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If it can be done from home, could it be done from abroad? The risks and opportunities of virtual offshoring

Executive Summary

The pandemic will soon be over, but the cultural changes it has brought will continue to shape the economy for years to come. Among these, the normalization of remote work is one of the most consequential. The massive telecommuting experiment forced by the great lockdown shattered many myths about what a remote workforce can achieve. With permanent telecommuting no longer a taboo, employers will be increasingly tempted to hire teleworking talent in developing countries. Many emerging economies are quickly catching up on education and technological development; yet labour costs remain lower by an order of magnitude. More and more office work will be performed in the developing world and then immaterially exported to wealthier countries at a fraction of its domestic cost. This trend towards “virtual offshoring” is driven by strong financial incentives. For instance, firms in a country like France would reduce labour costs by an estimated 7% if 1 out of 4 teleworkable jobs were virtually offshored. Coface estimates the total number of teleworkable jobs in high-income economies at around 160 million. In turn, the number of potential teleworkers in low and middle-income economies is close to 330 million.

For wealthy countries, large-scale virtual offshoring could become a source of political risk. The pressures of global competition can provoke economic anxiety among white-collar service workers, fuelling political polarization. For emerging economies, virtual offshoring can become a pillar of their development model. To single out countries with the potential to become virtual offshoring hubs, we used an indicator based on criteria such as human capital, competitive labour costs, technological infrastructure and business climate. Economies with low labour costs and large stocks of potential teleworkers (such as India, Indonesia or Brazil) seem well prepared to follow this path. This is also true of countries with relatively strong human and technological capital, such as Poland. While China and Russia would, on paper, be ideal virtual offshoring destinations, rising geopolitical and cybersecurity tensions with the West will be a significant obstacle.

During the last few decades of globalization, the offshoring of industrial activity and rise of global supply chains was one of the main drivers of productivity growth¹. In recent years, however, productivity gains from the reallocation of industrial activity seem to be stifling.

1 - See Den Butter & Pattipeilohy: “Productivity gains from offshoring” (Tinbergen Institute Discussion Paper, 2007) or Tillmann: “Offshoring, domestic outsourcing, and productivity: Evidence for a number of European countries” (Kiel Working Paper, 2012)

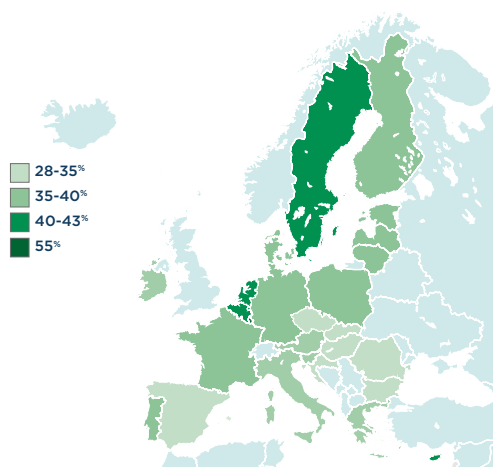
With corporate debt skyrocketing in 2020, firms will be more hard-pressed than ever to become cost-competitive. One option will be to intensify the offshoring of services and knowledge-intensive activities to countries with lower labour costs. This trend is not new: countries like India or the Philippines are already established offshoring hubs for ICT and business services. What has changed, however, is the ubiquity of remote work. Indeed, up to 40% of the EU workforce engaged in some form of regular telework during the first lockdown² in Q2 2020. With managers favourably surprised by the productivity of their remote staff³, attitudes quickly started shifting. While “if it can be done from home, it can be done from abroad” is surely an overstatement, firms are increasingly lured by the idea of a partially globalized virtual workforce. In a sample of 330 large U.S. firms, the share of organizations willing to hire foreign-based remote workers on a full-time basis soared to 36%, vs. 12% pre-pandemic⁴. Therefore, it is likely that firms will increasingly recruit qualified white-collar labour in the Global South⁵ thanks to digital innovation, an argument most notably made by economist Richard Baldwin⁶. The phenomenon of virtual offshoring (or “tele-migration”, as Baldwin calls it) does not need to become the norm to be of macroeconomic significance, as it only has to involve a large enough share of the work currently done in high-income economies.

