A Comparative Study of the HRM in Toyota and Hyundai: Focusing on Overseas Plants

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April 30, 2018

This research was conducted at the Japan Institute for Labor Policy and Training (JILPT), in Tokyo, Japan.

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Abstract

This research aims to compare the human resource management (HRM) of Toyota Motor Company and Hyundai Motor Company, focusing on their overseas plants. TMC and HMC have separately developed their HRM in the different institutional conditions of the home country and the host country.

In both companies, the HRM of the overseas plant has become different from that of the domestic plant, because of the necessity for adaptation under the institutional conditions that are different from those of the host country. Nevertheless, the path dependency to the domestic plants influences the HRM of the overseas plants.

Even though Toyota overseas plant has tried to upgrade the skill level of the local production workers, that is functional flexibility, the performances of the overseas plant have not reached those of the domestic plant.

On the other hand, Hyundai has tried to increase the numerical flexibility of the overseas plant with the preemptive labor management. The performances of the overseas plant have already overtaken those of the domestic plant within the short period.

This research shows the “converging divergences” of HRM in the globalizing industrial world. There is no “one best way”, while there is a converging trend toward “flexibility.”
1. Introduction

1) Research Purpose

This research aims to compare the human resource management (HRM) of Toyota Motor Company (hereafter TMC) and Hyundai Motor Company (hereafter HMC), focusing on their overseas plants. As shown in <Table 1>, TMC and HMC are ranked as the global automobile makers that are two of top 10 automobile makers in the world. Comparing the similarities and differences between these two companies is significantly meaningful, because HMC has benchmarked TMC during the last several decades.

![Table 1: World Ranking of Automobile Makers](image)

TMC and HMC have constructed their overseas plants to be able to respond to the different conditions of the respective overseas markets. The HRM of an overseas plant is different from that of a domestic plant, even though the HRM of the overseas plant is path-dependent on the HRM at the domestic plant in the home country. This research is going to compare the HRM of the domestic plant with that of the overseas plant in TMC and HMC. What are the similarities and differences of HRM at the domestic plant and the overseas plant of the two automobile companies? Subsequently, this research is going to explain the characteristics of the HRM of TMC
and HMC in the comparative perspective. The HRM of these two global companies is expected to be significantly different because their HRM have evolved under the different institutional conditions of the countries which they originate from.

In particular, this research uses the overseas plants that are located in Europe as the representative cases. The European market is a test bed of new products for the automobile companies because the customers reveal the high level of taste due to a long tradition of economic development and wealth. Therefore the case study of overseas plants in Europe is expected to give us useful implications that could be referred to the other overseas plants.

2) Analytical Framework

How do TMC and HMC operate their HRM in the assembly plants located in the home country and host country? HRM is an essential part of the internal labor market in a company because it influences the formation of the firm-specific skills in competing with other companies (Becker, 1964; Doeringer and Piore, 1985). TMC and HMC have developed their own HRM as the essential part of the internal labour market in the institutional conditions of their home countries.

The HRM of an overseas plant is different from that of a domestic plant in the
home country because it needs to adapt to the different institutional conditions in
the host country. The HRM of the overseas plant is influenced by the different labor
relations as well as the different labor market of the host country.

Nevertheless, the path dependency on HRM at its domestic plant influences that
of the overseas plant, because the headquarters of a global company both manages
the overseas plant and the domestic plant. “Multinational internal labor market” is
both overlapped and separated across the borders of different countries within a

2. The HRM of Toyota Motor Company

1) The Domestic Plant

TMC has developed its own HRM of production workers at the domestic plant in
Japan under the conditions of the lifetime employment and the cooperative
industrial relations. The main characteristic of Toyota’s HRM is the “seniority-based
wage” system. As wage rises depending on the seniority, the skill level of the
production workers is incrementally upgraded in the company. Since the 1990s, TMC
has adopted the “wage based on job evaluation” to add an element of competition
complementing the limits of seniority-based wage system. However, the seniority-
based wage system remains as the key element of the Toyota’s wage system.

