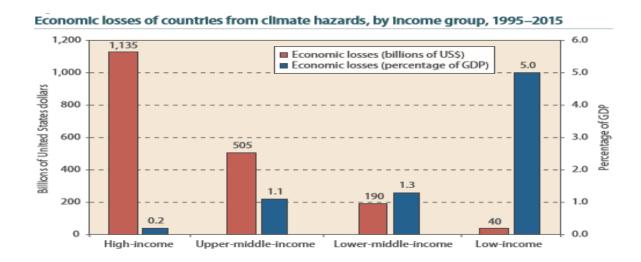
Is a post-growth economy possible for climate restoration and sustainability?

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"The climate emergency is our third world war. Our lives and civilization as we know it are at stake, just as they were in the second world war." J. Stiglitz, June 4, 2019. the Guardian

I. Is a post-growth society possible?

In general, a post-growth society or a de-growth society is understood as a society that pursues diverse values such as environmental preservation and spiritual growth, not just economic growth through continuous consumption—growth. While a post-growth society or a de-growth society is not understood as climate change problem, it tends to replace the climate change issue with the issue of reducing greenhouse gas emissions. But the problem of reducing greenhouse gases is not solved without the integral resolution of political, economic, social, cultural and racial inequality (UNDESA, "World Economic and Social Survey 2016: Climate Change Resilience: An Opportunity for Reducing Inequalities", 3 October 2016).



Source: United Nations (2016), *Climate Change Resilience: An Opportunity for Reducing Inequalities, World Economic and Social Survey 2016*, New York, Sales No. E.16.11.C.1

Supporters of a post-growth society or a de-growth society share the view that unequal social structures and international relations result in climate change, and climate change exacerbates all kinds of inequalities, thus expanding and reproducing the contradictions of the current system. But does the wisdom of the human society exist on this issue?

A need for a change of post-growth discourse

The concept of de-growth considers growth to be a barrier to the ultimate goals of human pursuit: a good or truly happy life, and instead values the voluntary and creative self-control and reduction of consumption reduction. But is a global adjustment where developed countries scale back their economies while developing countries continue to grow until they meet basic demands possible?

The concept of post-growth takes a socio-ecological position and considers growth-free prosperity or non-growth economy, but it also does not come up with ways to realize social justice to resolve the ecological crisis and a global redistribution of income or wealth to prevent the pursuit of growth in underdeveloped countries.

Basically, the ecological crisis requires a fundamental shift in values or paradigms based on modernism, securing the necessary conditions for productive forces in post-growth economies, and for changing the superstructure, but there is no specific blueprint for this.

Therefore, post-growth discourse needs to shift from "in a limited world, infinite growth is impossible" to "growth with inequality is impossible." In other words, a shift of perception is needed from that of "the pursuit of infinite growth due to scarcity of resources will destroy the social, cultural and natural conditions that are indispensable to human life" to that of "co-evolving growth methods with inequality will inevitably increase resource consumption to an extent that it leads human society to ruin." In addition to settlement of inequality, there is a need for a transition to a society that seeks a 'purpose' which is related to the concepts of 'good life' and 'happy life', that is, a society wherein people have the opportunity to relate to people other than through income accumulation and instead place value on meaningful things.

A need for system change, not climate change

We can get a clue to a solution for the climate crisis when accompanied by changes in the social structure, such as changes in energy-intensive industrial structure beyond change in energy sources, resolving social inequality, changes in employment and welfare systems, and strengthening of social and economic grassroots democracy. Also, it requires securing large investment resources for the transition to renewable energy, creating green jobs, and beyond that, calling for a change in industrial structure and a change in the development model. In other words, climate crisis response and the transition to a sustainable society cannot be limited to policies that introduce new technological solutions or find new growth engines. Climate crisis response requires global "system change, not climate change". So what are the specifics of system change?

Human society in the trap of modern paradigm: Unsustainable capitalism

The growth discourse is based on the experience of industrialization (enlightment, developmentalism) in that economic growth is the same as the industrialization process. Therefore, we need to understand the situation of capitalism after deindustrialization. The reason why the left has embraced the growth discourse stems from the belief that the market economy can be accommodated if most members of society can share the benefits of growth and equal opportunities such as educational opportunities are guaranteed. Since the 1970s, however, a society that had grown together transformed to a society in which a few monopolize growth, and equality of opportunity proved to be a mirage in the generation transfer of wealth.

