Employment policies for creating effective labour markets: An evidence-based assessment of labour market programmes in Indonesia

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**Declaration**

I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to any other University or Institution.

Emma Allen

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Finally, to my family and friends, my most heartfelt thanks for your continual encouragement, infinite patience and understanding. I promise to say yes to everything once I hit the send button for submission of this thesis!
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<th>Full Form</th>
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<tbody>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<tr>
<td>Bappenas</td>
<td>National Planning Agency</td>
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<tr>
<td>BPJS</td>
<td>Social Security Providers (Badan Penyelenggara Jaminan Sosial)</td>
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<td>BPS</td>
<td>Badan Pusat Statistik (Statistics Indonesia)</td>
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<td>DWCP</td>
<td>Decent Work Country Programme</td>
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<tr>
<td>EBT</td>
<td>Equipment based technology</td>
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<tr>
<td>G20</td>
<td>Group of Twenty</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>IDR</td>
<td>Indonesian Rupiah</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<tr>
<td>KDP</td>
<td>Kecamatan Development Programme</td>
</tr>
<tr>
<td>KHL</td>
<td>Kebutuhan Hidup Layak (minimum decent standard of living)</td>
</tr>
<tr>
<td>LRB</td>
<td>Local resource based</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MOMT</td>
<td>Ministry of Manpower and Transmigration</td>
</tr>
<tr>
<td>MP3EI</td>
<td>Masterplan for the Acceleration and Expansion of Economic Development</td>
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<tr>
<td>NAIRU</td>
<td>Non-accelerating inflation rate of unemployment</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>Padat Karya</td>
<td>Labour intensive</td>
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<tr>
<td>PEP</td>
<td>Public employment programme</td>
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<tr>
<td>PIP</td>
<td>Public infrastructure programme</td>
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<tr>
<td>PNPM</td>
<td>Program Nasional Pemberdayaan Masyarakat Mandiri (National Community Empowerment Programme)</td>
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<tr>
<td>PWP</td>
<td>Public works programme</td>
</tr>
<tr>
<td>RACBP</td>
<td>Rural access and capacity building project</td>
</tr>
<tr>
<td>Repelitas</td>
<td>Five Year Development Plan</td>
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<tr>
<td>RPJMN</td>
<td>Mid-Term Development Plan</td>
</tr>
<tr>
<td>Sakernas</td>
<td>Survei Angkatan Kerja Nasional (National Labour Force Survey)</td>
</tr>
<tr>
<td>SPF</td>
<td>Social Protection Floor</td>
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<tr>
<td>Susenas</td>
<td>Survei Sosial Ekonomi Nasional (National Socioeconomic Survey)</td>
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<tr>
<td>USAID</td>
<td>United States Aid Programme</td>
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<tr>
<td>USD</td>
<td>United States Dollar</td>
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Abstract

Trends in policy the world over have seen priority given to price stability and the strengthening of economic growth, with these measures perceived to provide the conditions for creating jobs and driving an economic towards full employment. However, economies the world over remain far from full employment. This thesis uses evidence-based approaches to assess labour market programmes in Indonesia in order to gain a better understanding of how employment policies support the functioning of labour markets. One particular employment policy is closely examined, namely, public works programmes. Public works programmes have been criticized in the literature due to poor targeting, political corruption, the creation of low quality assets, and mismatches between programme specification and the labour market situation. However, these programmes remain relatively popular among policy makers and the general public due to their combination of job creation and infrastructure investment.

Public works programmes can be thought of as targeted interventions that typically provide wages at fixed prices in line with the market minimum and attract labour from the back of the unemployment queue, therefore hiring "off the bottom" while providing an "on the spot" approach to creating jobs. Public works programmes therefore form a strategic pillar of employment policy. Indonesia has a long history of implementing public works programmes in various forms and these programmes have been instrumental in creating jobs, supporting crisis recovering and stimulating local economic development. Many models exist and it is important to take lessons from these models in order to support the overall development of such programmes.

In Indonesia, there is a strong relationship between economic growth and employment outcomes. There are also a number of challenges within the labour market, including labour market churning and a high prevalence of vulnerable employment. The situation points to a need for the strengthening of labour market institutions, programmes and services. Policies are designed to change and/or improve outcomes. In this regard, it is crucial to understand how changes can be attributed towards policy interventions through a range of evidence-based approaches, particularly through evaluations that provide information on impact and efficiency. This thesis does this for public works programmes. Core research questions that this thesis explores relate to whether public works programmes are a suitable employment policy given the Indonesian context. Programme effectiveness is examined through case studies that consider the wage income transfer and the role of the assets created. The research undertaken highlights how evidence-based approaches can be used to strengthen policy performance.

