Cornell University
ILR School

**Cornell University ILR School**

# DigitalCommons@ILR

International Publications

Key Workplace Documents

2014

# Profits and Poverty: The Economics of Forced Labour

International Labor Organization

# Profits and Poverty: The Economics of Forced Labour

## Abstract

[Excerpt] The publication by the ILO of new estimates on forced labour in 2012 created a sense of urgency on the need to address implementation gaps regarding the ILO's Forced Labour Conventions. In addition, it also prompted calls to consider the adoption of supplementary standards by the 103rd International Labour Conference in June 2014.

The power of normative pressure against those who still use or condone the use of forced labour is essential. National legislation needs to be strengthened to combat forced labour and penalties against those who profit from it need to be strictly enforced. However, a better understanding of the socioeconomic root causes as well as a new assessment of the profits of forced labour are equally important to bringing about long-term change.

The purpose of this report is to do just that. It highlights how forced labour thrives in the incubator of poverty and vulnerability, low levels of education and literacy, migration and other factors. The evidence and results presented in this report illustrate the need for stronger measures of prevention and protection and for enhanced law enforcement as the basic responses to forced labour. At the same time, it also provides new knowledge of the determinants of forced labour that can help us develop and expand policies and programmes to not only stop forced labour where it exists, but prevent it before it occurs.

## Keywords

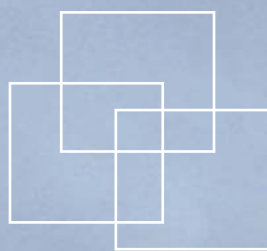forced labor, prevention, protection, International Labor Organization, ILO

## Comments

# Profits and Poverty:

## The Economics of Forced Labour

ILO

International
Labour
Office

Geneva

# PROFITS AND POVERTY:
# The economics of forced labour

# Preface

Since the ILO's International Labour Conference adopted the Declaration on Fundamental Principles and Rights at Work and its Follow-up in 1998, much progress has been made toward achieving respect for, and promotion and realization of, its four principals: freedom of association and the right to collective bargaining, the elimination of all forms of forced or compulsory labour, the effective abolition of child labour and the elimination of discrimination in respect to employment and occupation. In particular, the ILO's two Conventions on Forced Labour have today received almost universally ratification, and enjoy wide recognition and support.

Shortly after the adoption of the 1998 Declaration, the ILO Governing Body established the Special Action Programme to combat Forced Labour (SAP-FL), which is located in the Fundamental Principles and Rights Branch of the Governance and Tripartism Department. Since its establishment in 2001, SAP-FL has prioritized research and statistics to enhance the global understanding of forced labour and related practices, such as human trafficking and slavery, to support the development of evidence-based policies and programmes to address forced labour, human trafficking and other forms of involuntary, coercive work.

The publication by the ILO of new estimates on forced labour in 2012 created a sense of urgency on the need to address implementation gaps regarding the ILO's Forced Labour Conventions. In addition, it also prompted calls to consider the adoption of supplementary standards by the 103rd International Labour Conference in June 2014.

The power of normative pressure against those who still use or condone the use of forced labour is essential. National legislation needs to be strengthened to combat forced labour and penalties against those who profit from it need to be strictly enforced. However, a better understanding of the socio-economic root causes as well as a new assessment of the profits of forced labour are equally important to bringing about long-term change.

The purpose of this report is to do just that. It highlights how forced labour thrives in the incubator of poverty and vulnerability, low levels of education and literacy, migration and other factors. The evidence and results presented in this report illustrate the need for stronger measures of prevention and protection and for enhanced law enforcement as the basic responses to forced labour. At the same time, it also provides new knowledge of the determinants of forced labour that can help us develop and expand policies and programmes to not only stop forced labour where it exists, but prevent it before it occurs.

The report is based on the efforts of a multi-disciplinary research team, led by SAP-FL and supported by the ILO's Research Department, ILO experts and external peer reviewers. The publication of this report was possible thanks to the generous contributions of the Government of Ireland (Irish Aid) that provides core funding to SAP-FL. The U.S.

Department of Labor and UK Department for International Development (DFID) provided funding for the implementation of surveys.

It is hoped that this new report will contribute to greater awareness and effective action against forced labour as well as further research in this area.

# Table of Contents

# Acknowledgements

# Introduction

The global integration of economies, including labour markets, has brought many opportunities for workers and businesses. Despite the past years of economic crisis, it has generally spurred economic growth. However, the growth in the global economy has not been beneficial for all. Today, about 21 million men, women and children are in forced labour, trafficked, held in debt bondage or work in slave-like conditions.

The publication of this new ILO report on the economics of forced labour takes the understanding of forced labour, human trafficking, and modern forms of slavery to a new level. It builds on earlier ILO studies on the extent, cost and profits from forced labour. For the first time, it looks at both the supply and demand sides of forced labour, and presents solid evidence for a correlation between forced labour and poverty. What's more, it provides startling new estimates of the illegal profits generated through the use of forced labour, as well as new evidence of the key socio-economic factors that increase the risk of falling victim to coercion and abuse.

These new findings come as progress is being made in the struggle against forced labour. State-imposed forced labour is declining in importance when compared to the extent of forced labour in the private economy. Of course, vigilance is needed to prevent state-imposed forced labour from resurging. But attention must now be focused on understanding what continues to drive forced labour and trafficking in the private sector.

Chapter 1 lays the groundwork for an understanding of forced labour and what it is, and examines the importance of defining forced labour and related practices, such as human trafficking and slavery. It reviews the global forced labour estimates published by the ILO in 2012, which were significantly higher than the ILO's earlier estimate.

Chapter 2 examines the profits from forced labour. Using a new and expanded methodology and based on the 2012 Global Estimate, the report provides updated estimates of the global profits generated by forced labour.

Chapter 3 provides a new analysis of the socio-economic factors that make people vulnerable to forced labour. Based on a series of ground-breaking country surveys that consider a range of different cohorts and factors, it highlights where forced labour is most likely to occur and provides a striking correlation between household vulnerability to sudden income shocks and the likelihood of ending up in forced labour. It also elucidates risk factors that can increase vulnerability to forced labour, such as poverty, lack of education, illiteracy, gender and migration.

The results of this study serve to highlight the critical need for standardized data collection methods across countries that enable the ILO and other international organisations to generate more reliable global figures, measure trends and better understand risk factors. What's more, it also shows how understanding the socio-

economic factors that increase a person's vulnerability to forced labour can help drive the development of new, more robust and concrete strategies that augment existing programmes. In addition, it calls for a strengthening of laws and policies based on normative responses and an expansion of preventive measures that can keep people out of forced labour.

The report concludes that there is an urgent need to address the socio-economic root causes of this hugely profitable illegal practice if it is to be overcome. Comprehensive measures are required that involve governments, workers, employers and other stakeholders working together to end forced labour. It shows how the continued existence of forced labour is not only bad for its victims, it's bad for business and development as well. And it aptly illustrates that forced labour is a practice that has no place in modern society and should be eradicated as a matter of priority.

# Chapter 1

## Measuring forced labour, human trafficking and slavery: Why definitions matter

Clear and precise definitions are fundamental to the measurement of social problems, their trends and potential change. By carefully defining a problem, it is possible to quantify its extent, understand whether it decreases or increases over time, and assess whether policies have an impact. Some problems are easier to measure than others, and the consensus is that measuring forced labour, trafficking, slavery, including sexual exploitation, poses many challenges. The hidden nature of the problem, political sensitivities and ethical considerations make it very difficult to implement verifiable surveys.

This chapter examines the definition of forced labour, and how it may affect estimates of its extent and the profits generated through exploitation and loss of freedom. It also considers the phrase "modern slavery", which has emerged as a catch-all for forced labour, human trafficking, forced sexual exploitation and some of the worst forms of child labour. There has been some concern, in both academic and legal circles, that the phrase represents a trend to label certain practices as more extreme than is legally accurate. There is no question that slavery, in all its forms, is unacceptable and must be eradicated. However, not all children exposed to hazardous work are "slaves", and not all labour that is not compensated with a fair wage is necessarily forced.

The ILO's Forced Labour Convention, 1930 (No. 29) defines forced labour as: "All work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily" (ILO C.29, Art. 1). Convention No. 29 provides for certain exceptions with respect to work of a purely military character, "normal" civic obligations, work as a consequence of a conviction in a court of law and carried out under the control of a public authority, work in emergency situations such as wars or natural calamities, and minor communal services (Art. 2.2). A subsequent ILO Convention, the Abolition of Forced Labour Convention, 1957 (No. 105) further specifies that forced labour can never be used as a means of political coercion or education or as punishment for expressing political views or for participating in strike action, as labour discipline, as racial, social, national or religious discrimination, or for mobilizing labour for economic development purposes.

Forced labour includes practices such as slavery and those similar to slavery, debt bondage and serfdom as defined in other international instruments, such as the League of Nations Slavery Convention (1926)[1] and the UN Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery

---

[1] The 1926 Slavery Convention defines slavery as "the status or condition of a person over whom any or all of the powers attaching to the right of ownership are exercised" (Article 1(1)).

(1956). Further, the ILO Committee of Experts on the Application of Conventions and Recommendations (CEACR) has provided guidance on the scope of the definition of forced labour, stressing that it encompasses trafficking in persons for the purpose of labour and sexual exploitation,[2] as defined by the Palermo Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children.[3]

The Palermo Protocol defines trafficking in persons as the recruitment, transportation, harbouring or receipt of persons, by means of coercion, abduction, deception or abuse of power or of vulnerability, for the purpose of exploitation. It goes on to specify that exploitation, at a minimum, includes sexual exploitation, forced labour, slavery and slavery-like practices.[4] There is therefore a clear link between the Protocol and ILO Convention No. 29. The only type of exploitation specified in the Protocol's definitional article that is not also covered by ILO Convention No. 29 is trafficking for the removal of organs.

Forced labour affects both adults and children as defined in Convention No. 29. However, the importance of definitions is illustrated in the terms of the ILO Worst Forms of Child Labour Convention, 1999 (No. 182)[5]. The Convention makes a distinction between children who are held in slavery, debt bondage or serfdom, or who are trafficked or subjected to forced labour, and those who are in "hazardous work". All of these forms of child labour should be eliminated within the shortest possible time but different approaches are required. The Convention is part of a larger canon of UN and ILO instruments in which the drafters agreed that children cannot voluntarily "consent" to exploitation and that free movement does not equal free labour.

For the purposes of this report, therefore, all primary data have been validated as applying to persons meeting the definition under Convention No. 29: men and women, boys and girls were considered as being in forced labour whenever the work was involuntary as a result of force, fraud or deception, and a penalty or threat of a penalty was used to coerce them or their parents in the case of children below the age of 18. This means that, for example, working for low wages is not considered forced labour

---

[2] ILO Committee of Experts on the Application of Conventions and Recommendations (CEACR): *Eradication of forced labour: General survey concerning the Forced Labour Convention, 1930 (No. 29), and the Abolition of Forced Labour Convention, 1957 (No. 105)* (Geneva, 2007), Report III (Part 1B), para. 77.

[3] The Protocol supplements the UN Convention Against Transnational Organized Crime (2000). It criminalizes trafficking in persons, whether it occurs within countries or across borders, and whether or not conducted by organized criminal networks.

[4] Article 3 of the Protocol defines trafficking as: "The recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs." (Art. 3 (a)). It also specifies that: "The recruitment, transportation, transfer, harbouring or receipt of a child for the purpose of exploitation shall be considered 'trafficking in persons' even if this does not involve any of the means set forth in subparagraph (a) of this article" (Art. 3 (c)).

[5] According to the Worst Forms of Child Labour Convention (No. 182), "worst forms of child labour" shall include "all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict".

unless it results from coercion applied by the employer or recruiter. Victims of forced labour could be working in their place of origin, in another part of their country, or abroad.

<div style="background:teal;color:white;">

**A simple typology**

Since 2005, the ILO has classified forced labour in three main categories:

- Forced labour **imposed by the state** covers all forms of work exacted by public authorities, military or paramilitary, compulsory participation in public works and forced prison labour (within the scope of ILO Conventions No. 29 and No. 105);
- Forced labour **imposed by private agents for sexual exploitation** covers any commercial sexual activity, including pornography, exacted from the victim by fraud or force; and,
- Forced labour **imposed by private agents for labour exploitation** includes bonded labour, forced domestic work, forced labour of migrants in many economic sectors and work imposed in the context of slavery or vestiges of slavery. Forced illicit activities such as forced begging for gangs for example are also included in this category.

</div>

The ILO's 2012 Global Estimate of forced labour covers these three forms of forced labour, but the estimate of the profits and the analysis of the causes of forced labour presented in this paper are limited to labour and sexual exploitation extracted by private agents.

## Measuring forced labour: A brief history

In early 2000, there was virtually no solid data on forced labour, either at the national or global levels. Some international organizations, governments, media and non-governmental organizations cited anecdotal evidence of forced labour, but most of the information was vague, imprecise in its terminology and analysis, or quantified by widely varying estimates, if at all. In response, the ILO undertook the difficult task of collecting data that could be verified, thus providing a foundation to inform policy and action against forced labour.

The ILO designed and implemented qualitative research worldwide on the mechanisms of recruitment, working conditions and the means of coercion imposed on child and adult workers in various sectors and industries. At the same time, data were gathered by various organizations and governments on identified and assisted victims of forced labour and human trafficking, which began to raise concerns of what was perceived as "the tip of the iceberg" of a much larger phenomenon. Compounding the difficulty, it emerged that most victims who managed to escape from forced labour or trafficking returned to their place of origin without asking for assistance, and therefore were not included in those databases.

In 2005, the ILO published the first global estimate of forced labour, with indications of its regional distribution and broad forms in the Director-General's Global Report entitled *A global alliance against forced labour*. The global estimate's methodology was experimental and could, doubtless, have been improved in many ways. However, this

first estimate had the effect of launching an entirely new global discussion on the issue, not only on the extent of the problem that had been largely invisible due to weak or non-existent reliable data, but also on how to mobilize public awareness of its continued existence and develop means to support its elimination.[6]

Subsequently, data collection was extended to the national level and selected sectoral and geographical areas of potential forced labour. Between 2007 and 2012, the ILO launched a number of pilot statistical surveys in Africa, Latin America, Asia and Europe. In most cases, these surveys were designed and implemented in collaboration with National Statistical Offices to guarantee the quality of the work and to ensure national ownership.

The first surveys on the forced labour of migrant workers were conducted in Armenia, Georgia and the Republic of Moldova, all origin countries for mainly adult labour migrants and therefore potential sources of trafficking. The three surveys were implemented as household-based surveys, targeting labour migrants who returned from abroad after an absence of two to three years. In two other countries, Nepal and the Niger, surveys targeted households at risk of more traditional forms of forced labour of adults and children. Finally, surveys to estimate different forms of forced labour and trafficking, either at the national or regional levels or for a given sector of activity, were implemented in five countries: Bangladesh, the Plurinational State of Bolivia, Côte d'Ivoire, Guatemala and Mali.

These surveys gathered data on the socio-economic profile of the respondents, the recruitment process, migration history (if relevant), working and living conditions including the risk of involuntariness and penalty, economic data on wages, recruitment fees and remittances, and whether the workers had requested assistance. These data were used for the 2012 Global Estimate (to estimate the ratio of reported/non-reported cases of forced labour) and for the determinants analysis (testing some characteristics of the households or respondents for the regression analysis).

The lessons learned by implementing those pilot surveys were published in 2012 in another ILO publication, entitled *Hard to see, harder to count: Survey guidelines to estimate forced labour of adults and children*.[7] The guidelines included an operational definition of forced labour, along with a list of criteria for assessing forced labour that are now being used in the validation process of any ILO data used for research on forced labour to ensure consistency.

