ESR and Crisis 2020

Paradigm Shift from Scientific Management to Sustainability Management: Exploration of the transition of Corporation from Stockholders Property to Social Entity.

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1. What we have learned from COVID-19 pandemic:

Corporations are no longer Stockholders Property but Social Entity

One of major facts we have learned from COVID-19 pandemic is that corporations should start transition from Stockholders Property to Social Entities. The recent pandemic highlights that without Social Entity corporations focusing on social contribution by distributing values to all stakeholders, especially providing employees with wages, while of course caring for customers, suppliers and stockholders, modern societies cannot be sustained. The pandemic caused by COVID-19 highlighted the glaring deficiencies and inequality that exists in some countries.

Moreover, we have learned that without the sustainable corporate employment in accordance with the notion of corporation as Social Entity, majority of nations or societies have the potential to fall into serious chaos. While the governments' emergency actions of historically unprecedented monetary and fiscal supports for corporations to pay wages to employees seems to be working, it remains to be seen of a great depression can be avoided. Especially if those corporations stop acting as Social Entities, but resume acting as Stockholders Property after absorbing most of the government supports for themselves. While the appeals of scrapping Stockholders-First corporate management are emerging in globally influential conferences such as US Business Roundtable and World Economy

Forum in Davos, what we have experienced from COVID-19 is that this transition can no longer be can be kept in the realm of intellectual arguments or appeals for implementation – we have to face reality and confront the challenges by enacting appropriate policies.

2. When and what initiated the recognition of corporations as Stockholders Property?

Now we would have to consciously and intentionally think of what has penetrated the notion of corporation as Stockholders Property into the modern society and economy, and when the modern society and economy started being impacted by such notions.

If we recall, a most memorable initiative to move the world to that direction can be found in the emergence of Monetarism and Free Economic theory led by Nobel Prize laureate, Milton Friedman. He wrote in his paper in 1962 that corporate management investing money into social welfare steals and wastes stockholders' money. One of his most famous books, "Capitalism and Freedom" carrying his strong proposal that corporation is Stockholders Property was published in 1962 and sold more than half a million since 1962 with the translation into eighteen languages. The historical record of the book's global recognition and reputation could be a persuasive indication of its enormous influence in the beginning of the latter half of the 20th century.

And the second, US business schools succeeding and developing comprehensively Scientific Management originally proposed by Frederic Taylor early in the 20th century have produced corporate managements provided with their core competency of Scientific Management. They found that their competency of the master of Scientific Management is best effective to grow Stockholders Property throughout 20th century.

And the final accelerator of this notion was a global enthusiasm to maximize ROE (Return on Equity) in corporate management. The notion was enhanced by many US business school faculties led by Michael Porter. He even once announced in his article in Harvard Business Review in the early 21st century that companies should be classified by its level of ROI not necessarily by what it produces or serves.

There are three major reasons why US business schools have pursued the mission of ROE maximization for Stockholders Property: One is that ROE maximization for Stockholders Property is the most clearly and quantitatively measurable goal to prove their graduate managements capability. Another is that the logical rationalism of Scientific Management, the core learning contents of US business schools, could work most efficiently in pursuit of ROE maximization. And the third is that the mission and responsibility to pursue such explicit goal of ROE maximization allowed their graduate managements to get high level of performance payment more than 100-200 times of the average of employees' wages.

3. What has been lost by Stockholders Property paradigm for more than half century?

Corporations defined as Stockholders Property are destined to give the highest priority to transform the current resources most efficiently into profit and stockholders' return. Consequently, any investment preventing that movement has been eliminated and avoided. Especially avoided are long term investments which, with immense uncertainty and risk, only become the source to disturb the short-term profit maximization. As a result, majority of large corporations listed in stock markets in advanced economies such as US, EU and Japan have lost value creativity for sustainable growth and stagnated since the late 1990s. The global financial bubble bursting in 2008 triggered by Lehman shock could be a symbolic incident that financial industries had not sufficient investment targets in actual economy corporations experiencing stagnation for more than 10 years.

While the performance outlook of actual economy corporations is measured by stock prices maintained and stimulated by injection of money supply from Central Banks, the total GDP share of actual economy corporations in the total US GDP keeps declining by more than 20% since the year 2000（US Dept. of Commerce, Bureau of Economic Analysis for 1997-2013）

Another apparent cause of the stagnation of those large corporations is that they have

frozen employees' creativity by defining them as one of rational resources to realize short term profit maximization.

However, more than those historic losses, COVID-19 pandemic has disclosed another risk aspect of corporation as Stockholders Property. It is not only that those companies are just fragile in the face of global pandemic disaster but that they have high potential to cause the nation-wide economy downward spiral and even a great depression if they come to resume the Stockholders Property mission and result in rushing into employees layoff in accordance with their historical standard strategy of cost cutting at emergency.

4. Surviving Models of Social Entity Corporations in Japan

Facing the pandemic environment, one of the encouraging facts can be found in the Tokyo Metropolitan Government Survey 2017 results on the succession and transformation of 2236 manufacturing companies with more than 50 year longevity.

The survey indicates that majority of those long-lived companies have a set of management characteristics almost opposite to the characteristics of 1600 medium/large manufacturing corporations listed in Tokyo Stock Exchange.