Three methods were selected for examining public works programmes, including i) a programme assessment which provides a useful framework for understanding process-oriented aspects of programme execution, ii) a survey of beneficiaries of public works programmes, and iii) a baseline and post implementation survey of a public works programme located in a rural remote area of Indonesia. This combination of assessment methodologies allowed for a systematic, yet nuanced assessment of public works programmes. The major conclusions that can be drawn from the research undertaken in this thesis include that public works programmes in Indonesia have been inclusive of vulnerable groups and successful in supporting employment creation and local economic development. This thesis fills a gap in the literature by providing i) a thorough examination of the process-oriented features of public works programmes; ii) an understanding of who the beneficiaries of public works programmes are in Indonesia, and iii) an empirically founded analysis on the impacts of the asset provision component of public works programmes. In total, this thesis demonstrates that public works programmes in Indonesia have been worthwhile, but that an expansion of such programmes should be accompanied by a number of reforms in order to optimize the efficiency of public spending.
Chapter 1: Introduction

1.1 Background to the thesis

Full employment is a commitment that has been acknowledged by nations across the world at the highest level. However, in spite of the huge effort to reform economies, the realization of this goal largely remains beyond reach. Moreover, trends in policy the world over have seen priority given to price stability and the strengthening economic growth, with these measures perceived to provide the conditions for creating jobs and driving an economic towards full employment. Employment is therefore often considered to be an outcome of growth rather than the principle goal of development strategies across the world.

However, employment is a multidimensional issue, entailing the need for a broad strategy of strategies to promote outcomes. In terms of driving an economy to full employment, strategies are needed to address the remaining gap between the employed population and the underutilised labour force. The challenging is drawing together the right mix of policies to achieve this end. This thesis is titled "Employment policies for creating effective labour markets: An evidence-based assessment of labour market programmes in Indonesia". It hones in on one particular labour market programme, namely, public works programmes and seeks to discuss how such programmes contribute to employment policy and the functioning of the labour market.

Public works programmes are known by many names, and broadly speaking, public works programmes are instruments that have the dual objectives of providing temporary work opportunities while investing in community assets. Employment on public works programmes tends to be short term and is normally remunerated at rates equivalent to (or marginally below) the prevailing minimum wage for activities that have social, economic and/or environmental value that do not compete with the private sector. In the context of social protection, public works programmes may be conceptualized as "workfare" programmes. In the context of infrastructure investment, public works programmes may be conceptualized as a technology choice, where labour based technologies can be used in place of equipment based technologies. In developing countries, rural access has important implications for labour force participation. The infrastructure investments that stem from public works programmes have the potential to alleviate poverty through the jobs that are created throughout the process of investment as well as through improved access to markets and services after the investments have been completed. These programmes serve to stimulate the economy through investments in assets, and should contribute to the strengthening of effective demand through productive mechanisms.

Public works programmes are not new, they can be traced back to the period after the Industrial Revolution, when it was recognized that unemployment and labour underutilization were persistent features of the prevailing economic model. However, in recent times, public works programmes have become less popular as many government have prioritised supply side measures for supporting employment outcomes rather than demand side measures. That is, in general there has been a shift in policy maker’s attention towards employability and supply side measures rather interventions that stimulate demand for labour.

However, public works programmes are one of the most diverse policy tools that can be used for making progress on a range of issues. That is, there are many different models of public works

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programmes and a range of different economic purposes that justify the programmes. Some programmes are designed in a universal manner or provide universal coverage for target groups. Some programmes operate according to annual targets for supporting employment creation. One of the most famous public works programmes, "the New Deal" which was implemented in the United States of America during the Great Depression demonstrated that such programmes could successfully stimulate the economy through offering jobs that engage workers in socially and economically useful activities that did not compete with the private sector.³

Public works programmes are a response to unemployment and the underutilization of workers. However, such programmes play can play a much larger role than this. Public works programmes are associated with important multiplier effects that can stimulate economic recovery and act an automatic stabiliser. Beyond the actual cost and multiplier effects of such programmes, there is a need to consider the effects that such a programme would have on fiscal policy and price stability. It is also important to consider whether such programmes can address market failure and promote effective demand. A well designed public works programmes should be able to engage underutilized labour in productive employment, while supporting the functioning of the labour market by maintaining a work-ready supply of labour that can meet the demands of employers in the private sector. The challenge is ensuring the efficient and effective administration of such a programme so that it can perform such a function within the economy. These arguments are further discussed in chapter 2.

