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Global shifts in employment structure: a new geography of jobs?

Interview with Sergio Torrejón Perez, economic and policy analyst in the Joint Research Centre of the European Commission, and John Hurley, Senior Research Manager, Employment Unit, Eurofound

Introduction by host:

Welcome to the ILO Employment podcast series, Global Challenges, Global Solutions: The Future of Work.

I'm your host Tom Netter, and today we're going to look at shifts in employment structures, and the trends that are reshaping what researchers call the "geography" of jobs, the skills we'll need, and the composition of local labour forces.

Over more than a decade, a series of economic crises have taken their toll. And just as some countries had begun to emerge from the prolonged slump that began with the global financial crisis in 2008, the COVID-19 pandemic caused a new earthquake in the world of work, with millions of jobs lost in some sectors and millions of new ones created in others.

We've heard a lot about these shifts in the job markets. And Researchers are trying to assess the extent to which employment structures are "polarizing", due to the decline in mid-paid jobs, or "upgrading" because of growth in high-paid, high-skilled jobs.

How are these changes affecting different regions or economies? And what emerging sectors show the most promise for achieving employment growth in developed economies, as well as sustainable development, employment creation and poverty alleviation in less developed economies?

With me today to address this are two senior researchers.

Sergio Torrejón Perez, economic and policy analyst in the Joint Research Centre of the European Commission and coordinator of the joint ILO-JRC project 'Global shifts in the employment structure', and John Hurley, Senior Research Manager, Employment Unit, Eurofound.

Sergio, John, welcome to the programme.

Tom: My first question is to John, and it's an obvious one. What exactly do we mean by employment structure and what are the main drivers of employment change?

John: Well, thank you, Tom. It's a great pleasure to be here in the program. Thanks for the invitation. What do we mean by employment structure? Well, when we talk about the employment structure, we're basically talking about what type of work people do in terms of occupations and sectors. You can think of these as two dimensions describing the horizontal and vertical division of labour in our societies.

Sectors capture the horizontal division of labour across different economic activities, so whether firms operate in services, manufacturing, agriculture, or some other sector. Meanwhile, within firms, occupations capture the vertical division of labour, so the share of managers, professionals or production workers or workers in other occupations in a given firm or organization.

In the work that we're doing, the ILO, the Joint Commission Joint Research Center in Eurofound in the Global Jobs Project, we use what we call the jobs approach to analyze employment shifts in different countries and regions in terms of jobs defined in this way, so as occupations in sectors. So, it's kind of like the way a job might be identified in a job advertisement.

Using labour force survey data, we can identify up to 1,000 or more different jobs in many developed countries. The biggest employing jobs, just to give you an example in the EU, are those of a sales assistant in the retail sector. Another big employing job would be a teaching professional in the education sector. Each of these jobs employs between eight and 10 million people in the EU as a whole, and together they account for something like one in 10 of all those employed in the EU.

This is a structural approach in the sense that we're interested in looking at shifts in employment, not in terms of individual employment relationships, but in terms of these jobs that workers do and whether they're farmers, doctors, or teaching professionals, and how employment shifts between these jobs over time.

To the second part of your question, what are the drivers of employment change? Well, different experts tend to differ in their answers to this question. Labour economists tend to emphasize the role of trade or, in particular, technological change. So, for example, digitalization and automation in a contemporary context. These have tended to raise the demand for skilled and qualified labour in particular. They often displace at the same time employment further down the wage scale.

Political scientists tend to emphasize the role of labour market institutions, so labour regulation, labour protections for example, or the extent of union representation and collective bargaining. There's suggestive evidence, for example, that periods of labour market deregulation are more likely to raise relative demand for lower paid work and contribute in this way to employment polarization.

Sociologists at work increasingly point to the importance of factors, not on the demand side, but on the supply side. So, looking at the increasing stock of human capital available to our labour markets generated by higher education, greater female participation, also by increased migration flows. And the question there is what kind of jobs do the growing numbers of new graduates, immigrants, and female workers take up. So, in summary, there are many drivers, and this is reflected in a variety of different patterns of change, both by country and over time.

Tom: Thanks, John, for explaining that. Now, my second question is to Sergio. Are these employment structures the same in every country or do they differ

between countries or developing emerging economies and developed economies?

Sergio: Thanks, Tom. I have to say, employment structures are not the same in every country, and this is related with the previous response John provided because we have to take into account at least two things. First, that the drivers promoting employment change are various, and second, that these drivers and factors behave differently across countries and regions.

Accordingly, employment structures evolve in very different ways. Think that while technology, for instance, is expected to have a similar polarizing impact in most places, there are other factors that interact with and mediate that effect. We can think, for instance, about migrations with some countries that have received large amount of non-qualified immigrants in some periods while, in other countries, the flows have been more marginal. These therefore impacts on the quantity of labour available to fill low paid jobs, and the same applies to some of the other factors John mentioned before that behave differently. Apart from that, it is important to consider the importance of the economic and the sectoral specialization of the economy, but also the degree of formalization of the economy.