Table 2 shows Toyota’s personnel management based on the job evaluation.
Expert system supplements the scarcity of opportunities in which workers take job
position in the hierarchy of work organization. The workers can make use of the
opportunity to be promoted to expert, senior expert, chief expert, instead of being
promoted to team leader, group leader, chief leader.
Shown in <Table 3>, "職能基準給" is regarded as the element of the wage based on job evaluation. The other elements of Toyota's wage largely belong to the seniority-based wage.
Table 4 shows the wage system of TMC. Toyota's annual wage is composed of fixed wage, variable wage, and performance-based benefit per worker. It has not rapidly increased in numerical value, because the workers have controlled themselves in the wage negotiation. The currency value has also been underrated as a result of Yen depreciation.\footnote{The annual wage of HMC has overtaken that of TMC since 2013.}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline
\textbf{Year} & \textbf{Toyota \textsuperscript{1}} & & & \textbf{Hyundai \textsuperscript{2}} & & & \\
& \textbf{Fixed Wage (Monthly)} & \textbf{Variable Wage (Monthly)} & \textbf{Performance-based Benefit (Yearly)} & \textbf{Annual Wage} & \textbf{Fixed Wage (Monthly)} & \textbf{Variable Wage (Monthly)} & \textbf{Performance-based Benefit (Yearly)} & \textbf{Annual Wage} \\
\hline
2010 & 4,509,422 & 23,770,080 & 77,883,143 & 3,800,000 & 1,300,000 & 16,320,000 & 77,520,000 \\
2011 & 4,773,807 & 1,079,072 & 25,182,711 & 95,427,264 & 4,000,000 & 1,600,000 & 22,320,000 & 89,520,000 \\
2012 & 4,854,277 & 1,192,266 & 25,153,892 & 97,712,413 & 4,500,000 & 1,600,000 & 22,440,000 & 95,640,000 \\
2013 & 3,909,984 & 909,919 & 21,029,805 & 81,467,536 & 4,600,000 & 1,400,000 & 22,920,000 & 94,920,000 \\
2014 & 3,500,323 & 882,425 & 24,307,036 & 76,900,010 & 4,900,000 & 1,200,000 & 22,080,000 & 95,280,000 \\
\hline
\end{tabular}
\caption{Wage System of Toyota and Hyundai (unit: won)}
\end{table}
<Table 5> shows the skill level of Toyota production workers at the domestic plant that is located in Takaoka. About half of regular workers belong to the level 3 in which they do 10-15 jobs and correct the defects of products. 10% of regular workers belong to the level 4 in which they do jobs of another unit as well and participate in the set-up of the new production line and the development of new product. This proves the success of the HRM based on the developed internal labor market.

In summary, the HRM of Toyota’s domestic plant is based on the development of the internal labor market that has contributed to the skill enhancement of production workers. The wage system based on job evaluation encourages the production workers to upgrade their skill level, combined with the traditional seniority-based wage system that ensures their job security.

Most of the production workers do the multi-functional job to maximize their performances. Especially the upper level of skilled workers participates in the job standard setting of the new model as well as finding and solving the problems of production processes of the existing model.

2) The Overseas Plant

TMC has constructed many overseas plants in Europe since the 1980s. <Table 6> shows Toyota’s division of labor in the segment of products among the plants in Europe. Toyota U.K. plant constructed in 1989 produces 285 thousand units of compact car and family car per year.

TMC has developed its HRM suitable for the institutional conditions such as open labor market of Europe. Turnover rate of the workforce in the overseas plant in Europe is significantly higher than that of the domestic plant.
Even though the overseas plant’s management has tried to upgrade the skills of the local production workers in the long term, the performances of the overseas plants have not reached that of the domestic plant, as shown in Toyota U.K plant in <Table 5>.

Most of the regular workers belong to the level 2 in which they do three to five jobs and detect their defects. Only a few of regular workers belong to the level 3. The workers who belong to the level 4 are just pilot team members who are selected to prepare new production line.

In Toyota’s U.K. plant shortcomings of the hybridized employment relationship have been revealed. The plant had failed to successfully manage the U.K.’s practices such as recruitment, pay system, labor relations that are different from those of Japan (Pardi, 2005).
<Figure 2> shows the performances of Toyota overseas plants which are inferior in terms of productivity and quality as well as workers’ skill levels, compared to those of the domestic plant.