---

[6] ILO: *A global alliance against forced labour, Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work* (Geneva, 2005); P. Belser et al.: *ILO Minimum Estimate of Forced Labour in the World* (ILO, Geneva, 2005).

[7] ILO: *Hard to see, harder to count: Survey guidelines to estimate forced labour of children and adults* (Geneva 2012), available at: http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_182096.pdf.

# The ILO 2012 Global Estimate of forced labour

In the 2012 survey, the ILO estimated that 20.9 million people are in forced labour globally, trafficked for labour and sexual exploitation or held in slavery-like conditions. The vast majority of the 20.9 million forced labourers – 18.7 million (90 per cent) – are exploited in the private economy, by individuals or enterprises. Of these, 4.5 million (22 per cent) are victims of forced sexual exploitation, and 14.2 million (68 per cent) are victims of forced labour exploitation, primarily in agriculture, construction, domestic work, manufacturing, mining and utilities. The remaining 2.2 million (10 per cent) are in state-imposed forms of forced labour, such as prisons, or in work imposed by military or paramilitary forces.

Figure 1: Global estimate by form of forced labour
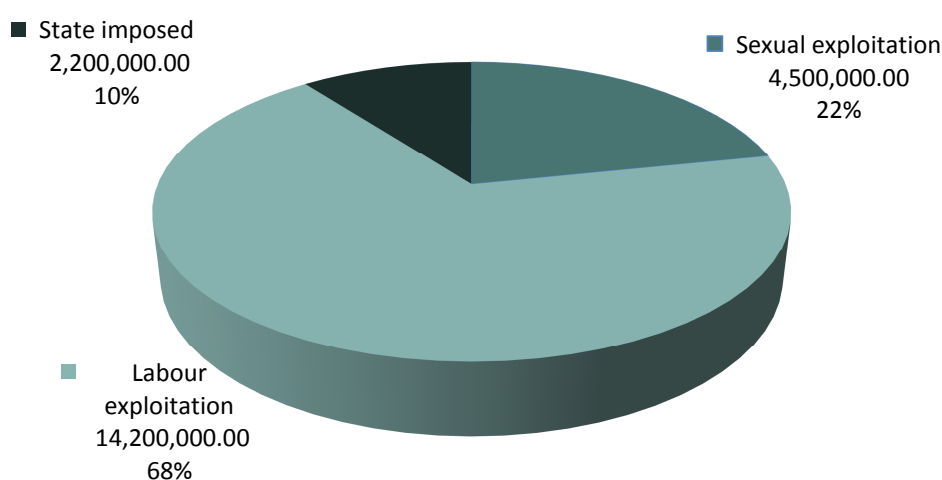


Source: ILO

Women and girls represent the greater share of the total – 11.4 million (55 per cent) – compared to 9.5 million (45 per cent) men and boys. Adults are more affected than children – 15.4 million (74 per cent) are aged 18 or older, with the number of children under the age of 18 estimated at 5.5 million (26 per cent).

The Asia-Pacific region accounts by far for the largest number of forced labourers – 11.7 million (56 per cent of the global total). The second highest number is found in Africa at 3.7 million (18 per cent), followed by Latin America and the Caribbean with 1.8 million victims (9 per cent). The Developed Economies and European Union account for 1.5 million (7 per cent), while countries of Central, South-Eastern and Eastern Europe (CSEE) and the Commonwealth of Independent States (CIS) have 1.6 million (7 per cent). There are an estimated 600,000 (3 per cent) victims in the Middle East.[8]

---

[8] Regional groupings are based on those used in the ILO's report, *Global Employment Trends 2012* (Geneva). Percentages and numbers are rounded.

The prevalence rate (number of victims per thousand inhabitants) is highest in the CSEE and Africa regions at 4.2 and 4.0, respectively, and lowest in the Developed Economies at 1.5 per 1,000 inhabitants. The relatively high prevalence in CSEE and CIS can be attributed to the fact that the population is much lower than in Asia, while reports of trafficking for labour and sexual exploitation and of state-imposed forced labour in the region are numerous.

The estimates also provide a picture of the impact of migration on forced labour. Of the total, an estimated 9.1 million people (44 per cent) moved either internally or internationally, while the majority, 11.8 million (56 per cent), were subjected to forced labour within their place of origin or residence. The study also showed that cross-border movement is strongly associated with forced sexual exploitation, while a majority of victims of forced labour exploitation, and almost all those in state-imposed forced labour, have not left their home areas. Another interesting result to emerge from the estimates is that victims spend an average of 18 months in forced labour, although this varied with different forms of forced labour.

# Chapter 2

## Estimating the profits of forced labour

The exaction of forced labour often involves a range of intermediaries such as brokers, moneylenders or criminal networks. They all take advantage of workers who are vulnerable to deception, abuse and fraud. But the individuals and enterprises that employ workers under conditions of forced labour stand to gain the most by underpaying their workers, or by not paying them at all. The *ILO Global Estimate of Forced Labour* in 2012 also provided evidence on the length of time that victims of forced labour were held captive. In more than one third of the reported cases that contained such information, forced labour lasted one to two years. Almost half of reported cases indicated that victims spent six months or less in forced labour.[9] During this time, unscrupulous employers and criminals can make significant profits by exacting forced labour.

In 2005, the ILO published its first estimate of the profits resulting from human trafficking, which was considered as a process involving the movement of a person by a third party.[10] The total illicit profits produced in 1 year by trafficked forced labourers were estimated at US$32 billion. The methodology was explained in more detail and extended to non-trafficked forced labour in an ILO working paper published in 2005.[11]

The paper provided the first estimates of the profits made by the use of forced labour, using data on value added in the agricultural sector. Estimates were also given for forced sexual exploitation. The results were based on the estimates of the extent of forced labour published by the ILO in 2005.[12] The focus was on the agricultural sector, as it was assumed to employ a high number of forced labour victims. Profits were defined in the 2005 working paper as the difference between the average economic value added and the sum of expenditures on wage payments and intermediate consumption. It was estimated that the global profits made using forced labour were at least US$44 billion per year, including the US$32 billion from trafficking.

In 2009, the *ILO Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work* focused on the financial costs workers incurred as a result of being held in forced labour. The report concentrated on the underpayment of wages and the costs involved in the recruitment process, such as

---

[9] ILO: *ILO global estimate of forced labour: Results and methodology* (Geneva, 2012).

[10] ILO: *A global alliance against forced labour*, G*lobal Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work* (Geneva, 2005).

[11] P. Belser: *Forced Labour and Human Trafficking: Estimating the Profits* (Geneva, ILO, Special Action Programme to Combat Forced Labour, 2005), DECLARATION/WP/42/2005.

[12] ILO: *A global alliance against forced labour, Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work* (Geneva, 2005); P. Belser et al.: *ILO Minimum Estimate of Forced Labour in the World* (ILO, Geneva, 2005).

recruitment fees. The report found that, excluding forced sexual exploitation, the total costs of coercion were approximately US$21 billion, with the total amount of underpaid wages estimated to be US$19.6 billion, with the remaining US$1.4 billion attributed to illegal recruitment fees.

This report re-estimates the illegal profits made from the use of forced labour based on an updated methodology and data collected for the 2012 Global Estimate. Like the 2005 ILO estimate of the profits of forced labour, this new estimate does not take into account profits generated by forced labour imposed by state authorities. The new estimate is the aggregation of regional profit figures for three forms of forced labour, namely forced labour exploitation outside domestic work, forced domestic work and forced sexual exploitation.

## Previous estimates

The 2005 estimate of the profits made by the use of forced labour exploitation relied on the value added for the agricultural sector. This was considered a good indicator of the average value added in the different low-skilled activities performed by forced labour victims. In addition, a high number of forced labour victims were considered to be working in this sector. The methodology involved the calculation of profits as the total value added (VA) minus the total wage payments (W). When information on value added was not readily available, the turnover approach was used, where the profits were estimated to be the turnover (T) less total wage payments (W) less intermediate consumption (C). Turnover was calculated as the average value of goods and services produced per worker multiplied by the total number of workers.[13] Thus, to estimate the profits, the 2005 paper used the following equations:

$$\pi = \textbf{VA - W}$$

$$\pi = T - (W+C)$$
$$\pi = [(qp) - (\omega + c)]N$$

Information on the added value per person in agriculture from the *2004 World Development Indicators* (WDI) of the World Bank[14] and the hypothesis that, on average, forced labour victims are paid about 20 per cent of their added value resulted in an estimated illegal profit of US$10.4 billion. A high percentage of the profits were made in Latin America and the Caribbean (US$3.6 billion), Developed Economies (US$3.4 billion) and in Asia and the Pacific (US$2.5 billion). When only trafficked individuals were considered, the 2005 paper estimated a profit of about US$3.8 billion.

Estimating the illegal profit from forced sexual exploitation is difficult as information on the economic added value of sex work is scarce and an "inappropriate" measure. Rough estimates are therefore used where the prices paid by clients were estimated

---

[13] This is in itself calculated as the average price of units produced (p) multiplied by the quantity (q) produced per worker.
[14] The World Bank: *World Development Indicators* (Washington D.C., 2004).

based on the level of income of the country where the transaction took place and the legal regime of that country. Based on information from multiple sources, it was estimated that each individual subjected to forced sexual exploitation had 80 transactions per month. It was further estimated that wage payments and intermediate consumption was about 30 per cent of total turnover. Using this information, it was estimated that profits made from forced sexual exploitation were about US$33.9 billion, with profits made from forced sexual exploitation as a result of trafficking estimated to be about US$27.8 billion, where almost half of these profits were made in industrialized economies alone (US$13.3 billion).

In his 2009 study, *Sex Trafficking: Inside the Business of Modern Slavery*[15], Siddharth Kara estimates there were 28.4 million slaves worldwide at the end of 2006. Using a profit and loss statement approach, the implied annual revenues generated by slaves at the end of 2006 was about US$152.3 billion, with the implied annual profit from slave labour estimated to be US$91.2 billion. This figure was revised in 2012 to reach US$96.5 billion. To calculate the profits, Kara initially calculates the revenue generated by each slave. For each type of slavery, Kara estimates a percentage in each region. Thus, for bonded labour and debt bondage, he estimates that 89 per cent are in South Asia, 5.5 per cent in Latin America and the other 5.5 per cent in Africa. He then divides, for each type of slavery in each region, the percentage of slaves in specific industries of selected countries. For example, of the 89 per cent of slaves in South Asia, 15 per cent are estimated to be in brick kilns, 25 per cent in carpet weaving and other manufacturing, and the remaining 60 per cent in rice and sugar cane production.

For brick kilns, Kara decides to use India as a case study, and thus estimates that the annual revenue generated by a bonded labourer working in the brick kilns of India amounts to US$4,355. This value, when multiplied by the percentage of bonded labourers in the brick kilns, puts the annual revenue contribution of a brick-kiln bonded labourer to the total revenues generated by bonded labourers in South Asia at US$653. This calculation is also done for the carpet weaving industry in India and the rice and sugar cane industry. An average of the revenues generated by these three selected industries are then calculated and subsequently multiplied by the percentage of bonded labourers in South Asia.

The calculations are then repeated for Latin America, where the countries used are Brazil, Peru and the Plurinational State of Bolivia, focusing on the charcoal camps (10 per cent), cattle farms (30 per cent) and agriculture (60 per cent), specifically tobacco and sugar cane, and for Africa using Côte d'Ivoire, Kenya and Uganda, where the sectors focused on include agriculture (90 per cent), specifically coffee and cocoa, and transport/conveyance (10 per cent). The overall revenue generated by bonded labourers is calculated as the weighted average of the estimated revenues per selected region. Operating costs are calculated using information from data gathered during the survey and face-to-face interviews. The final profit generated is estimated to be the revenues minus the operating costs.

---

[15] S. Kara: *Sex Trafficking: Inside the Business of Modern Slavery (*New York, Columbia University Press, 2009).

Figure 2 Summary of Kara methodology



```
                              ┌──────────────┐
                              │ Bonded Labour│
                              └──────────────┘
              89                   5.5                   5.5
     ┌──────────────┐        ┌──────────────┐      ┌──────────────┐
     │  South Asia  │        │    Africa    │      │ Latin America│
     └──────────────┘        └──────────────┘      └──────────────┘
    15      25      60          10      90          10      30      60
```

| Brick Kilns | Carpet Weaving | Rice & Sugarcane | Conveyance | Coffee & Cocoa | Charcoal | Cattle Farms | Tobacco & Sugarcane |
|---|---|---|---|---|---|---|---|
| • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits | • Revenues<br>• Costs<br>• Profits |

India

Côte d'Ivoire, Kenya, Uganda

Brazil, Peru, Bolivia

Source: S. Kara: Sex Trafficking: Inside the Business of Modern Slavery (New York, Columbia University Press, 2009).

Both approaches discussed so far employ a business model. While the ILO 2005 working paper chooses to use the *value added statement* approach, Kara uses the *profits and loss statement* approach. In the next section, the model is developed to estimate the profits made by the use of forced labour, using information from the 2012 Global Estimate database. The new methodology can be seen as a combination of the two methodologies described above. Since the two previous estimates were released, several studies have been carried out on the economics of forced labour, with new information coming to light. In addition, many cases of forced labour collected by the ILO for the 2012 Global Estimate of Forced Labour contained information on the sectors in which victims are concentrated and on the wages that they earn in the various sectors. These new data are used to improve the previous models.

## New estimate

In addition to the victims, the main financial losers from forced labour are the countries where forced labour originates or where forced labour occurs. The victims usually lose much of their earnings due to wage retention, debt repayments and underpayment of wages. They work under strenuous conditions but receive little or no pay. The countries where they work lose revenues from non-payment of taxes due to undeclared incomes or the illegal nature of the jobs concerned. For the countries of origin, remittances are severely affected by the very low wages of forced labourers. For developing countries, this cut in remittances tends to result in a heavy reduction in investments and a lack of improvement in income inequality.

Data collected by the ILO for the 2012 Global Estimate of Forced Labour made it possible to revise the 2005 estimate of the profits, giving a more accurate picture of the financial impact of forced labour by region. All calculations are made using 2006 as a reference year. As explained in detail in the following sections, the new estimate is the aggregation of regional figures of profits for three forms of forced labour, namely forced

labour exploitation outside domestic work, forced domestic work and forced sexual exploitation. These forms concern 18.7 million victims out of the 20.9 million people estimated to be in forced labour in 2012. In absence of reliable information on the economics of state-imposed forced labour, and the theoretical difficulties in estimating the profits in forms such as child soldiers, it was decided to exclude the profits generated by the 2.2 million victims of state-imposed forced labour.

Table 2.1. Estimated annual profits from forced labour (US$ billion)

| Region | Forced Sexual Exploitation | Domestic work | Non Domestic labour | Total |
|---|---|---|---|---|
| Asia-Pacific | 31.70 | 6.30 | 13.80 | 51.80 |
| Latin America and the Caribbean | 10.40 | 0.50 | 1.00 | 12.00 |
| Africa | 8.90 | 0.30 | 3.90 | 13.10 |
| Middle East | 7.50 | 0.40 | 0.60 | 8.50 |
| Central and South-Eastern Europe and CIS | 14.30 | 0.10 | 3.60 | 18.00 |
| Developed Economies and EU | 26.20 | 0.20 | 20.50 | 46.90 |
| World | 99.00 | 7.90 | 43.40 | 150.20 |

Source: ILO

Components may not add up to the total because of rounding

It is estimated that the total illegal profits obtained from the use of forced labour[16] worldwide amount to **US$150.2 billion per year**. More than one third of the profits – **US$51.2 billion** – are made in forced labour exploitation, including nearly **US$8 billion** generated in domestic work by employers who use threats and coercion to pay no or low wages.

