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Significance and Future of Rent in International Energy Markets

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While oil and other international energy markets have developed, huge profit produced by market players has exerted great impacts on the development of energy industries, growth of energy-producing economies, the international balance of power, international politics, and geopolitics. One of the most important source of the huge profit has been rent. Rent was originally conceived as income or profit from land ownership or use. Today, rent frequently means excess profit that surpasses the normal level. While normal profit comes from a completely competitive market, excess profit comes from a market that fails to be fully competitive for some reasons.

We can see the history of the international oil market from the viewpoint of how to maintain rent and who gets rent. In normal circumstance, the international oil market has had production capacity exceeding demand. The manager of the excess production capacity and how to manage the excess capacity have played a key role in maintaining and securing rent. This is a kind of international energy governance. The main player in such governance has transitioned from Standard Oil to the Texas Railroad Commissions, "Seven Sisters" oil majors, the Organization of the Petroleum Exporting Countries and Saudi Arabia, and the OPEC-plus group. They have used different methods or approaches to manage excess production capacity.

Currently, OPEC or the OPEC-plus group plays a key role in supporting and stabilizing crude oil prices by implementing joint production cuts (adjustments). OPEC and non-OPEC oil-producing countries heavily depend on oil revenue for national management to various extents. Therefore, crude oil price stabilization is significant for their national development and stability. Supporting crude oil prices amounts to maintaining or securing rent. In a fully competitive market, producers implement full production in ascending order of production costs. Producers with production costs up to a level at which demand and production curves intersect can implement production. Those with greater production costs cannot implement production. In the international oil market, however, producers with the lowest production costs (Middle Eastern and other oil-producing countries) adjust production, allowing an equilibrium price at the intersection point to become higher. In this way, excess profit is generated in the market. Most oil-producing economies are supported by rent, which is used and distributed for their national management.

Rent is important not only for oil-producing economies but also for international energy industries, particularly the international oil and gas industry. The industry's earnings breakdown indicates that its profit comes primarily from the upstream oil and gas sector. Although GAFA (Google, Apple, Facebook, and Amazon) and other information technology giants occupy top ranking positions now, oil multinationals had been among the world's largest companies. Rent is significant for these international oil companies that still maintain their great presence in the world economy and in global energy markets, despite their far lower ranking positions than in the past. As climate change countermeasures are being enhanced, IOCs are increasingly announcing business strategies to enhance initiatives for renewable and other clean energy areas, rather than the

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traditional oil and gas sectors. While these long-term strategies indicate a right direction, the problem is that renewable and other clean energy areas cannot be expected to provide them with excess profit as high as provided in the oil upstream sector. If they shift to business areas with less profit rates or levels, there is no choice but for their overall profit rates or levels to decline.

For oil-producing countries, however, it is vitally important to maintain rent. When the OPEC-plus production cut framework collapsed temporarily last March, indications were that any mechanism to defend rent was failing to work, triggering a free fall in crude oil prices. As the adverse effects of the collapse were so serious, OPEC-plus group oil-producing countries had no choice but to revive their joint production cut arrangements to restore and maintain rent. They will continue to coordinate their production cuts to maintain rent for their survival.

Regarding rent, new major challenges have come out for oil-producing countries. As major countries in the world have announced their carbon neutral targets and enhanced global decarbonization initiatives, the future course of oil and other fossil fuels has become more uncertain. Oil-producing countries and international energy industries face great uncertainties including when oil demand would peak, how fast oil demand would decrease after peaking, and what roles relatively cleaner natural gas or LNG could play in the decarbonized world.

In such situation, the decarbonization of fossil fuels has recently become a major attention-attracting topic. This means that fossil fuels positioned at the center of global energy systems will be decarbonized to realize overall low-carbonization or decarbonization while continuing to be used. A representative initiative calls for producing blue hydrogen from fossil fuels while capturing, storing, and utilizing CO_2 emissions and for developing global supply chains for such hydrogen. Given that technological innovations and huge investment costs are required for developing blue hydrogen supply chains, initiatives to use existing technologies and infrastructure for producing blue ammonia and developing relevant supply chains are also attracting global attention.

If these initiatives are implemented through technological innovations and relevant infrastructure investment and development, fossil fuels will be decarbonized and continue to be used, paving the way for countries and companies holding fossil fuel assets to prevent their assets from being stranded and gain brighter future visions. In this sense, it is natural for oil-producing countries and energy companies in the world to have great interests in blue hydrogen and ammonia. Another point to consider here is how rent would change for oil-producing countries and energy companies then. Blue hydrogen or ammonia supply costs will have to be reduced substantially in the future. How far such costs could be cut is uncertain. It may not be easy to reduce such costs to the same levels as the current fossil fuel supply costs. Market or sales prices of these innovative fuels are also greatly uncertain. No one can predict whether any premium value would be given to these ultra-clean fuels to resolve climate change and environmental problems or how much such premium would be. Such premium may also depend on how to value carbon for policy or institutional purposes, complicating the problem further. Anyway, however, it may be difficult to assume the current level of rent in the international oil market to be maintained.

If rent in the market for blue hydrogen and ammonia as ultra-clean fuels is smaller than that for oil, oil-producing countries may have difficulties regarding national management, even though being able to make effective use of their fossil fuel assets. In this sense, it will remain important for oil-producing countries to diversify and advance their economies.