This thesis recognises that public works programmes are a widely used policy tool throughout the world and that these programmes are under-researched.⁴ An underpinning notion of this thesis is that programme design elements are key to the effectiveness of public works programme. It is therefore important to examine the different programme features of a selection of public works programmes in order to get a broader understanding of their overall effectiveness. It is also important to mention that programme implementation can't be divorced from the policy specifications or the political context in which it is implemented. To further illustrate, the choice between the implementation modalities of public works programmes is essentially a political choice, and it is therefore important to consider programme implementation within this broader backdrop. In this context, evidence-based approaches to policy formulation can play an important role, as it provides evidence of effectiveness that is beyond theory and ideology.

Implementation approaches that define the parameters of public works programmes have transformed in accordance with prevailing ideologies that guide a nation's development model. Developments over the past two decades have spawned an extensive debate about the future of public works programmes, with pressures from demographic changes, globalization and the internationalisation of financial markets placing pressure on the fiscal space of government for the implementation of such programmes. In addition, there is growing preference among policy makers for interventions on the supply side that support employability rather interventions on the demand side that reduce labour underutilization. There is therefore a strong need for empirical research to be undertaken to support evidence-based approaches to the development of public works programmes. This chapter therefore provides a justification for the research to be carried out in this thesis in section 1.2. Section 1.3 provides an overview of the methodological approach used in this thesis. Section 1.4 concludes by providing an outline of the thesis.


1.2 Justification for the research

Since the popularization of the evidence-based policy making, governments the world over have been challenged to reform their approaches to policy design, with greater focus given to the illustration of the effectiveness and efficiency of interventions in relation to national and international development goals. This new paradigm in policy formulation seeks to drive a shift from ideology-led decision making and decision making on the basis of short-term pressures, towards policy formulation that involves scientific reasoning, evidence, and the collection and analysis of data in order to understand impact. Evidence-based approaches focus on outcomes and results, such as reduced unemployment, rather than on inputs, such as budget realization or provision of training. Many practitioners in the realm of policy development perceive that the evidence-based paradigm has opened a new level of transparency regarding the spending of public money for supporting progress towards targeted goals. The focus on the outcomes and results of policy interventions is increasingly being used to enhance accountability, inform budget allocations, and guide decisions.

However, as with all approaches, there are limitations. Often times, the data and analysis that is needed to support evidence-based approaches to policy formulation and policy reform are not available to policy makers at critical times, which makes it challenging to realize a shift from 'business as usual' to 'more effective business operations'. Many policies and programmes still have monitoring and evaluation frameworks that focus on annual cycles and budget realization rather than on verifying outcomes and impact. Moreover, evidence-based approaches to policy making have substantial data requirements and need for technical inputs that are costly. There are difficulties in establishing treatment and comparison groups. There are also researcher biases associated the identification of research questions and evaluation frameworks, development of data collection systems and analysis of information. There is often a need to limit and narrow the scope of data that can be collected for providing information on outcomes and impacts, which means that impacts are often only partially understood. In general, one can say that the narrow focus that is often adopted in evidence-based approaches is both a weakness and strength, as the approach allows for a comprehensive understanding of selected issues, but not all issues, and omissions can become a source of error.

This thesis uses evidence-based approaches in the context of employment policy in Indonesia and examines one particular element of Indonesia's employment policy, namely, public works programmes (PWPs). Public works programmes in Indonesia seek to empower communities by providing short-term work opportunities through investing in community assets that promote an enabling environment for local economic development. The overall objective of public works programmes is to promote employment creation and reduce unemployment. This thesis uses evidence-based approaches to understand the relevance, effectiveness and efficiency of public works programmes across a number of policy and programme settings. In particular, public work works programmes in Indonesia are often linked with macroeconomic objectives, as such fiscal stimulus policies that provide discretionary responses to economic crisis or disaster recovery policies

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that support reconstruction and rehabilitation. The efficacy of public works programmes are therefore assessed within these contexts and within the context of employment policy in general.