The profits are highest in Asia (US$ 51.8 billion) and Developed Economies (US$ 46.9 billion), mainly for two reasons: the high number of victims in Asia and the high profit per victim in Developed Economies.

---

[16] Outside state-imposed forced labour.

Figure 3. Annual profits of forced labour by region (US$ billion)

## Annual profits of forced labour per region (US $ billion)
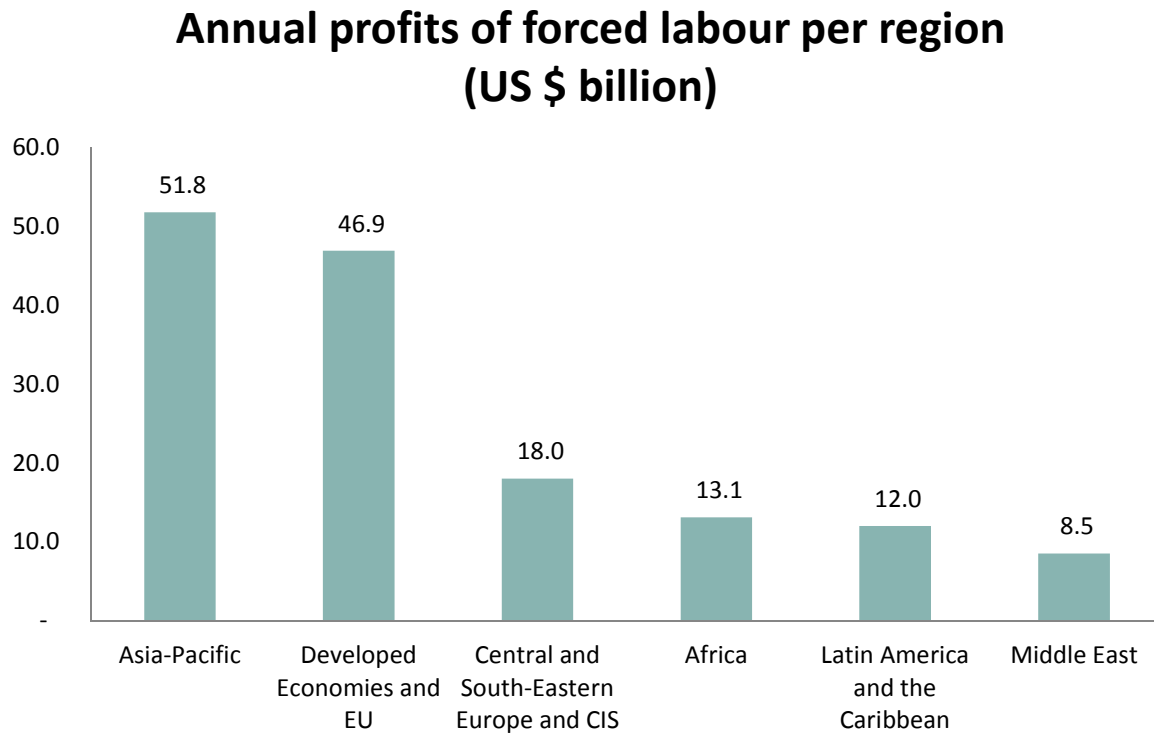


Source: ILO

Annual profit per victim is highest in the Developed Economies (US$34,800 per victim), followed by countries in the Middle East (US$15,000 per victim), and lowest in the Asia-Pacific region (US$5,000 per victim) and in Africa (US$3,900 per victim).

Figure 4. Annual profit per victim of forced labour by region (US$)

## Annual profit per victim of forced labour per region (US $)
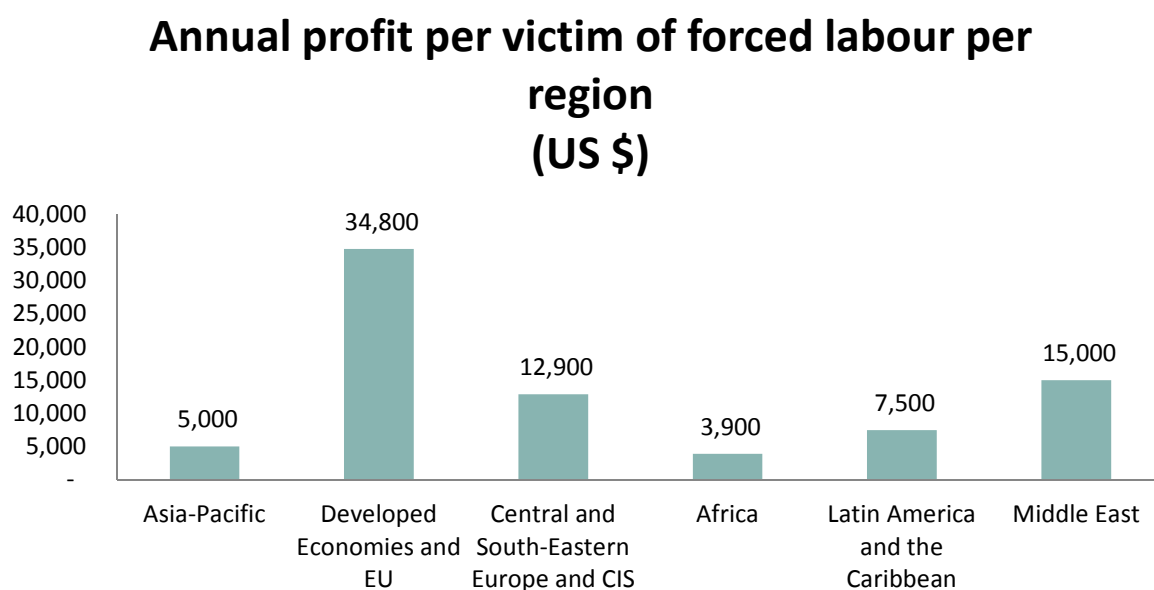


Source: ILO

Globally, two thirds of the profits from forced labour were generated by forced sexual exploitation, amounting to an estimated **US$ 99 billion per year**. In calculating the profits, it is assumed that wages and intermediate consumption make up about 30 per cent of the total earnings of forced labour victims in forced sexual exploitation.

Victims of forced labour exploitation, including domestic work, agriculture and other economic activities, generate an estimated **US$ 51 billion** in profits per year. Out of those, the profits from forced labour in agriculture, including forestry and fishing, are estimated to be **US$ 9 billion per year**. This was calculated by estimating the difference between the value added accruing to labour (using the value added per worker, which was then multiplied by the labour share, conservatively estimated to be two thirds) and the wages paid to victims of forced labour in that sector, using information of the 2012 Global Database.

Profits for other economic activities are estimated at **US$ 34 billion per year**, encompassing construction, manufacturing, mining and utilities. In this case, the value added accruing to labour is calculated using the sector-specific average earnings divided by the labour share.

Finally, it is estimated that private households employing domestic workers under conditions of forced labour save about **US$8 billion** annually by not paying or underpaying their workers. Those savings were calculated based on the difference between the wage that domestic workers should receive and the actual wages paid to domestic workers in forced labour. Based on information in the 2012 Global Database, it can be estimated that forced domestic workers are paid on average about 40 per cent of the wage they should receive.

Profits per victim are highest in forced sexual exploitation, which can be explained by the demand for such services and the prices that clients are willing to pay, and by the low capital investments and low operating costs associated with this activity. With a global average profit of US$21,800 per year per victim, this sector is six times more profitable than all other forms of forced labour, and five times more profitable than forced labour exploitation outside domestic work.

Figure 5. Annual profit per victim by sector of exploitation (US$)

## Annual profits per victim per sector of exploitation (US $)
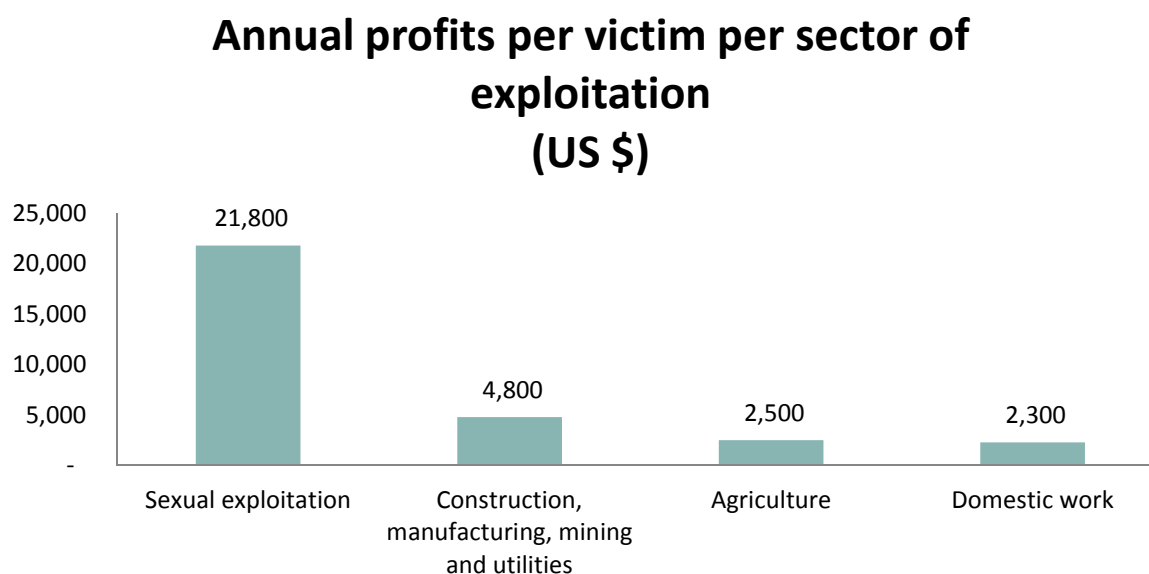
Source: ILO

## Regional and sectoral distribution of workers

This section describes the methodology used to distribute the 18.7 million victims of forced labour in the private economy worldwide in regional and sectoral estimates. The 2012 Global Estimate provides the total number of forced labour victims per region, and the global number of victims per form of forced labour, but no regional distribution could be calculated using the capture-recapture methodology with acceptable margins of error. In the framework of this research on the economics of forced labour, and in absence of more detailed information, this report assumes that the distribution of victims across the three forms (forced labour exploitation, forced sexual exploitation and state-imposed forced labour) is uniform across the regions. This would mean that in all regions under consideration, 10 per cent of the victims are in state-imposed forced labour, 68 per cent are in forced labour exploitation in the private economy and 22 per cent are in forced sexual exploitation.

Table 2.2. Estimated number of victims by type of forced labour and region

| Region | Forced sexual exploitation | Forced labour exploitation | State-imposed forced labour | Total |
|---|---|---|---|---|
| Asia-Pacific | 2,500,000 | 7,900,000 | 1,200,000 | 11,700,000 |
| Latin America & the Caribbean | 400,000 | 1,200,000 | 200,000 | 1,800,000 |
| Africa | 800,000 | 2,500,000 | 400,000 | 3,700,000 |
| Middle East | 100,000 | 400,000 | 100,000 | 600,000 |
| Central and South-Eastern Europe & CIS | 300,000 | 1,100,000 | 200,000 | 1,600,000 |
| Developed Economies & EU | 300,000 | 1,000,000 | 200,000 | 1,500,000 |
| Total | 4,500,000 | 14,200,000 | 2,200,000 | 20,900,000 |

Source: ILO

Components may not add up to the total because of rounding

The profits made from forced labour are then estimated for forced sexual and labour exploitation in each region.

In the absence of any reliable national surveys and figures on forced sexual exploitation, the distribution of victims resulting from this first assumption is difficult to assess. The patterns of recruitment, mainly based on deception and abuse of vulnerability, are quite well known from good qualitative research. The means of coercion applied to the victims, adults and children, male and female, have also been shown as means to extract more profits from the victims to force them to work more and prevent them from leaving the place of exploitation.

The 14.2 million victims in forced labour exploitation work in all productive sectors of the economy. The profits they generate depend on their occupation and the industry they work in. Ideally, the profits should be calculated based on the distribution of workers in forced labour per industry for each region. This was not possible for obvious reasons of reliability of such a distribution, as no such information is yet available. The industries were limited to the following: agriculture, including forestry and fishing, manufacturing, construction, mining, utilities and domestic work, which are known to encompass the vast majority of victims in all regions.[17] It was nevertheless decided to treat forced domestic workers separately from other victims of forced labour exploitation. This was done for two reasons: first, because they represent an important proportion of the victims of forced labour exploitation; and second, because the profits generated by domestic work could not be calculated with the same method used for other productive sectors.

---

[17] This was confirmed by the reports of forced labour collected by the ILO for the 2012 Global Estimate.

The economic data (salary, occupation and industry) collected in 2012 for the global estimate of forced labour was used to distribute the workers among economic sectors. This distribution should be seen and treated as a working hypothesis for the sole purpose of estimating the illicit profits from forced labour. These figures should not be quoted as new ILO estimates of the number of victims per sector per region.

Nevertheless, this distribution was assessed with existing estimates and ILO knowledge on the patterns of forced labour worldwide.

Table 2.3. Estimated number of victims of forced labour exploitation in the private economy by sector and region

| Region | Sectors | | | |
|---|---|---|---|---|
| | Domestic work | Agriculture, forestry and fishing | Construction manufacturing, mining and utilities | Total |
| Asia-Pacific | 1,900,000 | 1,040,000 | 4,970,000 | 7,900,000 |
| Latin America and the Caribbean | 650,000 | 360,000 | 190,000 | 1,200,000 |
| Africa | 570,000 | 1,130,000 | 840,000 | 2,500,000 |
| Middle East | 270,000 | 10,000 | 160,000 | 400,000 |
| Central and South-Eastern Europe and CIS | 30,000 | 470,000 | 550,000 | 1,100,000 |
| Developed Economies and EU | 30,000 | 530,000 | 460,000 | 1,000,000 |
| Total | 3,440,000 | 3,530,000 | 7,170,000 | 14,200,000 |

Source: ILO

Components may not add up to the total because of rounding

In 2011, the ILO presented a new estimate of 52.6 million **domestic workers** across the world in 2010.[18] The estimate of 3.4 million domestic workers in forced labour used in the context of this report would result in a ratio of 6.5 per cent of domestic workers worldwide in forced labour. Regional disparities could be explained by the specific proportions of both child and migrant domestic workers in the various regions. Migration of domestic workers can be internal, regional or inter-regional, such as in the Middle East, where almost all migrant domestic workers come from Asia or Africa.

The **agriculture, forestry and fishing** sector, according to the ILO, employs an estimated 1.3 billion workers worldwide, or half of the world's labour force.[19] Given this huge number of workers and the risks associated with forced labour described earlier, the 3.5 million people conservatively estimated to be in forced labour in this sector seems

---

[18] ILO: *Domestic workers across the world: Global and regional statistics and the extent of legal protection* (Geneva, 2013).

[19] http://www.ilo.org/safework/areasofwork/hazardous-work/WCMS_110188/lang--en/index.htm.

plausible. In many countries, agricultural work is largely informal, and legal protection of workers is weak.[20]

In South Asia, there is still evidence of bonded labour in agriculture, resulting in labour arrangements where landless workers are trapped into exploitative and coercive working conditions in exchange for a loan. The low wages associated with high interest rates make it quite difficult for whole families to escape this vicious circle.

In Africa, the traditional forms of "vestiges of slavery" are still prevalent in some countries, leading to situations where whole families (adults and children, men and women) are forced to work the fields of landowners in exchange for food and housing.

In Latin America, the case of workers recruited in poor areas and sent to work on plantations or in logging camps has been widely documented by national inspection services and other actors.

