

The Concept of a Just Transition is as Relevant to the Fourth Industrial Revolution as it is for the Move towards a Low Carbon Economy

Dr Martin Kaggwa and Sinenhlanhla Sithole

Article Summary

Two parallel developments are taking place in Africa, that are of key significance to workers. The first one is the concerted effort to move the national economies from depending on fossil-based energy to a clean low-carbon energy. The second is the continents gradual embrace of the Fourth Industrial Revolution (4IR). Organized labour has been active, in some countries like South Africa in engaging parties advocating for and implementing the transition to low-carbon economies to ensure that the interests of workers and communities are taken care of and are not sacrificed in the transition. Organized labour refers to the process of energy transition that takes into account the interests of workers and workers' communities as 'a just transition'. Regarding the 4IR, organized labour has not yet come up with a clear and consensus-based position on how to deal with the revolution. Organized labour's position on 4IR can at best be described as a work in progress. Against this background, and in recognition of the need for organized labour to urgently engage with the 4IR phenomenon, this article makes the case that worker-related tenets of a just transition in the energy sector also apply to a migration to the 4IR economy. As such, organized labour should form a common position demanding a just transition to the 4IR. The proposal of what should constitute a just transition to the 4IR should mirror that of the just transition to a low-carbon economy as articulated in the International Labour Organisations (ILO's) Decent Work Agenda. In particular it should include, social dialogue, social protection, rights at work and employment creation and protection.

Introduction

The emergence of the 4IR poses a complex and urgent challenge to trade unions. As the custodians of workers' interests, the first expectation of union members is that the trade union will protect their jobs; yet the 4IR comes with an inherent risk that it will result in job losses. This is because technological advancements tend to require less human capital. The unions, therefore, need to respond and be seen by members as taking a stand to protect jobs amidst the rise of the 4IR. Otherwise the members will slowly lose trust in the unions, and the unions will also lose relevance in the eyes of their members.

The need to protect jobs amidst the rise of the 4IR seems to be acknowledged by most of the trade unions. The question needing an answer remains the same: What stand and what action do trade unions need to take with regards to the 4IR?

This stand needs to be informed and practical. It should be informed by research, among others, and the recognition that the 4IR or some elements of it cannot be stopped. The introduction and implementation of the 4IR lies largely in the hands of private actors who do not need to seek permission from government or organized labour to do so. Another element to the 4IR puzzle is that not everything about the 4IR is bad for workers. In the revolution lies the potential of increasing the competitiveness of some companies, increase in labour productivity and, subsequently, the creation of some high-paying jobs.

It is around these dynamics of the 4IR that labour has to engage with all stakeholders to protect workers' interests. The good thing is that the labour constituency is aware of the potential risks that will accompany the transition to 4IR if the process is not managed. The bad thing is that the workers constituency has thus far not come up with a position, yet the 4IR is fast taking root in the national local economies. The situation calls for urgent steps to be taken to come up with an informed and consensus-based labour position and approach to the 4IR.

This article aims to contribute towards an informed worker-leaning position that organized labour can adopt in engaging with the 4IR stakeholders. The article proposes and makes the case that trade unions need not re-invent the wheel when it comes to finding a position and approach to the 4IR. They should instead utilize the *just transition* conceptual framework proposed under the transition to clean and low-carbon energy economy. Further, unions should make demands and push for interventions on the 4IR that mirror those of the energy just transition. This should be so because the impact of the 4IR on workers and workers' communities is almost similar to that of migration from fossil energy to a low-carbon energy economy.

The rest of the article is arranged as follows: Section 2 gives the conceptual framework of the just energy transition. This is done to highlight key assumptions and relationships that informed labour to request for a just energy transition. Section 3 makes a case for why a just transition is relevant to the 4IR. It does this by applying the pillars of a Decent Work Agenda and highlighting their suitability to the 4IR. Section 4 offers the conclusion and recommendations.

1 Just Transition Concept: Genesis and Characteristics

The concept of a just transition originates from the North American trade unions in the 1990s, and was located in the energy space. It was an intervention that was aimed at making sure that workers who would lose their jobs due to environmental protection policies and accompanying migration to cleaner energies would be supported (Smith, 2017).