How many jobs are teleworkable? How many can be offshored?

The pandemic revealed that the potential of remote work had been vastly underestimated. In a survey conducted on U.S. workers in October 2020, 62% of college-educated respondents said their work could be done remotely⁷. Of these, only one in five declared working from home on a regular basis before the outbreak. The more an economy is based on knowledge-intensive service activities, the more its labour force can work remotely. As such, the International Labour Organization (ILO) estimates that only around 13% of jobs in the Global South are teleworkable vs. 27% in high-income countries⁸. The European Commission’s estimates are even higher, averaging 37% for EU countries (Chart 1). On average, sectors with high potential teleworkability tend to be the ones with the highest labour costs per worker (Chart 2). However, this does not mean that all these jobs can be virtually offshored, with many tasks requiring some on-site presence, in-person contact with customers, or a skill and knowledge base specific to domestic workers. Successful advertising and PR campaigns, for instance, need a fairly sophisticated understanding of local culture. There is then the work that can be virtually offshored,

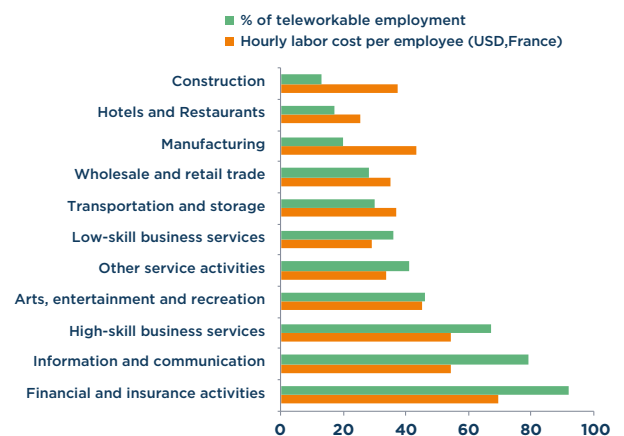
but only at the expense of a quality decline that many firms will deem unacceptable. Education provides a telling example: while technically feasible, the lack of face-to-face interaction makes teaching significantly less effective. Still, it seems safe to assume that some non-trivial share of teleworkable jobs can also be offshored. One could think that the limited availability of qualified labour would be another obstacle: will the Global South be capable of supplying enough tele-migrants to match the demand for virtual offshoring? Based on ILO estimates, the total number of teleworkable jobs in high-income economies should be around 160 million¹⁰. Even after accounting for relative disadvantages in technology and average qualification, we estimate that the current number of potential teleworkers in low and middle-income economies is close to 330 million. Indeed, while the per capita number of teleworkers is much lower, the sheer size of the labour force more than makes up for this deficit. In India, potential teleworkers account for only 12% of the labour force, but in absolute numbers, this is enough to surpass all of Western Europe combined. Building a comparative advantage in tradable services will be an alluring development strategy, so we can expect that the stock of potential tele-migrants will continue to grow.

CHART 1
Estimated teleworkable employment in the EU
(% of total domestic employment*)



Sources: European Commission and Eurofound⁹, Coface
*i.e. excluding the self-employed

CHART 2
Estimated teleworkable employment and average hourly labour costs by sector in France



Sources: European Commission and Eurofound, International Labour Organization, Coface

2 - Eurofound: “Living, working and COVID-19” (COVID-19 series, 2020)

3 - PwC’s US Remote Work Survey (December 2020 edition) reports that 52% of managers find that productivity has improved over the prolonged work-from-home period.

4 - The Conference Board: “Adapting to the Reimagined Workplace: Human Capital Responses to the COVID-19 Pandemic” (2020)

5 - We will use “Global South” as shorthand for both lower-income countries and middle-income emerging countries.

