# vercoming the Disaster, Working towards Revitalization & Strengthening of Global Economic Network

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Since the first White Paper on International Economy & Trade was issued on August 15, 1949, it has been published every summer, with this year marking the 63rd issue. In the 2011 White Paper, we analyze the current conditions of the world economy and changes in trade structure, show the new direction of Japanese corporations in their overseas development as well as the importance of Japanese industry in global supply chains, which was brought clearly into focus by the Great East Japan Earthquake, and outline measures for the Japanese economy to overcome the disaster and become revitalized.

# **Current Conditions & Issues in World Economy**

After the global economic crisis, which hit bottom with the Lehman shock, the world economy is gradually recovering, although there is an imbalance in the speed of recovery of advanced economies compared to emerging economies. The global economy faces many different risks of economic downturn, such as the trends in advanced economies to disinflation (the phenomenon of the rate of rises in prices dropping) and deflation (the phenomenon of prices steadily dropping); fragile balance sheets, especially the EU's fiscal problem; the economic overheating of some emerging economies; the soaring prices of resources and food; and further expansion of global imbalances. The degree of recovery from such a situation is still in an uncertain state.

# (1) Although Steadily Recovering, World Economy Faces Continuing Structural Uncertainty

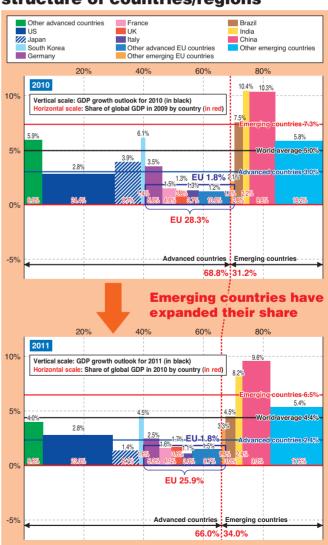
According to the World Economic Outlook released in April 2011 by the IMF, after recording in 2009 a minus 0.5% compared to the previous year, the growth rate of the world economy recovered to 5.0% in 2010, and it was deemed that "the feared second hitting of bottom in the economy did not occur." Indeed, as the growth of the world economy as a whole is again accelerating, there is a big gap as before between advanced economies and emerging economies in the speed of their recovery. While many advanced economies are even now experiencing delay in their recovery, there are indications that emerging economies are showing strong economic growth, to the extent that there is concern about the potential overheating of their economies (Chart 1).

For reference, on June 17, 2011, the IMF published a revised forecast, which stated the following:

- In regard to the global economy, "although there is a continued trend to growth, a slight deceleration and the increased risk of a downward trend" is seen. From the forecast of April, a downward adjustment (4.4 → 4.3) has been made, while 2012 is left as is.
- For advanced economies, a downward adjustment (2.4 → 2.2) is seen from April, while 2012 is left as is.
- The US is expected to have blunter growth (2.8 → 2.5) in 2011.
- For Japan, the downward trend of 2.1% resulting from the disaster

CHART 1

# **Growth rate & comparative GDP structure of countries/regions**



Note: Data for "other advanced countries" and "other emerging/developing countries" was estimated by METI based on IMF data.

Source: Compiled using data from IMF, "World Economic Outlook," April 20117

has been adjusted (1.4 $\Rightarrow$ -0.7). Recovery is expected in 2012.

- In the Euro-area, 2011 has been adjusted upwards (1.6 → 2.0).
   However, a slow-down is expected in 2012.
- As for the emerging economies, most are expected to continue to have strong growth. Upward adjustment (6.5→6.6) has been made from April 2011, while there is a downward adjustment for 2012.
- For China, India, and ASEAN5, 2011 and 2012 are left as they were. In contrast, for Central and South America, a minus 0.1% adjustment has been made for both 2011 and 2012.
- In Central and Eastern Europe, 2011 shows a 1.6% upward adjustment (3.7 → 5.3), while 2012 has a downward adjustment of 0.8%.