We name the former set of management characteristics as "Sustainability Management" because of its underlying core value, while the latter one is well known as Frederic Taylor's "Scientific Management". Or, the former can be defined as management viewing

the corporation as a social entity while the latter is assuming corporation as Shareholders Property.

The former would be the group that aims at creating values for all stakeholders including future generations, while the latter would prioritize primarily the shareholders' benefit maximization among all other stakeholders' benefits.

Additionally, not only from the management characteristics of the 2236 manufacturing companies with more than 50 year longevity in Tokyo Metropolitan Government's survey, also from a family management company, Toyota, we learn living model of "Sustainability Management".

Based on insights from the above companies we propose that Sustainability Management as a viable alternative to overcome the current economic stagnation as well as the chaotic depression caused by COVID-19 in all societies where Scientific Management has been the management backbone throughout the 20th century.

Three reasons: First, as we find, the set of management characteristics of Sustainability Management are collectively contrary to those of Scientific Management. Second, we perceive that the current economic stagnation in certain sectors of advanced societies is the result of the epoch-making success of Scientific Management having focused historically and excessively to maximize shareholders' present financial value as the

highest priority. Third, Sustainability Management consists of factors to resume what have been lost by the success of Scientific Management for the past 100 years: One is employees' creativity and humanity critical for organizational innovation. Another is corporate leadership to enhance employees' human dignity and resulting creativity. Employees creativity and humanity have kept shrinking as a result of being treated as the rational or artificially intelligent like resource pursuing productivity efficiency under 20th century's traditional MBA leadership, one of most symbolic Scientific Management initiatives.

Hence, we believe that as the enhancer of unlimited creativity, Sustainability Management has the potential to be the new global management standard in the 21st century after the century dominated by Scientific Management.

5. Symbolic contradictions between Sustainability Management and Scientific Management

Contradiction 1. Commitment to Corporate Mission of Dedication to Society

As shown in Table 1, 92.3 % of 2236 small/medium manufacturing companies in the Tokyo Metropolitan Government's 2017 survey responded that their executives are committed to their corporate mission of dedication to society. As shown in Table 1, 53.6% are the level of succeeding founder's corporate missions, 29.6% are the level of

understanding them and 9.1% are the level of acknowledging them.

In contrast, after having been engaged in the corporate management of shareholder value maximization since 1997 when Japanese government relaxed foreign investment controls, the highest priority corporate mission of majority of 1600 manufacturing corporations listed in the Tokyo Stock Exchange has been the maximization of ROE (Return on Equity) while standing for some obligatory agendas of CSR (Corporate Social responsibility) as a complementary or secondary management value.

Table 1　Executives' commitment to corporate mission of dedication to society

Less than acknowledging corporate mission	7.7 %
Acknowledging corporate mission	9.1 %
Understanding corporate mission	29.6 %
Succeeding corporate mission	53.6 %

Contradiction 2. Definition of Corporation

As shown by the fact that the executives of 92.3% of 2236 manufacturing corporations commit to their corporate mission of dedication to society, they recognize corporation as Social Entity. Also, this would be observed from that 94.8 % responded that the most critical success factor in ensuring longevity of more than 50 years is corporate philosophy

and strategy innovating, improving, and sustaining their product value in accordance with social evolution. (Table 2)

Table 2　Major strategies having realized more than 50 years longevity

Sustainably innovated product and service in accordance with social needs	15.0 %
Kept improving original product and service in accordance with social needs	65.8 %
Preserved strictly original product and service	13.3 %
Others	5.9 %

In contrast, Scientific Management has been the solid foundation for the great majority of executives of 1600 manufacturing corporations pursuing profit maximization and value for shareholders.

Contradiction 3. Expectation that Employees be Innovators

In the 2017 Tokyo Metropolitan Government survey report, while the majority answer that innovation is indispensable for their survival in future, 38.1 % answer that their innovation depends on their development of employees' creativity and evolution. 26.6 % answer that it depends on their development of top management to grow employees'

creativity and evolution. (Table 3)

Table 3　Important subjects of innovation

Independent product development	25.4%
Top management talent development	26.6%
Employee creativity development	38.1%

The above findings illustrate the corporate belief in employees' humanity of creativity and growth. On the other hands, in shareholders' property focusing on maximizing short term profitability by utilizing human resource, such belief and respect of humanity would not exist generally. The employees are expected to be human resources to realize and increase productivity without intuitive or emotional capacity for creativity. The extreme end of the expectation would be that they become living Artificial Intelligence or are even to be replaced with Artificial Intelligence as has been happening recently. Utilizing employees' humanity and creativity has never been a cornerstone of Scientific Management.

Contradiction 4. Commitment to the Development of People

The Tokyo Metropolitan Government survey reports that 31.5% or around 700 companies assume the time period to develop employees to become able to perform at a professional

level is more than 5 years, 27.6% or around 600 companies assume more than 10 years and 7.0% or around 170 companies assume more than 15 years. (Table 4)

Table 4　Time period assumed to develop professional

Less than 5 years	23.6 %
More than 5 years but less than 10 years	31.5 %
More than 10 years but less than 15 years	27.6 %
More than 15 years	7.0 %
No answer	10.3 %

In contrast, the majority of 1600 large/medium manufacturing corporations listed in Tokyo Stock Exchange Market would be far less than the above, because those corporations and executives pursuing to be best Stockholders Property cannot tolerate the above long-term investment by the definition of their Short Termism or by their duty to maximize short term profitability for shareholders by nature and destiny. They may even consider that such investment is risking shareholders' money toward future uncertainty.

