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Forced Labour: Definition, Indicators and Measurement

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Work in Freedom

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Forced Labour: Definition, Indicators and Measurement

Abstract
Summarizes and discusses some methods that have been used for measurement, and provides some guidance for future work on the subject. The paper was first distributed in April 2003, as a background document for an eminent group of international experts and ILO officials who participated in a consultation meeting on the measurement of forced labor.

Keywords
association, benefits, bonded, business, catherwood, child, code, compliance, conduct, cornell, corporate, costs, economic, employment, enforcement, forced, freedom, gender, global, globalization, government, ILR, industrial, inspection, international, labor, labour, law, legislation, monitoring, nondiscrimination, organization, organisation, portal, relations, sanctions, school, slave, standards, study, university, women, work

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InFocus Programme on Promoting the Declaration on Fundamental Principles and Rights at Work

WORK IN FREEDOM

International Labour Office

Forced Labour: Definitions, Indicators and Measurement

Kanchana N. Ruwanpura and Pallavi Rai

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Working Paper

Working Paper

Forced Labour: Definition, Indicators and Measurement

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Foreword

In June 1998 the International Labour Conference adopted a Declaration on Fundamental Principles and Rights at Work and its Follow-up that obligates member States to respect, promote and realize 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 of employment and occupation.[1] The *InFocus Programme on Promoting the Declaration* is responsible for the reporting processes and technical cooperation activities associated with the Declaration; and it carries out awareness raising, advocacy and knowledge functions – of which this Working Paper is an example. Working Papers are meant to stimulate discussion of the questions covered by the Declaration. They express the views of the author, which are not necessarily those of the ILO.

In November 2001, following the publication of the first Global Report on forced labour, the ILO Governing Body created a Special Action Programme to combat Forced Labour (SAP-FL), as part of broader efforts to promote the 1998 Declaration on Fundamental Principles and Rights at Work and its Follow-up.

Since its inception, SAP-FL has been concerned to raise global awareness of forced labour in its different forms, as a necessary prerequisite for effective action against it. Several thematic and country-specific studies and surveys have since been undertaken, on such diverse aspects of forced labour as bonded labour, human trafficking, forced domestic work, rural servitude, and forced prison labour.

A central concern has been the magnitude of forced labour in the world today. The 2001 Global Report on *Stopping Forced Labour* had indicated a trend towards an increase in certain forms of forced labour, but had refrained from direct measurement and quantification. It was then seen as "not possible at this stage to give an accurate estimate of the numbers affected on a global scale", because of the illicit nature of forced labour, which typically occurs in the underground economy and escapes official statistics.

In recent years, there has been a growing concern to come to grips with the problems of modern forced labour and slavery-like conditions, including the forced labour outcomes of human trafficking. A number of international organizations and also some governments (for example the United States) have been concerned to reach global estimates of human trafficking. And SAP-FL itself realizes that – not least in order to devise adequate operational responses – it needs to form the most accurate possible picture of the global scale of forced labour, and improve its understanding of the means to estimate the magnitude of forced labour at the country level.

The paper by Kanchana Ruwanpura and Pallavi Rai represents a first step in this direction. It describes the various forms of forced labour in existence, reviews available indicators of forced labour, summarises and discusses some methods that have been used for measurement, and provides some guidance for future work on the subject. The paper was first distributed in April 2003, as a background document for an eminent group of international experts and ILO officials who participated in a consultation meeting on the measurement of forced labour.

[1] The text of the Declaration is available on the following web site : http://www.ilo.org/declaration

The paper reflects an early stage of SAP-FL efforts to measure forced labour. Since that time, a research team under the supervision of SAP-FL economist Patrick Belser has now embarked on a new global estimate, which aims to generate benchmark figures on the minimum worldwide scale of the main forms of forced labour. A large and expanding database now contains more than 5,000 valid entries, with information on the number and gender of victims, the means of their enslavement, the economic sector where forced labour is imposed, and the levels if any of payment. As of mid 2004 the information had been collected from over 1,700 different sources, strongly reinforcing the knowledge base on different forms of forced labour. The final estimate will provide separate numbers for forced labour exacted by state authorities and private agents, respectively. The results are to be published in the next Global Report of the ILO Director General on forced labour in 2005.

We are extremely grateful to Kanchana Ruwanpura and Pallavi Rai for their path-breaking work on such a difficult area, where the knowledge base remains weak, but where analytical work of this kind is urgently needed. This can provide the impetus for intensified efforts against an unacceptable aspect of present-day societies, the continuation of various and largely hidden forms of forced labour in developing and industrialized countries alike.

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1. Introduction

Forced labour is not a new phenomenon.[2] The existence of this type of labour has both new and old dimensions to it, and there is growing consensus that the incidence of forced labour is on the rise (Bales 2000, International Labour Organization (ILO) 2001a, 2001b). Certainly, if one is to go by the media highlighted occurrence of human trafficking, there is much truth to this claim. Yet, no accurate measurement of forced labour exists, with estimates putting the figures at ***twenty-seven million*** forced labourers on a global scale (Bales 2000:8). Even Bales, however, cautions us that these figures are arrived at through approximation rather than "rigorous" survey analysis (*ibid*:8).

A big challenge facing the policy-making world then is to come up with accurate figures on the depth and severity of forced labour in the modern world. And it is with this aim in mind that this conceptual study is undertaken. The purpose of this review is to examine and evaluate the literature on definitions, indicators, and measurements, with the goal of drawing lessons from the literature. Moreover, any initial attempt by the policy-making world at conducting a survey at a global scale needs to begin by appraising documented local and national level efforts at doing the same. This review will also aim to highlight and propose useful and effective survey methodologies used from the available literature so as to initiate a global measurements exercise. Such an initiative will also help us comprehend the challenges that lay ahead in the act of measurements and conducting surveys.

This paper is separated into the following sections. The next section, section 2, begins by defining the concept of forced labour and the conceptual categories of forced labour. A good grasp of the terminology is essential in an actual exercise of measurements – since capturing the incidence of different types of forced labour may require surveys to be adapted according to these differences. However, while taking such steps may be necessary, it is also important to acknowledge at this initial stage that reality is very complex, and definitions therefore can not be watertight, for example, the overlap between trafficking and debt bondage. But the aim is still to be rigorous and consistent, at the very least. Therefore, in reality there are many areas of overlap and greyness that may mean conducting a problem-free measurement exercise is unlikely. This, however, is not unusual for any initial attempt of computing the incidence of a phenomenon globally – as the ILO's own attempts at calculating child labour through SIMPOC testify. So given these recognized limitations of concepts and categories, this section will therefore go through in detail the identified forms and types of forced labour.

Section 3 will examine and review the literature that has attempted to construct indicators on forced labour. The proposed methodologies on indicators are done with the purpose of ranking countries according to their efforts to implement standards on forced labour, which while useful may be a task done too early in the day. In other words, in the absence of reliable figures on forced labour for individual countries, efforts to rank countries in implementing forced labour standards may not be politically palatable. The absence of literature on the topic, however, shows how forced labour is not high on the agenda of economists. Moreover, in this section we will be in a better position to understand the extent to which economists have attempted to grasp the concept of forced labour as defined in the

[2] In the literature forced labour and slavery is commonly interchanged to mean the same (Bales 2000, ILO 2001). This paper refrains from doing the same and simply uses forced labour throughout, other than when discussing specific forms of forced labour.

policy-making context.[3] This is important for coming up with a sound methodology for measurement, as it is necessary to account for any gaps between theory and policy in this literature review.