The coming up with the concept of the just transition and the demand by organised labour that there should be a just transition to low-carbon energy economies had an underlying conceptual framework. At the centre of this conceptual framework was the understanding that the unconditional move from the use of fossil energy to clean low-carbon energy in national economies would have adverse effects on workers and workers' communities.

Underlying the just transition conceptual framework are a number of factors that come into play, and which impact on workers, when the fossil energy is substituted by low-carbon energy in a particular economy. Some of the key factors in this regard are: capital intensity of clean

energy generation, high skills, and educational requirements of workplaces, limited energy sector linkages with other sectors of the economy, and the loss of state control and directing of the energy sector. These theoretical underpinnings of the just transition on the energy sector are briefly expounded on below:

- ✓ The first theoretical premise for labour in demanding a just transition related to the capital intensity of clean energy production - compared with the existing fossil energy production.
- ✓ Organised labour contended that whereas fossil energy production was labour intensive, low-carbon production was capital intensive. Coal fired energy plants employed far more people compared to solar or wind energy plants. The capital intensity of the clean low-carbon energy production meant that employment in the energy sector would be the first casualty of the energy transition.
- ✓ The second theoretical base from which labour demanded a just transition was the recognition that even if jobs were to be created by the clean energy economy, such jobs would not be occupied by the same people in the fossil energy sector. This would be due to the geographical location of new energy generation plants.
- ✓ Thirdly, organised labour postulates that whereas fossil-energy production provides employment to workers with fairly lower skills, the aspired clean production predominantly provides employment for high skilled and specialised workers. Skills required in clean energy production are not readily available in many developing countries; therefore, the transition of workers from fossil energy production to clean energy production is very unlikely as workers do not always have the necessary skills.
- ✓ Additionally, the demand for a just energy transition is further based on the recognition that clean energy production has less developmental linkages with local economies than the existing fossil energy production. This means that socio-economic benefits of clean energy production to society will be less. Due to coal mining activities and the employment potential, many other economic opportunities have been realised in coal communities.
- ✓ Finally, the proposal to have a just clean energy transition was based on the recognition that fossil energy production has been in the control of government through State Owned Enterprises (SOEs). As such, the country uses this energy production as a developmental tool; for example, to offer energy subsidy to strategic sectors of the economy.

With the recognition of the above fundamental relationships and how they were likely to affect the well-being of workers, organised labour proposed interventions that could make the energy transition just.

1.1 Labour proposals on the characteristics of a just energy transition

Based on the solid belief that migration from fossil energy to clean low-carbon energy would negatively affect workers (in terms of employment dynamics) and communities (in terms of severed linkages with the energy sector), organised labour put forward conditions that would make the energy transition just from a workers' perspective, borrowed from the Decent Work Agenda of International Labour Organisation (ILO, 2015). The four pillars of making the energy transition just are briefly explained below:

1. *Social dialogue*: Social dialogue is a process which involves various social partners who negotiate towards certain policy agreements in the best interests of those whom they represent. The social partners normally include government, trade unions, businesses, and civil society. Social dialogues can be bipartite (between any two social partners) or tripartite (between any three social partners), or can include all social partners depending on the magnitude of the issue being negotiated (ETUC, n.d). According to ILO (2015) social dialogue can include all types of negotiations, consultations, or simply exchange of information between or among representatives of governments, employers, and workers on issues of common interest relating to economic and social policy.
2. *Social protection*: Social protection is about people and families having security in the face of vulnerabilities and contingencies; it is about having access to health care, and it is about working in safety (ILO, 2015). Social protection is about a person living in dignity by having the ability to provide or be provided with the basics of life. Social protection is closely linked with having a source of income, employment, or existing social safety net to assist a person in case their source of income falls away. From the organised labour perspective, a key part of social dialogue should be to ensure the social protection of workers amidst any developments. Specifically, organised labour should try as much as possible to advocate and demand that workers do not lose their jobs or source of livelihood. In case of the inevitable job losses, dialogue on social protection should include suggestions of alternative employment or livelihood opportunities.
3. *Rights at work*: Rights at work include the right to freedom of association, and the effective recognition of the right to collective bargaining. The ILO (2017) advocates that these rights should be universal and should be applicable to all states regardless of

the level of economic development. New economic developments not only come with loss of employment for workers but often with changes in the power dynamics in the work place. Often the owners of capital tend to mute the voice of workers in the workplace, as many tend to consider workers and workers' interests as a cost rather than an asset to the business. It is against this recognition that organised labour has to take a proactive stance that when there are changes in the economy, business, or workplace - workers' rights need to be protected.

