift rise, of forces that were reshaping the world.40)

Economists over the world were deeply interested in the suggestion of high wages for the mass production and consumption of the Model T. For example, Raff and Summers questioned why the Ford Company did not lower its wages in the face of an excess supply of labour.41) And they thought that the five-dollar day program was consistent with the predictions of efficiency wage theories. According to them, labelling the payments profit sharing was intended to convey a notion that the extra payments were gifts to workers rather than payments they had a right to expect. This made it clear that the company would not feel bound, and certainly could not be held to have promised, to continue the income stream if its own fortunes sagged. Indeed, the plan was initially announced as an experiment to which the company was bound only for 1 year. But the company kept this high wage program year after year. They think, “If wages are set at a level at which there is a utility cost to loosing a job, workers will autonomously choose to work harder: high wages will substitute for monitoring and control.”42) While doublings of wages did not become common, as other firms eventually introduced Ford’s technologies, they gradually emulated his high-wage policies. By 1928, wages in the automobile industry were almost 40% greater than in the rest of manufacturing. Raff and Summers emphasized that higher wages might elicit increased effort and contribute higher productivity and profitability as a whole. People, however, thinking that higher profitability as a whole might elicit higher wages, must take up the five-dollar day program as an income distribution

40) Ibid., p.541.
42) Ibid., p.s80.
problem.

**From Productivity-based to Profitability-based Wages**

The wage based on individual productivity has no direct relation to profitability as a whole. Rather it has somehow adverse relation to profitability. Hostility between labour and capital is unavoidable in setting a peace-rate. On the other hand, the wage based on profitability has no more direct relation to individual productivity. But it would be possible to have somehow correlativity between the interests of labour and capital.

Henry Ford expressed his introduction of a doubled wage system as profit sharing. Yet no economists have classified his wage system as profit sharing system so far. Because they have contrasted profit sharing with wage system. On the one hand, wage has the characteristics of pre-determined contractual expenditure measured by working time. On the other hand, profit sharing is generally the distribution of profit achieved ex-post.

But the differences between wage expenditure and profit disposal are actually not so large, not only because wage is a kind of taking out of profit in advance but also because wage is able to be reflected the amount of profit ex-post. Ford could take about $10 millions a year as an extra wage out of profit in advance. Nevertheless, the company did not need to do so. Ford maintained its high profitability during the years of Model T production. While Ford set a higher wage to its workers, it set a lower price to its customers. Moreover, as the company increased the production and sales, it could decrease its unit costs. The unit costs and prices inclined to 85% of the former whenever the accumulated production of Model T reached at the double amount. These effects of experience or learning curve are so to speak the economies of cumulative scale.
So long as the elasticity of demand to price is more than 1, the company can enjoy the economies of scale. The downward rigidity of price on the base of a kinked demand curve no longer has been less applicable to consumer goods industries than Paul Sweezy once believed. Ford connected its achieved cost reduction with its reflected price reduction. And then price reduction circulated a further cost reduction supported by a higher volume of production and sales. High wage system was needed for the maintenance and development of this efficient labour process. If Ford had not introduced the doubled wage system, the company might not achieve such high economic performances.

But while the company was very flexible to price setting, it was not flexible to wage setting. Both of the stability and flexibility of wages are needed for workers’ motivation and vigorousness of the company. The company gave priority to the stability of wage and kept it relatively high and rigid.

In 1913, Ford earned $27 millions profit and paid $11 millions dividends. If we assumed executive bonus and tax were zero, $16 millions at most would be ploughed back for the future activities. The residual amount of after deducting executive bonus and tax from $16 millions could be used for either additional machines or workers. Yet Ford might decide to use $10 millions at least out of $16 millions not for additional workers but for the existing workers. Otherwise, if other business conditions had not changed, Ford should earn only $17 millions profit in the next year.

In 1914, however, Ford earned $25 millions profit (actually nine months from 1 January to 30 September 1914) and paid $12 millions dividends. Again, if

other business conditions had not changed, Ford might earn only $15 millions profit in the following year. But Ford earned $24 millions profit (actually ten months from 1 October 1914 to 31 July 1915) and paid $16 millions dividends. And so on in the later years too.