3. The HRM of Hyundai Motor Company

1) The Domestic Plant
As shown in <Figure 3>, Hyundai Motor group maintains a monopoly position, occupying about two thirds of the domestic market which includes imported cars as well as cars made in Korea. <Table 7> shows the flexible mass production of HMC in which a production line produces 3-4 products with mixed production. HMC fulfills the significant level of flexibility in its production system to respond to the change of market demands.

<table>
<thead>
<tr>
<th>Products</th>
<th>Production Capacity (Ulsan Plant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Factory</td>
<td>Kona, Accent, Veloster</td>
</tr>
<tr>
<td>2nd Factory</td>
<td>i40, Santa Fe, Tucson, Avante</td>
</tr>
<tr>
<td>3rd Factory</td>
<td>Avante, i30, Ioniq</td>
</tr>
<tr>
<td>4th Factory</td>
<td>Maxcruz, Porter2, Grand Starex</td>
</tr>
<tr>
<td>5th Factory</td>
<td>EQ900, G80, Tucson</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>


However, HMC has developed its own production system with full utilization of automation and informatization instead of capitalizing on production workers’ skill, due to adversarial labor relations (Jo and Kim, 2013).

TMC and HMC have similarity in that they have developed their internal labor
market in the long term, achieving workers’ life employment. However, the relations
between skill and technology are strikingly different in these two companies.
Japanese Production System is characterized as skill-promoting work organization
with autonomation (i.e. “automation with a human touch”). On the other hand,
Korean Production System is characterized as skill-saving work organization with a
higher degree of automation (<Figure 4>).

Hyundai Production System is characterized by the combination of flexible
production technology and skill-saving work organization (<Figure 5>).
The education program of HMC proves that the company is not interested in developing skills of its employees. As shown in <Table 8>, the education program for the new employees is focused on the moral education to protect them from the adversarial labor relations. The job education is just a minor part of the whole education program.

In <Table 9> it shows that the education program for the existing production workers, the “training for job improvement for the workers who have worked for 15 years more” is the only existing job education program. Other programs are focused on the moral education.
HMC has maintained a wage system based on seniority because the labor union has fought against the adoption of “wage based on job evaluation.” The wage of production workers has increased according to the seniority (Figure 6). No element of Hyundai's wage system is based on the individual evaluations of job performance (Table 10).

<table>
<thead>
<tr>
<th>Skill Level</th>
<th>Composition</th>
<th>Job Capacity</th>
<th>Job Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>2 Non-regular workers (Chok-Tak)</td>
<td>1 Job Operation</td>
<td>Operator</td>
</tr>
<tr>
<td>Level 2</td>
<td>Most of Regular Workers</td>
<td>3-5 Jobs Operation</td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td>2 Persons, 2 Persons</td>
<td>Most of Jobs : Operation and Correction</td>
<td>Keeper, Line Leader</td>
</tr>
<tr>
<td>Level 4</td>
<td>1 Person</td>
<td>Participation in Job Standard Setting</td>
<td>Senior Line Leader</td>
</tr>
</tbody>
</table>

1) A work organization is composed of 30-40 production workers.
As shown in <Table 11>, the skill level of Hyundai production workers at the domestic plant is not so low, because the period of their employment is relatively long. The average period of employment is 22.5 Years. Most of the regular workers belong to the level 2 in which they do 3-5 jobs without defect. In each work organization, two operators including the keeper and two line leaders belong to the level 3 in which they do most of the jobs without defect. The senior line leader might be classified into the level 4. However, his participation in job standard setting of a new product is informal and very limited.

In other words, the motivation for workers to improve their skills is lacking. Workers have increased their wage not by upgrading their job performances but by making use of the organizational power of labor union.

As shown in <Figure 7>, HMC has maintained high growth since the 2000s, even though adversarial labor relations have not been improved. In <Table 12> it shows that losses from strikes due to the adversarial labor relations have continued, although they have decreased recently.
HMC has supplemented the shortcomings of the direct workers with the utilization of the skilled workers at the pilot production stage, the increase of indirect workers at QC and maintenance divisions, and additional use of non-regular workers at the post-production stage.

However, the status quo of Hyundai’s domestic plant recently got worse. Firstly, Hyundai has converted 6,500 non-regular workers into regular workers during 2014-2016. Hyundai management made a consensus with the labor union to convert additional 3,500 non-regular workers into regular workers until 2021. The level of the numerical flexibility is being lowered based on the reduction of non-regular workers.