Meanwhile, in the emerging economies, from now on a large amount of capital will flow in as a result of monetary easing in the developed countries, and concern is growing that this will lead to inflation and further appreciation of national currencies. As measures in response in the emerging economies, strengthening of capital inflow regulations, increasing the OCR and reserve deposit rate, and so on are taking place. Through this change in policy from monetary

Trends in current-account imbalance

of major countries (\$ billion 2.000 Other emerging countries (+) Russia Outlook Other advanced countries (+) Other advanced countries (-) Brazil South Kores /// Germany Other emerging countries (-1.500 1.000 500 -500 -1,000 -1,500 -Outlook -2 000

Source: Compiled using data from IMF, "World Economic Outlook," April 2011

easing to monetary tightening, if the economies of emerging economies slow down in the future considerably more than is expected, it is possible that this could result in a slowing of the recovery process of the world economy, which depends on the emerging economies.

# (2) Risks Faced by Global Economy

## 1. Soaring Prices of Resources & Food

One of the risk factors in the achievement of recovery of the global economy is the soaring prices of resources and food, and the resulting huge increases in the prices of major products. The factors behind the worldwide soaring prices of resources and food include: (a) the increase in actual demand, especially in emerging economies, (b) the uncertain supply resulting from inclement weather, etc., (c) the unstable political situation in some exporting countries, and (d) factors such as the capital inflow from financial markets, which are all having a compound effect in the light of the worldwide environment of monetary easing.

The soaring prices of resources and food tie in to the increases in the prices of imported items in each country and region. As the demand for food continues to be high, on the supply side there are many uncertain elements, so it is probable that in 2011 the prices of resources and food will remain in an increasing state of uncertainty.

Since the soaring prices of resources and food is a major cause for concern in the global economy, a Commodity Study Group was established by the G20 finance ministers and central bank governors in February 2011, and this study group is working to gain a comprehensive understanding of the actual conditions of the background and fluctuation factors in relation to the international product market.

# 2. Expanding EU Financial Crisis

Another risk obstructing the growth of the global economy is the EU financial crisis. Since the autumn of 2009, Europe has been continuously rocked by the financial problems of various countries in the Euro-area. Following on from Greece, which in May 2010 asked the EU-IMF for help, and Ireland, which requested assistance in November of the same year, in April 2011 Portugal also asked for assistance. In the Euro-area concern is spreading that countries where the relative competitiveness is low and the financial situation extreme may be unable to conduct monetary reconstruction independently, and the situation has worsened so that there is uncertainty about the financial system of the entire area.

At the root of such market concerns, there lies the fear that even if the assistance policies that have been announced so far are employed, reconstruction will not be achieved and debt restructuring in some form or other will take place. Including the possibility that responses to the immediate debt uncertainty will be partly delayed, how the EU will proceed from now on with further measures to respond to the various countries that are suffering from debt uncertainty is a topic of major interest.

# (3) Aiming for Sustainable, Balanced Economic Growth

The global imbalance, which contracted partially in 2009 after the occurrence of the world economic crisis, increased again after the start of 2011, and reduction is not expected in the medium term *(Chart 2)*. However, the previous situation in which the economic growth of each country and region depended on consumption in the US has become difficult to maintain, and there

TABLE 1

# Bilateral & regional trade shares in total amount of trade of six blocs

[2000]

[1990]

Rank	Country/Region	Share	
1	NAFTA-EU	29.3	
2	NAFTA-Japan	19.6	
3	EU-Japan	12.6	
4	Japan-ASEAN	7.9	
5	NAFTA-ASEAN	6.5	
6	EU-ASEAN	5.8	
7	NAFTA-Mercosur	3.9	
8	EU-Mercosur	3.5	
9	NAFTA-China	3.3	
10	EU-China	3.0	
11	Japan-China	2.5	
12	China-ASEAN	0.9	
13	Japan-Mercosur	0.8	
14	Mercosur-ASEAN	0.3	
15	China-Mercosur	0.1	

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11	EU-Mercosur	2.5	
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[2009]		
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6	China-ASEAN	5.8
7	EU-ASEAN	3.9
8	NAFTA-ASEAN	3.5
9	Japan-ASEAN	3.3
10	EU-Japan	3.0
11	NAFTA-Mercosur	2.5
12	EU-Mercosur	0.9
13	China-Mercosur	0.8
14	Mercosur-ASEAN	0.3
15	Japan-Mercosur	0.1

Source: Compiled from RIETI, "RIETI-TID2010"

is concern about the sustainability of the current global imbalance. which is one factor creating uncertainty about the global economy. In addition, the clash of policies aimed towards economic recovery, between advanced economies and emerging economies, among advanced economies, or among emerging economies, can work as a factor leading to dramatic fluctuations in the exchange rate and also as an obstacle to free trade, leading to the worsening of global economic instability.