In industrialized countries, the share of migrant workers in the labour force in this sector is very important. This has been documented in the EU, with a recurrent use of seasonal migrant workers for example. In the United States, the National Center for Farmworker Health quoted in 2012[21] an estimate of more than 3 million migrant and seasonal farmworkers in the country. According to the National Agricultural Workers Survey (NAWS) 2007–2009, 72 per cent of all farmworkers in the United States were foreign-born. This high share of migrant workers is reflected in the number of cases of forced labour in this sector.

The fishing sector has been documented recently as highly at risk of using forced labour. According to the Food and Agriculture Organization of the United Nations (FAO), an estimated 54.8 million people are working in the primary production of fish, including 38.3 million on fishing vessels at sea, of which a large proportion are migrant workers from developing countries. The necessity to go increasingly further from the coasts to reach abundant fishing grounds leads to more crew being employed in long-distance fishing operations for long periods of time. The isolation resulting from these new fishing practices creates an environment conducive to exploitative working conditions.

Cases of forced labour in **construction, manufacturing, mining and utilities** are found in all regions. The situation of migrant workers in debt bondage in brick kilns has been widely documented in South Asia. Migrant workers are recruited in poor countries to work on construction sites of richer countries all over the world. This is the case in the Middle East, with the recruitment of workers from Asia; in Central and South-Eastern Europe, with migrants from poorer countries from the same region; and in North America and the European Union, with intraregional or international migration. In some cases, workers are "posted", with contracts tendered out to companies based in third countries. In the manufacturing sector, a clear example of the risk of forced labour linked to globalization can be found in the garment industry, especially in low-tier suppliers and home-based manufacturing. Following a string of reports concerning forced labour, this sector has been scrutinized for many years, and instances of forced

---

[20] First category in the International Standard Industrial Classification of All Economic Activities- ISIC, Rev.4.

[21] http://www.ncfh.org/docs/fs-Migrant%20Demographics.pdf.

labour have been successfully addressed through, for example, Better Work, a partnership programme between the ILO and the International Finance Corporation. Cases of forced labour were also reported in mining, either in small-scale mining or in low-skilled occupations in the sector.

## Profits from non-domestic forced labour exploitation

In agriculture, it is possible to distinguish profits made from traditional forms of slavery, debt bondage and migrant workers.

In the first case, the workers receive no or very little salary, and the whole family is involved, providing a large number of working hours for crops or herding animals, which will later be sold at market price. The housing and food provided to the landless families are usually of very low value, leading to very low intermediate expenditures and high profits.

The same applies, to a certain extent, to migrant workers, whose salaries do not account for the high number of working hours imposed on them through the various means of coercion. The frequent cases of isolation make these forms of exploitation possible. In some instances, it has been shown how abusive employers profit from the isolation by forcing workers to buy food and basic items from their shops at prices much higher than market price. In addition, migrant workers are likely to have paid huge recruitment and transportation fees, which may be transformed into debt by the recruiter or employer, who will in turn impose high interest rates. All these elements are combined to increase the landowner's or employer's profits.

Debt bondage has been widely studied in South Asia in particular, and it has been shown how recruiters abuse the vulnerability of poor landless farmers, offering wage advances that are later translated into strong means of coercion to impose more work and lower wages.

The recent ILO report, *Caught at sea: Forced labour and trafficking in fisheries*,[22] revealed the mechanisms of recruitment, deception and coercion existing in this sector. The use of inadequately trained and informed migrant workers, the isolation of workers for months while at sea, regulatory gaps and the lack of law enforcement were shown as leading factors of forced labour and human trafficking in the sector. By underpaying these migrant workers, forcing them to work extremely long hours with no weekly rest and not respecting safety laws, the owners of these vessels are able to increase their profits.

In the construction sector, cases of forced labour leading to huge illicit profits are regularly reported. Some cases on construction sites in Eastern Europe, for example, relied on both deception and corruption. Migrant workers are brought illegally to work on a construction site, without knowing the working conditions or terms of payment. There, they discover that they are forced to live together in a remote place provided by

---

[22] ILO: *Caught at Sea Forced Labour and Trafficking in Fisheries* (Geneva, 2013).

the employer (to avoid police controls) and told that they will be paid only at the end of the construction. A few days before the end, when the work is done and wages are due, the owner may call a law enforcement officer to inform him of the presence of irregular migrants. The workers are then deported and the employer does not need to pay them. All due wages (minus the bribe) increase the profits made, thanks to the work of the abused migrants.

In brick kilns, mechanisms of debt bondage linked to advances paid before recruitment have been shown to be extensively used by kiln owners to coerce the workers, force them to work more, accept low wages and stay until the end of the season, or even force them to come back the following year, up to the repayment of the loan. The low piece rate applied leads to employment of entire families, to increase production and reach the quota associated to the wage promised.

These are a few examples on how threats, violence, deception and coercion are used by recruiters and employers to increase profits generated by the work of their employees.

It is estimated that the profits made with the world's 10.7 million victims of non-domestic forced labour exploitation reach US$43.4 billion per year, with an average annual profit of US$4,000 per victim. This profit is estimated to be the result of the exploitation of victims in agriculture on the one hand, and industrial sectors (construction, manufacturing mining and utilities) on the other.

Table 2.4. Estimated annual profits from non-domestic private forced labour by sector and region (US$)

| Region | Agriculture | Other labour | Total |
|---|---|---|---|
| Asia-Pacific | 400,000,000 | 13,400,000,000 | 13,800,000,000 |
| Latin America and the Caribbean | 200,000,000 | 800,000,000 | 1,000,000,000 |
| Africa | 1,100,000,000 | 2,800,000,000 | 3,900,000,000 |
| Middle East | 20,000,000 | 600,000,000 | 600,000,000 |
| Central and South-Eastern Europe and CIS | 700,000,000 | 3,000,000,000 | 3,600,000,000 |
| Developed Economies and EU | 6,400,000,000 | 14,000,000,000 | 20,500,000,000 |
| Total | 8,900,000,000 | 34,500,000,000 | 43,400,000,000 |

Source: ILO

Components may not add up to the total because of rounding

Forced labour profits in agriculture are lower than the sum of other sectors,[23] but are quite significant in terms of the number of workers. It is estimated that more than a third of the victims of forced labour in non-domestic sectors work in agriculture[24] (including

---

[23] Industries B, C, D, E and F from ISIC Rev.4.

[24] As per ISIC Rev.4, grouped under this industry are: agriculture, fishing and forestry. Per definition: "This section includes the exploitation of vegetal and animal natural resources, comprising the activities of growing

fishing and forestry as per the ISIC definition), amounting to 3.5 million of the 10.7 million people in forced labour exploitation other than forced domestic work.

Based on the calculations, the average profit per victim is lower in agriculture than in other sectors in all regions. This reflects the low value added of agriculture worldwide.

Table 2.5. Average annual profit per victim (US$)

| Region | Agriculture | Other labour |
| --- | --- | --- |
| Asia-Pacific | 400 | 2,700 |
| Latin America and the Caribbean | 700 | 4,100 |
| Africa | 1,000 | 3,300 |
| Middle East | 2,900 | 3,600 |
| Central and South-Eastern Europe and CIS | 1,400 | 5,400 |
| Developed Economies and EU | 12,200 | 30,400 |
| Total | 2,500 | 4,800 |

Source: ILO
Components may not add up to the total because of rounding

## Methodology

The definition of profits is the same as that of the 2005 working paper:

$$\pi_{rs} = FL_{rs}(va_{rs} - w_{rs}) * 12$$

where $FL_{rs}$ is the number of forced labour victims under economic exploitation per region per sector, $va_{rs}$ is the value added accruing to labour per region per sector, and $w_{rs}$ the wages paid to forced labour victims per region per sector.

To calculate the profits made from the use of forced labour in the private sector, excluding domestic work, the value added approach is used, combined with information from the 2012 Global Estimate database. The procedure to estimate the value added accruing to labour varies, depending on whether it is applied to the agriculture sector or other sectors (construction, manufacturing, mining and utilities).

In the case of the agricultural sector, information on the value added per worker from the World Development Indicators (2006) was used. For each country, the value added per worker accruing to labour is calculated as:

$$\dddot{va}_{cs} = \ddot{va}_{cs} LS_{cs}$$

---

of crops, raising and breeding of animals, harvesting of timber and other plants, animals or animal products from a farm or their natural habitats.".

where $\ddot{va}_{cs}$ is the value added per worker, $\dddot{va}_{cs}$ the value added accruing to labour, and $LS_{cs}$ the conservative labour share estimated to be two-thirds. Correcting for any missing values and aggregating in each region, the average value added per worker in agriculture is obtained as:

$$\tilde{va}_{rs} = \frac{\sum_c \dddot{\omega}_{cs}\dddot{va}_{cs}}{\sum_c \dddot{\omega}_{cs}}$$

where $\dddot{\omega}_{cs} = \dot{\omega}_{cs} * \breve{\omega}_{cs}$, with $\dot{\omega}_{cs}$ being the response weight and $\breve{\omega}_{cs}$ the population weighting.

Once the regional value added per worker accruing to labour has been established, the profits of forced labour victims are obtained as the difference between the value added per worker accruing to labour and the wage earnings of forced labour victims, multiplied by the number of victims in each region, i.e.:

$$\pi_{rs} = FL_{rs}(va_{rs} - w_{rs}) * 12$$

To calculate the wage earnings of forced labour victims, economic data on wages of victims stored in the 2012 Global Estimate database were used. The highest-reported earnings of the victims of forced labour in each sector are selected and, in cases where such information is missing for all victims from this region working in this sector, it is assumed that the victims earn the equivalent of US$1 Purchasing Power Parity in a selected country of that region. The ratio of earnings with respect to the minimum wage of the country in which this information is found is used as a representative percentage for all countries in that region to estimate the earnings of forced labour victims in each country of that region. A weighted average regional minimum wage is then calculated, using weights which are generated to take into account the size of the labour force in the sector and to correct for non-response.

In the other industrial sectors, a similar methodology is used. The main difference is, however, in the calculation of the value added accruing to labour in each region. Firstly, as information on the average earnings of medium- to low-skilled workers was available[25] (contrary to the agricultural sector, where it was scarce), the value added per worker is calculated as the ratio of the average monthly earnings of a worker and the conservative labour share for each of the three sectors (construction, manufacturing, mining and utilities), i.e.:

$$va_{cs} = \frac{ae_{cs}}{LS_{cs}}$$

where $va_{cs}$ is the value added per worker accruing to labour in country **c** in sector **s**, and **ae**$_{cs}$ is the average earnings of medium- to low-skilled workers in country **c** in sector **s**. These are then weighted for non-response and by the size of the labour force in each of

---

[25] Information was taken from the ILO database on labour statistics operated by the ILO Department of Statistics (LABORSTA) on the average earnings of individuals in 151 occupations (ISCO-88) in various countries. The occupations are then reclassified based on the skill level. Those in low-to-middle skills are kept and regrouped based on the industry of employment (ISIC REV 4).

the sectors. The regional weighted average is then estimated as the average value added per worker accruing to labour using:

$$va_{rs} = \frac{\sum_c \omega_{cs} va_{cs}}{\sum_c \omega_{cs}}$$

where the final weights are $\omega_{cs} = \widetilde{\omega_{cs}} * \widetilde{\omega_{cs}}$, with $\widetilde{\omega_{cs}}$ being the response weights and $\widetilde{\omega_{cs}}$ the population weights. An average of these values is taken in each region to obtain the value added for each region in other non-agricultural non-domestic sectors, $va_r$. To obtain the average earnings of forced labour victims in each of these regions, the methodology described for the agricultural sector is used. The exception is, however, that once the sector specific wages, $w_{rs}$, are obtained, they are weighted by the number of forced labour victims in each sector, $\epsilon_{rs}$, and an average is taken, i.e.:

$$w_r = \frac{\sum_s \epsilon_{rs} w_{rs}}{\sum_s \epsilon_{rs}}$$

Annual profits are calculated as the difference between the value added accruing to labour in the region and the wages of the victims of the region, multiplied by the number of victims in the region and 12, i.e.:

$$\pi_r = FL_r(va_r - w_r) * 12$$

Based on the data available in the 2012 Global Estimate database, the monthly average earnings of forced labour victims were estimated by sector and region.

Table 2.6. Average monthly earnings per victim of forced labour by sector and region (US$)

| | Monthly average earnings per victim (US$) | |
| --- | --- | --- |
| Region | Agriculture | Other labour |
| Asia-Pacific | 23.37 | 162.70 |
| Latin America and the Caribbean | 135.8 | 159.7 |
| Africa | 5.7 | 35.1 |
| Middle East | 33.4 | 117 |
| Central and South-Eastern Europe and CIS | 94.3 | 47 |
| Developed Economies and EU | 327 | 483 |

Source: ILO
Components may not add up to the total because of rounding

24

# Profits from forced labour in domestic work

It is estimated that nearly US$8 billion are literally stolen annually from the 3.4 million domestic workers in forced labour worldwide. This estimate is based on data collected by the ILO for the 2012 Global Estimate, which shows that domestic workers in forced labour are effectively deprived, on average, of 60 per cent of their due wages.

As noted in the ILO 2005 working paper, domestic services create an economic value added, and therefore the savings made by the employer on expenditures count as profits. The stolen wages consist of a combination of monthly wages (which are lower than what they should be), abusive deductions for housing and food, and illegal deductions for recruitment costs.

The global figure and regional distribution of the number of domestic workers in forced labour were estimated by combining the following: the share of reported cases of forced domestic work in the 2012 Global Estimate database of all reported cases of forced labour exploitation in the private economy; the regional distribution of domestic workers as estimated by the ILO in 2012;[26] and the regional prevalence (per 1,000 inhabitants) of forced labour as estimated in 2012 weighted by the relative proportion of live-in domestic workers across the regions.[27]

Table 2.7. Average annual profits of forced domestic work (US$)

| Profits of forced domestic work | No. of victims domestic workers | Annual profits | Annual profit per victim |
|---|---|---|---|
| Asia-Pacific | 1,900,000 | 6,300,000,000 | 3,300 |
| Latin America and the Caribbean | 650,000 | 500,000,000 | 800 |
| Africa | 570,000 | 300,000,000 | 600 |
| Middle East | 270,000 | 400,000,000 | 1,400 |
| Central and South-Eastern Europe and CIS | 30,000 | 100,000,000 | 1,700 |
| Developed Economies and EU | 30,000 | 200,000,000 | 7,500 |
| Total | 3,440,000 | 7,900,000,000 | 2,300 |

Source: ILO
Components may not add up to the total because of rounding

For the special case of domestic workers, where value added is not directly measurable, profits are estimated as the difference between what domestic workers in forced labour earn on average, and what their counterparts who are not in forced labour should earn. The economic data stored in the 2012 Global Estimate database of reported cases of

---

[26] http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_155951.pdf.
[27] Based on expert judgement and on a selected number of country studies.

forced labour show that, on average, domestic workers in forced labour are deprived of 60 per cent of their due wages. The wages earned by forced labour victims in each sector of each region were first estimated using economic information available in the global database, then sorted out into regions and then sectors. For each region, the wages earned by victims were converted into US dollars and the highest reported wage was selected as the wage earned by forced labour victims. The percentage of stolen wage was then estimated by comparing the earnings of forced domestic workers in a country with the national minimum wage or average wages paid to domestic workers in that country. This ratio was used to calculate the ratio of stolen wage worldwide.

This amount of stolen wages, or profit, varies between US$50 per month in Africa and more than US$600 per month in Developed Economies.

The profits are estimated with the simple formula of the difference between the wages earned (obtained from the global database), $w_r$, and the average wages domestic workers should get if working freely in the corresponding regions, $\omega_r^D$.:

$$\pi_r^D = FL_r^D\left(\omega_r^D - w_r\right) * 12$$

where $FL_r^D$ is the number of forced labour victims (domestic workers) in region $r$.