This relates with the second question you are making, being one of the main differences between developed and developing economies. And this is basically because when the size of jobs in agriculture or the share of informal work is relatively high, then there is still more margin or more room to transition to economies in which formal employment in the industry and in services have more importance. So, to put it simply, countries in which the share of agricultural jobs and the share of informal work is higher in principle more likely to experience job upgrading.

Now, and John mentioned this, I am working with him and with our colleagues from the JRC and Eurofound in a project producing global comparable evidence on the topic. And we are seeing that while in most developing countries, there is job upgrading, in developed economies, there is no single pattern prevailing. Job prioritization is visible in some developed economies such as the USA and the UK, especially from the 90s. But we also identify upgrading patterns in other countries and other sub periods.

This is because in developed countries, the polarizing effect of new technologies is more prominent, mainly because their penetration is higher, but also because

employment dynamics are on the other hand more sensitive to the business cycle and to some of the other factors and dynamics mentioned before. On the other hand, and I will finish, we know that in developing economies, structural transformations like the hollowing out of agriculture and the formalization of the economy prevail.

Tom: Thanks, Sergio. Now back to John. Tell us how employment patterns have changed over time. In particular, the impact of digitalization and increasing use of new technologies on shifts or structural changes in economies. Can you also tell us what the other fastest growing sectors are and which ones show the most promise in terms of job creation?

John: Well, the main changes in employment patterns that can be described in different ways, in advanced economies, probably the key change from an occupational perspective is the growing share of professional employment. This is a by-product of the massive investment in tertiary education in recent decades.

From a sectoral perspective, the main vector of change is the shift to services and the decline in manufacturing and agricultural employment shares. But then if we take it from a distributional or a job wage perspective, as already discussed, in most jobs approach analysis of the type that we do in this project, in advanced economies covering periods from the 1960s onwards, we observe two dominant patterns of employment shift. One is polarization and the other is upgrading. In polarization, the key feature is the relative weakness of mid-paid employment, this hollowing out of the middle with faster growth in employment at either end of the wage distribution. With upgrading the key feature is growth at the top and decline in low paid employment.

So, how have these patterns evolved over time? Well, the evidence, for example, from the United States where we have the longest time series has been of a shift from more upgrading patterns in earlier decades to more polarized employment growth in the 1990s and afterwards. In the European Union in work that Eurofound has done our work points to more upgrading than polarization overall from the 1990s onwards, so stronger growth in employment at the top. I think the important takeout from a lot of this work, especially in advanced economies, is the shared feature of the two dominant patterns of employment change. So, whether it be polarization or upgrading, the shared feature is the relative resilience of employment growth in higher skilled and higher paid jobs. So even during the global financial crisis, even during COVID, there continued to be employment

growth in top quintile jobs in the EU. The vulnerable categories of jobs in both of these crises were all either low or mid paid jobs.

What's the effect of digitalization and technological change more generally?

Well, it's clear that they have not led to mass technological unemployment in the way that some people may have feared. There are more people in employment in the US and Europe and now, for example, than ever before, despite the shocks of war, of COVID, of rising labour costs, and rising inflation. So, labour markets are tight. It's true that some jobs are declining in agriculture, in manufacturing, and in extractive industries, notably, but there is still more new employment in growing sectors than job loss in declining sectors.

So, where in particular our new jobs in the employment structure? Well, service sectors now account for nearly three quarters of employment in developed economies. They continue to grow their share of employment. There are fast growing subsectors within services, both on the public and the private side. So as our societies become richer, they spend more on health and on wellbeing more generally and indeed on services more generally.

So, we have this increase in demand, for example, for medical and care professionals. There are 30 per cent more health professionals now in Europe than a decade ago. And, of course, the digitalization of all aspects of our lives as well as of economic activity more generally requires an increasing army of ICT professionals. So, there are 60 per cent more of these in the EU than a decade ago, and this particular professional category has tended to be the one that crops up again and again, in lists of the fastest growing, large employing jobs.

Tom: Thanks, John. That was quite interesting. Now, I'd like to ask Sergio a follow-up. What are the implications in terms of skills, re-skilling, and retraining so that young women and men can benefit from the expansion of some of these emerging sectors? Also, what's the impact on older workers?

Sergio: Well, there is evidence on the skills that are being more demanded today, and these are mainly digital skills, and we are talking about basic digital skills, but also what is called social transversal or non-cognitive skills. And there is a debate on the name. But it should be clear that when we talk about digital skills, we refer to the ability to process and analyze data or to know how to use platforms and tools to share information and to communicate.

On the other hand, when we talk about social or non-cognitive skills, we refer to the ability to teamwork, for instance, creativity, how to communicate well, planning skills, etcetera. So, there are different type of findings indicating that these skills are key today to succeed in the labour market. For instance, we know that the prevalence of digital skills and non-cognitive skills is high in the occupations that have increased the most in recent years. We also know they're associated to wage premiums. They often appear in online job vacancies as the ones, as the skills that are more in demand today by employers.