Going over the theoretical underpinnings of calculating forced labour is a sound entry point to explore the surveys undertaken on the same. Section 4 reviews the available literature on measurements, particularly the well-established work done by Bales (2002). This feeds into section 5, which goes over the available surveys on forced labour in tabulated form. By presenting this evidence graphically, the measurement techniques used are highlighted – and it also helps bring out some of the limitations and pitfalls of relying primarily on surveys. To grasp the complexities and severity of forced labour it may be important to move beyond a simple survey, especially at the incipient stages of measuring forced labour. But whether this is a needed step, or not, requires us to review the empirical literature. Besides this, on the basis of critically reviewing the existing literature, it becomes possible to advocate the most appropriate sampling techniques and methods useful for any similar exercise. Moreover, in this section of the paper it also becomes possible to assess whether the literature on indicators may (or, may not) be applicable to ground level "realities" of computing forced labour – as per empirical surveys undertaken and carried out in different socio-economic context.[4]

The critical value of section 5 is that it enables one to explore the limits of relying primarily on survey techniques. This feeds into the penultimate section of this paper, section 6, which argues for the need to combine quantitative and qualitative research methods on measuring forced labour. The rationale for this proposition is because a qualitative assessment may be an invaluable starting step to better understand the factors and conditions leading to forced labour. And by drawing upon the evidence it becomes possible to formulate a quantitative exercise that best helps to capture the incidence of forced labour. Therefore, we also investigate possible ways of moving forwards in measuring the incidence and extent of forced labour as an emerging socio-economic issue. As calculating forced labour from a global perspective is at the early stages, there is every possibility that any techniques adopted may have to be localised and small scale. Yet, the potential value of these modest attempts should be noted.

By undertaking this literature review we will be in a better position to understand the *status-quo* and explore ways of moving ahead. However, like almost any new effort and attempt to conduct measurement exercises at the international level, there are likely to be limitations, pitfalls, and other unforeseen problems. The concluding section – section 7, therefore, identifies these particular factors. However, this ought not to deter and/or prevent initiating the preliminary stages of analysing the depth and severity of forced labour. The challenge is undoubtedly daunting, yet it is one that needs to be undertaken if one is to have better informed policy-making on forced labour.

[3] This is not to say that policy-makers are necessarily more aware and/or in tune with ground level reality. However, since policies affecting forced labourers do emerge from the policy-making arena it is important to investigate the extent to which theoreticians are aware of the policy-making discourse on the topic.

[4] This will be another means through which it will be possible to draw attention to any other potential discrepancies between theoretical and empirical exercises.

2. Forced Labour: Concepts and Conceptual Categories

Forced labour and its definition has in large part been the domain of lawyers. Yet, there is an economic context to it too. While this economic context has been changing and evolving, it is apparent that poverty and social exclusion contribute to forced labour – even though they may not in and of themselves explain its prevalence. There is not a necessary correlation between poverty and forced labour – since field-based evidence seems to indicate that its existence is either sector and/or country-specific. In other words, poverty, social exclusion and denial of human rights may be necessary conditions, but they are not sufficient conditions to lead to forced labour. It is here that the greatest challenge to measuring the incidence of forced labour arise, as understanding better the contributory factors need not in and of itself lead to accurate estimates of the phenomena. And we see this at play even in deciphering through the conceptual categories, where poverty, social exclusion and denial of human rights may be pointers in the right direction but they do not of themselves explain the concrete ways of thinking about of forced labour.

The ILO defines forced labour as work or service exacted from a person under threat or penalty, which includes penal sanctions and the loss of rights and privileges, where the person has not offered him/herself voluntarily (ILO 2001a).[5] Definitions in law may not be able to capture complexities on the ground, as a person is denied his/her rights in very particular social and economic conditions. An illustration is the Palermo Protocol,[6] which implicitly makes a distinction between human trafficking, a form of forced labour, and smuggling. According to the protocol human trafficking is defined where coercion, threat, force, or deception is used in the recruitment, transportation and harbouring of persons (United Nations Economic and Social Council 2002:7).[7] Therefore, where none of the above occurs, but persons are involved in illegal border crossings through complicity with recruiting agents, then this is considered a case of smuggling.

In law it is clear that a particular set of conditions define a trafficking scenario – thus setting it apart from smuggling. The practical situations may be different from this clear/neat separation. The practical difficulty arises when a seeming case of smuggling turns into trafficking because of trickery or deception at some point in the chain – as cases of smuggling and trafficking involve the connivance of many agents and actors. This serves as an instance where there may be grey areas between legal concepts and practical situations, which also underscore the practical difficulties that will be encountered in measuring forced labour.

Despite these difficulties, for operational purposes, the ILO has categorised "forced labour" into five key areas (ILO 2001b).[8] While this section of the paper goes over the schema of forced labour, the problems associated with the definition and practical application of the same still persists – and is duly acknowledged with out repetition of the issue. Therefore, this section of the paper discusses the existing categories of forced labour – which includes, slavery and abduction, misuse of public and prison works, forced recruitment, debt bondage

[5] This is according the Forced Labour Convention n° 29 (1930) (ILO 2001a:9).

[6] This is the protocol to prevent, suppress and punish trafficking in persons, especially women and children, which supplements the United Nations Convention against Trans-national Organized Crime (United Nations Economic and Social Council 2002:7).

[7] This is a rough reading of the concept. A precise description of the terms can be found in the United Nations Economic and Social Council document on the subject (2000).

[8] While this paper uses the five conceptual categories, earlier work by the ILO has eight separate categories of forced labour (ILO 2001a). In this paper, the later classification by the ILO is used.

and domestic workers under forced labour situations, and internal or international trafficking (*ibid*:5-6). [9] Categorizing forced labour into these distinct areas reflects the fact that older forms of forced labour continue to persist along with new forms of forced labour, which are emerging in the global economy.

There are two motivating reasons for examining this conceptual categorization. Firstly, to measure forced labour one needs to know what types of labour conditions fall within the rubric. Secondly, it helps us show that terminology and definitions are useful for practical purposes, especially when initiating a measurement exercise. In other words, what ever the limitations of the existing schema, it is important to know what is this classification system – because one needs to know what one is going to measure in trying to accurately estimate the prevalence of forced labour in the present global economy. What follows in the subsequent paragraphs, therefore, is a brief overview of each of these categories.

Abduction and slavery is a key form of forced labour, which continues to haunt the "modern" economy. While the cases detected are rare, conflict-conditions and "traditional" rivalries are factors that lead to abduction of people, who are then forced to labour for fighting parties (ILO 2001a:16). Where abductions take place in conflict conditions, it is argued that such persons are used to either directly or indirectly engage in armed conflict (ILO 2001b:5). Sierra Leone is a case in point, where diamond miners are compelled to labour for different fighting parties (ILO 2001a:16). Besides this, however, abduction of persons also usually tends to result in slavery and/or slave-like conditions as conventionally understood, and is known to be found in Sudan and Mauritania (*ibid*:16-17).

The inappropriate use of public works and prison labour is another category of forced labour (*ibid*:5). The former category may be subject to contention, especially where the voluntary labour performed by people is for short durations and/or sporadic. For example, village communities do come together to meet emergency and/or pressing socio-economic needs, such as building dams, during a limited amount of time as well as being involved in seasonal agricultural tasks based on reciprocity. Such practices are commonly found in predominantly agricultural communities and in countries that have a strong agrarian base – such as Africa or Asia. Clearly, these occurrences, which are based on particular cultural systems of self-help and reciprocity, ought not to be conflated together with situations of forced labour.