What has happened since the 1970s? Major systems and ideologies of industrial society has been collapsed since deindustrialization, failing to find new outlets. I call it a deindustrialization trap. First of all, as deindustrialization weakens the relationship between growth and employment, the relationship between market value and employment size of the firm, etc., the belief that growth benefits the majority has been broken. Second, as deindustrialization strengthens financialization and thereby capital dictatorship, the marketization of society has deepened, the job security and the social security system has weakened since 1980s. Third, Since the 1990s, the employment system has deteriorated further as in 'growth without employment' or 'youth unemployment', worsening inequality, resulting in the introduction of "neoliberal populism" of providing housing financing to low-income families and the outbreak of the financial crisis. Fourth, since the financial crisis, the ideology has been dislocated amid ultra-expansive monetary policy and 'low-rate traps'. In other words, the neoliberal political successors such as Trump and May are denying the "free market - free movement of people.".

The deindustrialization trap: the structuralization of inequality and imbalance

The IT revolution that developed after deindustrialization resulted in a drop in job growth and job polarization, which resulted in a decrease in the proportion of labor income internally. As a result of weakening domestic demand, a "debt-led growth" strategy was adopted in America, U.K., Spain, etc., while an "export-driven growth" strategy in Germany, China, Japan, etc. The combination of the two resulted in a global imbalance and led to the collapse of the international financial system and the international trade order. Further, the argument that "the servitization of the economy" is an alternative to deindustrialization will become a fantasy due to the job shock in the service sector resulting from AI-type automation, and concerns over the "job catastrophe" and "ultra-polarization" are mounting. In particular, because the Korean economy, which have the highest robot density and the fastest automation speed, are in an unsustainable situation, the reorganization of the industrial ecosystem will determine the fate of the Korean economy.

Addition of the Low-Rate Trap to the Deindustrialization Trap

The crisis caused by the deindustrialization trap was responded to by ultra-expansive monetary policy rather than the reconstruction of the new industrial-economic ecosystem. The result is the awkward coexistence of low unemployment and low inflation, and the latter is the result of low wage growth due to low labor productivity growth. Slow productivity stems from the increase of zombie enterprises and slowing innovation related to continued low interest rates, while, in addition to the deepening market concentration, slow innovation stems from the inability to adapt to changes in value-generating methods based on sharing and collaboration. On the other hand, low interest rates are preparing for a new crisis. As shown by a surge in low-rated corporate debt and in structured financial instruments made from low-rated corporate bonds, the way it created the crisis is repeated. As such, a vicious circle of demand-side and supply-side lethargy, the so-called "Japanification" of advanced economies, is under way. Low interest rates → increase of zombie enterprises → slowing productivity → (with globalization, weakening bargaining power of labor union, automation, etc.) slowing wage growth → (with deepening inequality of income and wealth) slowing demand and growth → vicious cycle of low interest rates. On the other hand, prolonged period of low growth \rightarrow delay in consumption and investment decision \rightarrow vicious cycle of low growth and low inflation. Hence ultra-monetary expansion does not help improve inequality or innovate, but also creates a new crisis (a bubble).

The rise of the data revolution and network economy and the crisis of capitalism

The IT Industrial Revolution brought about a network economy in which value-creating way shifts to co-creation through profit sharing. That is, profit sharing generates big data and develops AI technology as shown in the evolution of Google's business model. It is the so-called platform business model or sharing economy model. The problems are worsening job security and job catastrophe and the possibility of hyper-polarization due to the spread of platform business models and AI automation, leading capitalism to face a serious crisis in sustainability. For example, as the relationship between growth and employment, corporate value and employment scale, education level and productivity is weakened, the creation of jobs and values requires new human type, social norms, political and economic order, and distribution systems.