Contradiction 5. CEO' Average Term

More than 55 % answer that their CEO's term is more than 10 years and more than 30% answer that it is more than 20 years. (Table 5)

Table 5　CEOs' average term

More than 60 years	1.0 %
Less than 60 years but more than 50 years	3.2 %
Less than 50 years but more than 40 years	5.2 %
Less than 40 years but more than 30 years	6.9 %
Less than 30 years but more than 20 years	14.5 %
Less than 20 years but more than 10 years	23.6 %
Less than 10 years	37.8 %
No answer	7.7 %

This is a natural consequence of corporation that respects employees as the source of innovation and creativity and commits long term people development. For corporation committed to long term development of people and to long term development of innovation, the corporate leader also would have to stay long term to sustainably support those long-term investments. Also, if the corporation commits to sustainable evolution and innovation as the highest priority, their CEOs' do not have to be accused or fired by the failure in maximizing short-term profit.

In contrast, Fortune 500 CEOs' average term is shortened from 9.5 years in 2002 to 3.5 years in 2011. The most common reason of CEOs' frequent replacing is the shareholders' disappointment at the level of profitability and return on investment. ("The Art and Science of Finding the Right CEO" HBR Nov. 2011)

Meantime, generally shared understanding and customs of the CEO term of 1600 large/medium manufacturing corporations listed in Tokyo Stock Exchange Market is longest 8 years and average 4 years in accordance with the customs and habits to relay the top management position with the multiple terms of a few years. This shortened tenure is because CEO position and promotion tend to be perceived as the reward to the person of their devotion to corporate's financial prosperity historically and traditionally in medium/large size corporations in Tokyo Stock Exchange Market.

Contradiction 6. Time Period to Develop Succeeding CEO

It is considered a virtue to recruit CEO candidates outside the corporations in more than 50 % of US firms. It would be rather based on the traditional thought that internally promoted CEOs might have tendency to represent employees benefit against shareholders' benefit. And those hired from outside are those who have proved to have enhanced corporate financial performance before or are supposed to have such potential according to his or her career credentials.

In contrast, the 2017 TMG survey shows that more than 73.2 % companies assume that they need more than 5 years to develop CEOs internally. 46. 3% assume more than 10 years to grasp the entire corporate operations from front lines to top position and to incubate the relationship of mutual respect and trust with employees. (Table 6)

Table 6　Time period required to develop succeeding CEO

Less than 5 years	19.0 %
More than 10 years	27.0 %
More than 5 years	35.5 %
More than 15 years	10.5 %
No answer	7.8 %

Those assumptions that it takes long time period to develop CEOs can be substantiated further with the data presented in Table 7. This Table illustrates actual time period between CEO selection and succession. In 62.2% of corporations, selected CEOs are preparing for succession for more than 10 years. 30.3 % spend more than 15 years.

Table 7　Time period between CEO candidate selection and succession

Less than 5 years	26.4 %
More than 5 years	12.9 %
More than10years	19.1 %
More than 15 years	8.9 %
More than 20 years	21.4 %
No answer	11.4 %

Contradiction 7. Employees Benefit vs Investors Profit

The ratio of companies which have increased employee compensation and benefit for the past 10 years (2008-2017) in the 2017 TMG survey is 38.6 %.　(Table 8)

Table 8　Employees' compensation change between 2007-2016

Decreased more than 10%	16.4 %
Decreased more than 5% but less than 10%	16.7 %
Maintained within less than 5% range	26.3 %
Increased more than 5% but less than 10%	26.0 %
Increased more than 10%	12.6 %
No answer	1.9 %

On the other hands, among 1600 large/medium manufacturing corporations listed in Tokyo Stock Exchange Market, the ratio of those having increased the ratio of employee compensation to sales for the past 20 years (1993-2008) is almost 0% in almost all manufacturing industries (Table 9 a, b, c, d) with exceptions of a few, the industries of Automobile and Ocean Vessels, Precision Machinery, Food, and Glass and Ceramic industries. (Table 9 d) As shown in Table 9 a, b, c, d, they had sacrificed HR cost to maintain constant operating profit ratio throughout almost the entire 20-year period. This is especially true after 2004 when all stock market listed corporations in Japan were required to disclose their consolidated financial reports and at the same time, demonstrate that they can maintain the level of Operation Profitability foreign investors would be satisfied with.　While HR compensation cost ratio to sales might seem to be increased after 2008, this is a result of corporations' sales amounts rapid decrease for a few years after the 2008 Lehman shock.

