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Business at OECD (BIAC) Comments on “Reviving Productivity Growth: A review of policies” (December 2023)



Comments I: “Reviving Productivity Growth: A review of policies”

- The paper is a useful synthesis of nine years of hard, and partially path-breaking, research at the OECD and elsewhere on the sources of productivity declines across the membership. This topic is much more than a nuisance as the complex endeavor of increasing living standards in an environment of ageing populations, very uneven technical progress, shocks to globalization, economic security considerations at least temporarily dampening growth, decarbonization (with small growth-reducing impacts, see OECD paper on long-term modelling) and increasingly complex regulation (rather than a liberalization of trade and commerce) will not work without a concomitant and broad-based reversal of trend productivity almost everywhere. As the current trend is in the opposite direction, there is a challenge. Even though our understanding of productivity has increased substantially over the decade since the 2015 start of the agenda, actual policies supporting productivity are less often tried hard and/or have become less effective over time. This is hardly an acceptable state of affairs.
- More important than the impressive review of the evidence is the broad nature of the policy conclusions. To summarize without too much brutality to the evidence: multi-pronged, well designed and targeted policies with a particular view to raising aggregate productivity trends remain rare, selective policy attempts exhibit a broad range of design and implementation problems, in particular if tried ex post rather than ex ante, and the effectiveness of policies in several large policy areas, such as competition policy or product market reforms, seems to have declined, at least as measured in outcomes, or policies have not been pursued with similar vigor as in other periods in the 20th century. Most innovation policies targeting the frontier have held up, but diffusion-oriented policies are rare and are not well understood.
- There are a few bright spots in the paper, on the potential impact of technology, on seemingly workable policies and some hints to areas of potential relevance going forward. They warrant some additional consideration and, potentially, ongoing research.
- First, it would be useful, based on the evidence, to get a qualitative judgment on the respective contributions of the policy areas mentioned to the productivity puzzle. While there will be particularly useful combinations at the national level, some broad-based guidance would be warranted.
- Second, amongst the instruments that are understood rather well the promotion of R&D for innovation at the frontier is one that works comparatively well (para 47). The paper rightly describes that many jurisdictions moved to tax-based systems rather to spending programmes. If well-designed, these measures can be particularly effective. Again, it would be useful to synthesize the evidence on how to best design policies in that field, which is available in other strands of OECD work.

- Third, the issue of targeting basic or applied research needs to be considered carefully. While there is consensus with para 107 on the benefit of collaboration in research networks including state institutions and universities (private or public), we tend to have mixed thoughts about the para 106 on basic research. There are many reasons why a host of public research institutes in OECD countries is engaged in this endeavor whilst the role of private-sector research in this field is declining. Perhaps, one has to differentiate between those areas in which the boundary is hard to draw, in particular in digital technologies, and the private sector is investing heavily in AI or quantum and other areas in which commercialization opportunities may be too far away to get much R&D traction in the corporate sector. This is not per se a problem, as technology diffusion and applied research need to make a large contribution to aggregate productivity anyhow.
- Forth, concerning the design of public research support, the desired increase in private-sector productivity may benefit more from instruments fostering the rapid application of existing (digital or clean) technologies, the market entry and the commercialization of path-breaking new applications than from spending on basic research topics. In some areas, also, only a blended finance approach towards research will likely yield results, such as in medical and pharmaceutical areas, in which the more desirable R&D programmes on rare health issues probably cannot be fixed by private sector research. Moreover, in some fields in the life sciences, only highly coordinated, resource-rich programmes may provide some perspective at all, as decades of private-sector research made limited traction, such as on age-related mental diseases.
- Fifth, also, the design of programmes should also take into account issues of technology and innovation diffusion. If we read the evidence correctly, the analysis also shows that the gap between frontier firms and others are wide and growing. Now, policies targeted at innovation support for laggards may need to use different instruments that are simple, transparent and strong on incentives and low on bureaucracy. There are both good examples amongst the OECD for useful programmes and examples of programmes that are too difficult to tap for firms that do not have first-rate teams able to manage complex processes of applying for research grants. It might be interesting to look at the evolution of R&D programmes of sufficient size and to identify whether and how programme design and take up tilted the balance in favour of large, frontier-type, R&D heavy companies as compared to SMEs and large-caps which have tended to reduce overall effort, at least in comparison. It also appears that more recent trends in R&D programme design, such as mission orientation in the Mazzucato vein, might even aggravate this.
- Seventh, when thinking of broader policies supporting productivity through digitalization per se, the paper already addresses a number of them but not all. It is well taken that infrastructure availability and cost for broadband for firms does matter. Of course, managerial skill in promoting the adoption of existing technologies will be important concerning diffusion and aggregate results. The