From the ILO database of reported cases of forced labour, it is estimated that, on global average:

$$w_r = .4 * \omega_r^D$$

## Profits from forced sexual exploitation

In addition to the coercion, threats and violence inflicted on the victims of forced sexual exploitation, one common feature is that the victim is not paid by the client, who instead must pay the agent (or pimp) or brothel owner directly. Many testimonies collected in qualitative surveys on this issue confirm this. The victim is unaware of the amount the client has paid. There are also many instances of debt bondage, especially in the case of migrant victims, where the exploiter keeps all of the victim's earnings for months, without any proper accounting, ostensibly to reimburse the travel cost. In most cases of documented forced sexual exploitation, a whole chain of traffickers and exploiters benefits: the recruiter who imposes high recruitment fees; the people in charge of travel and transport, who make sure the victim safely reaches the place of exploitation; corrupted law enforcement paid to close their eyes to obvious cases of illegal migration or exploitation; owners of flats or houses; companies in charge of advertising; and, of course, the brothel owner or manager of the prostitution networks.

The profits made on pornography using children or women against their will are extremely difficult to estimate and were not taken into account in the current estimate,

making the assumption for the calculation of the profits that all victims of forced sexual exploitation work as prostitutes.

As in 2005, it should be noted that the fact that sex work is referred to as an activity, and that the revenue it generates is estimated, does not imply that the ILO endorses or legitimizes it.

The total annual profits made from forced sexual exploitation are estimated at US$99 billion worldwide. The profits are highest in Asia due to the large number of victims, but annual profits per victim are highest in Developed Economies (US$80,000) and the Middle East (US$55,000), due to the high average price of sexual encounters.

Table 2.8. Annual profits from forced sexual exploitation (US$)

| Region | Number of victims | Monthly earnings per victim (Kara, 2009) | Annual profits | Annual profit per victim |
|---|---|---|---|---|
| Asia-Pacific | 2 500 000 | 1 485 | 31 700 000 000 | 12 000 |
| Latin America and the Caribbean | 400 000 | 3 200 | 10 400 000 000 | 27 000 |
| Africa | 800 000 | 1 300 | 8 900 000 000 | 11 000 |
| Middle East | 100 000 | 6 510 | 7 500 000 000 | 55 000 |
| Central and South-Eastern Europe and CIS | 300 000 | 5 040 | 14 300 000 000 | 42 000 |
| Developed Economies and EU | 300 000 | 9 540 | 26 200 000 000 | 80 000 |
| Total | 4 500 000 | | 99 000 000 000 | 22 000 |

Source: ILO
Components may not add up to the total because of rounding

## Methodology

In the case of forced sexual exploitation, information on the value added is unavailable because of the nature of the work. Similar to the ILO's 2005 working paper and Kara's 2009 study, the profits were estimated on the basis of estimated earnings of forced labour victims per encounter. In the absence of ILO figures on the number of encounters per month of each victim of forced sexual exploitation, and the average earnings per encounter, regional estimates published by Kara are relied upon. The 2005 ILO assumption that the profits made by the exploiter are around 70 per cent of the amount paid by the clients is maintained.

The estimate of the regional profits made is then replaced by the use of forced labour victims in sexual exploitation, calculated as:

$$\hat{\pi}_r = FL_r^{CSE}(p_r q - (w_r + c_r)) * 12$$

by

$$\hat{\pi}_r = FL_r^{CSE} * w_{kr} *. 7 * 12$$

where $c_r$ represents the average regional intermediate consumption, $p_r$ is the average regional price per encounter, $q$ is the number of encounters, and $w_r$ is the average regional wages of the victims. In the second formula, used for this report, $w_{kr}$ is the monthly amount from sale of sex in the region r, as estimated by Kara (2009). $FL_r^{CSE}$ is the number of forced labour victims in sexual exploitation.

# Chapter 3

## What makes people vulnerable to forced labour?

Over the last decade, the ILO has supported the efforts of various national governments and national statistical bodies to carry out surveys and data collection programmes with the aim of studying the extent and conditions of forced labour. The current analysis is based on surveys carried out in eight countries, with three different target groups: all members of a household (5 years of age and above); children (5 to 17 years of age); and returned adult migrants. These three populations were chosen according to the form of forced labour that was more likely to take place in the country. The main purpose of this chapter is to study the factors that make individuals vulnerable to forced labour.

In Guatemala, Nepal and the Niger, where forced labour is likely to affect both adults and children from a same household, all members of the household were surveyed. A *probit* model was used as the basis of the analysis. In these three countries, the Plurinational State of Bolivia[28] and Côte d'Ivoire, special attention was given to the situation of children.

Three of the eight surveys targeted returned migrants in the CIS area, namely Armenia, Georgia and the Republic of Moldova. For these countries, the determinants of forced labour among returned migrants using a *trivariate probit* model with double selection are presented in this report. The purpose is to understand what factors make migrants vulnerable to forced labour at their destination.

This chapter starts with a brief literature review on the determinants of forced labour and continues with a descriptive analysis of the victims of forced labour found in the surveys, the methodology used and the results obtained through an analysis of ILO data sets.

## Theoretical discussion of the determinants of forced labour

In the last decades, a number of studies have focused on slavery and its impact on economic development. One hypothesis is that increases in labour supply make slavery and forced labour a less attractive option, with the phenomenon occurring less in capital intensive sectors.[29] Others, however, have argued that the effect of population growth will depend on production technology and the non-tradable skills that new

---

[28] The survey in the Plurinational State of Bolivia was a Child Labour Survey, which was not designed specifically to measure forced labour of children. The number of questions used to assess forced labour was smaller than in other surveys and the absolute number of victims was also smaller. This may explain that the results are not as solid as for the other countries and that the results quite often differ in the Plurinational State of Bolivia compared to other surveys.

[29] E. Domar: "The Causes of Slavery or Serfdom: A Hypothesis", in *The Journal of Economic History* (1970, Vol. 30, No. 1), pp. 18-32.

labour market entrants possess, especially in the agrarian economy.[30] For example, in a study on the reversal of fortunes among countries colonized by European countries in the past 500 years, it was found that in regions where population density was high and labour relatively abundant, the European countries were more likely to employ labour-coercive practices. The study hence emphasized the importance of the relationship between labour supply and labour coercion.[31]

The argument was further developed in subsequent studies.[32] Although coercion is socially inefficient, it always increases the efforts made by agents. Workers with fewer outside options are coerced more and provide higher levels of effort in equilibrium. The scarcity of labour encourages coercion through the labour demand effect, as it leads to an increase in the price of outputs, increasing the value of effort and thus making labour coercion a productive venture for producers. However, the scarcity of labour also decreases labour coercion through the outside option effect. In fact, labour scarcity increases the marginal product of labour in competing sectors of the economy and therefore increases the outside options, thus discouraging coercion. In addition, it could be demonstrated that there is an economies of scale effect, with the relative abundance of exploitable labour making coercion profitable.

In 1984, another study was published[33] that extended the transaction-costs model to study the extent ordinary benefits and pain incentives (threats and violence) respectively affect individuals in terms of how careful they are and the effort they exert. While threats or violence may make individuals exert more effort, it will make them careless. On the other hand, monetary incentives will make workers more careful but likely to exert less effort, as the benefit will be received not generally as immediately as the pain would be inflicted if they should not exert enough effort. The 1984 study finds that the former are in general more effort-intensive than care-intensive as opposed to the latter, and concludes that supervision is able to cheaply counter ill will, and therefore posits that slaves in care-intensive jobs will most often be motivated by rewards rather than pain.

The impact of incentives, both rewards and threats, has also been studied; the conclusion is that victims of forced labour where violence is involved are often very poor individuals with extremely limited options.[34] While the effect of labour supply (abundance versus scarcity) might appear slightly ambiguous, it is an important determining factor in the risk of ending up in forced labour. In addition, poverty and the lack of outside options for individuals also remain important risk factors. The presence of

---

[30] J. Conning: "The Causes of Slavery or Serfdom and the Roads to Agrarian Capitalism: Domar's Hypothesis Revisited", *Working Paper 401* (Hunter College: Manuscript, 2004).

[31] D. Acemoglu et al.: "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution", in *The Quaterly Journal of Economics* (2002, 117(4)), pp. 1231 - 1294.

[32] D. Acemoglu and A.Wolitzky.: "The Economics of Labour Coercion", in *Econometrica* (2011, 79,2), pp. 555 - 600. The findings are consistent with R. Fogel and S. Engerman: *Time on the Cross: The Economics of American Negro Slavery* (Boston, Little Brown, 1974).

[33] S. Fenoaltea: "Slavery and Supervision in Comparative Perspective: A Model", in *The Journal of Economic History* (1984, Vol. 44, No.3), pp. 635 - 638.

[34] M.S.Y. Chwe: "Why were workers whipped? Pain in a Principal-Agent Model", in *The Economic Journal* (1990, 100), pp. 1109 - 1121.

slavery in the past can be associated with increased poverty, low educational enrolment in these regions and land inequality.[35]

# Descriptive analysis of the victims of forced labour

In this section, the focus is on the descriptive analysis of the data used in studying the determinants of forced labour among different subgroups of the population. It is important to note that these results cannot be used to compare the situation of workers between the countries studied, as the survey design was specific to each country. While some surveys (the Niger) were national surveys targeting all households in the country, others (Nepal and Guatemala) targeted groups known to be highly vulnerable to forced labour. The target groups in Nepal were Haliya (landless agricultural labourers in far-western Nepal, mostly from the Dalit community), Haruwa (people who plough land for others in exchange for land to cultivate or to repay a debt) and Charuwa (people mainly employed for herding cattle). The aim was to understand the patterns of forced labour among these populations rather than to estimate the prevalence of forced labour in the entire country. Moreover, the surveys in Nepal and Guatemala were not national surveys but limited to some provinces.

*Indicators of forced labour*

According to the ILO's survey guidelines, an individual is considered to be working in forced labour if he or she was not freely recruited and faced some form of penalty at the time of recruitment, had to work and lives under duress and the menace of any penalty or cannot leave the employer because of the menace of a penalty.[36]

As per the survey design, the population studied in Guatemala had the highest rate of employment compared to the target population surveyed in Nepal or the Niger. In the three countries, forced labour was estimated among employed people. Of those employed in the Niger, it is estimated that 1.8 per cent were working as forced labourers. This is a national figure and hence is much lower than Nepal's 10.14 per cent and Guatemala's 10.25 per cent, which had been estimated within a specific target population that was extremely vulnerable to forced labour.

---

[35] D. Acemoglu et al.: "Finding Eldorado: Slavery and Long-run Development in Colombia", in *Journal of Comparative Economics* (2012, Vol. 40(4)), pp. 534 - 564.

[36] Definitions of variables are in the annex. See also ILO: *Hard to see, harder to count: Survey guidelines to estimate forced labour of adults and children* (Geneva, 2012).

Table 3.1: Indicators of forced labour in the household (adults and children, %)

| Indicator | Nepal | The Niger | Guatemala |
|---|---|---|---|
| Employed (within the sample) | 35.0 | 68.6 | 86.2 |
| Forced labour | 10.1 | 1.8 | 10.2 |
| Not freely recruited | 9.1 | 1.9 | 21.5 |
| Impossibility to leave | 5.9 | - | 2.0 |
| Limited freedom | 4.3 | 1.3 | - |
| Live and work under duress | - | - | 46.1 |
| Dependent individual | 7.8 | 2.1 | - |
| Dependent household | - | 3.6 | - |
| Labour rights violation | 14.6 | - | - |
| Coerced/violence | 12.7 | 1.1[37] | 13.6 |
| Guardian in forced labour | - | 2.9[7] | 17.9[7] |

Source: ILO

Dash ( – ) means missing value.

Unfree recruitment was very common in Guatemala where more than 40 per cent of employed individuals were recruited either through deception or coercion. Individuals also faced restrictions in various forms, including limited freedom and impossibility to leave the employer. Some were not allowed to communicate with other family members. In most cases, employers resorted to the use of various threats to keep employees at work. This phenomenon was also common in Nepal where, in several cases, individuals were not allowed to leave their employers until all debts had been paid off.

Some individuals were also highly dependent on their employers (8 per cent of the households affected by forced labour in the target groups in Nepal and 2.14 per cent of those employed in the Niger) for purposes not directly related to work, such as food and housing. This can also be the case for households as a whole. In Guatemala, about half of employed individuals were living and working under duress. Labour rights violations were only measured in Nepal and affected 14.62 per cent of employed individuals.

Coercive means such as violence, threats of violence, confiscation of documents and physical, sexual and emotional abuse affected between 12.69 per cent and 13.59 per cent of employed individuals in Nepal and Guatemala. In the Niger, only children were analysed for coercion; less than 2 per cent were affected. When parents are in forced labour, their children also become vulnerable to it. That was the case in Guatemala with approximately 17.95 per cent of employed children having guardians who were considered to be in forced labour or vulnerable to forced labour.

In the Plurinational State of Bolivia and Côte d'Ivoire, the focus was on children. Over one-quarter of the children in both countries were economically active. Children are

---

[37] Children only.

often forced to remain with their employers either through the refusal of employers to allow them to leave or through debt bondage and the issuing of threats.

Table 3.2: Indicators of forced child labour (%)

| Indicator | Nepal[38] | The Niger[39] | Guatemala[40] | P.S. of Bolivia[41] | Côte d'Ivoire[42] |
|---|---|---|---|---|---|
| Employed | 4.9 | 50.49 | 81.2 | 33.5 | 26.5 |
| Forced labour (among employed children) | 1.2 | 2.8 | 6.7 | 1.1 | 2.2 |
| Not freely recruited | 1.0 | 3.0 | 18.0 | 0.3 | 4.9 |
| Impossibility to leave | 4.4 | 1.5 | 1.9 | 1.2 | 5.6 |
| Live and work under duress | - | - | 93.7 | - | - |
| Dependent | - | 1.3 | - | - | - |
| Father in forced labour | - | 1.5 | - | - | - |
| Mother in forced labour | - | 1.1 | - | - | - |
| Coercion/Violence | 3.8 | 1.1 | 8.5 | 2.2 | - |

Source: ILO

Dash ( – ) means missing value.

In the case of returned migrants, information on coercive recruitment was only available in Armenia, where the main forms of coercion used in recruitment were debt bondage (4 per cent) and the confiscation of documents (1.76 per cent). By borrowing money from other individuals, the migrants became vulnerable to accepting whatever job they are presented to pay back the loans owed.

Migrants are also sometimes recruited through abuse. Recruiters may take advantage of their recruits for specific reasons using different methods. The most common form of this kind of recruitment reported by Armenian returned migrants was abuse of a difficult financial situation (15.43 per cent). Some recruiters also took advantage of the irregular status of their victims once they reached their destination countries (5.35 per cent) and the difficult family situation of the individuals (4.99 per cent).

Through deceptive recruitment, migrants are promised lucrative jobs with good employers, only to find often that most or all of the promises made at the time of

---

[38] This figure is not representative of the situation of children in Nepal. It was only measured in a limited group.

[39] Organisation internationale du Travail (OIT) et Institut National de la Statistique du Niger (INS-Niger): *Rapport de l'enquête nationale sur le travail des enfants au Niger de 2009* (Genève, 2011).

[40] This figure is not representative of the situation of children in Guatemala. It was only measured in a specific target group.

[41] See "Children at risk of forced labour in Bolivia: An analysis based on child labour surveys", June 2010, Not published.