Table 9-a Employees' Compensation Ratio to Sales 1993-2012

(Source: Toyo Keizai database of annual reports of publicly traded corporations in Japan)

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio	Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Food	199303	8.22%	3.6%	Textile	199303	11.77%	3.9%
Food	199403	8.66%	3.6%	Textile	199403	13.31%	2.2%
Food	199503	8.10%	3.9%	Textile	199503	12.45%	2.4%
Food	199603	8.37%	3.6%	Textile	199603	12.46%	3.1%
Food	199703	8.12%	3.5%	Textile	199703	12.43%	3.9%
Food	199803	8.20%	3.3%	Textile	199803	12.64%	3.4%
Food	199903	7.96%	3.6%	Textile	199903	13.00%	2.4%
Food	200003	8.08%	3.9%	Textile	200003	13.17%	3.3%
Food	200103	8.20%	3.5%	Textile	200103	12.59%	4.2%
Food	200203	8.16%	3.2%	Textile	200203	12.27%	3.4%
Food	200303	8.00%	3.6%	Textile	200303	11.81%	4.1%
Food	200403	7.90%	4.2%	Textile	200403	11.55%	5.2%
Food	200503	7.47%	4.7%	Textile	200503	10.79%	5.8%
Food	200603	7.25%	4.6%	Textile	200603	10.37%	6.4%
Food	200703	7.21%	4.6%	Textile	200703	9.53%	6.4%
Food	200803	6.90%	4.5%	Textile	200803	9.42%	5.5%
Food	200903	6.92%	4.1%	Textile	200903	10.18%	2.3%
Food	201003	7.30%	4.4%	Textile	201003	10.52%	2.3%
Food	201103	7.22%	4.8%	Textile	201103	9.71%	5.6%
Food	201203	8.42%	4.4%	Textile	201203	9.90%	4.6%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio	Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Pulp/ Paper	199303	8.93%	2.4%	Chemical	199303	9.85%	3.8%
Pulp/ Paper	199403	9.31%	2.2%	Chemical	199403	10.43%	2.8%
Pulp/ Paper	199503	9.26%	3.3%	Chemical	199503	10.55%	4.0%
Pulp/ Paper	199603	9.13%	5.9%	Chemical	199603	10.53%	4.8%
Pulp/ Paper	199703	9.46%	5.4%	Chemical	199703	10.10%	4.9%
Pulp/ Paper	199803	9.76%	4.0%	Chemical	199803	10.17%	4.9%
Pulp/ Paper	199903	10.70%	1.0%	Chemical	199903	10.48%	4.7%
Pulp/ Paper	200003	9.66%	3.0%	Chemical	200003	10.61%	5.7%
Pulp/ Paper	200103	9.13%	5.9%	Chemical	200103	10.32%	6.1%
Pulp/ Paper	200203	9.44%	3.4%	Chemical	200203	10.78%	4.6%
Pulp/ Paper	200303	7.93%	4.4%	Chemical	200303	10.34%	6.1%
Pulp/ Paper	200403	7.72%	5.3%	Chemical	200403	9.99%	6.4%
Pulp/ Paper	200503	7.36%	5.8%	Chemical	200503	8.82%	7.7%
Pulp/ Paper	200603	7.18%	4.8%	Chemical	200603	7.89%	7.4%
Pulp/ Paper	200703	6.76%	4.2%	Chemical	200703	7.73%	7.7%
Pulp/ Paper	200803	6.36%	3.1%	Chemical	200803	7.48%	7.3%
Pulp/ Paper	200903	6.24%	2.6%	Chemical	200903	8.03%	3.5%
Pulp/ Paper	201003	6.64%	5.2%	Chemical	201003	8.98%	5.0%
Pulp/ Paper	201103	6.72%	4.5%	Chemical	201103	8.43%	7.2%
Pulp/ Paper	201203	6.76%	3.9%	Chemical	201203	8.40%	6.0%

Table 9-b　Employees' Compensation Ratio to Sales 1993-2012

(Source: Toyo Keizai database of annual reports of publicly traded corporations in Japan)