In this way, since 2010, with the gap between the economic growth of advanced economies and that of emerging economies having become increasingly clear, friction between countries and regions has increased, resulting in the development of various concerns in relation to the international collaborative frameworks. There is a pressing need to advance ways to resolve such issues in for a such as the G20, APEC, WTO, etc.

# (4) Great East Japan Earthquake: Global Economy Moving towards Stability, through Cooperation among Countries

In response to the exchange rate movement associated with the Great East Japan Earthquake on March 11, on March 18 the G7 decided on concerted intervention in the exchange market and its expression of solidarity and readiness to provide needed cooperation meant that overall there was a relatively calm situation. The prices of resources such as crude oil and iron ore do not show a clear trend to a change if we compare before and after the disaster, while the market that clearly showed a downward shift post-disaster, as seen in the prices of grain and stocks in major countries, by April had recovered to the pre-disaster level.

Since April, while the various Anglo-Saxon countries and Japan have been continuing to implement monetary easing, in contrast the People's Bank of China and the European Central Bank have increased their rates of interest, and the rudder appears to be being steered towards alleviating the inflation that has spread to not only the emerging economies but also Europe. The global macroeconomy, which was overall in a stable state, is functioning in a positive direction for achieving post-disaster recovery.

# Changes in Trade & Commerce of World & Japan

The trade relationship between Japan and the other major countries and economic blocs of the world changed dramatically with the global economic crisis. Moreover, these changes included effects on the production networks comprising "the world's factory" of East Asian countries and regions, centering on Japan. What kind of effects have these changes had on Japan's domestic industrial composition and on aspects such as employment? Below we look at this question more closely.

# (1) Changes in World Trade that Affect Japan

Today, now that 20 years have passed since 1990, when Japan, along with the EU and NAFTA, began to be responsible for a major portion of global trade, China appears to have taken Japan's place. Also, in the same way, Japan's trade relationship with the various parts of ASEAN has faded in a relative sense (Table 1).

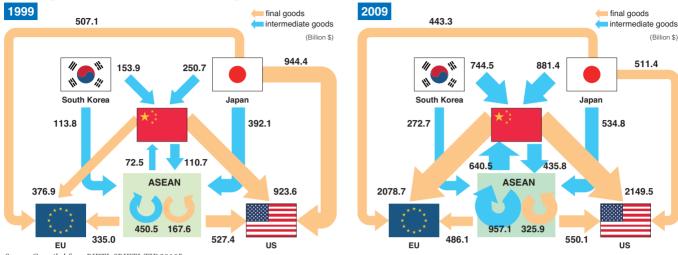
However, a closer look reveals that in the last 20 years the East Asian production network including Japan and ASEAN has dramatically expanded its amount of trade, to an extent not seen in any other region, and also deepened its trade relationships. While it is certainly true that China has rapidly expanded its presence in the global trade composition, one of the major factors behind this is the fact that China has established its position as a production and export base in the East Asian production network, while its role in connecting the East Asia region with the outside has also increased.

Another background factor is the expansion of intermediate-goods provision to China from East Asia including Japan, South Korea, Taiwan and ASEAN. Although at first it seems that Japan and ASEAN have a reduced presence in the global trade structure, this in fact means that an optimal division of labor system is progressing further in East Asia, through vigorous cross-border corporate activities within the region, including direct investment by Japanese corporations.