[42] Ministère de la Fonction Publique et de l'Emploi, Institut National de la Statistique de la Côte d'Ivoire: *Le travail des enfants en Côte d'Ivoire à partir de l'Enquête sur le Niveau de Vie des Ménages 2008* (BIT, Côte d'Ivoire, 2010).

recruitment are not fulfilled. In both the Republic of Moldova and Armenia, the most common form of deception reported involved wages. The victims often received wages that were much lower than initially promised or had their earnings unlawfully retained. Others ended up in working conditions that were worse than promised, or in entirely different jobs. Some of the returned migrants were forced to accept jobs, tasks or work under unacceptable conditions. They were frequently forced to stay longer at their place of work to get paid. Others had to do excessive work, sometimes without pay.

Table 3.3: Indicators of forced labour among returned migrants (%)

| Indicator | Rep. of Moldova[43] | Armenia[44] | Georgia[45] |
|---|---|---|---|
| Forced labour/trafficking | 8.2 | 5.9 | 8.5 |
| Not freely recruited | 14.16 | 14.63 | - |
| Exploitative working conditions | 40.12 | 55.07 | 71.24 |
| Coerced | 8.16 | 5.88 | 10.21 |

Source: ILO

Components may not add up to the total because of rounding. Dash ( - ) means missing value.

The main forms of exploitative working conditions that returned migrants in all three countries were reported to have faced include low salaries, delayed payments, imposed poor living conditions, excessive work and the lack of social protection. In the Republic of Moldova, for example, 45.64 per cent of returned migrants had to work for little or no pay while 24.85 per cent received late payments. In Armenia and Georgia the results were almost similar, with 20.22 per cent and 19.76 per cent respectively working for little or no salary. The returned migrants often faced multiple forms of exploitation.

To keep migrants working under these conditions, some form of coercion was usually applied. The main form of coercion used was the withholding of salary, for 13.5 per cent of Moldovan, 6.09 per cent of Armenian and 9.62 per cent of Georgian returned migrants. About 4.38 per cent of Moldovan returned migrants were threatened with financial punishment, while 5.14 per cent of Armenian returned migrants and 4.08 per cent of Georgian returned migrants were threatened with financial punishment or kept in isolation.

Returned migrants were not considered as freely recruited if they were recruited under false pretences, made to work in a different location from that initially agreed, in a different type of job or with a different employer, under conditions not specified in the contract signed, or if recruited coercively or by abuse of vulnerability, etc. They were considered as exploited if they had to work excessive hours, live or work under poor

---

[43] "Labour migration from Moldova: From successful migration to forced labour", April 2010.

[44] "Labour migration from Armenia in 2008-2009: Labour migration trends and insight into migration experiences", May 2010.  Not published.

[45] "Labour migration and risk of trafficking from Georgia, 2008",  National centre of the research resources and statistics, April 2010.

conditions, if they were paid very low salaries, faced violence from employers and colleagues, carried out hazardous work with no protection, or did not receive social protection. They were considered as working under coercion if they had to work under violence or threats of violence, physical or otherwise, if forced to work to pay back loans, threatened with denunciation to authorities, or had documents confiscated. Based on this classification, between 40 per cent and 72 per cent of the returned migrants faced some form of exploitation and another 8–11 per cent were coerced. Roughly 15 per cent faced some form of deception during the recruitment process.

## Demographics

There appears to be an ambiguous relationship between age and forced labour. At the level of the household (both adults and children), the average age of forced labour victims was much lower than that of workers not in forced labour in all countries except Guatemala. Focusing on just children, the difference between the ages of the freely employed children and those engaged as forced labour is only slight. Again, younger children appear to be more vulnerable to forced labour in all countries except in the Plurinational State of Bolivia and Guatemala. The differences are significant in all cases. Among returned migrants, the average age of those who became victims to forced labour was lower than that of those who found work as free labourers. Thus, on the whole, it appears that forced labour victims are much younger except in the Plurinational State of Bolivia and Guatemala, where they are slightly older.

Focusing on gender, women are generally under-represented in the labour market. According to the ILO, the employment-to-population ratio was 72.7 for males and 24.8 for females in 2012 worldwide.[46] The surveys of forced labour show, however, that women who are economically active are less likely than men to be in forced labour, even in the case of returned migrants.

## Education and literacy

The surveys show that the people in forced labour have a lower literacy level, whether they are adults or children. The literacy level of the parents (or heads of household) is lower for the children in forced labour than those not in forced labour. The same applies to returned migrants who found work abroad, for whom literacy appeared to have an effect, although slight. Across all three countries – Armenia, Georgia and the Republic of Moldova –workers with a high level education were more represented in the category of freely employed workers and less represented among forced labour victims.

## Wealth and Income Shocks

There was no measure of poverty at the household level. However, for a few of the countries, income shocks and food security were measured. In the Niger, a higher percentage of forced labour victims than those in non-forced labour were from households in which there had been a decline in revenue. The same applies for both the Plurinational State of Bolivia and the Niger in the case of children. In Nepal, food security was used as an indirect measure of poverty in households; members were asked if they had enough food to eat year-round. Only a few of the forced labour victims lived in

---

[46] ILO: *Trends Econometric Models* (2010).

households with food security (9 per cent) compared to freely employed individuals (56 per cent). The results remain unchanged even for children.

In the case of returned migrants, the only indicator of poverty was credit related. A higher percentage of the victims of forced labour borrowed to finance their trips compared to those who were successful in their migration and thus did not end up in forced labour.

# Determinants of forced labour at the household level

### The probit model

The probit model seeks to econometrically identify and analyse the factors that make individuals vulnerable to forced labour.[47] The variable of interest is an indicator that takes on the value of 1 if an individual worked as a forced labourer during the period of analysis, and 0 otherwise. When dealing with binary variables, the usual model of choice is either the probit or the logit model. For this analysis, a probit model was used. This model was chosen to homogenize results with that obtained in later sections when the trivariate probit model was used to study the determinants of forced labour among returned migrant workers.

Based on this, the probability that the individual $i$ in household $j$ will be in forced labour, $Pr(y_{ij} = 1|X)$, can be defined as:

$$Pr(y_{ij} = 1|X) = \Phi(\alpha + \beta X_{ij})$$

where $\Phi$ is the cumulative distribution function of the standard normal distribution, $X_{ij}$ is the set of independent (explanatory) variables, and $\beta$ the vector of unknown parameters to be estimated.

### Forced labour measured at the household level: The results

The results are presented in the form of marginal effects that measure the change in the probability of the individual under analysis ending up in forced labour given a unit change in the explanatory variables (for the case of discrete variables, it is the effect of a change in status from 0 to 1). Where necessary, results for forced child labour are presented separately.

---

[47] W.H. Greene: *Econometric Analysis* (Prentice Hall, 7th Ed., 2011).

Table 3.4: Determinants of forced labour at the household level

| Variable | The Niger | Nepal | Guatemala |
|---|---|---|---|
| Age | -0.0009*** (0.0000) | -0.0062*** (0.0001) | 0.0072*** (0.0001) |
| Age | 0.0000*** (0.0000) | 0.0001*** (0.0000) | -0.0001*** (0.0000) |
| Female | -0.0021*** (0.0001) | -0.0173*** (0.0005) | -0.0989*** (0.0008) |
| Literate | -0.0049*** (0.0001) | -0.0115*** (0.0005) | 0.0414*** (0.0011) |
| Haruwah-Charuwah | - | 0.1992*** (0.0013) | - |
| Haliya | - | 0.1955*** (0.0013) | - |
| Literate head of household | -0.0109*** (0.0001) | -0.0103*** (0.0005) | -0.0235*** (0.0010) |
| Age of head of household | 0.0001*** (0.0000) | -0.0003*** (0.0000) | 0.0003*** (0.0000) |
| Female head of household | 0.0056*** (0.0002) | -0.0008*** (0.0008) | 0.0335*** (0.0013) |
| Size of household | 0.0016*** (0.0000) | -0.0051*** (0.0001) | -0.0050*** (0.0002) |
| % of children < 5 in household | -0.0115*** (0.0004) | 0.0438*** (0.0009) | 0.0167*** (0.0029) |
| % of elderly (> 60) in household | 0.0186*** (0.0007) | -0.1385*** (0.0022) | 0.0892*** (0.0049) |
| % of male adults (18-60) in household | 0.0085*** (0.0005) | -0.0108*** (0.015) | 0.0337*** (0.0040) |
| Rural | -0.0133*** (0.0002) | -0.0029*** (0.0006) | - |
| Tarai | - | 0.0478*** (0.0006) | - |
| Revenue decline | 0.0039*** (0.0001) | - | - |
| Food security | - | -0.0557*** (0.0004) | - |
| Number of obs. | 12446 | 11427 | 4211 |
| R | 0.0505 | 0.5583 | 0.0682 |

Source: ILO

Dash ( – ) means missing value.

1. Each column presents the probability of an individual ending up in forced labour. The marginal effects are reported after running a probit model in STATA.

2. The number in brackets below the marginal effect is the standard error. The significance level is represented by stars where: *** = 1 per cent level, ** = 5 per cent level and * = 10 per cent level.

## Demographics

The counter-intuitive finding of the study is that women and girls are generally less likely to be in forced labour irrespective of their age. Being female as opposed to male reduces the probability of a household member aged 5 or older being in forced labour by 0.21 percentage points (in the Niger), to 9.89 percentage points (in Guatemala). While being female leads to a decrease of about 0.55 to 1.01 percentage points, the

result is positive in Nepal where female children appear more likely than their male counterparts to be in forced labour if they are employed.

The impact of the gender of the head of household on the likelihood of its members being victims of forced labour appears to be clear: households headed by women were more likely to be affected by forced labour than those headed by men. In Nepal, however, members of a houseful headed by women were less likely to be in forced labour. This could be related to the fact that in Nepal, the female-headed households were less likely to be Haliya, Haruwah-Charuwah.

In terms of location, living in a rural area reduces the probability of a person being in forced labour by about 0.29 to 1.33 percentage points in Nepal and the Niger, respectively. Children were also less likely to be in forced labour if they lived in rural areas (0.29 to 1.94 percentage points in Côte d'Ivoire and the Plurinational State of Bolivia, respectively). The exception is in Nepal, where living in rural areas increased the probability of an employed child being in forced labour by about 20.7 percentage points. This is because the population at risk studied in this survey is located in rural areas. While the child dependency ratio increases the probability of household members being in forced labour in Nepal and Guatemala, this was not proven in the Niger.

### Education and literacy

With the exception of Guatemala where, surprisingly, the literate were more likely to be in forced labour (4.14 percentage points), being literate leads to a maximum 1.15 percentage point decrease in the probability of household members being in forced labour. Individuals in households with literate heads were less likely to be in forced labour. For children, what matters is the literacy and education level of the household's decision-maker. This is often either the head of the household or the parent. In cases where no information on the education of the parent was available, the head of the household's education was used.

The education of the fathers, which impacts household income, has a negative effect on forced labour. Having an educated father reduces the probability of an employed child ending up in forced labour by 0.17 per cent in the Plurinational State of Bolivia to 2.82 per cent in Côte d'Ivoire. If a child is in a household with an educated mother, the decrease can be by about as much as 5.65 per cent.

## Table 3.5: Determinants of forced child labour

| Variable | The Niger | Nepal | Guatemala | P.S. of Bolivia | Côte d'Ivoire |
|---|---|---|---|---|---|
| Age | 0.0079*** (0.0000) | -0.0134*** (0.0028) | -0.0027*** (0.0012) | -0.0007*** (0.0244) | -0.0059*** (0.0002) |
| Age[1] | 0.0003*** (0.0000) | 0.0004*** (0.0001) | 0.0008*** (0.0000) | 0.0001*** (0.0000) | 0.0002*** (0.0000) |
| Female | -0.0101*** (0.0003) | 0.0345*** (0.0028) | -0.0210*** (0.0011) | -0.0055*** (0.0003) | -0.0089*** (0.0002) |
| Indigenous | - | - | - | 0.0016*** (0.0003) | - |
| Ivorian | - | - | - | - | 0.0002*** (0.0156) |
| Haruwah-Charuwah | - | 0.5928*** (0.0049) | - | - | - |
| Haliya | - | 0.6188*** (0.0183) | - | - | - |
| Mother's education | -0.0107*** (0.0006) | - | -0.0273*** (0.0011) | 0.0062*** (0.0008) | -0.0565*** (0.0007) |
| Father's education | -0.0215*** (0.0003) | - | -0.0035*** (0.0012) | -0.0017*** (0.0011) | -0.0282*** (0.0003) |
| Literate head | - | 0.0414*** (0.0028) | - | - | - |
| Age of head | 0.0001*** (0.0000) | -0.0013*** (0.0002) | -0.0008*** (0.0001) | -0.0002 (0.0000) | -0.0002*** (0.0000) |
| Female Head | -0.0013*** (0.0005) | 0.0359*** (0.0052) | 0.1212*** (0.0033) | -0.0030*** (0.0011) | 0.0053*** (0.0003) |
| Size of household | 0.0040*** (0.0000) | -0.0235*** (0.0006) | -0.0071*** (0.0003) | 0.0010*** (0.0001) | 0.0013*** (0.0000) |
| % of children < 5 in Household | -0.0018*** (0.0012) | 0.1494*** (0.0091) | -0.0533*** (0.0044) | -0.0387*** (0.0011) | 0.0177*** (0.0008) |
| % of elderly (> 60) in Household | 0.1719*** (0.0021) | -0.3872*** (0.0207) | 0.0458*** (0.0068) | -0.0005*** (0.0029) | 0.0637*** (0.0014) |
| % of male adults (18-60) in household | 0.0797*** (0.0017) | 0.0572*** (0.0144) | 0.0494*** (0.0061) | 0.0102*** (0.0016) | 0.0135*** (0.0011) |
| Rural | -0.0166*** (0.0005) | 0.2070*** (0.0079) | - | -0.0194*** (0.0004) | -0.0029*** (0.0003) |
| Tarai | - | 0.0728*** (0.0034) | - | - | - |
| Revenue decline | -0.0044*** (0.0003) | - | - | 0.0063*** (0.0003) | - |
| Food security | - | -0.1377*** (0.0029) | - | - | - |
| Number of obs. | 3307 | 800 | 1753 | 3376 | |
| R[2] | 0.0824 | 0.3845 | 0.1408 | 0.1008 | |

Source: ILO

Dash ( – ) means missing value.

1. Each column presents the probability of an individual ending up in forced labour. The marginal effects are reported after running a probit model in STATA.

2. The number in brackets below the marginal effect is the standard error. The significance level is represented by stars where: *** = 1 per cent level, ** = 5 per cent level and * = 10 per cent level.

3. The measure of parental education is an interaction variable of the presence of the parent in the house and their literacy. In the Plurinational State of Bolivia, however, there is no measure of parental presence and thus the measure is only whether they were educated or not, while in Côte d'Ivoire it is an interaction between parental presence and whether the parent attended school.

## Household vulnerability

Direct measures of wealth are not used in the estimation model due to the importance of credit in the measurement of forced labour. Instead, measures such as income shocks and food security are used. In the Niger, a reduction in income for the household as a whole increases the probability that a member will be engaged in forced labour by about 0.39 per cent. The result is not as clear if the situation of children is studied independently from the whole household, with contradictory results in the Plurinational State of Bolivia, for example.

In terms of food security, data were only available for Nepal where food security had a negative effect on the probability of household members ending up in forced labour. This effect is extremely high, about 5.57 percentage points for household members as a whole, irrespective of their age, and about 13.77 percentage points for children. This variable, though important, is missing for the other two surveys (the Niger and Guatemala) where the household situation was studied. Its high value might help explain the low $R^2$ obtained for the other two countries where the variable is missing.