paper may well consider whether typical size and corporate governance structures prevalent in OECD countries have an impact on the adoption of new technologies, with the underlying presumption that large, stock-listed, management-run firms might be faster in implementing cross-purpose digital technologies than SMEs, owner-run mid-caps. In addition, it may well make sense to look at the firm-specific situation of engaging in specialized rather than broad-based digitisation efforts involving available cross-purpose software tools. Heavily engaging in digitalizing production processes, business models and organizational set-ups will usually result in substantial increases in firm-level productivity, but only in a medium-term time frame of 5-10 years, as initial investment in parallel software, programming, data collection and analysis, the construction of digital twins, the hiring and training of staff and changes to business models and organizational set-ups will only increase cost initially, will then improve competitiveness and ultimately increase productivity in a typical sequence (IW Köln 2019). It might be interesting to think through the question on whether policy framework actually smoothens the cost profile and shortens the initial and middle phases, or not.

- Eighth, it seems to be the case that the potential of AI, quantum, cloud and edge computing and other technologies in the digital field that exhibit a higher level of maturity than five or ten years ago is possibly large for productivity, in particular if these new opportunities are widely used, will not be restricted to the frontier firms (which would sharply increase the gap) and are used to actually reduce costs and create value in the medium term. However, once again, a time lag between initial adoption and commercial success and sector-level productivity of several years might be plausible.
- Ninth, the paper rightly raises the point (para 11) that the resurgence in industrial policies across the OECD world has a variety of motivations, ranging from security of supply to de-risking, national security or, less notably, shifting man-made comparative advantage into once own jurisdiction (in a zero sum fashion). All these phenomena are by now means new but seem to become more prevalent across the OECD, with the US and Europe now joining the prevalent practices in East Asia more consistently. While this is a complex topic that cannot be dealt with in this framework, there might be a subset of policies that will have an impact on productivity in certain branches and sectors targeted, usually by the relocation of production from abroad or the set-up of new industrial or services activities. Many of these targeted areas are highly capital-intensive, normally very productive and often associated with complex value-chains, say in microelectronics, clean technologies, pharmaceuticals, medical instrument, defence or other areas if fully developed. However, certain market practices and distortions to international competition through large-scale systemic or specific subsidies on energy, capital and labour input, technology and production (i.e. the policy of the People's Republic of China) may implicitly create productivity issues when being countered. If the re-introduction of production and technology into the OECD countries is politically demanded or favored, this may go along with complex productivity effects as substitution may at least initially be less

productive until full scale-economies can be reaped again. Even though the major intent of the policy may not be productivity per se, a major corollary could be a strong impact on it.

- Tenth, In the green transition and in the wake of decarbonization, there may also be intra-firm or intra-sector effects of a changing production structure of manufacturing or energy that might have rather large aggregate productivity effects, say moving from coal to renewables in energy production or from one steel production route to the other. However, there may also be countervailing forces at play. If policy stringency on carbon mitigation in the housing sector were to finally increase substantially, a substantial shift in capital and employment would have to move to energy-efficiency in buildings. If the Spanish and Irish cases are an indicator, this could actually dampen productivity on a country-level basis.
- Eleven, in both fields of industrial policy more broadly and in the decarbonization, skill levels and human capital may change, perhaps systematically into higher levels of productivity. This observation may not be consistent with the paper on greening the labour market (same session) but may reflect other changes than occupational patterns, i.e. the greening of production and jobs that do exhibit almost the same occupation definition.
- Twelfth, moreover, it seems to be a good idea to look in a follow-up more closely at the relationship of intangibles and productivity more broadly. While the trend toward and increasing share of private-sector investment into intangibles seems to up-hold, the paper states that the impact may have declined. That is a bit counter-intuitive and would require a better understanding.
- Thirteen, the paper also rightly refers to policies on procurement and standards. The treatment is a bit short, however, as public procurement and standard-setting in several areas may well be used to raise standards and quality aspects and indirectly driving productivity if they are used to push productivity. It is not immediately evident that current procurement policies reflect such a consideration fully as these systems usually are designed to limit cost to the public sector (in a static sense) rather than to move markets and generate benefits (in a dynamic sense of innovation).

Comments II: “Reviving Productivity Growth: A review of policies”

In the report, a broad overview of the main structural drivers of productivity growth in recent decades is presented, combining insights from firm-level and macroeconomic studies. We expect that further analysis will reveal more about how we should respond at the micro and macro levels.

Below, we discuss the background of productivity growth in Japan and the policy responses in recent years, as well as our own efforts at the corporate level as an example.

I. Productivity Trends and Background in Japan

After rising in the 1950s and 1960s, Japan's productivity growth rate declined sharply in the 1990s and has remained stagnant ever since.

Breaking down the growth rate of productivity into the capital equipment ratio and the TFP, we find that both were high until the 1980s. The contribution of the capital equipment ratio factor was particularly significant, with a steady increase in the capital stock pushing up the capital equipment ratio.