This is also important. We also know they are at low risk of being automated, and this is, of course, because we are talking about a type of skill that requires human contact and some uncertainty. However, although they are so important, we know there are still some gaps and many Europeans, almost 20 per cent of the population, report having a low level of digital skills. While on the other hand, most companies report around 90 per cent of firms consider these skills are key nowadays. We also know that non-cognitive skills or socioemotional skills are not mandatory today in curricula in most countries, at least this is the case of Europe.

So, in this context, it is key to reinforce the importance of these skills so we can improve the employability of the people and promote more and faster transitions. I'm talking about transitions from job-to-job or from unemployment to employment. This can be done in at least three ways, in my view. First, by rethinking and adapting our formal education systems, promoting plans that are more focused on competencies and not only on the transmission of knowledge. Second, via lifelong learning programmes in the workplace.

So, this way, older workers and those performing the tasks that are getting obsolete today also have the chance to upscale and reskill, but also by reinforcing active labor market policies so those that are unemployed can also benefit from this training. However, I think it is really important to consider that it is not enough with identifying the skill needs today and then by promoting these skills. We also know that those benefiting more from training and lifelong programmes are those working in good, stable jobs. So, this is producing what is called the Matthew effect. Accordingly, it is extremely important to ensure these training programmes are well-targeted, benefiting fundamentally those that are most in need and not others, that is those that have more unstable careers and those that are performing the tasks that are at risk of being automated.

Tom: Thanks, Sergio. Finally, to conclude, I'd like to ask both of you following question. As the world shifts from relief from the impact of COVID to supporting recovery, what policy guidance can be provided for economies seeking to design structural reform packages around these emerging sectors? And, in the end, what will be done with all this information, or do we need more research? Let's begin with Sergio.

Sergio: Well, we know that the COVID crisis has been clearly asymmetric and regressive, affecting more those with low wages. Accordingly, I think that policies for the recovery should have a redistributive approach and they should have a clear emphasis on first compensating those that have been hardest hit, and then also on improving their employability so they can transition to emerging sectors.

Apart from this, it is also important to focus on creating good jobs. I think this is really important because we know that there is only upward mobility when room at the top is created, so when we create many good jobs. It is only then when we can ensure there are more and better opportunities for all. In this sense, I would say that more research and ideas on how to create good jobs are needed. So, we can, this way, reduce the problem of over qualification, ensure that some low wage workers are able to transition to better jobs and also to increase the opportunities to access the labour market for those that are in the margins.

Industrial policy is key in this regard, and it would be nice to know how to handle and manage the challenges we are facing nowadays, such as the green and the digital transition, in a way that we can create good jobs associated to this new or these emerging needs and sectors. In the sense, of course, more research is needed to know exactly what green jobs and green skills are and how we could contribute to these goals by creating jobs that are more sustainable, stable, and better equipped. Little is known yet on this, so it's a promising avenue for future research.

Tom: Okay, Sergio, Thanks. Now, John, can you give us your take?

John: Well, Tom, I think I don't really have that much to add to what Sergio has said in his comprehensive answer, but just to maybe reiterate two points. I think that it's clear from all of the jobs analysis that we've done that over time, clearly the takeout is that the greatest demand for labour is in well-qualified and well-paid jobs. This is driving employment growth in both developing and developed economies. So, this obviously puts a huge emphasis and premium on skills and our

ability of our education systems to supply skills to the labour market. So that's one obvious takeout, not surprising takeout maybe.

I think in terms of the post-COVID adaptation of our economies, and again just repeating a little bit what Sergio has said, it's very important to say that in all processes of economic change, there will be losers and there will be winners. And it's very important that there has to be some recognition of how to reintegrate people who do lose their jobs in processes of structural change and do give them opportunities to participate actively in labour market in new jobs. So that obviously involves reskilling and I think also post-COVID, it's very obvious that there's a very big quality of work issue in low paid jobs. The reason that we have labour market tightness in jobs in the retail, tourism, and leisure sectors in a lot of our economies is, I think, partially to do with the poor or irregular working conditions and employment conditions of workers of employment in those sectors. So, part of the post-COVID settlement should be probably an attention to improving the quality of work in those types of jobs as a precondition for employment to start growing again in those sectors.

Tom: Alright, Sergio, John, thanks very much for bringing your insights into this complex and important subject.

These shifts in the labour markets are very important, not only for policymakers, but those in the world of work. It stands to reason that knowing where and what the jobs are and what skills are needed will be extremely useful.

But can we translate this knowledge into action? Time will tell, but in the meantime, in today's turbulent labour markets, it seems that the better information we have, the better we can prepare for a brighter future of work.

I'm Tom Netter and you've been listening to the ILO Employment Policy Department podcast series, "*Global Challenges, Global Solutions: The future of work*". Thank you for your time.