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Pharmaceutical	199303	12.65%	10.0%
Pharmaceutical	199403	13.11%	10.8%
Pharmaceutical	199503	13.82%	11.9%
Pharmaceutical	199603	13.87%	12.2%
Pharmaceutical	199703	13.65%	12.6%
Pharmaceutical	199803	13.52%	12.6%
Pharmaceutical	199903	13.84%	14.6%
Pharmaceutical	200003	13.62%	16.3%
Pharmaceutical	200103	13.87%	16.0%
Pharmaceutical	200203	13.82%	16.1%
Pharmaceutical	200303	13.94%	16.8%
Pharmaceutical	200403	13.70%	18.2%
Pharmaceutical	200503	13.00%	19.2%
Pharmaceutical	200603	12.22%	19.5%
Pharmaceutical	200703	12.09%	19.2%
Pharmaceutical	200803	11.33%	19.0%
Pharmaceutical	200903	11.54%	16.1%
Pharmaceutical	201003	11.80%	17.5%
Pharmaceutical	201103	11.02%	15.6%
Pharmaceutical	201203	11.13%	14.3%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Petro/Coal	199303	2.29%	2.6%
Petro/Coal	199403	2.62%	3.2%
Petro/Coal	199503	3.01%	2.7%
Petro/Coal	199603	3.16%	2.1%
Petro/Coal	199703	2.85%	1.5%
Petro/Coal	199803	2.81%	1.1%
Petro/Coal	199903	2.92%	0.4%
Petro/Coal	200003	2.77%	1.4%
Petro/Coal	200103	2.32%	2.4%
Petro/Coal	200203	2.23%	1.8%
Petro/Coal	200303	2.10%	1.7%
Petro/Coal	200403	1.99%	1.7%
Petro/Coal	200503	1.61%	3.8%
Petro/Coal	200603	1.30%	4.0%
Petro/Coal	200703	1.21%	2.6%
Petro/Coal	200803	1.08%	2.4%
Petro/Coal	200903	1.15%	−1.2%
Petro/Coal	201003	1.59%	0.6%
Petro/Coal	201103	1.49%	3.1%
Petro/Coal	201203	1.31%	3.4%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Rubber	199303	13.99%	5.8%
Rubber	199403	14.78%	4.5%
Rubber	199503	15.46%	5.8%
Rubber	199603	15.34%	5.9%
Rubber	199703	14.56%	6.4%
Rubber	199803	14.19%	6.5%
Rubber	199903	14.04%	7.2%
Rubber	200003	14.86%	8.2%
Rubber	200103	14.00%	6.9%
Rubber	200203	13.51%	5.2%
Rubber	200303	13.60%	7.1%
Rubber	200403	13.70%	7.1%
Rubber	200503	13.09%	7.5%
Rubber	200603	12.16%	7.4%
Rubber	200703	11.49%	6.1%
Rubber	200803	10.91%	6.9%
Rubber	200903	11.24%	3.4%
Rubber	201003	12.90%	3.6%
Rubber	201103	12.07%	6.0%
Rubber	201203	11.14%	6.2%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Precision Machinery	199303	16.31%	2.7%
Precision Machinery	199403	16.97%	2.1%
Precision Machinery	199503	16.66%	3.7%
Precision Machinery	199603	16.14%	6.0%
Precision Machinery	199703	15.42%	7.0%
Precision Machinery	199803	15.66%	7.0%
Precision Machinery	199903	16.21%	5.8%
Precision Machinery	200003	15.87%	6.5%
Precision Machinery	200103	15.49%	7.5%
Precision Machinery	200203	16.25%	5.1%
Precision Machinery	200303	15.63%	7.5%
Precision Machinery	200403	14.93%	8.8%
Precision Machinery	200503	13.76%	8.4%
Precision Machinery	200603	13.53%	9.7%
Precision Machinery	200703	13.38%	11.0%
Precision Machinery	200803	13.06%	11.4%
Precision Machinery	200903	14.51%	6.0%
Precision Machinery	201003	15.17%	5.9%
Precision Machinery	201103	14.84%	7.2%
Precision Machinery	201203	15.03%	7.4%

Table 9-c　Employees' Compensation Ratio to Sales 1993-2012

(Source:Toyo Keizai database of annual reports of publicly traded corporations in Japan)

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Steel	199303	10.20%	4.1%
Steel	199403	11.32%	1.1%
Steel	199503	10.79%	3.2%
Steel	199603	10.32%	5.6%
Steel	199703	9.85%	4.5%
Steel	199803	9.62%	4.6%
Steel	199903	10.30%	1.6%
Steel	200003	9.76%	3.5%
Steel	200103	9.07%	5.6%
Steel	200203	9.65%	1.8%
Steel	200303	8.36%	5.2%
Steel	200403	7.78%	7.5%
Steel	200503	6.93%	12.4%
Steel	200603	6.38%	14.0%
Steel	200703	5.84%	12.7%
Steel	200803	5.30%	11.0%
Steel	200903	5.24%	7.2%
Steel	201003	6.78%	1.4%
Steel	201103	5.92%	5.2%
Steel	201203	5.97%	3.1%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Non Ferrous Metal	199303	8.34%	3.8%
Non Ferrous Metal	199403	9.54%	2.9%
Non Ferrous Metal	199503	10.15%	3.3%
Non Ferrous Metal	199603	9.52%	3.9%
Non Ferrous Metal	199703	9.35%	4.6%
Non Ferrous Metal	199803	9.57%	4.2%
Non Ferrous Metal	199903	10.21%	2.6%
Non Ferrous Metal	200003	10.10%	3.4%
Non Ferrous Metal	200103	9.25%	5.8%
Non Ferrous Metal	200203	9.71%	2.2%
Non Ferrous Metal	200303	9.40%	2.1%
Non Ferrous Metal	200403	8.42%	3.8%
Non Ferrous Metal	200503	7.65%	5.4%
Non Ferrous Metal	200603	6.73%	6.4%
Non Ferrous Metal	200703	5.47%	6.7%
Non Ferrous Metal	200803	5.23%	6.1%
Non Ferrous Metal	200903	6.25%	0.1%
Non Ferrous Metal	201003	7.04%	3.0%
Non Ferrous Metal	201103	6.16%	5.1%
Non Ferrous Metal	201203	6.10%	4.1%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Metal	199303	10.51%	6.0%
Metal	199403	10.95%	5.0%
Metal	199503	11.55%	5.0%
Metal	199603	11.99%	3.9%
Metal	199703	11.52%	4.1%
Metal	199803	12.20%	2.3%
Metal	199903	12.80%	1.9%
Metal	200003	12.66%	3.4%
Metal	200103	12.22%	3.3%
Metal	200203	12.29%	2.4%
Metal	200303	12.36%	3.3%
Metal	200403	12.12%	4.4%
Metal	200503	11.38%	4.3%
Metal	200603	10.95%	4.7%
Metal	200703	10.54%	5.1%
Metal	200803	10.50%	5.8%
Metal	200903	10.62%	2.9%
Metal	201003	11.41%	0.9%
Metal	201103	10.93%	3.9%
Metal	201203	11.16%	3.5%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Machinery	199303	11.31%	4.5%
Machinery	199403	12.87%	3.4%
Machinery	199503	13.72%	4.6%
Machinery	199603	13.78%	5.4%
Machinery	199703	13.62%	6.0%
Machinery	199803	13.98%	5.6%
Machinery	199903	15.00%	4.0%
Machinery	200003	15.31%	3.9%
Machinery	200103	14.41%	5.7%
Machinery	200203	15.01%	3.7%
Machinery	200303	14.56%	4.7%
Machinery	200403	13.94%	5.8%
Machinery	200503	12.95%	6.8%
Machinery	200603	12.48%	7.4%
Machinery	200703	11.76%	7.9%
Machinery	200803	11.40%	7.9%
Machinery	200903	12.43%	4.4%
Machinery	201003	13.91%	2.7%
Machinery	201103	12.87%	6.4%
Machinery	201203	13.05%	6.5%