Secondly, working hours have been shortened after the adoption of “Continuous Daily 2 Shifts.” As a result of the shortened working hours, the operation rate of the domestic plant has accordingly decreased, while the level of annual wage has been maintained, as shown in <Table 13>.

<Table 12> Strike Losses of Hyundai Motors

<table>
<thead>
<tr>
<th>Year</th>
<th>Strike Days</th>
<th>Production Losses (Number of Vehicles)</th>
<th>Revenue Losses (Billion Won)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>13</td>
<td>82,000</td>
<td>1,700</td>
</tr>
<tr>
<td>2013</td>
<td>10</td>
<td>50,000</td>
<td>1,020</td>
</tr>
<tr>
<td>2014</td>
<td>6</td>
<td>47,000</td>
<td>1,030</td>
</tr>
<tr>
<td>2015</td>
<td>3</td>
<td>21,000</td>
<td>450</td>
</tr>
<tr>
<td>2016</td>
<td>24</td>
<td>142,000</td>
<td>3,100</td>
</tr>
</tbody>
</table>

Thirdly, mass retirement of regular workers has already started. 24,140 workers who are the half of HMC workers in the domestic plant are expected to retire from 2018 to 2028. After the mass retirement of experienced workers, the tacit knowledge they possess may disappear along with them.

In summary, the future of Hyundai domestic plant does not seem so bright. The competitive advantage based on its numerical flexibility may not be sustainable in the future.

2) The Overseas Plant

HMC group increased the proportion of the overseas production since the 2000s. The proportion of the overseas production was 62.8% in 2017 (<Table 14>).
HMC group operates three overseas plants in Europe. <Table 15> shows Hyundai's division of labor in the segment of products among the plants in Europe. Plant A was constructed in Slovakia in 2004. It produces 313 thousand units of C
segment car and small SUV per year.

The internal labor market has been developed in Plant A, even though its turnover rate is 10% per year. The average period of employment is 7.9 Years. Plant A has maintained the cooperative labor relations as the result of active preemptive labor management, while the organization of labor union is permitted due to EU regulations. The organization rate of the labor unions is about 10%.

The education program of Plant A shows the path dependency of HMC HRM that is not interested in developing skills of its employees. As shown in <Table 16>, the education program for new employees lasts just 2 weeks. The job education is provided for a week in the form of OJT.²

² At the initial stage of A Plant in 2006, about 500 production workers had been sent to the domestic plant and trained for 1-3 months in Korea.
As shown in <Table 17>, the operators who work in Plant A are consecutively promoted to the senior operator, a supervisor within the T.O. The supervisors evaluate the performance of their subordinates for their promotion.
Another element of the internal labor market is the wage system based on competition. As shown in <Table 18>, within a same job grade, a worker’s pay band may be upgraded to the next pay band, based on the individual evaluation of the worker’s job performance. To be upgraded to the next pay band, the workers must do their best. The maximum wage gap within the same job grade is about 20%.

“Variable Wage” is differentially added to the basic wage, based on the individual job performance evaluation (<Table 19>). The allowance is partially varied, based on the individual evaluation of attendance (<Table 20>).

In summary, the HRM of Plant A is based on the evaluation of workers’ performance. Workers do their best not only to be promoted faster but also to get more wage. The HRM of Plant A helps the production workers to upgrade their skill.
Plant A has systemically rotated jobs of production workers. Table 21 shows the skill level of production workers who belong to a work organization at the assembly shop. Most of the regular workers belong to the level 2, even though the average period of employment is relatively short, compared to the domestic plant. Two operators including the keeper and two senior operators belong to the level 3. The supervisor as well as the experienced senior operators belongs to the level 4. The participation of high skilled workers in the preparation of new model is formal and active.

Hyundai’s plant A has developed a HRM distinguished from that of the domestic plant, with the partly open labor market and the cooperative labor relations. Plant A has improved the skill level of the production workers, based on the competitive promotion and differential wage system.

