# Plant organization system and the formal organization of the factory

by Edi Rahmat Taufik

**Submission date:** 21-May-2023 08:42AM (UTC+0700)

**Submission ID: 2098034997** 

File name: Plant\_organization\_system\_and\_the\_formal.pdf (200.47K)

Word count: 4503 Character count: 24041

#### How to Cite:

Rulinawaty, R., Perbawasari, S., Taufik, E. R., Hasan, S., & Chauhan, R. (2022). Plant organization system and the formal organization of the factory. *International Journal of Health Sciences*, 6(S2), 9323–9331. https://doi.org/10.53730/ijhs.v6nS2.7437



## Plant organization system and the formal organization of the factory

#### Rulinawaty

Universitas Terbuka, Indonesia

Corresponding author email: ruly@ecampus.ut.ac.id

#### Susie Perbawasari

Universitas Padjadjaran, Bandung, Indonesia

#### E. Rahmat Taufik

Fakultas Ekonomi dan Bisnis, Universitas Sultan Ageng Tirtayasa, Banten, Indonesia

#### Samsurijzal Hasan

STIE Bangkinang, Riau, Indonesia

#### Rahul Chauhan

Parul University, India

Abstract---In large Japanese companies, in general, the ratio between the number of people in one level of cement and the level below is roughly one in three. Namely a president with 2 or three people recruited by the manager who is responsible to him, and in charge of approximately 10 heads of departments. Each section is divided into approximately 3 sections and this section is divided into 4 subsections. Although the terminology used for these units varies from factory to factory, the general structure is the same. The one-to-three ratio usually applies at several levels of foremen, with at least two groups of first-line supervisors. The terminology used here varies widely, as are the boundaries of position, authority and responsibility. A common pattern is a work group of perhaps 10 workers led by a team leader whose job is roughly equivalent to the role of a team leader in some American-style jobs, although these positions usually carry no official responsibilities, but in some factories, have official titles and official ranks, In a factory that employs approximately 4,500 workers, about 450 people have the rank of team leader or foreman and about 150 people have the rank of chief foreman, each with two or three teams under it. So, it is within this clear outline of the formal organization representing the large Japanese companies. The rate among factory employees is roughly one in six. Leaving aside the post

of deputy and assistant, from worker to president to 9 levels of rank in this minimal scheme, which does not have to be paid as a continuous progression of the distinction between shokuin and coin discussed earlier leads to a clear division and a sharp distinction. area of employees based on background and status, that is, between the section head and foreman levels.

Keywords---system, organization, factory, worker, companies.

#### Introduction

It is this division between status and role at the subsection level that introduces an important addition to the plant pattern described here. In some of the factories studied, where technical training was essential for the functioning of the factory, an intermediate post was introduced between the foreman and the head of the sub-section [1]. Usually held by young academy graduates who, as a result of the recruitment methods and personnel used, could not be placed in line supervisory positions. First, as fresh graduates from the academy, they are not sufficiently experienced and trained to assume the responsibilities of directors. In the meantime - because of their status when they were hired - they cannot be placed as workers [2]. Therefore they are given various positions with titles in which they act as technical assistants for chief foreman.

The formation of these middle positions is a good example of the kinds of adjustments that Japanese organizations are forced to make due to the nature of the company-worker relationship system and the conflicting demands of technology and human-human relations [3]. An extreme example of this conflict is the situation at a mine in Shikoku, which is part of the steel production complex. The miners (mining workers) were recruited from mountain villages near this isolated sector on the island of Shikoku. This mine has been operating since the 17th century, and several generations among many families have worked in the mine. The role of local traditions, superstitions and customs in mining is enormous, and people can only be effectively supervised by foremen and leaders who are well acquainted with these customs and traditions. However, a young academic graduate who will manage the mine, is recruited by the head office from universities in Tokyo and sent to the mining area for a period. Although technically competent, these people are completely inadequate to supervise in these special circumstances. For example, if a miner breaks a plate at breakfast, he doesn't want to go to the mine that day anyway, because he believes that doing so means death. Trained local supervisors understand and respect that belief, and young graduates from major universities in Tokyo are unlikely to be sympathetic. In order for staffing procedures to match the realities of supervisory demands at the mine, the company has developed a system in which two people fill each intermediate supervisory position. One was a person with years of experience on site. One is a young engineer who may or may not remain in the local work situation for the rest of his career. After all it has to leave actual control of the miners to its partners.