# Determinants of forced labour among returned migrants

## The trivariate probit model

A modified probit model was used to study the factors that make migrants vulnerable to forced labour. As full information is only available on the conditions of work of the returned migrants (and not on the migrants who are still working abroad), they are the only group that can be fully identify as either being in forced labour or not. This creates a selection problem that must be taken into consideration. The dependent variable of interest is $FL_i^*$, and it is related to the indicator variable $FL_i$, which takes on the value of 1 if returned migrant $i$ was in forced labour at their last destination, and a value of 0 if not. This variable, however, is only observed for migrants who have returned to their country of origin and thus were interviewed. Using a trivariate probit model[48], it is possible to correct for selection bias in the study of the determinants of migrant forced labour.

In the migration equation, the variable of interest, $M_i^*$, is related to the variable $M_i$, an indicator variable that takes on the value of 1 if the individual was a migrant (present or absent at time of interview), and 0 otherwise. The variable of interest in the return migration equation is $R_i^*$, associated with the observed indicator variable $R_i$, which takes on the value of 1 if the individual is a returned migrant, and 0 if the individual is still absent from the household. Thus the model of interest becomes:

---

[48] V. Carreón Rodriguez and J. Garcia-Menéndez, "Trivariate Probit with Double Sample Selection: Theory and Application", *Working papers No DTE 520* (Centro de Investigacion y Docencia Aconomicas, División de Economía, México, 2011); J.R. Ashford, J. R. and R.R. Sowden, "Multi-Variate Probit Analysis", in *Biometrics*, Vol. 26, No. 3 (International Biometric Society, 1970), pp. 535-546.

$$FL_i^* = \alpha^{FL} + \beta^{FL} X_i^{FL} + \varepsilon_i^{FL}$$

$$R_i^* = \alpha^R + \beta^R X_i^R + \varepsilon_i^R$$

$$M_i^* = \alpha^M + \beta^M X_i^M + \varepsilon_i^M$$

$$\rho_{FL,R} = Cov[\varepsilon^{FL}, \varepsilon^R | X^{FL}, X^R] \neq 0$$

$$\rho_{R,M} = Cov[\varepsilon^R, \varepsilon^M | X^R, X^M] \neq 0$$

$$\rho_{FL,M} = Cov[\varepsilon^{FL}, \varepsilon^M | X^{FL}, X^M] \neq 0$$

where $\alpha^p$ is the intercept, $\beta^p$ the vector of coefficients associated with independent variables $X_i^p$, with $\rho_{p_1 p_2}$ being the associated correlation coefficients for $p_1$ and $p_2$, respectively. The idiosyncratic component is $\varepsilon_i^{FL}$.

The two selection levels imply that there are four types of individuals: those who did not migrate, those who migrated but did not return, those who migrated and returned but were not in forced labour, and those who migrated and returned and were in forced labour at their final destination country. Full information is only available for the last two.

## Determinants of forced labour among returned migrants: The results

Three groups of respondents were studied: non-migrants, absent migrants and returned migrants. The correlation coefficients in Armenia and Georgia are all significant, implying that there is indeed some level of selection bias. The error terms are all correlated except in Armenia, where there appears to be no correlation between the error terms of the forced labour regression and migration regression. This means that there are common factors that make individuals vulnerable to forced labour and more likely to return to their country of origin, as well as common factors that make individuals choose to migrate and that also make them vulnerable to forced labour. In addition there are common factors that make individuals decide to migrate and to return. It is important to account for these correlations, as the three groups are generally not independent. The trivariate model takes this into account. Its results are presented in the next subsections.

Table 3.6: Correlation coefficients

| Variable | Rep. of Moldova | Armenia | Georgia |
|---|---|---|---|
| $\rho_{FL,R}$ | 0.2081*** (0.0473) | -0.6488*** (0.0188) | -0.8666*** (0.0121) |
| $\rho_{FL,M}$ | 0.2528*** (0.0294) | 0.0179 (0.0244) | -0.3823*** (0.0128) |
| $\rho_{R,M}$ | 0.3280*** (0.0101) | -0.2800*** (0.0223) | -0.3188*** (0.0128) |

Source ILO

*Demographics and literacy*

Contextual factors, such as the individual's characteristics and the characteristics of the household to which the individual belongs, are included in the regression analysis. In the Republic of Moldova, returning male migrants were more likely than females to have ended up in forced labour at their last destination country.

Similarly, individuals with only a primary-education level or below were also more likely to be victims of forced labour than their more educated counterparts. In Armenia, however, returning female migrants were more likely than males to have been in forced labour (but less likely to have been deceived). In the three countries under consideration, being of rural rather than urban origins increased the probability of an individual ending up in forced labour at their destination country by between 0.83 percentage points in the Republic of Moldova and 5.71 percentage points in Georgia. The destination was also a determinant; individuals who went to CIS countries faced a higher probability of ending up in forced labour than those who did not. For example, going from the Republic of Moldova to a CIS country increased the probability of being in forced labour by about 0.3 percentage points, all else being constant.

Irregular migrants are more likely to be in forced labour than migrant workers with a regular status. In this model, being an irregular migrant as opposed to a regular migrant increases the probability of being in forced labour by about 0.39 percentage points in the Republic of Moldova to 13.84 percentage points in Georgia, all else being constant.

## Table 3.7: Determinants of forced migrant labour

| Variable | Rep. of Moldova | Armenia | Georgia |
|---|---|---|---|
| Age at migration | 0.0006*** | 0.0011*** | 0.0149*** |
| | (0.0001) | (0.0004) | (0.0021) |
| Age at migration | -0.0000*** | -0.0000*** | -0.0002*** |
| | (0.0000) | (0.0000) | (0.0000) |
| Female | -0.0067*** | 0.0780*** | - |
| | (0.0009) | (0.0095) | |
| Married | -0.0017 | -0.0450*** | 0.0427*** |
| | (0.0052) | (0.0047) | (0.0062) |
| Primary | 0.0080*** | 0.0401*** | |
| | (0.0023) | (0.0052) | |
| Rural | 0.0083*** | 0.0097*** | 0.0571*** |
| | (0.0013) | (0.0018) | (0.0058) |
| Situation before leaving | | | |
| Employed | 0.0025*** | 0.1120*** | -0.1443*** |
| | (0.0004) | (0.0084) | (0.0096) |
| Student | 0.0065*** | 0.0967*** | - |
| | (0.0011) | (0.0095) | |
| Other | 0.0039*** | -0.0365*** | - |
| | (0.0007) | (0.0053) | |
| CIS | 0.0028*** | - | 0.0231*** |
| | (0.0005) | | (0.0056) |
| Lender | | | |
| Relatives/friends | 0.0035*** | 0.0843*** | - |
| | (0.0006) | (0.0067) | |
| Third party | 0.0081*** | 0.1295*** | - |
| | (0.0014) | (0.0099) | |
| Amount borrowed | -0.0000*** | -0.0000*** | - |
| | (0.0000) | (0.0000) | |
| Paid for departure | | | |
| Relatives/friends | - | 0.0156*** | - |
| | | (0.0027) | |
| Third party | - | -0.0575*** | - |
| | | (0.0051) | |
| Legislation fully known | - | -0.0302*** | - |
| | | (0.0032) | |
| Recruitment fee | | | |
| Relatives/friends | 0.0051*** | - | - |
| | (0.0102) | | |
| Third party | 0.0132*** | - | - |
| | (0.0022) | | |
| Illegal resident | 0.0039*** | 0.1384*** | 0.0525*** |
| | (0.0007) | (0.0115) | (0.0065) |
| Sector of work | | | |
| Qualified workers in industries | 0.0084*** | 0.0566*** | 0.2416*** |
| | (0.0013) | (0.0048) | (0.0129) |
| Low-skilled workers | 0.0052*** | 0.1694*** | 0.1379*** |
| | (0.0009) | (0.0092) | (0.0092) |
| Skilled agriculture | 0.0083*** | 0.3754*** | 0.2350*** |
| | (0.0020) | (0.0165) | (0.0169) |
| Service/commerce | 0.0109*** | -0.0235*** | - |
| | (0.0018) | (0.0043) | |

Source ILO. Dash ( - ) means missing value.NOTES: For each the marginal effects are reported. The cmp in STATA developed by Roodman is used for the analysis. The number in brackets below the marginal effect is the standard deviation of the coefficients.

The significance level is represented by stars where: *** = 1 per cent level, ** = 5 per cent level and * = 10 per cent level.

## Recruitment fees and debt

In the surveys that targeted returned migrants, no direct information was available on the income levels of the migrants prior to migration. The only information that could be used as proxy is whether they borrowed to finance their trip. Borrowing from third parties, even from relatives and friends as opposed to not borrowing at all, leads to an increase in the probability that an individual will end up in forced labour. While borrowing in itself has a significant impact on the individual's vulnerability to forced labour, the amount borrowed appears not to have much impact. Those who borrowed from relatives and friends as opposed to not borrowing faced an increase in the probability of being in forced labour by about 0.35 percentage points in the Republic of Moldova to 8.43 percentage points in Armenia.

Considering just the Moldovan returned migrants, the payment of recruitment fees, even to relatives or friends, leads to a higher probability of ending up in forced labour. Paying recruitment fees leads to an increase in the probability of an individual ending up in forced labour by about 0.51 percentage points and 1.32 percentage points if the fees were paid to relatives and friends and to third parties, respectively. In both Armenia and Georgia, recruitment fees are not included in the regression analysis due to the small number of individuals who actually paid such fees.

## Occupation

In this model, occupations are broken down into qualified industry workers, low-skilled workers, skilled agriculture workers and service/commerce and other professional workers. The reference group for the Republic of Moldova and Armenia is other professional workers, while in Georgia it is service/commerce workers and other professional workers due to the fact that there were not enough other professional workers. Skilled agricultural workers faced an increase in probability of being in forced labour across all three countries due to their occupation as opposed to being in the reference occupations. The returned migrants in the Republic of Moldova and Armenia faced between a 0.83 percentage point and a 37.54 percentage point increase in probability of being in forced labour if they were skilled agriculture workers as opposed to workers in professional occupations. In Georgia, they faced a 23.50 percentage point increase in their probability of being in forced labour if they were in skilled agriculture as opposed to professional occupations.

A similar result is found in the services occupations among the Moldovan returned migrants; they faced a 1.09 percentage point increase in their probability of being in forced labour with respect to the reference category. In Armenia, however, the effect was the opposite. The returned migrants in the services sector were less likely to have faced forced labour compared to those in other professional occupations.

# Conclusions

*"I had not then learned the measure of "man's inhumanity to man," nor to what limitless extent of wickedness he will go for the love of gain."*

*— Solomon Northup, Twelve Years a Slave (1853)*

Those words were written by Solomon Northup in "Twelve Years a Slave" more than 150 years ago, but they ring as true today as they did then.  More than a century after being banned in the developed world, and decades after being outlawed in the newly emerging developing world, modern forms of slavery—forced labour, human trafficking, forced sexual exploitation—still exist, and unfortunately risk growing in extent and profitability in the world today.

As this report has shown, the profits from forced labour, as generated on the backs of largely working poor who are desperately searching for a decent job and a better life are more than three times the ILO's previous estimates.

Put into perspective, the 21 million victims in forced labour and the more than US$150 billion in illegal profits generated by their work exceeds the population and GDP of many countries or territories around the world. Yet this vast nation of men, women and children, along with its resources, remains virtually invisible, hidden behind a wall of coercion, threats and economic exploitation.

Since its first Global Report on Forced Labour was issued in 2001, the ILO's Special Action Programme to combat Forced Labour has led the way in marshalling concrete global action. The ILO's two international standards on forced labour have been nearly universally adopted, and today form the basis of binding international law that has been embraced by most ILO member States. This new report builds on the 2012 Global Estimate, and new methodologies and surveys, to take the understanding of forced labour, its extent and its profits to a new level.

The report indicates that while unscrupulous employers and criminals reap huge profits from the illegal exaction of forced labour, the losses incurred by the victims are also enormously significant. People in forced labour are often caught in a vicious cycle that condemns them to endless poverty. They may suffer personal trauma that will require years to overcome as they try to rebuild their lives. At the same time, law-abiding businesses and employers are disadvantaged by forced labour as it creates an environment of unfair competition and risks tarnishing the reputation of entire industries and sectors. And governments and societies are also harmed because the profits generated by forced labour bypass national tax collection systems, and the costs involved in dealing with forced labour cases are significant.

The impact of poverty and income shocks is central to the understanding of forced labour. Individuals living in poverty are more likely to be in forced labour and to borrow money, leading to an increase in vulnerability to forced labour or a family member

being held in debt bondage. In addition, income shocks that push households further into poverty, and often below the food poverty line, also increase the likelihood of exposure to forced labour. These households are more likely to need emergency funds, eventually relying on third parties to support their families. This heavy dependence on other individuals can lead to manipulation, coercion, exploitation and deception, especially if a creditor is a recruiter or trafficker.

The choice of a specific occupation also has an impact on whether the person ends up in forced labour. Forced labour is more common in unskilled occupations in agriculture, fishing, domestic work, manufacturing and other work requiring low levels of education and skills. Informal sector workers are more vulnerable to forced labour than workers who possess enforceable employment contracts.

Education and literacy are very important factors, both in terms of vulnerability to, and in the elimination of, forced labour. Educated individuals are less likely to be in basic forms of manual labour, and are more likely to know their rights. Literate individuals can read contracts and recognize situations that could lead to exploitation and coercion. In addition, households headed by educated persons are more likely to be better off and thus less likely to borrow, especially in the event of unforeseen income shocks.

Gender is another important factor that determines the likelihood of being in forced labour, especially in relation to specific economic activities. According to the ILO's Global Estimate, about 55 per cent of all victims are women and girls. In forced sexual exploitation and in domestic work, the vast majority of victims are women and girls. In other economic activities, however, men and boys tend to be disproportionally represented. According to survey data discussed in this chapter, men and boys are slightly more at risk of falling victim to forced labour than women and girls. This can be explained by the selection of surveys, and a particular focus on bonded labour or debt bondage.

Previous ILO studies have shown that it is usually the male head of the household that borrows from moneylenders and hence pledges his labour as collateral. But this often implies that the entire family is considered to be bonded. Some country surveys show that male migrants were more often in forced labour than women, depending very much on the choice of destination country. Other country surveys show that single female headed households were more at risk of forced labour than male headed households. Thus, while, gender is an important factor determining the risk of forced labour, it is often contextual and there are great variances across countries, sectors and forms of forced labour.

Finally, migration is an important risk factor. Surveys that focused on migrant workers in Eastern Europe showed a clear correlation between the need to borrow money for the payment of recruitment fees and the risk of ending up in forced labour. The level of education also played a role, as educated migrants were less likely to be in forced labour. Finally, the choice of destination country and the legal status of migrant workers in that country played a significant role in determining the likelihood of being in forced labour. An irregular situation entails a higher risk to be exposed to forced labour than regular migration and employment status.

What needs to be done? There is a critical need to expand the current knowledge base on forced labour through standardized data collection methods across countries. Such standardization and regular data collection would enable the ILO and other international organizations to generate more reliable global figures, measure trends and better understand risk factors. Better data and research will also contribute to the design of more effective programmes and policies. Following the resolution of the International Conference of Labour Statisticians adopted in September 2013, the ILO will now establish a working group of statisticians, economists and other experts to further advance data collection and research in this area.

However, if the lives of the 21 million men, women and children in forced labour are to be significantly changed, concrete and immediate action is needed. The fact that, with limited deterrence, huge profits can be made from millions of poor and uneducated workers provides a compelling argument for stronger government intervention and social and economic development. Despite enhanced enforcement action against forced labour and human trafficking in recent years, it remains a low risk and high gain enterprise. This has to change.