4. *Employment protection and creation*: Employment protection and creation is one of the most important concerns of organised labour. It is the core focus of organised labour because without it, organised labour loses relevancy. In the extreme cases, without employment, trade unions will have no members and thus no one to protect. The basis for social dialogue, social protection, and rights at work falls away. Hence, it is of utmost importance that energy transition, at least, has employment protection provisions embedded in it. Without job protection and probably job creation, there was no way that organised labour could consider a change from fossil energy to low-carbon energy as just.

Organised labour strongly believed that with the incorporation of the above four pillars of the Decent Work Agenda in the energy transition, the transition would become just. It is important to note that these pillars are process specific, and not sector specific. They enable a transition to be just irrespective of the sector or the circumstances. As such, this paper makes the case that these pillars should provide the blueprint for making the process of South Africa's transition to the 4IR to be a just one, at least from organised labour's perspective.

2 Why a Just Transition is Relevant to the 4IR

Having discussed above the concerns that led organised labour to advocate for a just transition in the energy sector, this section highlights the challenges labour faces with the 4IR. It will show how these challenges, for labour, are similar to those in the energy sector hence the justification for the recommendation of the relevance of a just transition within the 4IR as well.

2.1 The 4IR and the opportunities and challenges it creates for organised labour

The 4IR is loosely understood as a concept that is highly synonymous with technology. According to various scholars (Schwab, 2017; Ayentimi & Burgess, 2018; Kaggwa, 2019) the 4IR is characterised largely by a range of technologies that combine digital, physical, and biological systems to operate as one. These can be categorised as artificial intelligence, robotics, the internet of things, 3D printing, and additive manufacturing to name a few.

The 4IR undoubtedly presents businesses, and economies in general, with many opportunities. It is considered as an important driver of social and economic growth as it is anticipated to increase production potential at a more rapid pace, using advanced technologies. Thus far, it has been embraced mostly by developed and thriving economies. Big businesses have been quick to point out the vast growth and expansion opportunities that the 4IR presents to their companies. A prime example is the African Mining Indaba in February 2020 held in Cape Town which was characterised largely by talks about the potential use of automation, digitisation, robotics, and artificial intelligence in the mining sector in the wake of the 4IR. Given, this was an investment platform and investors were excited about the technological opportunities in mining that would bolster profits and tap into the economic potential of the continent. However, not so strongly embraced at the Indaba was the impact on workers, should the mining sector embrace the 4IR.

The 4IR is anticipated to reshape the future of work; and for trade unions this is a major concern as advancements in technology are known to reduce labour in the workplace. In African countries, an embrace of the 4IR is of even more concern as there are many other ills the economies are faced with. According to Ayentimi and Burgess (2018:641), these include informal economies, low levels in technical skills (technical skills are a major requirement of the 4IR economy), as well as multinationals dominating the advanced technological sectors.

The 4IR is anticipated to bring with it changes in the manner in which goods and services are produced and are marketed. Production under the 4IR will be more capital intensive; to make matters worse, even the selling of goods and services produced is likely to go online. With online sales the retail sector, which is a major employer, will lose many jobs; this will exacerbate the already high unemployment levels in many African countries.

The other challenges associated with the 4IR that is of interest to labour is that of the skill-set that the 4IR will require. The 4IR requires high skills that are not readily available in the domestic market. So, apart from employing less people, the 4IR may necessitate import of some specialised skills thereby making worse the displacement of local nationals in the workplace.

The previous three industrial revolutions (1IR, 2IR, and 3IR) all have had an impact on the future of work and it is only fitting that trade unions are concerned about how the 4IR will impact work. Undoubtedly, advancements in technology have brought about much fear of the potential job losses that will be experienced by different sectors, and whether their current skills will be sufficient to keep the workers relevant. The 4IR poses a challenge for the continent given its unemployment rate. The negative effects of the 4IR on employment have already been witnessed in the continents banking sectors where a number of bank branches have been closed,

and a number of workers rendered jobless. It is anticipated that thousands of workers will be retrenched in the banking sector as a result of the rapid digitisation of banking services.

In all, the 4IR poses a real threat to organised labour due to its potential to lead to significant job losses and the displacement of workers based on skills, geographical location, or new workplace configuration.