There are many similar situations in Japan; this is only an extreme example of a common problem. The company was sandwiched between highly theoretical exercises at Japanese universities and the social demands of a recruitment at a Japanese factory that made it impossible to fill board positions from the level of the workforce [4]. The result was a patchy expansion of hierarchies and the creation of superfluous titles; where functions and responsibilities are randomly assigned and their usefulness is very doubtful [5]. Perhaps most important to note in this situation is the fact that the efficiency and rationalization requirements of a production organization succumb to the demands of the social context in which the plant operates.

#### Plant Organization System

The complex and highly detailed Japanese plant organization system is essential in two ways. The first is the effect of organizational systems on decision-making processes in Japanese companies, and the second is the relationship between formal organizations and the careers of individuals in the organization [6].

Regarding the differences between American companies and Japanese companies and regarding the different relationships between the social systems of the two societies and their business organizations [7], nothing is more striking and clearer than matters of decision making, details regarding the management hierarchy in Japanese companies have been described. What has not been emphasized / affirmed is the size of the offices - which are officially differentiated and well defined. The functional one is erratic and the formula is not good. The complexity of the structure itself actually causes an overlapping amount of authority to more than one person in any space. The problems regarding the differentiation between head office and factory have been described. The functions of staff and lines were not clearly differentiated, and there were many positions of deputy (deputy) and assistant who had blurred authority [8]. Furthermore, because the extent of a person's authority has no clear boundaries, there is a tendency to shift responsibility for decision making upward. There are several consequences for these factors from a decision-making point of view. The first is that nearly all decisions are determined by groups of people in meetings and discussions, in a slow and impractical way. Second, communication is not well defined, and the levels of authority that the decisions that must pass through are numerous. third, and perhaps most importantly, in this system it is almost impossible to determine the responsibility of a person for a decision or an error in the reversal of a decision [9].

To cite a common (mundane) example of how decision-making works and how it affects people in the system, the problem of paying bonuses is clearly likely to create difficulties in the factory. Since any kind of worker may feel discriminated against against this kind of individually determined payment, it is likely that the bonus would be a major source of complaint in the factory. Japanese managers maintain that - there is no evidence - to suggest otherwise - that bonuses cause little or no difficulty. One could argue that the lack of dissatisfaction stems from general obedience on the part of Japanese workers. However, this is more likely to be due to the system used in deciding bonus payments [10]. There was no one else that workers could target to express a sense of dissatisfaction with the

decision. The bonus payment - the difference between one individual and another is small - is not decided by the worker foreman, nor by the sub-section head, nor by the section head, nor by the staffing department, but by all this together with the agreement the end of the section head. If the worker feels hatred, then that hatred must be shown to all of these people, or more to the company as a whole. And because he differs in a special relationship with the company, such resentment is neither easy to vent nor easy to express [11].

This approach to decision making is by no means limited to the issue of bonuses and effort. But it is a feature of all decision making in large corporations [12]. The advantages of such a system are numerous and seem to have their roots in Japanese customs. The tradition of family deliberation, in which the whole family participates in making decisions about family matters and village deliberations, in which the village as a whole talks about and decides village matters, has been noted by Japanese scholars and societies. This pattern has been linked to the relationship between familiar people prevailing within the Japanese limited group and to the great importance of maintaining the status and presitse of the Japanese people. According to this argument it is not possible to present someone at risk of direct responsibility for a decision [13]. In practice, this approach to decision-making within the factory protects one's position in the factory. If a person has to spend his entire career in one factory or company, then it is very important that his prestige and reputation, and his relationships with others. will be able to maintain / maintain their integrity. The decision-making system was adapted for this purpose in amazing ways.

But the system also has difficulties, which are clear from the point of view of operating the plant effectively. It is slow and impractical to meet the rapidly changing market and workforce conditions [14]. Viewed from a Western organization this is less favorable because it hinders the possibility of clearly managing one's responsibilities and quickly and efficiently correcting weaknesses in the organization. This system clearly depends on alternative goals [15]. The Japanese choice is in a direction that supports and maintains relationships between people within the company at the expense of maximum efficiency. It is an option Western advisers hope to rationalize Japanese production methods that are very difficult to appreciate.