6 - Baldwin: “The Globotics Upheaval: Globalisation, Robotics, and the Future of Work” (Oxford University Press, 2020)

7 - Pew Research Center: “How the Coronavirus Outbreak Has –and Hasn’t –Changed the Way Americans Work” (2020)

8 - International Labor Organization: “Working from Home: Estimating the worldwide potential” (ILO Policy Brief, 2020)

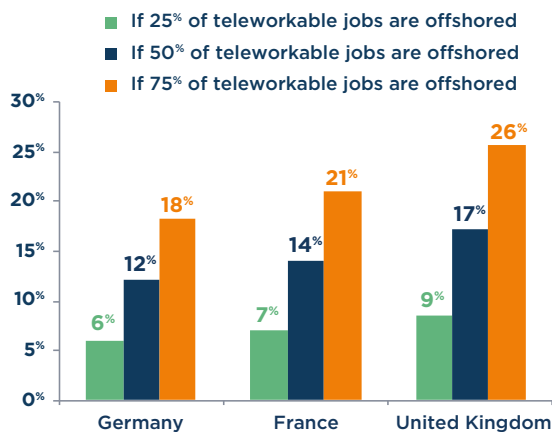
9 - Sostero, Milasi, Hurley, Fernandez-Macias and Bisello: “Teleworkability and the COVID-19 crisis: a new digital divide?” (JRC working paper series on Labor, Education and Technology, 2020)

10 - In the ILO paper cited above, teleworkability coefficients are calculated for 10 classes of occupations across 3 country groups (high-income, middle-income and low-income, as defined by the World Bank nomenclature), based on a survey of local labor market experts. We multiply these coefficients by the number of jobs in the corresponding occupation class and aggregate them to get the total number of teleworkable jobs in each country.

Virtual offshoring can be a productivity bonanza, but could also bring political disruption

How important can the economic impact of virtual offshoring become? To get an idea, we can run a simple thought experiment: how much would firms in the UK, Germany and France be saving if virtual offshoring became widely used? There are currently around 30 million estimated teleworkable jobs in these three countries combined. A handful of emerging countries in the European periphery (Russia, Poland, Romania, Ukraine, Turkey, Morocco, Algeria and Tunisia) have enough potential teleworkers in their combined workforce to absorb these 30 million jobs. Taking into account wages, vocational training, payments in kind, labour taxes, social security and other welfare expenses, labour cost differentials between these two groups are sizeable, averaging 37.4 USD per hour in the developed group, vs only 7.3 USD in the emerging group¹¹. If, for instance, 1 out of 4 teleworkable jobs were virtually offshored and paid at the current emerging country wages, this would allow for an estimated 6-9% reduction in aggregate labour costs in the developed group (Chart 3).

CHART 3
Potential cost savings of virtual offshoring, in % of total national labour costs



Divergences within the developed group reflect slightly different employment structure and labour costs. For example, the financial sector is disproportionately large in the UK, leading to both higher teleworkability and higher earning differentials for teleworkable jobs.

Source: Coface calculations based on International Labour Organization (ILO) data

In practice, however, the reorganising of value chains around virtual offshoring will not take place overnight. Labour laws constrain firms in their ability to adjust existing employment. The transition will probably occur at the margins, with little outright job destruction, but with more and more new teleworkable jobs created abroad rather than domestically¹². Furthermore, the window of opportunity for the largest productivity gains will narrow, as wages for teleworkable jobs in the Global South gradually catch up.