However, participation in public works under threat or force by the military, for prolonged periods of time, or without adequate remuneration (i.e. minimum wages), is considered a form of forced labour. Examples of forced labour situations where threat or force is used to extract labour from communities are noted in previous work by the ILO – with Myanmar being a case in point (ILO 2001a:19). Similarly, the discrepancies between local and national legislative frameworks, which may lead to forced labour situations through public works, in some African nations are also noted (*ibid*:20).[10]

[9] This review on measurements will not cover the computing of child labour. This of course is for the obvious reason that this is already undertaken by International Program on the Elimination of Child labour (IPEC).

[10] It is important to bear in mind such a tightly defined type of forced labour. This will prevent unnecessary lumping together instances of those case mentioned in the previous paragraph along with the situations discussed here, which is a critical distinction to make as otherwise it is likely to be contentious for its lack of cultural sensitivity and euro-centric biases.

Prison labour has two dimensions that constitute forced labour. The first type involves prison labour imposed by the state for anti-social acts. People have been imprisoned for political dissent against the state or for expressing religious views. Such persons are required to undergo compulsory labour so as to reform and educate themselves – which implies not simply a denial of human rights but also an instance of forced labour (*ibid*:62-3). China is a country singled out for violation of the core labour standards, with growing concern voiced by human rights and international workers organizations (*ibid*:62-3).

Prison labour has been usually used within prison premises in the past, and this is not the subject of our study. It is instead prison labour, which has involved work with private sector firms outside the prison on a daily basis, that is increasingly perceived as situations of forced labour. This is because, as workers organizations have noted that wages of these prison labourers are very low and they lack protection to negotiate for sound terms and conditions (*ibid*:60-61). Thus, the increasing public-private partnerships on prison maintenance, privatisation of prisons, and the use of prison labour by private enterprises in countries, such as the United States, United Kingdom, China, is noted as endorsing a particular type of forced labour. Yet, this type of prison labour is a contentious area to be considered forced labour – perhaps partially explained by the fact that these countries wield influence internationally.

Peonage and serfdom systems are remnants of feudal structures, which unfortunately are still found in many Latin American countries. "*Enganche*" is a coercive recruitment practice where indigenous people are recruited by indebting their subsistence living, for which they have to produce goods and services (ILO 2001a:22). Similarly, advances are used to induce indebtedness among indigenous people before the agricultural harvesting time, which leads to these people working to pay off their debts – with these practices extending to sugar cane and charcoal production as well (*ibid*:23).[11] Forced recruitment, however, is in many instances inter-mixed with debt bondage – because the former is not done simply under duress but also by compelling workers to take monetary advances.

Debt bondage, however, has another element to it – this is the case of bonded labourers found in South Asia, namely Bangladesh, India, Nepal and Pakistan (Bales 2000). The situation of bonded labourers differs from debt bondage in Latin America in that their period of indebtedness usually extends indefinitely, with many occasions of inter-generational bondage. Another significant characteristic of bonded labour in South Asia is that there are notable links to religious, cultural, and caste-based social relationships and skewed land-ownership patterns, which is closely related to the local social and economic structures.[12] [13]

The case of domestic workers in forced labour situations is infinitely more complex, because all domestic work need not degenerate into forced labour situations. A variety of factors

[11] The case of forced labour in sugar cane and charcoal production shows how it is not simply linked to poverty and social exclusion, but is also closely linked to the globalisation process with multi-nationals deriving economic benefits from such exploitative labour practices (Bales 2000).

[12] This particular feature is a noteworthy distinction from debt bondage in Latin America, which can be shown to be more closely linked to global economic relations and not simply local conditions.

[13] A particular manifestation of bonded labour situations in South Asia linked to religious and cultural traditions, not to mention gender, is the case of '*devadasis*' – who are pre-pubescent girls sacrificed to temple priests in exchange for the families economic security (Bales 2000:199). These young girls remain the property of the temples and priests well into womanhood – and are sexually enslaved and are usually thrust into temple-based prostitution. In the name of religion, culture and tradition, however, such abominable practices continue, with sporadic media attention.

could render domestic work into a situation of forced labour – which includes, debt bondage, trafficking, physical threat and withholding wages and/or identity papers (*ibid*:30). Moreover, since domestic workers are not visibly engaged in their work activities and tasks, difficulties can arise in assessing forced labour situations – with usually the more stark forms of abuse getting media coverage. The absence of labour legislation protecting domestic work, employment training – especially where domestic workers migrate from their home countries to foreign destinations, and their inability to exercise freedom of association, further contributes to the particularly sensitive nature of their position (*ibid*:31).[14]

Internal or international trafficking leading in forced labour situations is the next identified group (ILO 2001b:6).[15] The fundamental reason for trafficking to take place in both scenarios, however, is mostly due to poverty and lack of equitable human development – which thrust people to look for better alternatives (ILO 2001a:53). This, however, is only one aspect to the problem. It is equally important to look at the relationship between trafficking and labour market failures in both sending and receiving countries. In sender locations, the lack of employment opportunities compel people to look outside, while in the receiving locations labour market failure in terms of discrimination and occupational segregation means that trafficked labour is needed to fulfil occupational tasks at the bottom end of the ladder.[16]

The preceding paragraphs in this section discussed in some detail major forms of forced labour identified by the ILO (ILO 2001a, 2001b). The purpose of this analysis was to stress that this categorisation at some level is arbitrary and subjective, which may not render neat grouping possible. A difficulty attached with this for measurement purposes is that it may make identifying a particular situation, to be classified as forced labour, problematic as is measuring it. Yet, from a policy and operational perspective it is a necessary exercise to begin with arbitrary categories, and then use these concepts in order to measure the gravity of forced labour in the global context. Indeed examining the conceptualisation shows that particular categories of forced labour will be more easily measured, such as prison works, than others – such as trafficking, or bonded labour. Despite the difficulties in measuring particular categories of forced labour, there is a compelling need to measure the occurrence of forced labour and arrive at reliable global estimates – so that policy-makers can move forward in shaping the necessary policies to redress this particular labour market failure.

With these particular conceptualisations and issues in mind, the next section reviews indicators on forced labour. As mentioned in the introductory section a principal purpose of this evaluation is not simply to understand the raison d'être of economists in computing forced labour. Our aim is to also assess the extent to which economists have begun to understand forced labour as an operational category of imperative importance in the policy-making world. And with this backdrop in mind, we move to the next section.

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[14] The problems associated with domestic labour and the lack of effective labour legislation is not in certain ways surprising, given the gender dimension attached to this form work. In other words, since it is predominantly carried out by women and usually seen as an extension of work in the private sphere, which is usually considered "unproductive", the lack of legislative protection is predictable.

[15] While this paragraph defines some of the key features of trafficking, it is important to bear in mind the arbitrary nature of this particular category – and the potential areas of overlap between trafficking and smuggling pointed out before (page 3).

[16] An illustration is the case of Chinese trafficked under debt bondage working in sweatshops in France, which is an outcome of labour market failure in both China as well as France.

3. Indicators on Forced Labour

The quantification of forced labour has received scant attention by the economics discipline. Moreover, the interest is on exploring the trade and foreign direct investment effects or develops proxy measures to quantify the possible application of core labour standards globally (Cuyvers, van den Bulcke and Wijaya 2001, Kucera 2001, Busse 2002, Smith 2002, Institute for Human Development (undated)).[17]

An early study that focuses on core labour standards, including forced labour, examines the capacity and willingness of countries to comply with core labour standards – including forced labour (Cuyvers et al 2001:2). The authors use quantitative and qualitative data to measure the extent to which countries adhere to the fundamental conventions of the ILO. A distinction between *de jure* and *de facto* compliance, however, is made, and the purpose of this paper is to measure the latter – which is the issue that ought to be of concern to policy makers (*ibid*:3).