#### The Formal Organization of the Factory

The second thing that is very interesting in the study of the formal organization of the factory is the relationship between the organizational system and the careers of workers [16]. This organization consists of two distinct sections for workers. The first is about hierarchy, which can be achieved by graduates of old-style elementary and current high schools. Which has expanded the possibilities: from apprenticeship through workers and group leaders to foremen. These workers are coins. And their career count is separate from those of graduates of other levels of schools, where this expansion is intended for them-at least in theory-to occupy other positions in the organization to the top positions. In fact, career advancement for high school is more limited than for university graduates; but putting this aside; it turns out that careers for better educated people will lift them to higher levels.

There is no doubt that the complexity of directorships is due in part to the enormous difficulties faced in trying to demote or fire workers and the need to offer titles and ranks to compensate for the limited flexibility of the salary system [17]. Recalling the discussion about recruitment and wages. It is clear that if there is an error in the recruitment into the shokuin group, then there must be an internal mechanism to minimize the mistake. if the factory worker is not a competent person he is not fired, but he can be transferred to routine and harmless positions without harming the company. Likewise, a person who enters the company from the academy cannot be demoted (rank) or fired. The need for a system of relatively harmless positions for incompetent shokuin seems to have led to some expansion of positions and titles. It is necessary to find a niche (place) for a less capable person where he can do small jobs without jeopardizing the overall effectiveness of the factory and without harming one's prestige [18].

Apart from being a safety valve for errors in recruitment, the duplication of positions also makes it possible to pay individuals with concrete evidence of career progress within a company. In companies that had expanded their workforce during the war, the problem became even more serious after the war and during the period of postwar regret. They felt and still feel that there are too many staff at the board of directors level. To compensate for the temporary loss of army personnel, recruitment for the rank of directors continued throughout the war, but wartime and postwar personnel were entitled to post-war positions. This fact alone has resulted in an enormous staffing (dotación de personal) at the shokuin level. Although the company which expanded in this way during the war subsequently reduced its workforce substantially during the period 1949-1950, it proved unable to reduce its board of directors proportionally [19]. Finally, large companies, although willing to cut all additional recruitment of workers at this time, feel that they must continue to recruit academy graduates, Palideciendo is not in a reduced number. The result is that in most Japanese companies there is a very large number of directors and staff when compared to workers and administrative personnel. The net effect (net effect) severely hinders career progression among executives, especially since a retirement age of 55 is rarely seen in upper-level directors. The job title and assistant section manager allow the company to give career recognition to those who would otherwise not have the advancement (promotion) due to their seniority. Despite the need to reward competent individuals, pressure. To give career recognition depends on 2 very general considerations [20]. It should be borne in mind that wage differences are very limited, and a title and perks for a formal position are certainly an alternative to increasing wages in rewarding employees. On the other hand, it may also be noted that, if a company (or military organization or government agency) uses multiple titles and ranks, then companies and organizations that have a working relationship with that company should also use a range of titles to facilitate communication. What is even more important is the second consideration in using titles and titles in exchange for career - in Japanese companies this is determined by age and age level (class). The relationship between age and rank in Japanese companies is very close. In general it can be stated that it is impossible to promote / promote a person to a rank where he will have authority over people who are much more senior than him. After all it is necessary to raise a person's rank to some extent if he reaches a sufficient age. (because workers do not move from one company to another, their service period and age are directly linked).

This general rule of seniority and promotion applies to both major groupings within the factory, for both workers and staff. So, for example, a group leader in a factory and a foreman must have at least 10 and 20 years of service, respectively. Progress at the level of directors is governed by age. Age will not guarantee progress beyond a certain point, but if age is less, one certainly will not progress until the required number of years is met. So an academy graduate will not reach a position head-branch until he reaches the age of 30-35. He will be 35-40 at the next promotion, maybe at 40-45 for the next promotion, and will be a superintendent near the age of 50. Not everything will go that far, but age determines the promotion to a large extent. There will not be an academy graduate without ranks for an indefinite period of time, and vice versa, he will not be promoted as the superior of an older person. The importance of age class (grouping) of age in Japanese companies has been illustrated in one company where the job classification system prevails. (Job classification, in large and well-managed companies, is an unusual tool in Japan).