Moreover, the global economic crisis also transformed the trade structure of the East Asian economic area. The crisis reduced the

### CHART 3

# Trends in trade of intermediate goods & final goods in countries/regions of East Asia



Source: Compiled from RIETI, "RIETI-TID2010"

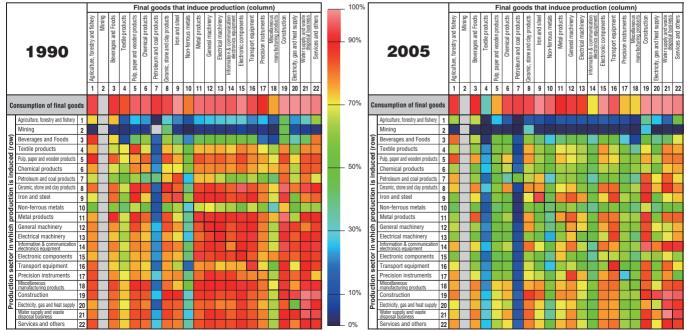
worldwide demand, and in particular, advanced economies such as the US and Europe suffered serious economic stagnation. At the same time, the growth of Asia, where China, ASEAN, etc. experienced a speedy recovery, lead the growth of the global economy. Meanwhile, the "East Asia production network," which depended on consumption by the US and Europe, began to show autonomy as the "East Asia production and demand network" that seeks a final-product demand area within its own region as well. Demand has expanded supply not only within the region but also beyond it. "The world's factory," while maintaining and strengthening that position, at the same time is steadily becoming "the world's area of demand" (Chart 3).

# (2) Changes in Structure of Japan's Trade & Economy

Since, until about 1990, its neighbors were still developing countries, Japan was unable to build an international division of labor structure, and so the so-called "full-set-type" of industrial structure naturally came into being - that is, an economic composition whereby the division of labor in all industrial fields is kept inside one country and maintained at a certain level. However, as a result of changes in the situation such as the economic development of the countries of East Asia, and the high yen, lowpriced items imported from overseas became easy to purchase, and so in Japan only, the "full-set-type" of industrial structure that had

TABLE 2

# Changes in Japan's domestic production inducement effect



Source: Compiled using data from "Input-Output Tables for Japan" (1990 & 2005)

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driven the economy became no longer necessary. A structural transformation to a more specialized "international division of labortype" industrial composition then took place, characterized by increasing moves to overseas of production bases and increasing FDI, the importing of low-priced final goods and intermediate goods from overseas, and the export of high-value-added final goods and of intermediate goods that involve advanced, specialized technology.

The fact that a path has been cleared to overseas markets, from a management perspective, is a rational decision. However, looked at from the macro-view of the effect that this has had on the Japanese economy, a so-called hollowing-out effect has been brought about, in which the above-mentioned "full-set-type" of close-knit domestic industry fields has been disrupted, the accompanying domestic production inducement effect reduced (*Table 2*), and employment suffered a decrease. To place the Japanese economy into a global industrial-related structure so that Japanese domestic production inducement is achieved, even among an international division of labor structure, is a policy issue.

# Aiming for New Overseas Development of Japanese Economy

Having survived both the world economic crisis and the recent disaster, the presence of the emerging economies, centering on Asia, has become clearer. Below we describe some of the future possibilities inherent in new overseas developments of the Japanese economy, based on an understanding of the need for coexistence with the other countries of Asia, which are showing dramatic growth, and industrial compartmentalization.

First, in regard to Japan's manufacturing industry as it aims to capture the markets of emerging economies, we analyze the directions of possible responses, and also indicate business opportunities that can provide major contributions to resolving issues in emerging economies. Then, defining overseas development that is well underway in emerging economies as "localization," we discuss the features and issues of this phenomenon and indicate the effects this trend to localization will have on the Japanese economy, and then consider the ideal relationship between such localization and the domestic economy.