A primary basis of this exploration is that the ability of countries to respect core labour standards in practice may be determined by their income capacities, namely the average level of national income and income distribution (*ibid*:5). In addition, of course, these countries also need to have an educational, health, and political capacity since social awareness is usually closely linked to a sound basis of these factors. Using these criteria as cut-off points, countries are categorised so as to identify those countries that are unable to implement the core labour standards (*ibid*:9-10). After which the authors develop a formal, real and composite index for each core labour standard. As the focus of this paper is on forced labour, we review the indices for forced labour.

The key indicator for formal forced labour index (FFLI) is whether countries have ratified the ILO conventions on forced labour (convention 29 and 105). A significant proportion of countries have endorsed both conventions and a few other countries have not ratified either one of the conventions, but about 5.00 per cent of ILO member countries have not ratified either of the labour conventions (*ibid*: 27). This leads FFLI scores to range from 0 to 1, with a score 0.5 being assigned to countries that ratified one convention and not the other. This assignment of scores, however, is for formal legal acceptance. The reality and practical application in each country may be different, and therefore the authors go onto develop a real forced labour index (RFLI). The basis for this construction is the reported violations in forced labour conventions – where extent of forced labour in a country is quantified by assigning it a value (1, possible – 5, very serious) is combined with the number of types detected in the same country (*ibid*:28-29).[18] A composite forced labour index (FLI) is then obtained by constructing the calculated average of the FFLI and RFLI (*ibid*:30).

According to the FLI score derived through this indexing, some type of forced labour is found in both developed and developing countries. In other words, the existence of some type of forced labour globally indicates that it is not simply linked to the level of economic development, and for certain types of forced labour, trafficking, prison labour, the level of economic development of a country does not insulate it from the occurrence of forced labour. Similarly, there are other forms of forced labour that are shown to have close relationship to historical and cultural factors (*ibid*:31). An important contribution that emerges from this

[17] Most of these (limited) studies look at forced labour as one component of the core labour standards, and it only a couple of studies look at forced labour *per se*.

[18] Where there are discrepancies of the level of violations noted by different sources, a mid-value is arrived at by using the simple average of quantified degrees (*ibid*:29).

study is that there appear to be structural factors contributing to the persistence of forced labour.

An exercise in similar spirit has been undertaken by the Institute for Human Development (IHD) (undated) in its work on the vulnerability to debt bondage index (VDBI). The purpose of the VDBI is to identify and target the groups vulnerable to debt bondage in South Asia, namely Bangladesh, India, Nepal and Pakistan. The focus of the VDBI is on a particular type of forced labour – bonded labour – in a particular region, and since it is an indicator it may be used as a proxy measure for the number of bonded labourers in the region. However, the study itself acknowledges that the purpose of their indices is not to measure bonded labour, but is rather to be used as a tool for intervention and prevention of debt bondage (IHD: 1).

The analytical thinking behind the VDBI is that there are particular characteristics of bonded labourers that can be translated into measurable indicators. These include key features of bonded labourers as defined by international and national laws, contextual and environmental, trigger, socio-economic, and preventive factors. The latter four sets of indicators are based on baseline household surveys, while the information for the first indicator, characteristics of debt bondage, is obtained through secondary sources. The methodology used in order to translate these factors into indicators is that the information on agricultural workers is aggregated through a multivariate analysis, namely principal component analysis (PCA), used to test the scale.

A limitation of the VDBI is that no universal methodology can be developed as the complexity of assigning scales to particular factors is specific to the situation. Therefore, the methodology for coming up with proxy measures has to be specific to the ground realities and needs to reflect the context. Consequently, the categories used in each exercise of developing such indices for other sectors or countries need to be justified within the particular context. Despite these limitations, or rather challenges, the VDBI is a useful proxy guide to analysing the conditions that lead to debt bondage – and perhaps could be used along with others techniques of measurement to arrive at reliable global estimates.

4. Measurements on Forced Labour

This section of the paper reviews the methods used by Bales (2002) to arrive at the number of forced labourers. This overview helps locate the particularly difficult juncture we are at in obtaining numbers for forced labour, and therefore the possible need to use a variety of techniques at the initial stages of measuring the incidence of forced labour.

Bales (2002) traces the process used by him to arrive the figure of 27 million, and it is worthwhile going over the salient aspects to this method. First, available information on forced labour from a variety of sources – which ranged from reports by the ILO and experts, United States and other government agencies, Non-Governmental Organizations (NGOs), the work of academic experts and press reports – had been extensively searched to pull together a data base on a country by country basis. Upon amassing the data, “experts” from each country or sector were asked to compare the evidence found against their knowledge and experience of the ground level picture (2002:14). The “experts” were provided with a tight definition of the categories of forced labour and an educated guess of numbers to reflect upon.

It is this process that led to a refining of the estimates and arriving upon an approximate number of forced labourers at a global level (*ibid*:15).[19]

Clearly there are likely to be gaps in obtaining global estimates through these means, and Bales himself acknowledges the particularly worrying aspects to this process (*ibid*:15-16). As one moves from questionnaire to coding sheet to analysis, it is possible that the accuracy of individual numbers is suppressed at each level (*ibid*:16). Yet, there are also ways of improving upon the estimates: specifically, by cross-checking the qualitative and quantitative data it may be possible to refine the available forced labour figures. And this may be a necessary initial step in working towards raw numbers that helps paint a global picture of the magnitude of forced labour.

Given this backdrop, one particular observation that there may not be one answer to the ways in which a measurement gathering exercise should be carried out. Therefore, it is equally important to look at the national or local surveys carried out on data collection, to see if the experience on the ground may shed more light on the tools and techniques necessary for doing similarly for gathering information on forced labour at the international level. This, therefore, is the focus of section 5

5. Summarizing the Empirical Information

A common method of gathering data is through survey methods. All surveys, which are carried out at the local, national and international levels, however, need not adopt a similar methodology. This is particularly likely to be the case for forced labour, which is composed of many categories – all of which are not necessarily clearly measurable through surveys. The case of bonded labourers, serve as a case in point. Since there are nuances to the various surveys undertaken for forced labour, the task of reviewing the empirical surveys is challenging at one level. The challenge is to review and present the empirical information in ways that are easily digestible, while covering ground in comprehensive ways – especially so that we can draw necessary lessons for future measuring exercises. In order to do so, this section of the paper is presented in two ways. The first section of the paper summarizes the empirical information in tabular form, highlighting the significant features of each survey carried out. This is followed by a detailed discussion of those survey methods that may be particularly fruitful for future work on measuring forced labour.

Presenting this section of the paper in this manner will help bring together key information gathered through the surveys. Beyond this, however, by following the tabulated information with a detailed discussion of the relevant survey methods, we are in a position to highlight the challenges that similar measurement exercises may possibly bring about. And especially since gathering quantitative information on the incidence of forced labour at a global scale is at its incipient stages, through this review we will be in a better position to assess a) whether there is a need for combining different methodologies, b) which methodologies are most appropriate for the task, and c) which techniques are better suited for measuring the diverse forms of forced labour. First, however, a graphic presentation of the literature on surveys.

[19] This recent work of Bales (2002) also goes onto assign rankings to countries, while once again acknowledging that he may be at worse "building upon bad estimates to construct worse ordinal or ranking estimates." (2002:16).