#### Level of Workers

There are five levels of workers: apprentices, workers, trained workers at level 3 and level 2, and "upper level" workers. Further studies show that this classification depends solely on the length of service period, divided into persons with working terms of up to 3, 10 and 15 years, respectively, and finally the post of foreman which in this factory requires a service period of 20 years. Because of the overstaffing of shokuin in many factories, this general rule governing promotions based on length of service period uses constant pressure to have positions formally at least higher in the corporate hierarchy. The positions of deputy and assistant were held to fulfill this demand, but to say that these positions were not functional within the operation of the factory was not the same as saying that the people in those positions had no authority. They further illustrate a further division of powers and a process of further depletion of the decision-making function, which further exacerbates existing deficiencies in the Japanese organizational system. The discussion recognizes the relationship between organizations formal and career workers are not intended to imply that informal factors do not play a role in career and career opportunities. Several informal factors have been pointed out in the previous section. For example, nepotism plays a definite role in the basic recruitment process. In addition, the literature on Japanese society indicates the existence of a peculiar type of informal relationship, known as oyabun-kobun, parent-child, which should be briefly discussed here. It is an explicitly recognized set of reciprocal obligations between old (senior) and young (junior) which has been observed and represents a kind of Japanese employment relationship. During this study this kind of relationship has also been noted. On the whole it seems justifiable to report that the oyabun-kobun relationship in its true form does not exist in large companies. But certain types of industry, especially loading and unloading on boats and construction work, have retained this type of organization, and this is a striking feature of a large number of the Japanese gambling and entertainment industry. Apart from the semi-legal and illegal areas / fields, it is interesting to note that the most vigorous in those industries - in the United States at least - are the most ridden by extortion; and this system has great similarities to American-style blackmail. It seems inaccurate to describe the relationship between people in

Japanese companies in this sense. It is correct to say that the relationship between young and old, between superiors and subordinates often has many components that we might call paternalism or relationships - which have a lot in common with the father-son relationship. So, for example, a Japanese foreman feels responsible for the welfare of his workers, completely outside the work environment. Family problems, death of workers' family members, illness, quarrels between workers.

The individual, the welfare of the workers in the community, all of this was and is still an important part of a foreman's responsibility. But now it is not the kind of formal and organized relationship that is included in the definition of oyoabunkobun. If we look at the present situation and especially think from the perspective of management relations, then the more important term than oyabunkobun is the word batsu, or klik (clique). In the discussion regarding recruitment procedures it has been stated that a group of young people who jointly enter shokuin status in a certain year are recruited from a small number of universities, which in practice means that a certain age group at the time of entering work for the company has had some interactions and interests. timan before. The intimacy of the academy years is maintained in the company by means of group meals, meetings and other informal activities. Furthermore, a senior member of the board of directors, usually a graduate from the same university, will often be familiar with and familiar with the careers of such a group of young people. On the basis of shared experience at the university and the same background developed in large companies different cliques that play a very important - albeit informal - role in career advancement and success. This factor often causes difficulties in careers for overseas university graduates who work for Japanese companies. The role of a senior board member in this clique structure underscores the importance of such a person in the training system of Japanese companies. The detailed methods used by American companies to train workers at all levels are seen very little in Japanese companies. In general, training is training on the job (on the job training), learning from seniors and superiors.

#### Conclusion

New workers are placed on an apprenticeship system and very little knowledge is obtained through formal schools. Work learning takes place in factories and - given that vocational schools or trade and industry curricula are not part of the Japanese education system - it is the responsibility of senior workers to teach new workers the methods used in factories. The same applies to directors. The absence of formal training in Japanese companies adds to the close relationship between workers and their superiors and increases the bonds that bind workers to companies in an inherently paternalistic relationship system. These ties, which are formed within a stretched formal organization, are very much like the sort of relationship-arrangement between owners and workers that is exhibited by a small textile factory. Although the size of the organization hinders the in-team recognition and interaction with superiors who are the central forces in the operation of a small factory, there are two types of relationships - the same as the system found in a small factory - that a large company may have. The first is the strong bond between the company and the worker described above, the lifelong

mutual commitment between the worker and the company, and the detailed system of in-kind payments and wages, which has been developed in large factories. The second is the internal relationship arrangement between superiors and subordinates that develops in the clique system at the board level and in the relationships between apprentices and teachers as well as between foreman workers within the factory itself. In order to fully present the similarities in the organization of matters between Japanese small factories and large Japanese factories, it is necessary to break through the formal system and see the role of the company in all activities of workers' life. Inter-penetration that occurs between jobs with other social activities that are so conspicuous at the Keea factory it also appears in the big Japanese factories. A large factory is the same as a small factory with 20 workers, is an organization that is involved with the entire life span of the workers; an involvement that workers expect and accept and one that deals with such important questions as the role of trade unions in Japanese factories.