However, virtual offshoring on this kind of scale could come with destabilizing societal effects, with possible implications for political risk. There is a well-documented link between de-industrialization and the rise of anti-establishment politicians observed in western democracies over the last decade¹³. In the latter case, physical offshoring in manufacturing led to income

stagnation among less qualified workers, making them receptive to anti-globalization rhetoric. With virtual offshoring, there is the risk of a similar pattern taking hold among high-skilled professionals. Notwithstanding labour shortages for certain in-demand skills, there is already a trend of diminishing returns on higher education in the West, with the supply of college graduates increasing faster than demand for qualified labour¹⁴. In principle, virtual offshoring should exert additional downward pressure on high-skill earnings in developed economies, in particular for entry-level positions. Historically, educated young professionals have in general favoured and benefited from globalization¹⁵, but persistently disappointing job prospects could eventually tip the scale in the opposite direction. This can in turn increase the risk of polarization, social unrest and become an obstacle to good governance.

A virtual, global middle-class

All forms offshoring, whether physical or virtual, end up affecting demand and supply. First, industrial offshoring made China the beating heart of global value chains. With time, enough of the wealth created by this process trickled into the pockets of the Chinese consumer. Historically located in the West, the epicentre of global consumption demand has been shifting eastward and southward as the Global South becomes wealthier. In 1995, developing and emerging economies accounted for 19% of global consumption demand. By 2017, this figure had doubled to 38%¹⁶. The income of tele-migrants will be generous by the standards of their home countries, even though they are cheaper for their employers. Therefore, we can expect virtual offshoring to accelerate the transition to a world where the Global South increasingly drives global consumption demand.

Nevertheless, the Global South is large and diverse, and the competition to attract foreign investment will be fierce. Some countries are better prepared than others are to face this contest, which will be fought across several domains (Box 1). Already a global leader in the field, India looks set to capitalize its investments in what will probably be a winner-take-all type of race. Google's recently announced a USD 10 billion investment to accelerate the Indian economy's digitalization, suggesting that a digital infrastructure boom is coming.

While human and technological capital are crucial, they are not everything. In a world of rising cybersecurity risks, geopolitical alignment will be at least as important as economic fundamentals. In principle, China ticks all the boxes of an attractive destination: a large number of highly educated workers, relatively attractive wages and a favourable technological environment. However, with the U.S. and China seemingly drifting into a technological cold war, firms will think twice before getting into a position where they have to pick sides, or have their information compromised. The same holds for Russia, and, to a lesser extent, Turkey or the Ukraine¹⁷. Furthermore, service activities rely on human coordination, which is always made easier by cultural proximity. Countries with a common majority religion, a common language and a common colonial past are more likely to exchange services¹⁸. To identify some of the most attractive countries for virtual offshoring investment¹⁹, Box 1 provides an overview of some key indicators. Our results suggest a strong potential for Southeast Asian economies, and India in particular. Polish labour might be expensive by the standards of other emerging

11 - Mean nominal hourly labor cost by employee in 2017 USD, taken from the ILO competitiveness indicators dataset.

12 - Said otherwise, virtual offshoring is likely to manifest as a slowdown of employment growth, rather than an outright contraction. In particular, we can expect diminished domestic job creation and/or wage growth per unit of added value. This is the kind of pattern that was observed in manufacturing. In the U.S., for instance, value added in the manufacturing sector grew by 26% between 2010 and 2019, while employment only grew by 10%, due to a combination of automation and physical offshoring.

13 - Rodrik: "Why Does Globalization Fuel Populism? Economics, Culture, and the Rise of Right-wing Populism" (NBER Working Paper, 2020)

14 - Vedder: "The Value of a College Degree Is Diminishing Over Time" (in "How Valuable Is A College Degree?", Greenhaven Press, 2016)

15 - Bertelsmann Foundation: "Gains, Pains and Divides: Attitudes on Globalization on the Eve of the Corona Crisis" (2020 GED Globalization Survey)

16 - McKinsey Global Institute: "Globalization in transition: the future of trade and value chains" (2019). Offshoring is only one of several factors behind growth in the Global South. Other factors such as demographic growth and the commodity price boom also played a key role.

17 - In the sense that the long-term geopolitical alignment of these countries with the West is not guaranteed.