2.2 Justification for adopting a just transition in the energy sector to the 4IR

The assumptions and labour concerns that motivated for calls for a just transition in the energy debates as discussed in Section 2 are very similar to those labour faces under the 4IR. In other words, the threat to employment and well-being of workers that was faced under the energy transition from fossil to low-carbon energy mirrors the threats that confront organised labour with the emergence of the 4IR. With this recognition, it makes sense that organised labour borrows from the energy transition the labour perspective conceptual framework and recommendations in dealing with the 4IR.

The key similarities between energy transition – from fossil energy to low-carbon energy and the transition from previous industrial revolutions to the 4IR transition are that both processes:

- Involve migration from a labour intensive production regime to a capital intensive regime; Require fairly higher skilled workers than previously;

- Are characterised by the private actors taking a bigger role in the production process and the relegation of the role of the state.

The similarities point to the fact that the resultant effects on workers and organised labour of the energy transition and the 4IR will be same, although they may differ in scale. The undesirable effects of the transition have already been identified and articulated under the energy transition – job losses, workers replacement, and other adverse effects that come from job losses. Moreover, a framework to mitigate these adverse effects in the energy space – namely a just energy transition - has already been developed. For the 4IR, labour should propose that recommendations of a just transition should apply to the 4IR as they apply for the energy transition. This will not be controversial since the concept of the just energy transition has, by and large, been accepted by key stakeholders in the energy space, and these happen to be the same stakeholders in the 4IR space, i.e. government, business, and labour.

3.3 Applying the pillars of the Decent Work Agenda to the 4IR

The pillars of the Decent Work Agenda, upon which a just energy transition was based, are relevant to the 4IR debate and discourse in Africa. Below the article summarises how organised

labour can use these pillars to guide and formulate its position and demands on how the continent should embrace the 4IR:

- ✓ **Social dialogue:** Although there are some efforts to social dialogue on the 4IR, its embrace by countries in the continent was not preceded by social dialogue – a deliberate process where social partners would negotiate the embrace of the 4IR, taking into consideration the interest of the constituency each represents. There was no debate within countries about what should be the national stance on the 4IR. Rather, unilateral decisions were taken by governments to embrace the 4IR.
- ✓ As a result of missing out on being part of negotiations and debate on the 4IR on the continent, some social partners like organised labour have been caught on the back foot in terms of having a coherent and consensus-based position on how the continent should embrace the 4IR. They were never given time to investigate and form their position on the matter.
- ✓ In some countries like South Africa, there have been efforts by government to engage with organised labour on how the country should proceed with the 4IR, but these engagements have not been very useful. This is because organised labour, as a constituency, has not been given the chance, space, and facility to deeply interrogate the impact of the 4IR and form its own position to present to the other social partners.
- ✓ To imbue the social dialogue aspect in the continent's 4IR discourse, organised labour should be allowed an opportunity to form its own position on the 4IR and present it to all other social partners. Moreover, organised labour ought to participate in the 4IR mapping on the continent as a single social constituency rather than have some of its members participate in their individual capacity.
- ✓ **Social protection:** Social protection for workers is a key duty of organised labour. Engaging stakeholders in social dialogue should entail making a strong case for protection of the well-being of workers, workers' families and communities whose livelihoods would be threatened by the continent's migration to the 4IR.

Social protection proposals should ensure that even if the constituencies represented by organised labour were to be negatively affected by the 4IR, there will be mechanisms or interventions to ensure that decent livelihoods are guaranteed.

Making social protection a part of the transition to the 4IR requires that organised labour takes time to understand and document workers and workers communities whose livelihood will be threatened by the migration; and to develop concrete proposals on how potential job losses due to migration to the 4IR can be minimised. Where job losses are absolutely inevitable, organised labour should propose safeguards that have

to be put in place to facilitate transition to alternative sources of livelihoods for those affected.

Employment protection and creation: Employment protection and creation as a pillar of the Decent Work Agenda goes hand in hand with social protection. Ensuring that a person has a job that pays enough for him or her to meet living needs is the most desirable and respectable aspect of social protection. As such, this should be the starting point of the social dialogue of a just transition to the 4IR.

