

# Globalization and occupational health: a perspective from southern Africa

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**Abstract** Increased world trade has generally benefited industrialized or strong economies and marginalized those that are weak. This paper examines the impact of globalization on employment trends and occupational health, drawing on examples from southern Africa. While the share of world trade to the world's poorest countries has decreased, workers in these countries increasingly find themselves in insecure, poor-quality jobs, sometimes involving technologies which are obsolete or banned in industrialized countries. The occupational illness which results is generally less visible and not adequately recognized as a problem in low-income countries. Those outside the workplace can also be affected through, for example, work-related environmental pollution and poor living conditions. In order to reduce the adverse effects of global trade reforms on occupational health, stronger social protection measures must be built into production and trade activities, including improved recognition, prevention, and management of work-related ill-health. Furthermore, the success of production and trade systems should be judged on how well they satisfy both economic growth and population health.

**Keywords** Employment; Occupational health; Occupational diseases/etiology; Commerce; Public policy; International cooperation; Social justice; Africa, Southern (*source: MeSH*).

**Mots clés** Emploi; Hygiène professionnelle; Maladies professionnelles/étiologie; Commerce; Politique gouvernementale; Coopération internationale; Justice sociale; Afrique australe (*source: INSERM*).

**Palabras clave** Empleo; Salud ocupacional; Enfermedades ocupacionales/etiología; Comercio; Política social; Cooperación internacional; Justicia social; África Austral (*fuentes: BIREME*).

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## Globalization and employment

In the past two decades global trade has tripled and trade in services has grown more than 14-fold. This has increased the production of information, knowledge, and technology (1) such that the global gross domestic product is now US\$ 21.6 trillion, implying the average worker produces US\$ 9160 annually. However, not all are benefiting from this change: globalization under liberalized markets has generally benefited the strong industrialized economies and marginalized the weak. The average gross national product per capita, for example, varies by a factor of about 12 between high- and low-income countries, and between 1960 and 1990 the poorest countries' share of world trade fell from 4% to 1%. To make matters worse, investment flows have concentrated in only about 10 countries (1).

Poor countries have been marginalized from investments and markets and have not developed the capacity or exposure to engage in investment or trade. Instead, they compete against each other for a small share of the market, which drives down the returns to

trade through economic and labour-market concessions. Debt can then consume an increasing share of scarce domestic resources, further reducing the possibility of development (2, 3). Not surprisingly, income has declined for a quarter of the world's people, many of them in sub-Saharan Africa (1) and even within regions and countries there are widening disparities in wealth and economic opportunity. In southern Africa, for example, globalization has produced mixed employment outcomes and the highest-paid 20% of the population controls 10–20 times the income of the lowest-paid 20% (1).

### General employment trends

It is clear that globalization has contributed to the spread of human rights and the enhancement of equity in employment law; wider employment in non-traditional spheres of employment has brought more people into the workforce. New information technology, and chemical, biotechnological, and pharmaceutical production processes have also widened industry options for low-waste, low-energy, and recycling strategies, which has generated new types of work organization and a shift from "blue-collar" to "white-collar" employment. However, this shift has mainly benefited the industrialized countries. For the large majority of workers in the less-industrialized

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countries, liberalized trade has been accompanied by transfer of obsolete and hazardous technologies, chemicals, processes and waste, including asbestos and pesticides no longer produced or used in industrialized countries (3, 4). It has also been associated with an increase in assembly line, low-quality jobs, with minimal options for advancement, and a growth of insecure, casual employment in a small-scale informal sector (5–7). The International Labour Organisation (ILO) estimates that the number of people unemployed or underemployed in the world today exceeds 800 million, or nearly one-third of the labour force (8).

### Employment of women

Women have been particularly affected by these employment patterns, since they tend to work in undercapitalized and insecure production activities, with inadequate access to credit, land, services, training, and other production inputs (9, 10). They have taken on more jobs and work longer hours, in part due to the double workload of household work and employment in formal or informal sectors, occupying low-skilled, low-paid jobs where rates of union membership are low. The work is often strenuous, monotonous, and ergonomically unsound and they have little control over the job pace or content. Thus, while new production patterns have brought women into the labour force, challenged traditional gender roles and provided women with greater income opportunities, this has been at the cost of increased exposure to occupational risk, decreased rest time, and increased work-related stress (6, 11).