Name of Survey	Definition Used	Methodology	Strengths	Weaknesses	Results
Gandhi Peace Foundation Survey (India)	Bonded labourers, as defined in national legislation (i.e. Bonded Labour System (Abolition) Act of India, 1976).	• Survey questionnaire of household characteristics, including on wages, loans, assets and employment structure. • Carried out at the village level on a random sample of villages in ten states. • A total of 450,119 of randomly selected villages in ten states participated in the survey. • Of the total survey population, a sample of 1000 villages was randomly selected. • The survey villages were distributed over 295 districts in the ten states. • Where selected villages reported the existence of bonded labour, a socio-economic description of the village was given.	• Follows a feasible and straightforward methodology. • The survey was decentralised. • Apparent sensitivity to ground situation, and approaching the issue of bondage via debt. • Shows the structural conditions leading to bondage.	• In the event the survey was mainly focused towards identifying bondage it is possible that diversity of tenancy agreements are classified under one grouping – i.e. bonded labour. • Not recognized by the Indian state as an accurate reflection of bonded labour (i.e. an overestimation).	• Estimates for bonded labourers in each district was arrived at in four ways: a) proportion in population surveyed b) proportion of agricultural labourer c) proportion in scheduled castes and tribes in each district d) the average number of bonded labourers in a particular district. • Estimated no.'s ➔ **2, 617,000**
Special Mobile Inspection Unit (Brazil)	Definition given by the Ministry of Labour is used, which distinguishes between slave labour, *trabalho escravo*, and *super-exploração*.	• Arrived at on the basis of formal complaints of forced labour. • This led to inspection raids and the number of workers	• Figures gathered are likely to be very accurate. • Since 1998 figures have	• Only where violence is used has been police and judiciary been willing to	• 109 operations and 23 raids were carried out during the

		encountered is summed up on an annual basis.	been separated into gender and age.	acknowledge forced labour situations. • There may be cases that do not get reported – possible underestimation.	1995-2000 period. • Numbers arrived at ➔ **1,834**
IPEC/SIMPOC[20]	Child labourers consist of a) all children "economically active" in the 5-14 year age group, b) children between 12-14 years engaged in light work (up to 14 hours of work per week), and c) children aged 15-17 years in hazardous and other worst forms of child labour	• Twenty-nine national household surveys were conducted for the 1990s period. • Ten of these household surveys were designed to specifically measure child labour under ILO/SIMPOC[21] • The other 19 surveys are a broad mixture of household and community surveys, conducted as part of the World Bank's program on Living Standard Measurements Survey (LSMS). • The data sets were harmonized with respect to *age groups*, *reference year*, and *measurement of work*.	• Modified according to different country needs. • Self-weighting sampling technique ensures that household in each study have an equal chance.	• SIMPOC survey is not directly comparable to other national surveys. • Some national household surveys are not specifically designed to measure for child labour. • Lack of adequate individual country-level raw data containing all the required data.	• The adjusted data formed the basis for estimating global figures by: a) national data for each sex and age category was used to produce a ratio estimate to correspond to population data

[20] The purpose of Statistical Information and Monitoring Program on Child Labour (SIMPOC) under ILO/IPEC was to carry out country surveys and generate quantitative and qualitative gender sensitive data on child labour in all its forms. Such an information base would then allow the study of the scale, distribution, characteristics, causes and consequences of child labour.

[21] The SIMPOC effect was measured by fitting a logistic regression to the work population ratios in each sex and age category, with a dummy variable for distinguishing SIMPOC from non-SIMPOC surveys. The estimated regression coefficients of the dummy variable were then used to adjust the non-SIMPOC survey results to the apparently more accurate information obtained from the SIMPOC surveys.

		• 2000 was adopted as the common reference year and the national data extrapolated to mid-2000.			calculated by the United Nations Population Division, b) the resulting ratio was weighted *by the inverse of the probability of selection of the country* to produce regional estimates, and c) regional estimates were simply aggregated to obtain the total figure. • Global estimate ➔ 211 million child labourers
ILO/IPEC – Worst Forms of Child Labour	ILO Convention 182 (Worst Forms of Child Labour) and 29 (Forced Labour Convention)	• Sources of data less than three years old from the ILO, other international agencies	• Variety of sources. • The possibility of	• Unclear on the dividing line between	• The preliminary data base fed

	was used to estimate children involved in *trafficking*, *forced labour*, *armed conflict*, *sexual exploitation* and *illicit activities*.	(UNICEF, IOM, OSCE, etc), trade unions, employers organizations, non-governmental organizations, governments, academic institutions and individual experts were collected. • Using data from these sources, the following categories were constructed – *who*, *what*, *where*, *how many*, *from where*, and *when* were constructed. • This information was entered into a preliminary database.	obtaining estimates for a sensitive area of study.	hazardous and non-hazardous situations. • Using different sources may leave room for divergence on definitions and categories.	into towards computing the worst forms of child labour. • Global estimate ➔ 8-4 million child labourers
Informal Sector Service Centre (INSEC) (Nepal, Kathmandu)	Bonded labour as defined in the *Kamiya* system, i.e. those workers in the agricultural sector working for cash advances (loans), was used.	• Field sites were selected on the basis of easy accessibility and site areas suspected of having *Kamaiya* exploitation. • Local enumerators who spoke the local language and familiar with local problems and practices were selected. • *Kamaiyas* in three districts were interviewed.	• Sensitivity to local customs. • Adaptability of survey to ground level realities.	• Can not cope with the different types of *Kamaiya*'s. • Workers were not willing to respond as the study was not considered to be relevant.	• Survey data, which included information on characteristics of persons and household information, was used to quantify the number of *Kamiya* labourers. • Numbers arrived at ➔ 17,728

Baseline Study for Nepal by the Social Finance Unit/ILO.	The legal framework in Nepal is used as a guiding definition. This states that traffic in human beings, slavery, serfdom or forced labour in any form is prohibited. The legal statute also has provisions on working hours, overtime, lay offs, minimum wages, etc., which are used for this baseline survey.	• The study was limited to one district, and in the *Banke* district three village development committees were selected for the survey. • The Consultative Group to Assist Poorest (CGAP) poverty assessment tool was used. • The sample size was 300 non-bonded households and 200 former bonded households. • A semi-formalised questionnaire from the CGAP tool was used. • A participatory rural appraisal and wealth-ranking system was used to garner more information on the status of bonded labourers.	• Since the area surveyed was small, satisfactory results were obtained. • Variations in causes and incidence of bonded labour had the ability to come through.	• The techniques can be used only in small and similar geographical areas. • The survey can not be used in large areas, without necessary adaptation to local conditions.	• Poverty is a strong indicator, but there is a need to move beyond looking at poverty. • Other socio-economic and cultural factors relate to the risk of becoming bonded. • The purpose of this study was not to arrive at numbers of bonded labourers, but to assess factors that contribute to making particular groups vulnerable to debt bondage.
Baseline Study for Karnataka, India by the	The definition was not specified.	• Four backward districts of Karnataka were selected for rapid appraisal.	• Participatory rural appraisal methods were	• SAME AS ABOVE	• Debt bondage was found in a) caste-

Social Finance Unit/ILO.		• Sample households were selected after discussions with various state institutions. • Since bonded labourers are concentrated in particular locations, two sub-districts (*talukas*) per district was used for the study. • A quota sampling approach was used to select 11 households per village ➔ the final sample size was of 528 households. • The questionnaire from the CGAP and the International Food Policy Research Institute was used to assess the poverty of households. • Qualitative research was also done, with each village selected after discussing with local NGOs.	used to understand better the local conditions. • OTHERS – SAME AS ABOVE.		based, traditional and inter-generational relationships, b) where there was an unexpected need of money for emergencies or ceremonies, and c) the combination of the above led to system of multiple loans and rolling debt.
United States Government – Trafficking in Person's Report 2002	Not available	• Through secondary sources – though it is unclear as to which areas of trafficking are covered in these figures.	• Not able to comment as there is no noted methodology.	• There is no clear methodology used in arriving at estimates.	• Figures are for trafficked women and children. • Estimates arrived at for 1997 ➔ 700,000
International Organization of Migration	Women and children trafficked for sexual exploitation.	• Based on a short questionnaire of person participating in IOM field office programs.	• Cover a particular type of trafficking	• Do not take the trafficking of men into	• Estimates arrived at from IOM's

		• Together with data and estimates of secondary sources.	comprehensively • Give important information on trafficking flows.	account. • Do not cover trafficking for other forms of labour.	120 offices in 89 countries. • Disaggregated data is presented in the Appendix.