# (1) Clarification of World Market & Strategy of Japanese Manufacturing Industry

# 1. Targeting Income-Earners of Increasingly Wealthy Emerging Economies

In the emerging economies of the world, especially in Asia, which is exhibiting dramatic growth and where income is increasing, the market is steadily expanding in amount, and moreover also in quality. In 2010, the comparative composition of the population by income strata of emerging economies in the emerging economies overall (4.3 billion people), was: wealthy class 5.9%, upper middle class 11.8%, lower middle class 37.6%, and low income class 44.6%, with almost half (1.92 billion people) in the low income class. But by 2020 these figures are expected to have changed to: wealthy class 14.7%, upper middle class 24.6%, lower middle class 40.7%, and low income class 20.0%, meaning that about 40% (1.84 billion people) of the total population of the emerging economies (4.69 billion people) will be in the upper middle class or wealthy class of income earners (*Chart 4*).

Although responding to the middle strata of the emerging economies that comprises a large market now and also in the future is essential, in order for Japanese corporations to establish a position in the attractive middle-class stratum as it gradually becomes richer, it is essential to gain an accurate understanding of the market targeted at the wealthy classes through high-value-added products that make the most of Japan's strengths.

# 2. Japan's Strategic Areas Can Contribute to Resolving Issues of Growth in Emerging Economies

Although the emerging economies are already showing remarkable growth, in order for them to achieve further growth, there are issues that need to be resolved. Here we consider a model for coexistence with the emerging economies that not only contributes to resolution of the issues they are facing, but also leads to growth for Japan as well, through strategic fields where it is possible to implement division of labor with the industries of the emerging economies.

The rising of wages in emerging economies in recent years has grown dramatically, especially in countries that have a high percentage of lower-income-earners. For example, in the manufacturing industry of China, a state of affairs has arisen in which it has become difficult to obtain labor, especially in coastal areas, because of the soaring wages, and it appears that the time has already come for a change from the previous labor-intensive style to automation.

Japan's automation technology and industrial robot technology are in an overwhelmingly strong global position, and in the various regions and countries of Asia, where wage increases and aging will rapidly progress in the future, the introduction of Japan's industrial robots is expected to advance. As the overseas development of the manufacturing industry proceeds, it is hoped that manufacturing technology with Japan as its base will contribute to resolving the problem of soaring labor costs, a growth issue in Asia's emerging economies and regions.

Another growth issue for the emerging economies is the streamlining of the electricity infrastructure, which supports corporate production activities, and of the transportation infrastructure, which is essential for smooth distribution of goods. Advancing with streamlining infrastructure not only contributes to the growth of the country in question, but also makes a major contribution to the growth of Japan. Exports of infrastructure and investment in infrastructure projects have an extremely large ripple effect on the economy and employment of Japan. According to analysis by the Japan Bank for International Cooperation (JBIC), which supports large-scale infrastructure projects, in relevant financial operations such as export financing, investment financing, and business operation development, of the total amount of money involved in the projects of 2.72 trillion yen, 919.4 billion yen affects emerging economies, while at the same time, the effect on the domestic economy is as much as 1.33 trillion ven. In addition, investing in infrastructure projects and proceeding with overseas development in a systemic manner also leads to advancement of Japanese industry and expansion of added value, through the achieving of sustained profits along with the obtaining of advanced technology and expertise.

# (2) Localization of Japanese Corporations Takes New Step

As a new move in the overseas development of Japanese corporations that is well underway in emerging economies, overseas

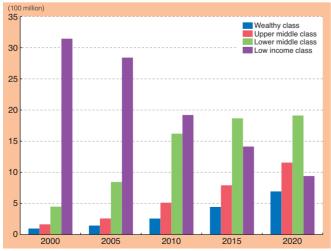
development that incorporates customized responses in relation to customer needs is defined as "localization." Below we discuss the characteristics and issues of this phenomenon, and the current state of the localization of management. After that, we consider what kind of effect this localization trend has on the Japanese economy, from aspects such as the export of intermediate goods, income from investment, and domestic employment, and then discuss the ideal relationship between such localization and the domestic economy. and ways to achieve it.