Poor-quality jobs do not usually enhance social protection, while the increase in out-sourced, casual and home-based work disguises the employment relationship and shifts liability for working conditions to the worker. Work safety is also undermined by risks introduced by new production processes, with new risks being generated by the movement of capital and migrant labour. The next sections explore the extent to which the negative occupational health impacts have been controlled and the spread of information, technology, and standards in the new production processes.

### Impacts of globalization on occupational health

The movement of capital and technology, and changes in work organization appear to have out-paced the systems for protecting workers' health. Work in the agriculture, manufacturing, and mining sectors is already associated with high rates of injury from mechanical, electrical, and physical hazards. In African countries, for example, the injury rates in forestry, electricity production, mining, basic metal production, non-metallic mineral manufacturing, wood-product manufacturing, and transport are all

greater than 30 injuries per 1000 workers (12, 13). The expansion of chemical, electronic, and biotechnology industries and of the service and transport sectors has introduced new risks, widened the spread of work-related risks and increased their interaction with non-work factors in ill health, such as environmental pollution. Thus, in addition to old and prevalent problems, such as traumatic injury, respiratory disease, occupational dermatitis and musculoskeletal injury, workers now also suffer new stresses, such as new asthmatic disorders, psychological stress, and the ergonomic and visual effects of using video display units. Work is increasingly characterized by a high level of demand, with little control over the nature and content of the work, leading to digestive disorders, sleep difficulties and musculoskeletal problems (6, 11).

### Health in export processing zones

Examples of occupational health under liberalized tax and trade regimes can be seen in export processing zones (EPZs). EPZs have been associated with high levels of machine-related accidents, dusts, noise, poor ventilation, and exposure to toxic chemicals. Job stress levels are also high, adding further risk. It has been reported that accidents, stress, and intense exposure to common hazards arise from unrealistic production quotas, productivity incentives and inadequate controls on overtime. These factors create additional pressure to highly stressful work, resulting in cardiovascular and psychological disorders. In the young women who often work in EPZs, the stress can affect reproductive health, leading to miscarriage, problems with pregnancies, and poor fetal health (6, 7).

### Health of migrant workers

Production systems across the south have long used migrant workers, but increased trade and financial flows have added new waves of migrants, including informal sector traders. This poses a number of cross-boundary problems when trying to locate former migrant workers to compensate them for illness and injury. Studies in Botswana and South Africa, for example, signal the potential size of the problem, in the thousands of undetected or unreported cases of occupational lung diseases in former mineworkers in the rural areas of southern Africa (14–16).

### Notification of work-related diseases

While many of the conditions above are recognized as problems when they occur in industrialized countries, they are less well recognized in lower-income countries, such as those found in southern Africa. Many of the diseases are chronic, and with insecure employment, particularly in small enterprises, they are likely to go undetected. Many factors in the work environment that cause ill-health modify, or are modifiers of, wider causes of ill-health, such as the combined effects of workplace and environ-

mental pollutants on asthmatic disorders. This may also make it difficult to establish the direct contribution of the workplace, particularly for groups in which poverty has increased disease and mortality levels. Weak monitoring and regulatory systems imply that a significant share of occupational morbidity is not routinely reported, particularly chronic illnesses due to chemical, ergonomic and psychosocial factors. Health problems may also be underreported due to job insecurity and high labour turnover, factors exacerbated by employment patterns created by globalization.

In many countries in southern Africa, even the most comprehensive notification systems do not cover small-scale (informal-sector) production, despite the fact that informal-sector production is expanding more rapidly than that in the formal sector in many liberalized economies. Informal-sector risks include poor work organization, poor access to clean water and sanitation, ergonomic hazards, hazardous hand-tools, and exposure to dusts and chemicals. Surveys of informal-sector workers have found occupational injury and mortality rates similar to those in the formal sector, but higher rates of occupational illness (12, 13, 17–20).

### Effects beyond the workplace

Occupational risks also spill over to non-employed populations, through air and water pollution, and transmission of communicable diseases (21). Sexually transmitted infections including HIV/AIDS, for example, are more prevalent in communities along transport routes, or surrounding major development projects. Such morbidity is not usually classified as occupational, but is certainly work-related (22). Similarly, enterprises may generate public health problems when they provide poor living environments, such as in the dormitory-style hostels of EPZs (23). Some EPZ companies were even reported to offer prizes to women undergoing sterilization, to avoid losing time from maternity leave (6).