Organised labour should be emphatic in demanding that the transition to the 4IR should be done in a way that protects jobs. In cases where some jobs may be lost, there should be practical ways and evidence through which new alternative jobs will be created. Moreover, social partners should clearly articulate how those who may lose jobs can take advantage of the new jobs that are to be created as a result of migration.

Without guarantee that jobs will be protected and that there may also be opportunities for new jobs to be created, organised labour should insist that some sectors and areas of the local economies should be ring-fenced and protected from migration to the 4IR. A point should be made that the entire country needs not operate within the 4IR parameters. This position can be supported by empirical evidence which reveals that no country in the world, developed or developing, has all its economic sectors operating at the 4IR level.

Rights at work: Ensuring that workers have rights in the workplace is an important pillar of the Decent Work Agenda and talks directly to the traditional trade unions. It is notable from the previous industrial revolutions that workers' bargaining power diminishes with the progress from one revolution to another.

Technological progress in each subsequent industrial revolution has been making it easier to substitute labour with machinery. With this potential substitution of labour, workers have been slowly losing bargaining power on all workplace issues, including continued employment. The loss of bargaining power by workers comes with the risk of loss of rights at work.

Given that technology is at the centre of the 4IR, it is imperative that organised labour be vigilant and that it demands that rights at work should not be compromised in the process of migrating the economy to the 4IR.

With the above recommendations from organised labour, it can be possible to achieve a just transition to the 4IR on the continent. A just transition to the 4IR will create possibilities for an optimal situation beneficial to all social partners on the continent:

For workers, a just 4IR transition will ensure that affected workers are either reskilled and redeployed into other jobs that may emerge in the 4IR space, and that those who are left behind also emerge as winners from the transition. This speaks to social protection and ensuring employment creation for those workers who are likely to be left behind in the transition.

For industries, switching to more advanced technology will be done in a way that retains employment and economic linkages to other industries. Due consideration and care will be taken to ensure that jobs along critical value chains are not lost as a result of new technologies. There will be conscious effort to balance between improved efficiency and maintaining a human element in production in the introduction of new technologies. This is likely to mitigate against hostile industrial relations.

For all social partners - government, business, labour, and civil society - the need to have a just transition to the 4IR will catalyse dialogue that will bring varying perspectives on how to approach the transition. The dialogue will ensure that policies and mechanisms of migrating to the predominant use of 4IR technology guarantee social and economic justice. In the process, concerns around social protection, rights at work and employment protection and creation are likely to be addressed. This will be good for economic growth and the social harmony of the continent.

Ultimately, the intention of the just transition is to be accommodating of both winners and losers, leaving no one behind. This should be the case with Africa's migration to the 4IR, if it is to be considered just.

3 Concluding Remarks and Recommendation

In the wake of globalisation and the rapid changes in the world of work, trade unions are increasingly facing more complex challenges in ensuring that they safeguard the interests of workers and workers' communities. The rise of the 4IR is one such challenge. Although the 4IR is likely to increase productivity and probably propel countries to faster levels of development its effect on employment, in the short term, is likely to be negative. A number of existing jobs will be lost, and there are no guarantees that the envisaged benefit of rapid economic growth will be fairly distributed between owners of capital and workers.

With the recognition that the 4IR cannot be stopped in its entirety, organised labour has to come up with an informed and consensus-based position on how to deal with the 4IR on the continent, so that the interests of workers are not sacrificed in the process. Organised labour has to make

sure that the well-being of the working class does not become a casualty of the technological changes that accompany the 4IR. Trade unions on the continent seem to have been caught off-guard by the rapid unfolding of the 4IR and its adverse effects on workers. As a result, they have not had time to come up with a position on the 4IR.

This article makes the case that the concerns that workers had with the change in energy (from the fossil-based energy to low-carbon energy) are still the same when it comes to the 4IR challenges. Since enough time and thought went into the process of overcoming such challenges by coming up with the proposal of a Just Energy Transition, organised labour need not re-invent the wheel in its position and demands on the 4IR. Organised labour should simply demand that the process of adopting the 4IR should be made just – it should demand for a just transition to the 4IR.

Organised labour should make it clear that a just transition is as relevant to the 4IR as it is to the energy transition. This is because the anticipated impacts of both transitions on labour are similar, and if not managed they will negatively affect workers. Drawing from the energy just transition, it should demand that a just transition to the 4IR should be underpinned by social dialogue, social protection, and protection of rights in the workplace.

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