Measures are needed to strengthen laws and policies and reinforce inspection in sectors where the risk of forced labour is high. This should be linked to an early identification system of victims and their effective protection. Labour rights violations should be swiftly punished and criminal sanctions should be imposed on those who prey on particularly vulnerable workers. Workers need to be empowered by supporting their organization and access to remedies.

There is also a need to strengthen preventive measures and address specific risk factors. Social protection can prevent household vulnerability to sudden income shocks and debt bondage. Access to education and skills training can enhance the bargaining power of workers and prevent children in particular from becoming victims of forced labour. Measures to promote social inclusion and address discrimination against women and girls can also go a long way towards preventing forced labour. Good migration governance can enhance the positive development impact of migration and prevent the exploitation and abuse of migrant workers.

The need to address the socio-economic root causes of this hugely profitable illegal practice is urgent. Comprehensive measures are required that involve governments, workers, employers and other stakeholders working together to end forced labour. The continued existence of forced labour is bad for its victims, for business and development. It is a practice that has no place in modern society and should be eradicated as a matter of priority.

# Appendix

## 1. Definitions

An individual was considered to be *employed* if they engaged in any economic activity within the reference period used in the survey.

An individual is considered to be working in *forced labour* if they

- had not been freely recruited and faced some form of penalty at time of recruitment or
- had to work and live under duress and the menace of any penalty or
- could not leave their employer because of a menace of a penalty

**A child** is all persons below the age of 18.

**An adult** is defined as an individual who is older than 17 years.

**A returned labour migrant** is an individual who migrated to work abroad and returned to their country of origin at any point in time within the 12 months preceding the interview. This individual has to be present in the household at the time of interview.

**A household** is affected by forced labour if at least one of its member, adult or child, is a victim of forced labour.


## 2. Profits from the Illegal Use of Forced Labour

*Dealing with non-response*

Both data sets have missing values and we have to correct for this. Following ILO (2013), non-response is treated as a sampling problem. Countries for which data is available may be different from those for which data is unavailable, Peress (2010). To correct for this bias the estimate is often weighted such that the distribution for the observed variable in the sample matches the distribution of the population. One way to do this is via the variable response propensity estimator, ILO (2012).

*Response Weight*

Each country $i$ is assumed to provide information on sector $j$ with a probability, $\pi_{ij}$, independently of each other. The inverse of this response probability is then use as a weight in calculating the final estimated number of workers in each sector in each sector. In order to calculate the probability of non-response, we create a dummy variable, $r_{ij}$, which takes on the value of 1 if the country $i$ provides information on our

variable of interest for sector *j*, that is the size of the work force in a given sector, and 0 otherwise.

We therefore calculate the response probabilities using a probit model. Thus we estimate

$$\pi_{ij} = \Phi_{ij}(\alpha_{ij} + \beta_{ij}X)$$

where $\Phi$ denotes the cumulative distribution function (CDF) for the probit regression, $\alpha$ is the intercept and $X$ the matrix of independent variables to be used in estimating the probabilities.

## *Response Weights: The Dependent Variables*

The estimation of the profits depends on three main variables, the size of the workforce in each sector, the value added per sector and the minimum wage. As the countries that do not report information on all three variables tend to be concentrated in specific regions, we employ a regional dummy variable as one of our dependent variables. In addition the GDP in each country is also used as an indicator for response. Countries with lower GDPs are less likely to carry out surveys and thus to report any such information. In addition we expect that democratic countries are more likely to report these values and therefore include the democracy index of the economic intelligence unit. We therefore run the regression:

$$\pi_{ij} = \Phi_{ij}(\alpha_{ij} + \beta_{1i}Region + \beta_{2i}GDP + \beta_{3i}Democracy)$$

and in the case of agriculture we run

$$\pi_{ij} = \Phi_{ij}(\alpha_{ij} + \beta_{1i}Region + \beta_{2i}GDP)$$

In the domestic sector, we estimate the probability that in information on the minimum wage is available by running the regression

$$\pi_{ij} = \Phi_{ij}(\alpha_{ij} + \beta_{1i}Region + \beta_{2i}GDP)$$

Once the probabilities of response are calculated we are able to estimate the profits made by the use of forced labour per sector per region.

| Variable | Agriculture | Mining | Manufacturing | Construction | Domestic |
|---|---|---|---|---|---|
| Region | | | | | |
| Developed Economies and EU | 0.9888*** (0.3155) | 0.4740 (0.4289) | 0.3889 (0.4188) | 0.5326 (0.4488) | -0.1191 (0.2907) |
| Latin America and the Caribbean | 1.1318*** (0.3152) | 0.4138 (0.3748) | 0.5093 (0.3571) | 0.1831 (0.4049) | 0.2079 (0.3146) |
| Asia-Pacific | 0.1956 (0.2895) | 0.5104 (0.3541) | 0.6241* (0.3373) | 0.5191 (0.3694) | -0.2108 (0.2976) |
| Middle East | -0.3179 (0.3959) | – | – | – | – |
| GDP | 0.3090 (0.2508) | 0.2576 (0.1745) | 0.2396 (0.1715) | 0.4708** (0.2124) | 0.0752 (0.1362) |
| Democracy | – | 0.0901 (0.0820) | 0.0989 (0.0791) | 0.0835 (0.0866) | – |
| Constant | -0.3090 (0.1528) | -1.7066*** (0.4188) | -1.6067*** (0.3967) | -1.7618*** (0.4361) | 0.7295*** (0.1430) |
| $R^2$ | 0.1366 | 0.1123 | 0.1074 | 0.1584 | 0.0087 |
| Number of obs. | 174 | 164 | 164 | 164 | 174 |

# Bibliography

Acemoglu, D., Johnson, S. and Robinson, J. 2002. "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution", in *The Quaterly Journal of Economics*, 117 (4), pp. 1231 - 1294.

Acemoglu, D. and Wolitzky, A. 2011. "The Economics of Labour Coercion", in *Econometrica*, 79, 2, pp. 555 - 600.

Acemoglu, D., Garcia-Jimeno, C., and Robinson, J. 2012. "Finding Eldorado: Slavery and Long-run Development in Colombia", in *Journal of Comparative Economics*, Elsevier, vol. 40(4), pp. 534 - 564.

Arif, G. M. 2009. "Recruitment of Pakistani Workers for Overseas Employment: Mechanisms, Exploitation and Vulnerabilities", *Working Paper No. 64* (International Labour Organization, Geneva).

Ashford, J. R., and Sowden, R. R. 1970. "Multi-Variate Probit Analysis", in *Biometrics*, Vol. 26, No. 3 (International Biometric Society), pp. 535-546.

Basu, A. K. 2000. "The Intriguing Relation between Adult Minimum Wage and Child Labour", in *The Economic Journal* , Royal Economic Society, Vol. 110(462), pp. C50-61.

Basu, A. K. and Chau, N. H. 2003. "Targeting Child Labor in Debt Bondage: Evidence, Theory, and Policy Implications", in *The World Bank Economic Review* , Vol. 17, No. 2, pp. 255 - 281.

—. 2004. "Exploitation of Child Labor and the Dynamics of Debt Bondage", in *Journal of Economic Growth* , Vol. 9(2), pp. 209 - 238.

Bazen, S. and Salmon, C. 2010. "The Impact of Parental Health on Child Labour: The Case of Bangladesh", in *Economics Bulletin*, Vol. 30, Issue 4, pp. 2549 - 2557.

Becker, G. S. 1994. *Human Capital* (University of Chicago Press).

Belser, P. 2005. "Forced Labour and Human Trafficking: Estimating the Profits", *Working Paper No. 42* (International Labour Organization, Geneva).

Belser, P., de Cock, M. and Mehran F. 2005. *ILO Minimum Estimate of Forced Labour in the World*, (International Labour Organization, Geneva).

Boutin, D. 2012. "Family Farming, Child Labour and the Wealth Paradox: Evidence from Mali", in *Economics Bulletin*, (CNRS Rank 3), Vol. 32, No.4, pp. 3471 - 3479.

Buis, M. L. 2011. "The Consequence of Unobserved Heterogeneity in a Sequential Logit Model", in *Research in Social Stratification and Mobility*, Vol. 29, No 3, pp. 247-262.

Cameron, S. V. and Heckman, J. J. 1998. "Life Cycle Schooling and Dynamic Selection Bias: Models and Evidence for Five Cohorts of American Males", in *Journal of Political Economy*, Vol. 106, No. 2, pp. 262 - 333.

Carreón Rodriguez, V., and Garcia-Menéndez, J. 2011. "Trivariate Probit with Double Sample Selection: Theory and Application", *Working papers No DTE 520* (Centro de Investigacion y Docencia Aconomicas, División de Economía, México).

Chwe, M. S. Y. 1990. "Why were workers whipped? Pain in a Principal-Agent Model", in *The Economic Journal*, 100, pp. 1109 - 1121.

Conning, J. 2004. 'The Causes of Slavery or Serfdom and the Roads to Agrarian Capitalism: Domar's Hypothesis Revisited", *Working Paper 401* (Hunter College, Department of Economics).

Danailova-Trainor, G. and Belser, P. 2006. "Globalization and the Illicit Market for Human Trafficking: An Empirical Analysis of Supply and Demand", *Working Paper No.78* (International Labour, Geneva).

Dessy, S., and Pallage, S. 2001. "Why Banning the Worst Forms of Child Labour Would Hurt Poor Countries", in *Cahiers de Recherche CREFE / CREFE Working Paper No. 135* (Université Laval - Département d'économique).

—. 2005. "A Theory of the Worst Forms of Child Labour", in *The Economic Journal*, Vol. 115, Issue 500(01), pp. 68-87.

Domar, E. 1970. "The Causes of Slavery or Serfdom: A Hypothesis", in *The Journal of Economic History*, Vol. 30, N. 01 (Cambridge University Press), pp. 18-32.

Edmonds, E. 2007. "*Child Labour", NBER Working Paper No. 12926*.

—. 2007. "Selection into Worst Forms of Child Labor: Child Domestics, Porters and Ragpickers in Nepal", *Working Papers id:1011* (eSocialSciences).

—. 2010. "Selection into worst forms of child labor", in Randall K.Q. Akee, Eric V. Edmonds, Konstantinos Tatsiramos (ed.) *Child Labor and the Transition between School and Work (Research in Labor Economics, Volume 31)*, Emerald Group Publishing Limited, pp.1-31.

Fenoaltea, S. 1984. "Slavery and Supervision in Comparative Perspective: A Model", in *The Journal of Economic History*, Vol. 44, No. 3 (Cambridge University Press), pp. 635 - 668.

Fogel, R. and Engerman, S. 1974. *Time on the Cross: The Economics of American Negro Slavery* (Boston, Little, Brown and Co.).

Greene, W.H. 2011. *Econometric Analysis* (7th Ed., Prentice Hall).

Grootaert, C. 1998. "Child Labour in Côte d'Ivoire: Incidents and Determinants", *World Bank Policy Research Working Paper No. 1905* (World Bank, Washington D.C.).

Hox, J. 2010. *Multilevel Analysis: Techniques and Applications (*New York, Routledge).

54

Hussein, M., Saleemi, A. R., Malik, S. and Hussain, S. 2004. "Bonded Labour in Agriculture: A Rapid Assessment in Sindh and Balochistan, Pakistan", *Working Paper No. 26* (International Labour Organization, Geneva).

International Labour Organization (ILO). 2003. *Trafficking in Human Beings: New Approaches to Combatting the Problem* (Geneva).

—. 2005. *A Global Alliance Against Forced Labour, Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work, Report of the Director-General* (Geneva).

—. 2007. Committee of Experts on the Application of Conventions and Recommendations (CEACR), *Eradication of forced labour: General survey concerning the Forced Labour Convention, 1930 (No. 29), and the Abolition of Forced Labour Convention, 1957 (No. 105)* (Geneva).

—. 2009. *The Cost of Coercion, Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work (*Geneva).

—. 2010. *Trends Econometric Models* (Geneva).

—. 2012a. *ILO global estimate of forced labour: Results and methodology* (Geneva)

—. 2012b. *Global Employment Trends 2012: Preventing a deeper jobs crisis* (Geneva).

—. 2012c. *Hard to See, Harder to Count: Survey Guidelines to Estimate Forced Labour of Adults and Children* (Geneva).

—. 2013. *Caught at Sea Forced Labour and Trafficking in Fisheries* (ILO Special Action Programme to Combat Forced Labour, Geneva).

—. 2013. *Domestic workers across the world: Global and regional statistics and the extent of legal protection* (Geneva).

Kalzuny, R. 1975. "Determinants of Household Migration: A Comparative Study by Race and Poverty Level", in *Review of Economics and Statistics*, Vol. 57, pp. 269 - 274.

Kara, S. 2009. *Sex Trafficking: Inside the Business of Modern Slavery (*New York, Columbia University Press).

—. 2012. *Bonded Labour: Tackling the System of Slavery in South Asia* (New York, Columbia University Press).

Leimt, G. v. 2004. "Human Trafficking in Europe: An Economic Perspective", *Working Paper No. 31* (International Labour Organization, Geneva).

Lowell, L. and Findlay, A. 2001. "Migration of Highly Skilled Persons form Developing Countries: Impact and Policy Responses", *International Immigration Papers No. 44* (International Labour Organization, Geneva).

Maddala, G. S. 1983. *Limited-Dependent Variable and Qualitative Variables in Econometrics* (Cambridge, Cambridge University Press).

Ministère de la Fonction Publique et de l'Emploi, Institut National de la Statistique de la Côte d'Ivoire. 2010. *Le travail des enfants en Côte d'Ivoire à partir de l'Enquête sur le Niveau de Vie des Ménages 2008,* BIT (Côte d'Ivoire).

Organisation internationale du Travail (OIT) et Institut National de la Statistique du Niger (INS-Niger). 2011. *Rapport de l'enquête nationale sur le travail des enfants au* Niger de 2009 (Genève).

Ranjan, P. 1999. "An Economic Analysis of Child Labor", in *Economic Letters*, Elsevier, Vol. 64(1), pp. 99 - 105.

Ruwanpura, K. N. and Rai, P. 2004. "Forced Labour: Definitions, Indicators and Measurement", *Working Paper No. 18* (International Labour Organization, Geneva).

Sékou, A. R. and Adji, S. 2004. "Etude sur le travail forcé en Afrique de l'Ouest: Le Cas du Niger", *Working Paper No. 29* (International Labour Organization, Geneva).

Stark, O. 2006. "Inequality and Migration: A Behavioral Link", in *Economics Letters*, Vol. 91, Issue 1, pp. 146 - 152.

Stark, O. and Taylor, J. E. 1991. "Migration Incentives, Migration Types: The Role of Relative Deprivation", in *The Economic Journal*, 101(408), pp. 1163 - 1178.

Stark, O., Taylor, J. E. and Yitzhaki, S. 1986. "Remittances and Inequality", in *The Economic Journal*, Vol. 96, No. 383, pp. 722-740.

Taylor, J. E. 2006. "International Migration and Economic Development", in *The International Symposium on International Migration and Development,* UN/POP/MIG/SYMP/2006/09 (United Nations Population Division, Department of Economic and Social Affairs, Turin).

The World Bank. 2004. *World Development Indicators* (Washington D.C.).

Todaro, M. 1969. "A Model of Labour Migration and Urban Unemployment in Less Developed Countries", in *American Economic Review*, 59/1, pp. 138 - 148.

Tyuryukanova, E. 2005. *Forced labour in the Russian Federation today: Irregular migration and trafficking in human beings* (International Labour Organization, Geneva).

United Nations Department of Economic and Social Affairs. 2008. "International Standard Industrial Classification of All Economic Activities Revision 4", *Statistical papers Series M No. 4/Rev.4* (New York).