II. Global Imbalance: the nation economy trap

Global imbalances stem from the asymmetry of the pluralization of economic power and the dollar-based international monetary system based on absolute American economic power. In particular, under the post-Breton Woods system, which includes floating exchange rate system and the liberalization of capital movements in addition to the dollar-based system, emerging countries facing the currency crisis risk as the volatility of exchange rates increases have sought a current account surplus from the perspective of self-insurance and it weakened U.S. currency sovereignty because of the structuralization of current account deficits. In other words, the conflict between U.S. currency sovereignty that undermines the autonomy of monetary policy and emerging countries' currency sovereignty that seek exchange rate stability is at the core of the global imbalance problem.

Is there a solution to the global imbalance?

In order to resolve the global imbalance issue, the U.S. demands that major trading partners reduce their current account and trade surplus, while emerging economies demand a "currency swap" to U.S. But the U.S. refuses to make these demands against the interest of the Wall Street. In response, emerging countries say that external quantitative easing is inevitable to maintain industrial competitiveness, growth and current account surpluses. The creation of a new international monetary system that responds to the pluralization of economic power is necessary, but is it possible to create a new system? The problem is that the supranational cooperation is very poor. As a result, the U.S., deeply wounded by the financial crisis, is becoming as a major risk for the global economy, denying the global economic order it led.

III. Eurozone Crisis: the nation state trap

European economic integration is nothing but limited partial integration, such as the weak coercion of monetary union and the fiscal and banking systems left in the realm of individual countries. First, in addition to the eurozone's institutional flaws, differences in industrial structure and competitiveness among member states have structured 'unbalance within the euro zone,' the cause of the eurozone crisis, while 'unbalance within the euro zone' exposes the problem of incomplete European integration as it meets the sudden movement of capital. Second, as the benefits of the monetary union disappeared and the 'costs' of the economic downturn after the financial crisis and the eurozone crisis has been distributed unequally among members of society, the monetary union served as a cause of social conflicts, resulting in a split in Europe (as shown by the possibility of no-deal Brexit). Thus, European integration calls for supra-national cooperation, requiring resolution of the 'collective action dilemma' problem at the supra-state level. The continuation of the eurozone crisis also faces a collective action dilemma, a situation in which the framework of nation state and nation economy continues, while supra-national cooperation has become an absolute condition due to economic integration. Regarding the eurozone crisis, for instance, Europe's central economies are stressing the responsibilities of peripheral states, demanding 'strengthening self-regulation' of member states rather than 'solidarity' and causing the emergence of far-right forces which reject European unity. In other words, it shows that European integration is an impossible project as long as it does not escape the nation statenation economy framework.

IV. The alternative economy and the transition of civilization: For a transition from post-growth economy to ecological economy

As we have seen so far, it is impossible to solve the problem of climate change in a modern paradigm. This is because the task of 'internalizing externality' in the supra-state dimension, namely, solving the asymmetry of nation state-nation economy and globalization, is insoluble. First, while the 'internalization of costs' that an individual causes to a community is possible within the framework of a nation state, the cost of climate change occurs beyond the framework of a nation state-nation economy, thus requiring wisdom to solve the problem of 'the dilemma of collective action' at a supra-national level. Second, Similarly, it is impossible to solve the problem of 'the dilemma of collective action' arising from supranational level with modern-type humans based on the norm of 'individual freedom' which means doing as one pleases within the laws created by society without being controlled or bound by others.

From homo economicus to homo socius or homo empathicus

What kind of human form should I be to escape the modern paradigm trap? Homo economicus of industrial society, which seeks individual rational choice based on competition, is inappropriate in the network economy where reciprocal choice based on cooperation and sharing creates optimization because everything is connected. In other words, the fact that reciprocal choices based on cooperation and sharing become commonplace requires homo socius or homo empathicus in whom one can pursue one's own interests only when one cares and guarantees others' interests. This is in contrast to the fragmented lives of individuals who only need to do well in the industrial world.