Nevertheless, it has not been actively maximizing the potential abilities of skilled workers, path-dependent on the skill-saving Hyundai production system that has been developed in the domestic plant.
<Table 22> Comparison: Hyundai Motors’ HRM at the Domestic Plant and Overseas Plant A

<table>
<thead>
<tr>
<th>HRM</th>
<th>Domestic Plant (Korea)</th>
<th>Overseas Plant (Plant A in Europe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Relations</td>
<td>Hostile Relation</td>
<td>Cooperative Relation</td>
</tr>
<tr>
<td>Internal Labor Market;</td>
<td>Closed and Equal; 22.5 years, 48.2 years old, 0%</td>
<td>Partly open and Competitive; 7.9 years, 36.4 years old, 10% per year</td>
</tr>
<tr>
<td>Average Period of Employment,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Age, Turnover Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment</td>
<td>Numerical Flexibility: Low</td>
<td>Numerical Flexibility: High</td>
</tr>
<tr>
<td>Promotion</td>
<td>T.O.: Incomplete Competition</td>
<td>T.O.: Competition</td>
</tr>
<tr>
<td>Wage System (Production Worker)</td>
<td>Based on Seniority, 95,830,000 Won</td>
<td>Based on Job Evaluation, 1,175 Euro (18,330,000 Won)</td>
</tr>
<tr>
<td>Skill Level</td>
<td>Empirical Formation of Skill; Engineer-Led</td>
<td>Systemic Formation of Skill; Participation in the Job Standard Setting; Engineer-Led</td>
</tr>
</tbody>
</table>

<Table 23> Performances of Hyundai Motors’ Domestic and Overseas Plant (2016)

<table>
<thead>
<tr>
<th></th>
<th>Domestic Plants 1)</th>
<th>Overseas Plant A</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPH 2)</td>
<td>56 5)</td>
<td>63</td>
</tr>
<tr>
<td>HPV 3)</td>
<td>26.8</td>
<td>13.7</td>
</tr>
<tr>
<td>Allocation Ratio 4)</td>
<td>57.8</td>
<td>92.5</td>
</tr>
</tbody>
</table>

1) 1st Production Line of Ulsan 1st Plant
2) UPH (units per hour) is the number of vehicles that are assembled in a hour in a plant.
3) HPV (hours per vehicle) is the index of plant productivity, meaning the number of hours spent to assemble a car in a plant.
4) Allocation ratio is the relative ratio of net assembly working hours out of total assembly working hours by production workers at the assembly plants.

Plant A has performance-wise overtaken the domestic plant within a short period because it was not highly dependent upon the skills of production workers. As shown in <Table 23>, the performances of Plant A have exceedingly overtaken those of the domestic plant. It has maximized its numerical flexibility that is distinguished from the domestic plants.

4. Conclusion

This research aims to compare the human resource management (HRM) of TMC and HMC, focusing on the overseas plants of two companies. TMC and HMC have separately developed their HRM in the different institutional conditions of the home country and the host country.

In both companies, the HRM of the overseas plant has become different from that of the domestic plant, because of the necessity for adaptation under the institutional conditions that are different from those of the host country. Nevertheless, the path dependency to the domestic plants influences the HRM of the overseas plants.
<Figure 8> shows the statuses of TMC and HMC plants using a combination of “flexibility” and “performance.” Even though Toyota overseas plant has tried to upgrade the skill level of the local production workers, that is functional flexibility, the performances of the overseas plant have not reached those of the domestic plant.

On the other hand, Hyundai has tried to increase the numerical flexibility of the overseas plant with the preemptive labor management. The performances of the overseas plant have already overtaken those of the domestic plant within the short period. It became one of the most successful automobile plants in Europe.

<Table 24> shows the performances of TMC and HMC in the European market in 2016. Even though TMC and HMC have chosen different strategies of HRM in their overseas plants, they have succeeded in occupying substantial market shares in the European market.
This research shows the “converging divergences” of HRM in the globalizing industrial world (Katz and Darbishire, 2000). There is no “one best way”, while there is a converging trend toward “flexibility.”

In general, a multinational company develops its own HRM in the internal labor market to maximize its flexibility in the domestic plant. While the company tries to transfer its HRM into the overseas plant, it consequently develops another HRM that is distinguished from that of the domestic plant, adapting to the institutional conditions of the host country. These diverse forms of converging divergences are also revealed in the cases of other multinational companies.
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