The graphical presentation above shows that there are only a limited number of surveys available to date on measuring forced labour. Besides this, however, the survey techniques used has been limited to sample surveys, which is not surprising since detailed research into forced labour is recent and scarce. Moreover, not all identified categories of forced labour has begun to be quantified using reliable methods of measurements, with the absence of any comprehensive survey for the category of abduction and slavery being a case in point. However, it is necessary to begin by assessing the strengths and weaknesses of the past survey studies in this section of the paper for us to evaluate the next steps to be taken.

Presenting the available survey studies in tabulated form confirms that statistical evidence on forced labour is extremely scanty. Most often it also appears that much research efforts have extrapolated from known incidence based on reports from individuals, social workers, investigative local reporters, non-governmental organizations and so forth. Furthermore, it is also evident that most of the above surveys are geographically limited and large-scale surveys are notably absent – the exception being the Gandhi Peace Foundation (GPF) survey on bonded labour in India. Since surveys have been the most commonly used technique for gathering data, the ensuing paragraphs discuss this method in more detail.

Surveys for gathering data on forced labour has been primarily conducted on a small scale. The advantage of small-scale and local surveys is that they are better able to provide a comprehensive overview of ground level realities. However, conducting surveys on a small scale implies that the raw data gathered will be small in number – and may not necessarily help in extrapolation to arrive at global estimates. Yet, a limited data base is better than nothing at all, since it provides some vital clues – i.e. potential areas and sectors in which forced labour is likely to be found, types of forced labour found, and so forth – in doing further investigative survey studies. However, it is not necessarily the case that techniques used in small scale surveys can be uncritically used on a large scale, as this process is likely to pose many challenges – especially where there is variation in the socio-economic context and circumstances. However, the small-scale survey reviewed above show the potential usefulness of the information they have derived in a preliminary attempt at measuring forced labour.

All surveys done, however, have not been small scale – the exception, the GPF survey, also needs some consideration in this discussion. The GPF survey is the most comprehensive survey done so far on bonded labour, a form of forced labour. The survey covers a wide area, uses standardised techniques and harmonises the characteristics of debt bondage in India over ten states to obtain a comparable figure. However, the findings from the GPF survey have not been accepted by the Government of India, and have been subject to much criticism. A main reason for these criticisms is that an approved statistical tool or methodology was not used in collecting the primary data. Furthermore, it was noted that it was not known if the sampling was representative in terms of the population.[22]

At one level there is legitimacy in the concerns voiced by the Government of India, since the baseline methods used to characterize the extent of bonded labour is rigidly pre-planned. However, modern sampling techniques, such as using more adaptive[23] sampling designs –

[22] The random sampling method, which was drawn from 450,000 villages in 10 states, from which 1000 villages (every 450th villages were selected resulted in the estimation of 2.6 million bonded labourers in India.

[23] A discussion of the key features of the adaptive sampling technique will follow in the penultimate section, section 6.

which is increasingly used to facilitate more precise data collection, will help overcome some of these limitations to result in better quality data. This is especially the case as bonded labour is noted to be found in particular areas and sectors, i.e. it is unevenly concentrated in certain areas, where normal sampling may not effectively capture its incidence.

The study in Brazil arrives at statistical figures on a case-by-case basis. Although these figures are an outcome of government efforts in the area, they do not record the total incidence of forced labour. This is especially the case as there is little systematic monitoring of particular sectors, recruitment practices or migratory flows, with inadequate inspection in rural areas. Moreover, since the data is gathered on the basis of reported cases to the authorities, it is possible that many cases of forced labour go unreported simply because forced labourers fear collusion between the relevant authorities and landowners and slave owners. Therefore, the data available from the Brazil study highlights that it does not reveal the incidence of forced labour there, and also does not provide a rigorous methodology to be used in other situations for measuring the incidence of forced labour.

Similar concerns are available for estimating the exact numbers involved in trafficking. Both the estimates by the government of the United States of America and the International Organization for Migration (IOM) greatly vary. The U.S. government estimates, which is based on 1997 data, that 700,000 persons – mainly women and children – are trafficked internationally on an annual basis. According to IOM the estimates for the same year, 1997, the number of person trafficked internally and internationally is four million. These wide discrepancies highlight the particularly problematic aspect to capturing the incidence of trafficking, which as we noted in section 2 was a particularly tricky area to neatly define. Therefore, it is not particularly surprising that different estimates are obtained from these two particular sources and bodies.

Not withstanding this limitation, the new figures for 2001 provided by IOM on the global scale of trafficking were obtained as a result of a rapid survey of IOM field offices. These figures were obtained from collecting basic statistics obtained through the participation of trafficked persons in IOM programmes at the field, with additional data and estimates based on secondary sources of information. The limitation of the more recent attempts by the IOM is that these figures focus only on women and children, and therefore the number of trafficked men is not yet accounted for in the newer estimates.[24] This shortcoming also reflects the continuing focus on trafficking for sexual exploitation, without accounting for the many other reasons for which both men and women are trafficked on an internal and international level.

By discussing in detail the available survey evidence, a purpose of this paper has been to highlight possible limitation of relying primarily on conventional survey techniques in gathering data on the incidence of forced labour. This is especially the case because forced labour has heterogeneous dimensions, all of which may not necessarily be captured via surveys – and this excludes some of the weaknesses that have already been noted in the graphical presentation of survey studies reviewed above. Equally, the very scattered nature of evidence available means that it may be too early in the day to rely primarily on a large-scale survey for gathering information on the incidence of forced labour. Indeed it may, therefore,

[24] However, as the table in the appendix shows, this recent information gathered by the IOM is useful for understanding the profiles of trafficked persons and current trends in trafficking. The latter, particularly, may be useful for informing policy-making on understanding better labour market dynamics and failures that give rise to trafficking in the first instance.

well be the case that it is necessary to use a variety of measurement techniques at this very initial stages of a measurement exercise on forced labour.

The review of the survey studies helps begin to discuss in detail the ways in which it may be necessary to propose different alternatives to measuring forced labour. As the recent evidence indicates not all types of forced labour has been measured, and quantifying these particular categories may pose new challenges. For the non-quantified types of forced labour, it may be necessary to draw upon lessons from the information gathered and the survey studies initiated in other related areas. Therefore, the next section of the paper reviews some particular techniques that may be the most appropriate for measuring forced labour at this particular juncture.

6. Information Gathered, Lessons Learnt

From the review of surveys done thus far, it is apparent that any attempt to numerically establish the global incidence of forced labour may have to proceed on several grounds. It may have to begin with simple tallying techniques, such as the methods employed by Bales, to carrying out local and national samples. The benefits of each of these methods is evaluated in this section of the paper, which points to the different levels at which a preliminary attempt of obtaining global estimates on forced labour needs to proceed.

Primary data is considered to be invaluable in research, particularly when the purpose is to gather statistical data. Given the heterogeneous nature of forced labour and the particular difficulties associated with concretely identifying forced labour situations, it is may be necessary to assess the probability of bonded labour situations. At this stage, conducting rapid assessments may be a useful first step as a particular attribute of this method is to identify social and cultural factors of the particular social issue under investigation.