Until the 1980s, the shift of resources from agriculture, forestry, and fisheries to manufacturing maintained a high rate of productivity growth. From the 1990s onward, however, productivity stagnated due to a shift of resources to the service sector, which has relatively low productivity.

In addition, with the collapse of the bubble economy at the end of the 1980s, the three excesses (employment, facilities, and debt) were corrected, and not only did aggregate demand decline, but also the pace of capital savings slowed and the allocation of resources became inefficient.

After the COVID-19, initiatives to improve productivity, such as the expansion of remote work, increased online consumption, and the use of IT capital were seen. However, in many cases, this has merely increased efficiency and has not led to an increase in value added, and overall productivity gains have been limited in comparison to other countries.

II. Recent Japanese Government Initiatives

The Abe administration advocated a productivity revolution through “Investments for the Future” as an implementation of the growth strategy. That was intended to increase productivity mainly through expansion of the capital equipment ratio and enhancing corporate earning power by accelerating private-sector investment on the back of the promotion of the “Corporate Governance Code” and the “Steward Ship Code”.

In addition, it also aimed to increase productivity from the labor market side by promoting a human resource development revolution (e.g., free early childhood education and higher education, expansion of professional skill education subsidies, raising the age of continuous employment to 65 and over, etc.), with the goal of encouraging women and the elderly to work and making non-regular workers into regular workers.

After that, the Suga administration committed to achieving carbon neutral by 2050 and formulated the Green Growth Strategy. It also created the Green Innovation Fund. This was the starting point for the GX Investment Strategy, which is linked to the current policies. It also established the Digital Agency to promote DX.

The current Kishida administration's main policy is a new capitalism that aims for a virtuous cycle of income distribution and growth.

With regard to income distribution, the policy is to promote structural reforms to raise labor productivity. A mechanism to raise wages is promoted, with a three-pillar labor market reform that consists of (1) improving workers' skills through reskilling, (2) introducing job-based pay based on individual company conditions, and (3) facilitating labor mobility to growth fields (job mobility).

In addition, focusing on the approach to view human resources as "capital" and emphasizing HR management that maximizes the value of HR, there has been a move to require disclosure of information on HR capital (e.g., development policy) and diversity (e.g., gender wage gap, ratio of female managers) as sustainability-related indicators in securities reports since March 2023 by Cabinet Office Ordinance. As for growth, the principle is to encourage large-scale investments (capital stock expansion) in semiconductors and de-carbonization to strengthen supply capacity. Furthermore, the government aims to increase productivity through technological advances such as AI, self-driving, and space technology development.

Through these measures, the government intends to transform Japanese economy from a "cost-cutting economy with low prices, low wages, and low growth" to a "growth-oriented economy driven by sustained wage increases that exceeds inflation and active investment”.

III. The SOMPO Group's Productivity Improvement Efforts

Insurance, the Group's main product, basically depends on paper and seal (signature). At the time of contract or renewal, it was necessary to fill out all information needed and seal (sign) the documents, transport and store them, and input the information into the system.

In addition, when paying insurance claims, it was necessary to check the damage on-site and assess it. With technological innovations, the first step in the shift from these processes was to go paperless, through on-line filling out and signing of documents.

The paperless contract also eliminated the work of entering the information on them into the system and the need to store a huge volume of paper contracts. In addition, the workflow of damage assessment by AI based on photos taken by the claimer, has gradually been introduced for small claims, and is expected to gradually expand to other areas in the future.

This not only improves productivity at our offices, but also expedites convenience for subscribers and reduces the amount of time spent on inputs for society as a whole. Currently, in order to apply AI more to our work, we have conducted DX reskilling trainings for all staff, including DX basics, AI, design thinking, and data utilization etc. Almost all staff will have taken the courses required by the end of FY2023.

An elderly care business, which is very labor-intensive, is another area of business the Group has. Documents submitted to government offices, as well as records of care-receiver's health conditions are also handwritten, and assistance for meals and bathing are manually done.

Due to manpower nature of the elderly care, the government has imposed a regulation that at least one caregiver should be assigned for every three care-receivers. In view of the future increase in the population requiring long-term care, we need an elderly care business model in which a caregiver can take care of, for example, four care-receivers by more efficient care.

As one of the largest players in the small sized operator-dominated elderly care industry in Japan, the Group has been taking advantage of its capital and technological capabilities to improve the quality of care while saving labor by introducing ICT and new equipment like automated nursing shower/bathing equipment.

Finally, the company is building a data-driven elderly care platform that can detect signs of changes in residents' physical condition by accumulating data through ICT. Ultimately, the Group aims to improve the productivity of not only the Group but also the industry as a whole, and to provide a solution to the gap between the number of those who need care and the number of care providers, which is a major social challenge that Japan faces.



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