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INCLUSIVE GLOBALIZATION IN A DIGITAL AGE: ANALYSIS

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Abstract

The digital economy is creating a new divide between capital and labor. The labor share in income is declining in G20 countries. This Policy Brief offers two explanations for the global fall in the labor share. First, digital technology is a capital-biased technology. Firms have substituted workers by machines which accounts for 50 percent of the decline. Second, digital technology leads to 'winner takes most' markets with a rise of 'superstar firms'. A one percentage point rise in industry concentration lowers the labor share by 0.4 percentage points. Superstar firms are operating globally affecting market concentration in many countries. Therefore, the G20 should implement a Global Competition Authority to address superstar firms.

Challenge

We are facing a new digital divide between capital and labor. Income is not only increasing between different groups of workers (the top 1 % and the rest) but also between capital and labor. Income is shifting to capital. In the post-war period there used to be an economic rule: 70 percent of GDP went to labor income and 30 percent to capital income. John Maynard Keynes described this rule as an 'economic miracle' and the economist Nicolas Kaldor called it the 'golden rule of growth'. This rule has broken down. Since the mid-1980s the labor share has declined to today 58 percent and the capital share has risen to 42 percent. The decline in the labor share is a global phenomenon. It is observed in all OECD countries as well as in China (see Karabarbounis and Neiman 2013). What drives the global decline in the labor share?

Proposal

The global decline in the labor share suggests that the phenomenon is generated by a force that is affecting all G20 countries. I would like to suggest two economic forces which drive the global decline in the labor share based on recent academic research. Both explanations see the digital economy as the source of this decline.

Economic Force 1: The digital technology is a capital-biased technology (rather than a skill-biased technology) in which intelligent robots replace smart people rather than increase the demand for skills. As a result the skill premium (the premium for an academic degree) is declining in Europe in the last 15 years and has stopped advancing in the US since the turn of the century (see Marin 2014). The skill premium responds to the supply and demand for workers with academic degrees. The demand for academic workers depends on the speed of technical change. The supply of academic workers is determined by the expansion of higher education. If robots are a capital-biased technology, a more rapid diffusion of this technology will lower the demand for skills (as educated workers are substituted by machines) reducing the skill premium. The rapid expansion of higher education in most of Europe has led to an increase in the supply of skills. Both, the lower demand for skills due to the digital technology and the larger supply of skills due to the expansion of higher education have led to a decline in the skill premium in Europe. Karabarbounis and Neiman (2013) show that digitalization is indeed a capital-biased technology. They find that 50 percent of the fall in the labor share can be explained by lower costs of information technology increasing the relative profitability of machines relative to workers. The substitution of workers by robots is also supported by the expansionary monetary policy of the Federal Reserve and the European Central Bank which have been contributing to reducing the capital costs relative to workers due to low interest rates.

Economic Force 2: The digital economy leads to a 'winner takes most' market with the rise of 'superstar firms'. Industries are increasingly characterized by a 'winner takes most' feature where one firm (or a small number of firms) can gain a very large share of the market. These large firms have excessive market power which allows them to raise prices without losing many customers. The sources of this market power are the new features of the digital economy. Digital technology favors products with network effects in which a product becomes more attractive the more people use it as behemoths like Facebook, Google and Amazon demonstrate. Moreover, software platforms and online services may be expensive to install, but not costly to expand which lowers the number of workers these firms employ. All these factors explain why the digital technology favors large firms with a smaller labor share in production. Moreover, higher market concentration can also arise because of anti-competitive forces in which these giant firms are able to prevent actual and potential rivals from entering and expanding, an explanation that is consistent with the observed declining firm entry and exit rates.

Autor et al. (2017) examine six industries that account for 80% of private employment in the United States. In each industry they discover a remarkable upward trend in concentration. In manufacturing, for example, the top four companies controlled 43% of sales in 2012, up from 38% in 1982. In finance, the figure grew to 35%, from 24%, and in retail trade it went to 30%, from 15%. Autor et al. (2017) show that the faster market concentration grew, the bigger the drop in labor's share. They estimate for the period 2007-2012 that each percentage point rise in an industry's concentration ratio index lowers the labor share by 0.4 percentage points.

Surprisingly, when they calculate the concentration ratio taking into account that domestic firms face import competition, their measure of concentration rises rather than falls, as one would expect. The

reason is that imports are supplied by a few superstar foreign firms with market power which contributes to more concentration rather than less.

Policy Recommendation:

The increased concentration of markets in which firms have excessive market power is a major reason of concern, because it drives inequality between capital – firms that own the robots – and labor – workers which are potentially replaced by robots. Therefore, competition policy becomes of first order importance. Competition policy has to become global and it has to address these superstar firms. Superstar firms are often multinational firms operating globally and affecting concentration in markets of many countries. Previous G20 meetings addressed the issue that multinational firms avoid paying taxes. Here, I argue that the digital technology is creating market outcomes that favor multinational firms at the expense of workers.

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