# 1. Overseas Development of Japanese Corporations Steadily **Progressing in Emerging Economies**

As a result of the expansion of the middle-class and wealthy-class strata of the emerging economies, the consumption level of these emerging economies is rapidly growing, and the resulting overseas moves of Japanese corporations to emerging economies, while aiming at lower production costs, also brings gradual progress to a change from activities that are focused on the production function to those that aim at market acquisition (the sales function). Moreover, for market acquisition in emerging economies, coming into focus as an important factor is the ability to appropriately provide customized responses to local customer needs. That is, measures that are more broad-ranging than obtaining markets by simply lowering prices are required. Specifically, this means finding ways to develop customized responses such as specification changes, rapid delivery systems, after-service measures, and so on.

Also, in order to provide customized response to local preferences, there is generally thought to be a need to immediately implement rapid management decisions that relate to local conditions. However, for local Japanese corporations, it cannot necessarily be said that the transferring of authority to Japanaffiliated local corporations in emerging economies (localization of management), which is considered essential to achieve the above purpose, has advanced to the extent that it has for Japan-affiliated local corporations in the US and Europe. In responding to the expansion of the ratio of local sales in overall sales, and the

Trends in population in emerging countries by income sector



Note: Household population by disposable household income level. Calculated by multiplying the household ratio of each income level, by the population. Figures for 2015 and 2020 are Euromonitor estimates.

Source: Compiled from "Euromonitor International 2011"

conditions of human-resource acquisition and education of local corporations, the reality is that each corporation is simply trying to work out its own measures for itself.

# 2. Effect on Domestic Economy of Localization in Emerging **Economies**

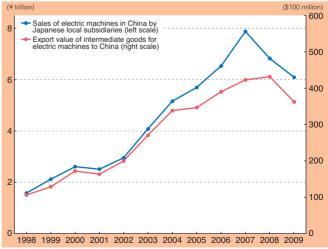
Localization to emerging economies, through the flow-back into domestic Japan coming from the increase in the export of intermediate goods from Japan to the country (local area) and the expansion of FDI profit and income from patents, etc., tends to bring an expansion of domestic R&D and investment in plants and equipment, and thus makes a positive contribution to the Japanese economy (Chart 5). However, the flow-back into Japan from increased exports of intermediate goods and FDI profits through changes in the competitive environment is not always sustainable. and in order for it to bring about a greater benefit, it is necessary to streamline the environment towards improved competitiveness in the export of intermediate goods and the flow-back into Japan of funds.

Furthermore, localization to emerging economies, when looked at from the macro-viewpoint, does not necessarily bring about a positive effect on domestic employment. Accordingly, attention should be paid to the possible influence that localization can have on domestic employment and, as measures to achieve market acquisition by Japanese companies in emerging economies are expected to steadily progress further, it is important to look at such trends from the viewpoint of what kinds of effects this will have on domestic employment, and at the same time consider what kinds of Japanese domestic functions should be concentrated and strengthened.

# Trade & Economic Relationship between Japan & Rest of World Shown by Great East Japan Earthquake

The Great East Japan Earthquake and subsequent events caused enormous damage affecting a wide area centering on the Tohoku district, and Japan's domestic production bases have been seriously hurt as well. The three Tohoku prefectures that were worst affected –

# Relationship between increase in sales of Japan-affiliated local corporations & increase in export of intermediate goods



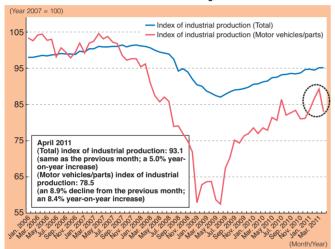
Source: Compiled using data from METI, "Survey of Overseas Business Activities" & RIETI,

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Iwate, Miyagi, and Fukushima Prefectures — as well as surrounding districts such as Ibaraki Prefecture (hereafter called the affected area) — comprise one of the areas where Japan's automobile-parts industry and electric/electronic-parts (such as semiconductors) industry, as well as related industries such as those for the production of materials necessary to manufacture these items, are concentrated. As a result, concerns have been voiced in many quarters that the supply of parts and materials from the affected area might be curtailed, and indeed both domestic and overseas production activities have been affected.