### Underrecognition of the burden of occupational disease

The greater share of the health burdens within new production, trade and employment patterns appear to be underrecognized. Estimates of the burden of occupational disease suggest that reporting systems in southern Africa probably underestimate the real burden of occupational disease 50-fold. The estimates were made by comparing the reported levels of occupational injury and disease in southern Africa with data from countries with better reporting systems (12, 24). The fact that occupational illness is least visible in groups marginalized from the opportunities of liberalized trade represents a silent shift of the burdens of economic reform. The next section examines the effectiveness of public policies and occupational health systems in dealing with these trends.

## Public policy issues and responses

The relationships between risks and occupational health form an important basis for legal standards, for work-environment norms, and for services in industrialized countries. However, this knowledge does not result in evenly applied standards in lower-income countries. In these countries, poor monitoring systems undermine the detection of ill-health, legal standards may be weaker, and immediate costs to enterprises sometimes limit efforts to improve work safety. Application of this knowledge is even more limited when there is uncertainty about the adverse health risks of new production processes. In industrialized countries, standard setting in unclear situations may err on the side of controlling risks, but in poorer countries this often errs on the side of continued exposure, with the burden of uncertainty usually being borne by the workers. Unfortunately, these countries also have the least human, technical and financial resources to carry out studies needed to demonstrate the risk, a situation exacerbated by the outflow of occupational health professionals.

### Policy convergence

Standards, risk control, and compensation systems are outcomes of both scientific evidence and workers' struggle. The systems thus vary across countries and institutions such as ILO have played an important role in promoting policy convergence. For example, ILO conventions have set norms for safe work and for managing occupational health and safety, including ILO Conventions 155 (tripartite occupational health systems, rights, and responsibilities), 161 (occupational health services), 170 (chemical safety), and 174 (prevention of major industrial accidents). The ILO *Tripartite declaration of principles concerning multinational enterprises and social policy* (26) requires common standards across all branches of multinational enterprises, and the *Code of practice on safety, health and working conditions in the transfer of technology to developing countries* (27) requires technology-exporting states to inform importing states about hazardous chemicals or technologies.

### Ratification and implementation of standards

Despite the need for these standards, their ratification and implementation in national law has been sluggish (8). Countries and tripartite organizations have resisted integrating the standards as social clauses in trade agreements, and other forms of linkage to trade liberalization, particularly through global forums that do not have a tripartite framework. This has focused attention on how standards can be promoted, without adding further barriers to market access in poor countries. Accordingly, while the Trade Ministers' meeting at the 1996 World Trade Organization conference endorsed internationally recognized fundamental labour standards (the prohibition of forced labour and child labour, freedom of association, the right to organize and bargain

collectively, and the elimination of discrimination in employment), they emphasized that ILO was the proper forum to deal with such labour issues (27).

In fact, liberalization has been associated with deregulation of production laws, adding to pressures on occupational health standards. For example, occupational health laws did not apply in some EPZs and penalties for breach of occupational health laws have been set at absurdly low levels relative to other production costs. Law enforcement has been patchy and criminal sanctions for breach of law rarely invoked, which is not surprising in light of inadequately resourced government inspection systems, weak protection of workers' collective bargaining rights, and the non-application of laws in the informal sector (13). Thus, rapid and uneven production changes have not been accompanied by the transfer of information, technology, skills, and regulatory capacity to ensure that health risks are adequately identified and controlled (3). Self-regulation is often promoted under liberalized trade systems, but is not always implemented (13) and it is no substitute for national laws and enforcement systems. The background regulatory environment has proved to be important for promoting safe work standards across large and small companies, including transnational enterprises.

### Management systems

Rapid changes in production and trade demand a state capacity and organization that can promote and implement work environment standards and a work safety culture. They also demand a tripartite management system that is capable of hazard surveillance in the workplace and occupational health management, as well as being able to reach consensus on national standards (8). The increased movement of goods, services, and processes across national boundaries calls for regional cooperation on occupational health and an effective interface between the community's and workers' health, or between occupational health and public health. Given the importance of workers' struggles in occupational health outcomes, these goals will not be achievable if workers themselves become weaker and less able to control the work process. Trends towards output-related pay, introduction of new processes without accompanying hazard information, and insecure and flexible contracts weaken workers' ability to control their work environments. Unions may benefit from the global spread of information and global pressures for occupational health standards, but find it difficult

to implement these gains in the face of restrictions on workers' access to unions, such as in EPZ workplaces; job insecurity; output-related pay; and home-based, migrant, and out-contracted work. Unions have responded to these difficulties by forging stronger links with unions internationally and with nongovernmental and state organizations working with communities and by finding innovative ways to strengthen information flow to members. However, these measures do not adequately compensate for the significant threats that job insecurity and flexibility pose to collective organization and to worker control over work conditions.