Carrying out rapid assessments would set the ground for more elaborate systems of collecting data through larger scale surveys, such as the GPF survey done in India. And this technique is particularly helpful where there is little data gathered, which is the case for almost all types of forced labour. Besides this, by carrying out rapid assessments it is possible to do more in-depth studies in different sectors and geographical areas, to understand better the social and cultural factors as well as labour market failures that lead to forced labour situations. Moreover, this particular research technique for gathering statistical data is an important stepping-stone for doing intensive household surveys covering a particular community or sector where the incidence of bonded labour has been noted.[25] In this sense, quantifying the extent of all types of forced labour, especially those categories that lie in grey areas such as abduction and slavery, debt bondage, bonded labour and so forth, can begin with rapid assessments in areas, regions and sectors it is noted to exist.[26]

An initial round of rapid assessments paves the way for more in-depth studies as well as for conducting sample surveys in particular regions, sectors and areas. As was noted before a particular problem with doing surveys in specific locations well known for forced labour is

[25] A particular problem, of course, would be that there could be sampling bias. This to some degree could be overcome by using adaptive sampling techniques, which we will be discussed in detail later on in this paper.

[26] The exception is possibly the gathering of numerical data on the prevalence of prison labour, which is more easily quantifiable as prison records are likely to illuminate the necessary information.

that there could be sampling bias. In this scenario adopting the adaptive sampling technique[27] may be a way out of this problem, especially where it is necessary to extrapolate estimates. The box below describes in detail, the key features of the adaptive sampling technique and its uses – even though a limitation of this method is that it is more complicated to design, and therefore more costly as well.

BOX ONE
Adaptive Sampling Technique

Adaptive sampling designs for statistical experiments are ones where the accruing data from experiments (i.e. the observations) are used to adjust experiments as it is being run. Typically, decisions such as how to sample during an experiment are made and fixed in advance. A sequential sampling algorithm or adaptive sampling algorithm obtains instances sequentially and it is determined from these instances whether it has already seen enough number of instances for achieving a given sample.

Adaptive procedures are more complicated to design, and they tend to be more difficult to implement than fixed sample size procedures. Because of this, adaptive designs are usually overlooked in favour of simpler, though less efficient, fixed designs. In many case, however, users are unaware of the option to use adaptive designs because standard statistical courses and packages do not include them.

The techniques offering workable solutions to the long-standing problem of estimating the abundance of rare clustered populations. For this reason, they are rapidly gaining prominence in social sciences and other fields with inherently difficult sampling situations.

In marked contrast to conventional sampling designs, in which the entire sample of units to be observed is fixed prior to the survey, adaptive sampling strategies allow for increased sampling intensity depending on upon observations made during the survey. For example, in a forced labour survey, sampling intensity may be increased whenever prevalence of the bonded labour is encountered in a cluster. The design allows for adjusting the weight of the sample upon accounting a higher probability of a sample.

By using this method at the phase of conducting surveys, potential criticisms – such as those levied against the GPF survey – can be avoided. Moreover, it is possible that by using this particular method, enumerators do not unnecessarily categories diverse situations under one

[27] The specific value of this method is that it is particularly suitable for obtaining estimates, whether national, regional or global, where there are a high probability of concentration in particular locations, and is known to be used successfully in estimating drug addiction. Since forced labour is difficult to quantify and found in specific areas, there is more need for further investigation into using this particular technique for measuring forced labour. [Thanks to Mr. Mehran for bringing to our attention these new measurement techniques and its particular appropriateness for measuring forced labour].

grouping. And therefore, potential criticism of overestimation is avoided – which may be a challenge that will be confronted in enumerating the prevalence of forced labour.[28]

After carrying out rapid assessments, which includes the use of in-depth studies – such as case studies and participatory appraisal methods, the next logical step is to carry out micro-level sample surveys. Using each of these particular methods will help researchers to make sense of the data collected at a wider level as well as assess the quality of the data collected. The use of such methods is particularly relevant where it is necessary to undertake more rigorous analysis of the problem, and is very much necessary where little is known. Therefore, the use of these methods may be particularly relevant for probing into those categories of forced labour, such as abduction and slavery, trafficking, debt bondage, and bonded labour, where data and research is scanty or non-existent. In other words, since there is a paucity of statistical data on many forms of forced labour, it is imperative to begin measurement exercises on the quantification of forced labour on many levels. The box below, underscores the different situations in which rapid assessments, sample surveys, participatory appraisals and case studies are appropriate.

BOX TWO: When Are Key Methodologies Appropriate?

Rapid Assessments	Participatory Appraisals and Case Studies	Sample Surveys
• Useful from a programming perspective when the goal of the result is towards implementation, monitoring, and evaluation. • An understanding of social and cultural factors is required. • When it is necessary to assess whether or not the felt needs of the project is addressed. • There is a need for contextual studies before designing more complex monitoring or impact assessments.	• And understanding of social and cultural factors is required. • It is necessary to understand the quality of the data collected through surveys or rapid appraisals. For example, the underlying factors that contribute the emergence and prevalence of forced labour. • The impact of community-based organizations is important. • Other methods, such as surveys and rapid assessments have not been useful.	• When the target population is heterogeneous and it is difficult to isolate the factors as they differ in different environments. • Accurate estimates are required. • Statistical comparisons must be made between groups over time and/or between locations, sectors, and regions. • When micro-level data is required for a more rigorous data analysis of the problem.

A review of current studies on the quantification of forced labour shows that at the early stages of obtaining a dynamic global picture, it is necessary to conduct both quantitative and qualitative studies. This is particularly the case since the object of study here, forced labour, is a relatively little known and understood – and is a usual first step in social science research (Bales 2002:9). By conducting these two different modes of investigation into forced labour,

[28] This is a problem that may be encountered, because as was mentioned in section 2 there are many grey areas of forced labour that may not be easy to measure. One way of overcoming this particular limitation would be to incorporate probing questions that proceed beyond surface factors. For example, inquire about the loans and debts potential forced labourers may have, what is the repayment method, what is the time period of these loans and debts and so forth will help distinguish between legitimate sharecropping and bonded labour situations. Obviously, questionnaires have to be adapted to the particular type of forced labourers under investigation, but a high level of sensitivity to ground situations is necessary to avoid overestimation and ensure accuracy and reliability.

it becomes possible to cross-check evidence so as to verify the accuracy of the data obtained. Equally, it is important to keep in mind that since some categories of forced labour are criminal activities, namely trafficking, that conducting any type of investigative research on this will only scratch the surface of the problem – especially in trying to get statistical data.

This challenges aside, however, the need to move forward on combining quantitative and qualitative research to obtain figures on forced labour is quite apparent – and therefore, should be given high consideration. Therefore, in the concluding section we argue the need to not just carry forward in such research activities, but also explore the ways in which we may need to make sense of the current figures in getting global estimates.

7. Conclusion

From the review carried out, there is little doubt that measuring forced labour at the global level and arriving at reliable estimates may be a task fraught with difficulty. However, the situation is not without hope, as there is enough evidence, scanty as that may seem, from which it is possible to trace forward-looking research options. A synopsis of some of these measurement options are briefly given in this section of the paper, so as to pull together the threads on the different levels at which a measurement exercise has to be carried out at this early stage of obtaining global estimates.

A device used in particular situations has been the development of proxy indicators – with the vulnerability to debt bondage index being a case in point. While this particular tool does not provide a means of measuring the depth of forced labour, and indeed this is not its purpose, it is useful in drawing attention to areas and locations where there is likely to be a concentration of forced labour situations. This information can be used to carry out further research studies, such as rapid assessments, micro-level surveys and so forth. In this respect, therefore, the information available from proxy indicators can be utilized to progress towards applying other measurement techniques where forced labour situations is likely to be found.