Accordingly, in regard to the importance of the trade and economic relationship between Japan and the rest of the world, which has become more obvious as a result of the disaster, we will

CHART 6
Trends in US industrial production



Note: Values are seasonally adjusted. Source: Compiled using data from FRB & CEIC Database conduct analysis that focuses on the "supply chain in international production activities" (the flow of the chain of activities that takes place internationally, from the acquisition of materials and parts to their production, distribution, sales, etc.; hereafter called the global supply chain).

# (1) Possible Influence of Disaster on Japanese Production & Trade

The disaster caused production at the production bases in the affected areas to stop, and also, because planned electricity cuts were implemented in the Tohoku and Kanto areas in order to resolve the electricity shortage, Japan's production activities were further severely affected. In Japan's Industrial Production Indices for March 2011, mining and industry overall showed a 15.5% drop compared to the previous month (after seasonal adjustment, ditto for the figures below), greater than after both the 1995 Great Hanshin-Awaji Earthquake (a 2.6% drop) and the 2008 world financial crisis (a drop of 8.6% maximum), and the biggest decrease since February 1953, when comparable figures were first released. Moreover, in the affected areas of Tohoku and Ibaraki Prefecture, there are even greater decreases.

As for different industries, the transport machinery industry, including passenger cars and car parts, showed a decrease over the previous month of 46.7%, the worst showing among all types of industry. In particular, the effect of the stoppage of production of automobile parts also affects overseas production, by disrupting the supply chain. For example, as a result of the decrease in exports of automobile parts from Japan, the production of automobiles and their parts in the US in April showed a large decrease compared to the previous month (seasonally adjusted) of 8.9% (*Chart 6*).

However, if we look at the absolute trade amount, the trade amount of exports from the five prefectures affected by the disaster in 2010 was about 1.38 trillion yen, and imports about 1.38 trillion yen, amounting to only about 2% of Japan's overall exports and 4%

Composition of exports of automobile parts, in case of consideration of indirect exports (Units: million yen, %age)

	0	0	8	0 +	. 2	0 + 0				
Region name	Direct exports from the region	Indirect exports of parts produced in another region	Indirect exports of parts produced in the region	Value of exports from the region (Tier 1- centered view)	Share by region	Value of exports from the region (Tier 2- centered view)	Share by region	Proportion of direct exports	Proportion of indirect exports	Region in which the largest input is made (share in the total input)
Hokkaido	15,601	8,857	16,154	24,458	0.61%	31,754	0.79%	49.1%	50.9%	Chubu (86.6%)
Tohoku	22,355	11,488	40,534	33,843	0.84%	62,889	1.57%	35.5%	64.5%	Kanto (73.8%)
Kanto	1,142,951	175,817	204,750	1,318,768	32.91%	1,347,701	33.64%	84.8%	15.2%	Chubu (55.8%)
Chubu	1,573,766	200,960	271,634	1,774,726	44.29%	1,845,400	46.06%	85.3%	14.7%	Kanto (39.5%)
Kinki	162,353	97,320	76,240	259,673	6.48%	238,594	5.95%	68.0%	32.0%	Chubu (59.0%)
Chugoku	170,959	47,372	48,892	218,331	5.45%	219,851	5.49%	77.8%	22.2%	Kyushu (26.2%)
Shikoku	194	169	938	363	0.01%	1,133	0.03%	17.2%	82.8%	Kinki (73.5%)
Kyushu	233,656	142,881	25,726	376,537	9.40%	259,383	6.47%	90.1%	9.9%	Chubu (52.4%)
Okinawa	5	5	0	10	0.00%	5	0.00%	100.0%	0.0%	N/A
Japan total	3,321,840	684,869	684,869	4,006,709	100.00%	4,006,709	100.00%	82.9%	17.1%	Chubu (29.3%)

Note: Values other than percentages are in units of ¥ million

Source: Compiled using data from METI, "2005 Inter-Regional Input-Output Table" (53-sector table) (March 2010)

of Japan's overall imports. Moreover, looking at the products made in the affected areas, even if we consider those that were exported from ports and airports outside the affected areas, the percentage of the amount of total exports is still small.