Table 9-d　Employees' Compensation Ratio to Sales 1993-2012

(Source: Toyo Keizai database of annual reports of publicly traded corporations in Japan)

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Electric Equip.	199303	14.60%	2.3%
Electric Equip.	199403	14.80%	2.5%
Electric Equip.	199503	14.17%	4.3%
Electric Equip.	199603	13.62%	5.2%
Electric Equip.	199703	13.01%	5.3%
Electric Equip.	199803	13.04%	5.7%
Electric Equip.	199903	13.50%	3.6%
Electric Equip.	200003	12.79%	4.6%
Electric Equip.	200103	12.05%	6.2%
Electric Equip.	200203	13.66%	1.5%
Electric Equip.	200303	12.76%	4.4%
Electric Equip.	200403	12.62%	5.7%
Electric Equip.	200503	11.85%	6.0%
Electric Equip.	200603	11.60%	6.0%
Electric Equip.	200703	11.79%	6.2%
Electric Equip.	200803	11.45%	6.4%
Electric Equip.	200903	13.02%	1.3%
Electric Equip.	201003	14.06%	2.3%
Electric Equip.	201103	13.01%	5.2%
Electric Equip.	201203	13.85%	4.1%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Glass/Ceramic	199303	9.18%	3.9%
Glass/Ceramic	199403	9.60%	2.7%
Glass/Ceramic	199503	10.07%	3.4%
Glass/Ceramic	199603	10.31%	4.2%
Glass/Ceramic	199703	10.06%	5.2%
Glass/Ceramic	199803	10.50%	5.0%
Glass/Ceramic	199903	11.20%	3.5%
Glass/Ceramic	200003	10.95%	4.2%
Glass/Ceramic	200103	10.59%	6.6%
Glass/Ceramic	200203	11.01%	3.7%
Glass/Ceramic	200303	10.48%	4.7%
Glass/Ceramic	200403	11.60%	5.6%
Glass/Ceramic	200503	10.29%	7.5%
Glass/Ceramic	200603	9.92%	7.6%
Glass/Ceramic	200703	9.12%	8.8%
Glass/Ceramic	200803	9.21%	9.3%
Glass/Ceramic	200903	9.94%	5.6%
Glass/Ceramic	201003	11.25%	4.8%
Glass/Ceramic	201103	10.39%	9.6%
Glass/Ceramic	201203	10.48%	8.3%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Auto/Vessel	199303	8.90%	1.8%
Auto/Vessel	199403	9.14%	0.9%
Auto/Vessel	199503	10.01%	1.7%
Auto/Vessel	199603	10.21%	2.6%
Auto/Vessel	199703	10.19%	3.7%
Auto/Vessel	199803	10.59%	3.4%
Auto/Vessel	199903	10.87%	3.4%
Auto/Vessel	200003	11.27%	3.2%
Auto/Vessel	200103	10.99%	3.9%
Auto/Vessel	200203	10.55%	5.0%
Auto/Vessel	200303	10.00%	6.1%
Auto/Vessel	200403	11.94%	5.3%
Auto/Vessel	200503	11.37%	5.3%
Auto/Vessel	200603	10.53%	5.6%
Auto/Vessel	200703	9.65%	5.4%
Auto/Vessel	200803	9.17%	5.7%
Auto/Vessel	200903	10.51%	0.6%
Auto/Vessel	201003	10.98%	2.7%
Auto/Vessel	201103	10.22%	5.0%
Auto/Vessel	201203	10.28%	4.7%