The opportunities for occupational health improvements presented by globalization are thus still outweighed by the shift in the health costs to workers in the most insecure forms of employment, particularly given the weakness of the social protection systems. This burden falls particularly on migrant workers, women, children, and workers in precarious employment. While international standards obligate the employer to pay for occupational injury and disease, inadequate prevention, detection, and compensation flout this principle (28).

### Conclusion

As a minimum requirement, greater effort is now needed to study the occupational health consequences of global economic and trade reforms, and standards put in place to protect workers' health. Adequate public-sector and union capacity for setting standards and enforcement should also be ensured, as well as international cooperation on norms of safe work; the liabilities of manufacturers, employers, and exporters; and work-safety rights. This means focusing attention on those currently marginalized from the opportunities of globalization. Unfortunately, the most creative social protection systems cannot confront a tidal wave of health problems from insecure, hazardous and low-quality jobs. Instead, attention should focus on the source of the hazard. The health problems emerging from liberalized, competitive production processes demand that production be organized to meet sustainable development goals, not only in terms of economic growth, but also in the development and health of human resources. ■

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### Résumé

#### Mondialisation et santé au travail : l'exemple de l'Afrique australe

L'intensification du commerce mondial profite en général aux pays industrialisés et aux économies fortes et marginalise les faibles. Le présent article examine l'impact de la mondialisation sur les tendances de l'emploi et sur la santé au travail en s'appuyant sur des

exemples vécus en Afrique australe. Avec la diminution de la part du commerce mondial qui revient aux pays les plus pauvres de la planète, les travailleurs de ces pays sont de plus en plus employés à des travaux précaires, dangereux, utilisant parfois des techniques dépassées ou

interdites dans les pays industrialisés. Les maladies professionnelles qui en résultent sont en général moins visibles dans les pays à faible revenu, où elles sont insuffisamment reconnues en tant que problème de santé publique. Elles peuvent aussi exercer leurs effets nocifs en dehors des lieux de travail, par exemple du fait de la pollution de l'environnement ou des mauvaises conditions de logement. Afin de réduire les effets néfastes des réformes du commerce mondial sur la santé

des travailleurs, il faut intégrer des mesures plus énergiques de protection sociale dans les activités de production et de commerce, notamment une reconnaissance, une prévention et une prise en charge accrues des maladies d'origine professionnelle. Plus encore, la réussite des systèmes de production et d'échanges devrait être jugée d'après leurs résultats sur le double plan de la croissance économique et de la santé de la population.

## Resumen

### Globalización y salud ocupacional: perspectiva desde el África austral

El aumento del comercio mundial ha beneficiado por lo general a las economías industrializadas y poderosas y ha marginado a las débiles. En este artículo se examinan las repercusiones de la globalización en la evolución del empleo y en la salud ocupacional, a partir de ejemplos extraídos del África austral. Mientras la participación de los países más pobres en el comercio mundial ha disminuido, los trabajadores de esos países se ven cada vez más obligados a aceptar trabajos precarios e inseguros, en los que a veces han de hacer uso de tecnologías obsoletas o prohibidas en los países industrializados. Las enfermedades profesionales resultantes son generalmente menos visibles en los países de bajos ingresos, donde no se reconoce lo suficiente el

problema que suponen. Fuera del entorno laboral también pueden verse afectadas muchas personas, por ejemplo como consecuencia de la contaminación ambiental de origen laboral y del deterioro de las condiciones de vida. A fin de reducir los efectos adversos de las reformas del comercio mundial en la salud ocupacional, es preciso incorporar a las actividades productivas y comerciales medidas de protección social más sólidas, incluidas mejoras del reconocimiento, la prevención y el tratamiento de los problemas de salud de origen laboral. Además, el éxito de los sistemas productivos y comerciales debe calibrarse a tenor de los beneficios que de ellos se deriven tanto para el crecimiento económico como para la salud de la población.

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