#### References

- Wang, B., Schlagwein, D., Cecez-Kecmanovic, D., & Cahalane, M. C. (2020). Beyond the factory paradigm: Digital nomadism and the digital future (s) of knowledge work post-COVID-19. *Journal of the Association for Information* Systems, 21(6), 10.
- 2. Ye, Y., Omar, R., Ning, B., & Ting, H. (2020). Exploring the interactions of factory workers in China: A model development using the grounded theory approach. *Sustainability*, 12(17), 6750.
- 3. Cervantes, C. A. (2021). Implementing the Design Factory Studies at HAMK Case: Degree Programme in International Business.
- 4. Brüggemann, I., Kroezen, J., & Tracey, P. (2020). Fighting "Factory Fiction": The Evolution of a Marginalized Institutional Logic in UK Trade Book Publishing. In *Macrofoundations: Exploring the institutionally situated nature of activity*. Emerald Publishing Limited.
- 5. Nørreklit, L. (2020). Paranoia and Control—A Narrative About the Social Factory. In *Precarized Society* (pp. 215-236). Springer VS, Wiesbaden.
- Akgöz, G., Croucher, R., & Pizzolato, N. (2020). Back to the factory: the continuing salience of industrial workplace history. *Labor History*, 61(1), 1-11.
- 7. Jerman, A., Pejić Bach, M., & Aleksić, A. (2020). Transformation towards smart factory system: Examining new job profiles and competencies. *Systems Research and Behavioral Science*, 37(2), 388-402.
- 8. Strauß, A., & Fleischmann, A. (2020). Reconceptualising solidarity in the social factory: cultural work between economic needs and political desires. *Work, Employment and Society*, 34(1), 109-125.
- 9. Haider, R., & Thorley, V. (2020). Supporting exclusive breastfeeding among factory workers and their unemployed neighbors: Peer counseling in Bangladesh. *Journal of Human Lactation*, 36(3), 414-425.
- 10. Beaney, W. M. (2020). The Foreign Affairs Fudge Factory. Denver Journal of International Law & Policy, 2(2), 10.
- 11. Li, P., & Jiang, P. (2021). Enhanced agents in shared factory: Enabling highefficiency self-organization and sustainability of the shared manufacturing resources. *Journal of Cleaner Production*, 292, 126020.

- 12. Lass, S., & Gronau, N. (2020). A factory operating system for extending existing factories to Industry 4.0. *Computers in Industry*, 115, 103128.
- 13. Wei, G., Chen, B., Lai, D., & Chen, Q. (2020). An improved displacement ventilation system for a machining plant. *Atmospheric Environment*, 228, 117419.
- 14. Li, P., & Jiang, P. (2021). Enhanced agents in shared factory: Enabling high-efficiency self-organization and sustainability of the shared manufacturing resources. *Journal of Cleaner Production*, 292, 126020.
- 15. Yamaguchi, T. (2020). Education, training, and business workshops and forums on plant factories. In *Plant Factory* (pp. 397-415). Academic Press.
- 16. Santiteerakul, S., Sopadang, A., Yaibuathet Tippayawong, K., & Tamvimol, K. (2020). The Role of Smart Technology in Sustainable Agriculture: A Case Study of Wangree Plant Factory. *Sustainability*, 12(11), 4640.
- Gong, Z. X., Zhang, W. X., Li, T. K., & Wang, B. L. (2021). Product life cycle-based digital plant modelling method for process industry. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1043, No. 2, p. 022049). IOP Publishing.
- 18. Báthory, Z. (2020). Qualitative study on the value stream-based organization: lessons from Hungarian production plants. *Management and Production Engineering Review*, 11.
- 19. Roth, N., Deuse, J., & Biedermann, H. (2020). A framework for System Excellence assessment of production systems, based on lean thinking, business excellence, and factory physics. *International Journal of Production Research*, 58(4), 1074-1091.
- Rehman, A. U., Usmani, Y. S., Umer, U., & Alkahtani, M. (2020). Lean approach to enhance manufacturing productivity: a case study of Saudi arabian factory. Arabian Journal for Science and Engineering, 45(3), 2263-2280.

### Plant organization system and the formal organization of the factory

**ORIGINALITY REPORT** 

SIMILARITY INDEX

**INTERNET SOURCES** 

**PUBLICATIONS** 

STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

6%



★ www.researchgate.net

Internet Source

Exclude quotes

Exclude bibliography On

Exclude matches

Off