BOX 1 WHO WILL BENEFIT FROM THE VIRTUAL OFFSHORING BOOM?

Investment capital flows across borders due to a combination of worsening returns on risk at home (push factors) and/or better-expected returns abroad (pull factors). A country is likelier to attract virtual offshoring investment if it offers :

- 1. A large and educated labour force:** Since many of the virtually offshorable jobs are highly qualified, human capital requirements are higher than for manufacturing offshoring. Countries that offer the largest numbers of qualified workers for the lowest labour costs will attract the most investment. We measure this through the number of potential tele-migrants.
- 2. Strong technological infrastructure:** Digital value chains will require substantial technological capital. This implies capacities in broadband, mobile telecom, data centres and networks, widespread digitization of business processes (including for SMEs), access to cloud computing and reliable cybersecurity, among others. In the absence of internationally comparable data in this domain, we use the number of secure internet servers per capita as a proxy for the spread of technological development.
- 3. Low labour costs:** We measure this with ILO data on nominal monthly wages, adjusted for inflation and converted to USD.
- 4. A quality business environment:** As for any other type of investment, a business-friendly institutional framework is a primary concern. This implies flexible and transparent regulation, strong rule of law and property rights (especially intellectual property), minimal red tape, favourable taxation, trade and financial openness, among others. We measure this using Coface's business climate score, a pillar of our country risk assessment methodology.

Based on these we developed a composite indicator for evaluating a country's likelihood of attracting large virtual offshoring investments. Size matters: to benefit from returns to scale, firms are likely to concentrate investments in countries with the highest number of potential tele-migrants. As such, only countries with a high quantity of potential tele-migrants were considered in the sample. Scores are normalized on a 0-100 scale, and the global score is the unweighted average of the 4 components.

INTERPRETATION EXAMPLE:

China is the country with the highest number of potential tele-migrants; India's number of potential tele-migrants is 62% that of China. Average wages in Indonesia are only 26% (100-74) of those in Poland, the country with the highest wages in the sample. Countries highlighted in red perform well on our indicator but could be avoided by investors for geostrategic and/or cybersecurity concerns.

Rank	Country	Global Score	Potential Tele-migrants	Internet Servers Per Capita	Labor Cost	Business Climate
1	India	53	62	2	87	63
2	Poland	51	5	100	0	100
3	China	45	100	4	13	63
4	Indonesia	43	15	8	74	75
5	Russia	42	17	45	45	63
8	Brazil	41	15	13	59	75
7	Turkey	40	5	26	54	75
8	Ukraine	39	4	38	65	50
9	Viet Nam	39	7	13	73	63
10	Thailand	38	5	7	55	88
11	Mexico	38	8	1	68	75
12	Pakistan	36	8	0	86	50
13	Philippines	36	8	1	71	63
14	Bangladesh	35	7	0	85	50
15	Colombia	35	4	4	59	75

Sources: ILO, World Bank, Coface calculation

countries, but it remains cheaper than French labour by a factor of three. Yet, its college enrolment rate is roughly equal to that of France (68%), and it hosts more secure internet servers per capita than Spain. Therefore, virtual offshoring will not only enhance the competitiveness of the global service economy, it could also become one of the main paths to development²⁰. Finally, the need to tax and regulate these cross-border labour exchanges can imbue struggling multilateral institutions such as the World Trade Organization or the International Labour Organization with renewed relevance.

DISCLAIMER

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18 - Ghemawat: "Distance still matters : the hard reality of global expansion" (Harvard Business Review, 2001)

19 - By « most attractive », we mean those that are likely to attract large investments and become virtual offshoring hubs, systemically important nodes in the global services supply chain. Small, highly digitized economies, such as the Baltics, will undergo significant change but will have less systemic weight.

20 - Baldwin & Forslid: "Globalization and Development: When Manufacturing is Jobless and Services are Tradable" (NBER Working Paper, 2020)

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