This means that other business conditions had changed and profit reservation had not been used for wage payment. In fact, Ford increased the sales vigorously year after year. And the company could pay the doubled wage without resorting to any internal reservation of profits. But what happened if it had decreased the sales and had earned little profit or deficit? Henry Ford’s new wage system was not a temporary sharing wage system but a steady sharing wage system. Therefore, it was not reflecting the changes of sequent profitability. Henry Ford was to think over an alternative pay system, wasn’t he?

The company might choose one among some other alternative pay systems. They are classified into two groups largely. One is a profit sharing system combined with a wage system. The other is a wage system reflecting the yearly profitability.

Although the first one can include many variations, I would like to take up a system which combines $2.50 a day wage system with 37% profit sharing system. The 14 thousand workers could earn $20 millions in total as much as Ford paid actually in 1914. But in 1915 the 13 thousand workers could earn $9.75 millions of wage and $9.25 millions of profit sharing. The total amount of payment to the workers reduced from $20 millions to $19 millions reflecting the profitability.

Although the second option can include many variations, I would like to take up a wage system which reflects the change rate of profitability. The profit reduced from $27 millions in 1913 to $25 millions in 1914. The workers could earn $18.52 millions wage in 1915. It would be 7.4% down from the wage in
1914. If the combination of a fixed wage of $2.50 a day per head and a flexible wage as the standard of $10 millions gross bonus in 1914 had been set, the total amount of wage in 1915 would be quite similar to the amount of the first option.

Let us take more extreme examples to illustrate the differences between the two options of rewards. If the company had earned $17.5 millions profit in 1915, i.e. only a half amount of the profit in 1914, in 1916 the workers could be paid $16.475 millions (=fixed wage $10 millions + profit sharing $6.475 millions) under the first rewarding plan or $15 millions (=fixed wage $10 millions + flexible wage $5 millions) under the second rewarding plan. If the company had earned $50 millions profit in 1915, i.e. a double amount of the profit in 1914, in 1916 the workers could be paid $28.5 millions (=fixed wage $10 millions + profit sharing $18.5 millions) under the first rewarding plan or $30 millions (=fixed wage $10 millions + flexible wage $20 millions) under the second rewarding plan.

It is very important to ascertain how each distribution method strengthens or softens the tense relationship of capital and labour when the various ways of income distribution in an individual enterprise are examined. Labour was the only factor of production, and it was the only residual claimant in extremely primitive times when neither the land ownership system nor the necessity in the accumulation of capital existed. In modern times, capital is the main residual claimant. If the profit sharing to labour is admitted, it is clear that the tense relationship between capital and labour becomes tight.

Capital must be the only residual claimant in order to soften the tense relationship between capital and labour. And some portion of rewarding to labour must be reflected upon a given company’s profitability in order to tie in the interests of capital and labour. These are the reasons why I recommend the second rewarding plan even though the actual amounts of rewards between the two
plans could be no different at all. I do not discuss here about how to decide the portion between fixed and flexible wages although all full flexible wages are not practical in any case for loosing the stability of payment to labour. The change rate of profitability must reflect fully in the change rate of flexible wage so that labour’s interests can be connected with capital’s interests. Workers need to have their motivation and responsibility to the profitability of the company, while owners can take full advantage of it and have to take all risks of it.

The second rewarding plan also contributes to stabilize two kinds of fluctuation: profitability and employment. If the company achieved a higher profit, it has to preserve a higher portion of the profit for preparing for the payment of a higher flexible wage. The higher preservation of profit could bring a lower inclination to dividend. And the payment of a higher flexible wage could cause a lower profit in the next year. On the other hand, if the company achieved a lower profit, it might be inclined to preserve a lower portion of the profit for preparing the payment of a lower flexible wage. The lower preservation of profit could bring a higher inclination to dividend. And the payment of a lower flexible wage could cause a higher profit in the next year.

It is needless to say that as wage coordination is adopted more, employment coordination is adopted less. The second rewarding plan can contribute to full employment easier and more effective than the first rewarding plan.

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