Rapid assessments and participatory appraisals are the more commonly used methods in collecting data in fields of study where there is much fluidity and areas of overlap. This approach was effectively used in obtaining data on child labour, which fed into its process of arriving at global estimates by the IPEC. Similarly, carrying out rapid assessments and participatory appraisals in particular areas, sectors and locations where forced labour is to be found will need to be fed into a data gathering exercise. However, a level of qualitative variation is necessary in designing rapid assessments for forced labour, given the heterogeneity of different forced labour situations. Therefore, it is necessary not to go in search of forced labour, so to speak, but to analyse different situations with sensitivity so as to decipher between seemingly force labour-like situations. This is particularly applicable in detecting forced labour situations within an array of share-cropping arrangements, and equally in distinguishing between smuggling and trafficking situations.

The worth of the rapid assessment and participatory appraisal methods is not simply this. These measurement procedure are also helpful for devising micro-level and larger-scale surveys, which is commonly used in gathering statistical data. In spite of the problems in conducting surveys, particularly in a field of analysis such as forced labour, noted before the value of doing surveys should not be underestimated.

Moreover, if sample surveys are combined together with participatory and other qualitative approaches they provide a basket of techniques relevant to different situations and may give better results. As indicated in Box Two, each method has its own strengths, and as a result studies are now able to benefit from the advantages of sample surveys and statistical methods together with qualitative approaches. Furthermore, by using different methods to research the same issue also helps cross-check and verify one set of results with another, thereby minimizing the occurrence of discrepancies.

Besides this, when conducting intensive surveys covering households within a particular community, sector, location or region, the weaknesses of the GPF survey being applicable to other similar survey should not be discounted. However, using the adaptive sampling technique, the benefits which were noted in the previous section, will minimize any potential overestimation. Therefore, by utilizing the latest available statistical techniques that helps eliminate problems associated with commonly used survey techniques, it becomes possible to overcome criticisms that may be levied again and again.

While primary research methods are the most common means of gathering statistical data, using secondary sources for arriving at global estimates may also be necessary at this early juncture. As the review above has shown this is not the only device available for garnering numerical figures on forced labour. The tallying methods employed by Bales (2002) in estimating global figures for forced labour and by the ILO (2002) for the worst forms of child labour are equally critical at this early juncture. In the case of arriving at tallying figures, it is important to take care in using the figures obtained from the GPF survey, especially since it has not been recognized by the Indian state. By careful cross verification, using the figures obtained by the GPF, however, should be a possibility open for enumerators.

In conclusion it can be re-stated that the need for global figures on forced labour at this juncture is imperative, because policy-making also needs to be based on statistical information. And therefore, this is an important area of research needing close scrutiny. Nonetheless, it is essential to keep in mind that there are limitations to many of these approaches, and therefore, they are likely therefore to come in for criticism from different quarters. However, given the complexities of the categories of forced labour, it would be an ambitious task to capture its numerical incidence through one method or sample survey techniques alone. Instead a variety of methods will have to be used, especially at an early phase of the process – so that it is possible to proceed forward in the search for accurate and reliable global estimates.

Appendix

SOURCE	DESTINATION	TYPE (If Specified)	SCALE
Africa			
Nigeria (March 1999-Dec 2000)	Italy, Belgium, Netherlands	Sexual Exploitation and Forced Labour	1,178
Ghana (1998-2000)	Nigeria, Ivory Coast, Italy, Belgium, Netherlands,	Sexual Exploitation and Forced Labour	3,582
Ethiopia (1999)	Lebanon, Libya, U.S.A		12,000 – 20,000
Mali	Middle East, Gulf States, Mongolia Ivory Coast, Nigeria, Saudi Arabia, Kuwait	Forced labour, Child Labour and Domestic Work	At least 2,000 reported at present
Asia			
China (2000)			123,000 women and children in a nation six-month rescue operation
Cambodia (2000)	Internal, Thailand, Taiwan, Singapore	Sex industry, Begging and sometimes Domestic Labour	235 trafficked persons returned to home country
Vietnam	China, Taiwan, Cambodia	Marriage and Sex industry	
South Asia			
Nepal	India	Sex industry	5,000-7,000 women and girls per year
Bangladesh	India, Pakistan, Middle East	Sex industry	13,500 out of 500,000 estimated prostitutes in India are Bangladeshi. In Pakistan 4,500 per annum and 200,000 in ten years. In the Middle-East 200,000 in the last 20 years and 3,397 children (1683 boys) in the last ten years, and 2,000-3,000 children a year.
Sri Lanka	Both internal and to other countries.	Sex industry and Domestic labour	500,000 per year
Latin America			
Columbia		Sexual & Forced Labour	(…)

Eastern Europe (Only IOM assisted returns of trafficked women from the Balkans and Western Europe for 2000 are provided)		Sex industry and promise of jobs	652 women returned by IOM, and 703 IOM assisted voluntary returns.
Western Europe (Person from the following regions are trafficked into Western Europe – Africa, Latin America, Asia, Central and Eastern Europe)	Belgium (1999) Germany (2000) Netherlands (women only – 1998) Italy (women only)		334 100 assisted victims by IOM 288 Average 20,000-30,000
Central Asia Kazakhstan (1999) Kyrygystan Tajikistan (2000)	UAE, Moscow, Greece CIS, Turkey, transit via Russia and Middle East Middle East, Ukraine, Kyrgystan	Sex industry Sex industry and promise of jobs Sex industry and promise of jobs	5000 women 4000 women At least 20 known cases

References

- Bales, Kevin. 2000. **Disposable People: New Slavery in the Global Economy**. Berkeley, Los Angeles, and London: University of California Press

- _____. 2002. "International Labour Standards: Quality of Information and Measures of Progress in Combating Forced Labour." Paper presented at the International Labour Standards: Quality of Information and Measures of Progress Workshop, Washington D.C., July 10-11, 2002.

- Busse, Mathias. 2002. "Trade and Investment Effects of Forced Labour: An Empirical Assessment." Unpublished Paper.

- Cuyvers, Ludo, Danny van den Bulcke, and Chrisna Wijaya. 2001. "Quantifying Respect for Selected Core Labour Standards with Special Emphasis on Force Labour." Unpublished Mimeograph. Geneva: I.L.O.

- Department of State – United States if America. 2002. **Trafficking in Persons Report**. U.S.A.

- Institute for Human Development. (Undated). "Report on Vulnerability to Debt Bondage Index." Unpublished Mimeograph. Social Finance Unit, I.L.O. Geneva: I.L.O.

- International Labour Office. 2001a. **Stopping Forced Labour**. Global Report under the Follow-Up to the ILO Declaration on Fundamental Principles and Rights at Work. Geneva: I.L.O.

- _____. 2001b. "Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work: Priorities and Action Plans for Technical Cooperation." Fifth Item, Govern Body – Committee on Technical Cooperation. Geneva: I.L.O.

- Kucera, David. 2001. "The Effects of Core Worker Rights on Labour Costs and Foreign Direct Investment: Evaluating the Conventional Wisdom." Discussion Paper 130. Decent Work Research Program. Geneva: I.L.O.

- Rai, Pallavi. 2002. "Measuring Force Labour: A Critical Review." Unpublished Mimeograph. IFP/Declaration. Geneva: I.L.O.

- Smith, Robert. 2002. "Why Human Development Varies by Region: Exploring Correlated and Causes." Unpublished Paper. Massachusetts: Social Structural Research Incorporation.

- Thompson, Steven. 1992. **Sampling**. New York: John Wiley and Sons, Incorporation.

- United Nations Economic and Social Council. 2002. **Recommended Principles and Guidelines on Human Rights and Human Trafficking** . New York.

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