Industry	Fiscal Year	HR Cost Ratio of Sales	Consolidated OP Ratio
Electrlicity/Gas	199303	10.56%	8.9%
Electrlicity/Gas	199403	10.90%	8.9%
Electrlicity/Gas	199503	9.42%	14.0%
Electrlicity/Gas	199603	10.30%	13.4%
Electrlicity/Gas	199703	10.34%	12.2%
Electrlicity/Gas	199803	10.20%	12.9%
Electrlicity/Gas	199903	11.13%	12.4%
Electrlicity/Gas	200003	10.49%	13.1%
Electrlicity/Gas	200103	10.84%	13.0%
Electrlicity/Gas	200203	10.65%	12.3%
Electrlicity/Gas	200303	11.69%	11.8%
Electrlicity/Gas	200403	11.36%	12.1%
Electrlicity/Gas	200503	10.01%	12.8%
Electrlicity/Gas	200603	8.81%	10.9%
Electrlicity/Gas	200703	7.91%	10.1%
Electrlicity/Gas	200803	7.09%	5.4%
Electrlicity/Gas	200903	7.79%	3.0%
Electrlicity/Gas	201003	8.78%	7.0%
Electrlicity/Gas	201103	7.62%	7.7%
Electrlicity/Gas	201203	7.14%	−2.5%

6. Toyota Motor Corporation: 75 years of Sustainability Management based on the Five Main Principles of the founder, Dr. Kiichiro Toyoda

We explore in-depth the issues covered so far in this paper in relation to a globally known family company - Toyota Motor Corporation (TMC).

(1) Toyota Motor Corporation as Family Enterprise

Among the 2236 manufacturing companies in the 2017 TMG Survey, 84% are managed by CEOs of founding family members, which means majority of 2236 are family owned or managed corporations. (Table 10) In other words, all the above management characteristics indicated in the 2017 TMG survey are those of family management if we define family management by whether it is managed by founding family members.

Table 10　CEO's profile

External recruiting	4.0 %
Employee promotion	7.8 %
Founding family member	80.5 %
Founder	3.3 %
Others and No answer	4.4 %

Then, Toyota Motor Corporation could also be classified as family managed corporation. It has been managed mostly by its founder's family members. In addition, TMC has

succeeded for 75 years the three characteristic what we have found common among 2236 family corporations in 2017 TMG Survey: Dedication to Society, Devotion to Innovation, Caring for Employees as Family Members.

(2) Toyoda Kouryo: The foundation for Toyota Motor Corporation's sustainable evolution.

In 1942, a small family business called Toyota Motor Corporation started producing 200 cars per year. At inception, the founder, Kiichiro Toyoda declared his corporate mission and philosophy: 'Toyoda Kouryo' ('Toyota Disciplines') consisting of five principles:

- Always be faithful to your duties, thereby contributing to the company and to the overall good.
- Always be studious and creative, striving to stay ahead of the times.
- Always be practical and avoid frivolousness.
- Always strive to build a homelike atmosphere at work that is warm and friendly.
- Always have respect for spiritual matters, and remember to be grateful at all times.

In the above five principles we can observe three critical and common values of family business succession and transformation in the same as those observed in TMG's 2017 survey: 1. Devotion to Society, 2. Leading Innovation, 3. Caring for Employees as Family Members. It is also recognized that the five principles have been successively and steadily

realized as corporate policy and strategies by successive generations of the Toyoda family CEOs of Toyota Motor Corporation, namely: Starting from the founder Kiichiro Toyoda (CEO : 1941-50), Eiji Toyoda (CEO: 1967-82), Shoichiro Toyoda (CEO: 1982-92), Tatsuro Toyoda (CEO: 1992-95) and Akio Toyoda (CEO: 2009-) (Kazuo Wada 2002, “Kiichiro Toyoda Biography”, Tadao Onaka 2018 “ Toyota CEOs’ Five Main Principles”) The fact indicates that in order to realize those critical and common values for succession and transformation with sustainable evolution, CEO’s commitment to those values is critical.

Devotion to Society:

At the time of foundation, Toyota’s CEO, Kiichiro Toyoda, intended to produce cars as social infrastructure for enhancing nationwide transportation system rather than commercial products. In his biography, he memorized that the purpose and reason of TMC’s existence is to realize social infrastructure of nationwide highway networks for social prosperity and evolution. (Kazuo Wada edition of “Corpus of Kiichiro Toyoda's Documents” published in the 9th issue of “Toyota News” by the University of Nagoya Press on November 1, 1936: Toyota is Ready to Move Forward!)

Leading Innovation:

The fact that Toyota was the first to introduce the hybrid car, Prius, among all other global

auto-manufacturers would be an example showing that the founder's mission is still adhered to. Another example of adherence to the founder's mission can be found in the announcement by Akio Toyoda in Las Vegas in the early 2020 that Toyota will start intelligent city development.

Also, Toyota's commitment on manufacturing efficiency symbolized by JIT (Just- In-Time) and Kanban is not only for pursuing the profit maximization as a priority, but also for maintaining and developing employees' senses of innovation and pride. ('Gemba (Field Front) and People Are the Source of Innovation', Shoichiro Toyoda, the 6th CEO of TMC 'Step by Step, with a Belief in the Future' by Nikkei Publishing Inc. in 2015)

Caring for Employees as Family Members:

A proof the extent Toyota CEOs committed to their family mottos of caring for employees as family member is the well-known fact that Toyota CEO's executive compensation is the lowest among all the global automobile corporations. Akio Toyoda, current CEO of Toyota Motor corporation has joked in a public speech that he is the world's highest fuel efficiency CEO. ('Corporate Leaders, Akio Toyoda', an exclusive interview from the Weekly Toyo Keizai published in April 9, 2016) According to Toyota's 2017 annual report published in March 2018, Akio Toyoda's annual executive compensation is 3,800,000 Yen (US$ 3.5 Million) in 2017 which is around one-thirtieth of the average top 10 US

CEO's compensations in 2016. (Bloomberg, QuickTake Executive Pay, Jan 23, 2018)

(3) Three conditions of corporate sustainability according to Toyoda Kouryo

From the above Toyoda family's Five Main Principles and from Toyota CEOs' commitments to them we can learn the necessary conditions to realize and implement Sustainability Management for sustainable corporate evolution:

Condition 1. The dignity and the reason of existence of human beings, creativity should be pursued for dedicating global society including future societies and generations as the highest mission.