# (2) Global Supply Chain Centering on Japan's Exports Clarified by Disaster

The amount of direct exports from the area affected by the disaster, when compared to the total amount of exports of Japan, cannot necessarily be said to be large. But in the global supply chain, when looking at the breakdown of exports in Japanese industry, which employs a vertical specialization system, it is important to consider not only the direct exports from each area, but also the indirect exports from the affected areas (hereafter called indirect exports). "Indirect exports" here refers to when the production activities of a particular area are intermediately inputted into the production activities of other areas, and as a result of that input, products made in other areas are exported overseas.

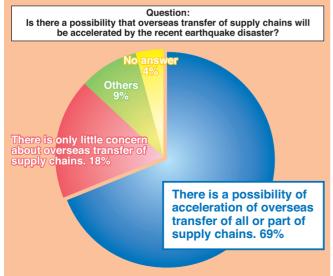
If we concentrate on the automobile industry, which suffered the most damage in the recent disaster, exports of automobile parts from the Tohoku area cover more than 60% of indirect exports, and they are mainly intermediately used in automobile parts manufactured in and exported from the Kanto area (Table 3). In other words, the curtailment of production of automobile parts in Tohoku as a result of the disaster had a negative effect on exports, mainly through Kanto. It is clear that this area had a larger link with global supply chains than only that directly related to exports.

# (3) Learning from the Disaster Experience

The natural disaster and the accident at Tokyo Electric Power Company's Fukushima No. 1 nuclear power plant had a wide-ranging impact on Japan's economic activities, affecting everything from inspections and strengthened measures in regard to items exported

# CHART 7

# Possibility that disaster will accelerate overseas transfer of Japanese corporations



Source: METI, "Emergency Questionnaire Survey on the Status of Restoration, Reconstruction, and Hollowing-out of Supply Chains after the Great East Japan Earthquake"

from Japan, to distribution, sightseeing, aviation, etc. Both the public and the private sectors of Japan are endeavoring to provide rapid and accurate information to international society, and to implement measures to resolve problems. It is important from now on to share the experience of, and the lessons to be learned in, our recovery from this disaster, and to consider appropriate responses when an emergency situation occurs, within multinational cooperation frameworks.

# Overcoming the Disaster, Aiming for Revival of Japanese Economy

# (1) Advancing Measures for Japan's Revival

The Great East Japan Earthquake had an enormous effect on the Japanese economy and the operation of related policies. Japan must steadily overcome the various restrictions brought about by the disaster, strengthen measures to realize new growth, and recover the potential growth power of Japan. At the same time, there is a need to respond to the various structural issues that Japan was facing even before the disaster.

In May 2011, the government passed the Guideline on Policy Promotion in Cabinet; it indicates government policy towards achieving recovery from the disaster and the revival of Japan. With this as a base, by implementing future-oriented, strong reconstruction and recovery, and creating the framework for a new society, Japan aims to contribute to international society as well.

# (2) Advance of Diverse Free-Trade System along with Construction of Strategic Foreign Economic Policy

Although the damage to Japan from the Great East Japan Earthquake was indeed huge, in the global supply chain, Japanese corporations are constructing multi-layered relationships with corporations from other countries, and Japanese corporations that export competitive intermediate goods are expected to continue to fulfill their responsibilities in this regard.

Accordingly, by getting rid of the various obstacles that exist in overseas business operations and trade, in order to reduce "costs" in the broad sense of the word, in economic activities that straddle national borders it is necessary to implement measures to construct strategic economic relations with other countries. It is important to have this lead to further strengthening of the competitiveness of Japanese corporations, an increase in Japanese exports, and the growth of Japanese employment.

# (3) Measures to Revitalize & Strengthen Location Competitiveness

Although some measures in response to the negative effects of the disaster, such as restrictions on the electricity supply and harmful rumors, are gradually being implemented, it cannot be said that concerns about Japan's drop in location competitiveness have disappeared, while there is also a concern that the hollowing-out phenomenon will accelerate (*Chart 7*).

In order for Japan to continue to achieve sustainable growth in the future, along with increasing the attractiveness of domestic locations and continuing to produce highly competitive financing, services, and systems, there is a need to actively attract bases of local control and R&D of foreign corporations to Japan.