Network economy and Homo socius

The 'all-connected' network economy and the postgrowth society where 'all life is connected' are products of the same perception. It is the reason why the climate crisis is perceived as a multidimensional crisis and a complex social crisis. What are the implications of 'cooperative innovation' or 'co-creation' or benefit-sharing business models in new ways of innovation and value creation? The IT revolution has made it possible for everything to be technically connected, but not automatically. Technically being able to connect makes it possible to create a business model that creates value through connections with others, while sharing benefits to connect people. Through connectivity and cooperation, other people's resources, such as ideas, were used to create value, and new resources such as data were also available. This is the so-called platform business model and it could create big data which helped to develop AI technology and thereby strengthened business competitiveness. This is the reason behind the emphasis on the ability of new talent to identify problems and solve problems through the combination of accessible technologies (cooperation with others), so-called 'social skills' or '4C capabilities' (creative, critical thought, communication, and cooperation).

Components of Homo Socius: Associability and Empathy

First, empathy is an absolutely necessary capability for cooperation which has an etymological meaning of 'feeling together'. The reason is that it has emerged as the talk of the times. It has an implication which self and others are not two, but one. Thus today requires Homo Empathicus or Homo Socius with the associability. Second, 'self-regulation' capabilities are required for sharing and cooperation to work among dispersed individuals. Because cooperation must be reciprocal, it requires self-control rather than freedom. In other words, since self-control is a rule of individual

will that is consistent with universal law, it is possible to pursue co-evolution with the society in which an individual lives and the natural ecosystem in which he or she belongs.

The 4th Industrial Revolution and Importance of Self-control

Self-control can solve concerns about the infringement of personal information and privacy, the problem of sharing economy being exploited for crime, the ethical responsibility of software developers raised by the advent of the artificial intelligence era, and the problem of free ride or the dilemma of collective action that can arise when running society and economy on the principle of cooperation. At the same time, the new social norm of self-control is absolute in order to ensure the confidence needed to sustain the network. Above all, changes in human form and social innovation are essential to prevent the emergence of anti-social and anti-humanoid artificial intelligence robots.

The Transformation into a Reciprocal Economy and the Reciprocal Distribution System

The idea that self-control is a principle of behavior for members of society means that not only does every individual lead their own lives, but also the economy and politics that affect the lives of the group are organized on the same principle. In the economic sphere, sharing and cooperation have established itself as a property of the new value-creating paradigm, while the transition from 'shared collaborative capitalism' to 'reciprocal economy' calls for the evolution of the human form, the enhancement of autonomy capabilities and the change of the distribution system. In particular, unlike the method of capital-intensive value creation in an industrial society in which labor time and value creation are proportional, the idea-intensive value creation of the network economy significantly weakens the correlation between labor time and value creation, thus introducing a new distribution system such as basic income, basic dividends and basic assets is inevitable.

Data Economy and the Philosophy of Reciprocal Distribution System

Today, big data is created by the participation of many people, and the machine learning algorithms that dominate the AI field are the aggregation of human intelligence, which makes big data another aspect of human labor. This is why social control of data is necessary, and furthermore, it is necessary to address the right to access data at the civil rights level. In addition, it is a good idea to imbue data with value, which is not produced in proportion to labor hour, unlike the labor of the manufacturing era, and in some extreme cases, it is possible that a single idea while living a life will contribute greatly to the world. It is necessary to value meaningful

contributions in relationships with others. For example, we need to give value to what we humanize, such as restaurants that use direct farm delivery materials, home-based medical services, and live performances. In order to support the reciprocal distribution system, we need to democratize finance and diversify our monetary system.

Evolution from Liberal Democracy to Autonomous Democracy

In the political arena, in order for sharing and cooperation to be institutionalized, it is necessary to strengthen self-government (which includes voluntary organization and self-governing process, such as strengthening of socioeconomic grassroots democracy), and democracy must be upgraded to autonomous democracy based on autonomy and cooperation. If it is possible for each individual to plan his or her own life and actually organize it accordingly in network society and economy, it requires autonomous democracy that can ensure the individual's spontaneity, overcome individualism, and reconcile the community benefits with the individual benefits. In particular, to solve the dilemma of collective action at the supranational level, autonomous democracy is needed beyond the modern plan, namely liberal democracy (the 1st Democracy) and people's democracy (the 2nd Democracy), which is the principle of social operation based on nation state and nation economy. Also, autonomous democracy can be a solution to overcome the division of Korea in that it is the third democracy that upgraded the first and second democracy.