Condition 2. Employees are treated as human beings to serve society and create value for social evolution rather than as human resources to be utilized for maximizing profit and ROI (Return on Investment) for stockholders.

Condition3. Appreciation to the entire society beyond the senses of 'cost and benefit' and 'give and take'. This is based on the perception and belief that human beings are embraced by the entire society and environment since the time of birth and already blessed far more than each human being can explicitly recognize. Then why not return the equivalent value toward the entire society.

7. What can be learned from family enterprises with more than 50 year longevity?

Seven major contradictions between 'Scientific Management' and 'Sustainability

Management' are summarized as below:

Scientific Management

- responds to shareholders' demands of short-term profitability maximization,
- perceives itself as Stockholders Property,
- recognizes employees as the resource to realize productivity efficiency for short term profitability maximization,
- expects instant and disciplinary people development,
- keeps replacing the CEOs for higher short-term profitability performance, and
- prioritizes investors benefit rather than employees' benefit.

In contrast, Sustainability Management

- succeeds founder's corporate mission of dedication to society,
- recognizes itself as Social Entity,
- respects and expects employees as the source of corporate creativity for innovation,
- commits long term people development,
- assumes CEO's long term for pursuing sustainable evolution,
- invests for growing succeeding CEO, and
- cares for not only employees' benefits but also their dignity of creativity.

8. Major Factors of Entrepreneurial Social Responsibility (ESR) commonly observed in family business enterprises in Japan

(1) Two common major factors

The two common major corporate missions succeeded and pursued by all family business enterprises in Japan are Entrepreneurship and Social Contribution which are coincidentally the same as those of ESR, proposed by Zhongming Wang, Zhejiang University in October 2017 SREEN conference.

This indicates the possibility that these two common factors of Entrepreneurship and Social Contribution are critical foundations for the common goal of ESR and family business enterprises with more than 50 year longevity in Japan: “Corporate Sustainability”. In order to validate the extent of the possibility, it would be useful to examine why and how both of ESR corporations and family business enterprises in Japan can realize corporate sustainability.

(2) Three steps to realize Corporate Sustainability from Social Contribution

First, if we look into how the corporate mission of “Social Contribution”, which commonly exits in ESR management corporations and family business enterprises in Japan, realizes “Entrepreneurship”, then we first recognize the fact that such corporate

mission itself or its existence is the most fundamental source to stimulate corporations toward Entrepreneurship. Why? It is because if the corporate mission of social contribution is executed officially and substantially by managements and employees, their sensitivity and therefore organizational and corporate-wide sensitivity toward social changes will be increased and keep enhanced by nature of "out of box perspective" grown from their eagerness and curiosity to see and explore the society and the world.

Then, the second step, consequently, the possibility of encountering the social changes stimulated by new emerging social needs would be increased. The possibility would be quantum leap higher if compared to the possibilities for those people who keep staying in the same work accountability box long time with the built-in command programs to pursue concentratively the efficiency of internal operation.

Again consequently, the third step, those abundant opportunities of encountering emerging various social needs would naturally stimulate creative initiatives, "Entrepreneurship", of managements and employees. Then it would not be so difficult to imagine that such continuously stimulated and incubated Entrepreneurship would keep realizing corporate sustainability.

(3) The third common factor

There is a third underlying factor we need to address. It is the fact that Entrepreneurship

could not be incubated in any robot or employee functioning /programmed like a robot or driven by AI to pursue internal operation efficiency alone. If we agree with the axiom that only human beings can incubate Entrepreneurship, then we understand the missing link we have omitted from our discussion. However, it commonly exists among family business enterprises in Japan. It is the corporate mission of respecting employees and their dignity and creativity. It can be endorsed by the fact that in any family business of more than 50 years of corporate sustainability in Japan, another corporate mission of respecting employees and their dignity and creativity is commonly succeeded and executed as one of top three priorities as shown in Toyoda Koryo and 2017 TMG survey results..

(4) ESR and Social Entity corporations

Here, we come to the point that any corporation with ESR is not grounded on being Stockholders Property but a Social Entity producing values to all stakeholders of customers, stockholders, partners, employees and to the wider society.

(5) ESR and Sustainability Management

Sustainability Management competency we discussed earlier is foundation and prime driver to realize ESR management. Sustainability Management assumes that corporations consist of human beings as the inevitable source for creativity and evolution. Scientific Management assumes that corporations consist of employees to be controlled rationally

and expected to work like AI driven robots, bounded by pure rationality. Therefore, Sustainability Management development could be considered to be the new frontier for corporations exploring sustainable evolution in the 21st century.

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