International research into public works programmes has questioned the efficacy of these programmes, with many researchers recommending that such programmes be replaced and/or reformed. More specifically, the effectiveness of these programmes has been questioned in terms of social protection function, promotion of employability, and investment outcomes. Proponents of these programmes have responded by calling for refinement in terms of design, implementation, governance, monitoring and evaluation - all of which are necessary components of any effective programme. Public works programmes therefore attract a lot of contention among policy makers and academe, with proponents and opponents each releasing research and policy papers in support of their arguments. Criticisms of public works programmes have raised issues in regard to targeting and inclusion of the poor, corruption and political interest, and the trade-off between critical scale and public expense. Meanwhile, these programmes are also seen as an opportunity to stimulate local economic development through direct, indirect and induced effects that are associated with the process of investing in infrastructure, provision of a wage income transfer and improvements in local capacities. Both arguments are valid and highlight that programme concept and implementation effectiveness play important roles in the overall outcomes of public works programmes. Building on this, McCord notes that:

"an interesting and complex picture has emerged in relation to PWPs and poverty reduction in the literature, which on the one hand recognizes the limited evidence on the efficacy of public works on poverty reduction but yet continues to argue their potential as an instrument for poverty reduction."

One of the features of public works programmes is their relative popularity among policy makers and the general public, while academics and development practitioners remain divided. Given the debate in international literature, which raises the issue of the need to better understand the effectiveness and efficiency of these programmes, this thesis uses a selection of evaluation methodologies to provide information that can be used by practitioners for supporting policy and programme formulation. This thesis contributes to the body of literature through undertaking evidence-based assessments of selected public works programmes in Indonesia and addresses the following questions:

- Are public works programmes a suitable employment policy given the context in Indonesia?
- Can public works programmes support the purchasing power of vulnerable groups during times of crisis?
- How do the assets created through public works programmes stimulate local economic development?
- What lessons can be taken from evidence-based approaches to strengthen policy performance?

With these guiding questions, this thesis provides case studies that consider the functioning and impact of public works programmes. It examines the wage income transfer and the role of the assets created within public works programmes, as well as providing a programme assessment of a public works programme in order to understand the implications that programme execution has upon the realization of the policy concept. These case studies address gaps in the literature and provide policy makers with evidence that can be used to support reform. Importantly, the thesis strongly advocates for the use of evidence-based approaches to support the development of public works programmes.

1.3 Methodology

Key issues in both academic and policy circles relate to the overall effectiveness of public works programmes. Many have raised questions on programme effectiveness, particularly in regard to the comparative efficiency of public works strategies for addressing challenges such as unemployment and poverty reduction. Drawing on impact evaluation methodologies associated with evidence-based approaches policy design, this thesis undertakes research that is exploratory and of discovery nature in order to build more comprehensive understandings of the public works programmes. Using theoretical explanations from the post-Keynesian school of economic theory coupled with recent developments in evaluation methodologies, this thesis provides an empirical basis for analysing public works programmes.

The evaluation methodologies used in this thesis were developed in collaboration with the International Labour Organization to examine features of public works programmes in Indonesia. The approach adheres to best practices in evaluation theory, which gives focus to relevance, effectiveness, efficiency and sustainability. This thesis draws on programme evaluation data, as well as data from Statistics Indonesia and government administrative data to measure programme impacts across a range of variables. Three different methodologies are used to analyse public works programmes from different perspectives, including programme assessment, a survey of beneficiaries and a baseline / post implementation survey that measured selected local economic development indicators. Chapter 2 discusses the methodological framework, particularly, evidence-based approaches to programme assessment, in detail. Chapter 6, 7 and 8 present the methodology applied for each study in further detail.

Each of the three method used allowed for the development of a structured grid of data across selected variables to be created. These approaches are compared in the conclusion chapter to understand their strengths and weaknesses, as well as their role in supporting programme reform through evidence-based approaches. The range of methods used in this thesis provides a methodological framework for the future analysis of public works programmes. The methods can be used to support the improvement of programme effectiveness and the impact that such programmes have on employment and livelihood development.

1.4 Outline of the thesis

The thesis is organised sequentially to provide a theoretical framework for analysis, followed by an outline of concepts and situational analysis, then presentation of evidence-based research and finally a summation of contribution of this thesis in a conclusion. Chapters 2 and 3 constitute an introduction and a review of literature of public works programmes and their associated theoretical

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foundations. It also discusses evaluation methodology and evidence-based approaches to policy formulation. Chapters 4 and 5 provide an overview of the Indonesian context, including an examination of employment policy and the employment situation. Chapters 2 to 5 of the thesis examine theory, policy documents and statistics to give insight into the Indonesian labour market and interventions that are being provided to stimulate employment outcomes.

Chapter 2 provides a macroeconomic perspective on the role of public works programmes, including a discussion of their role in economic shocks, promoting effective demand and supporting price stability. The chapter also discusses institutional and contextual factors that impact upon the implementation of public works programmes in the real economy. Chapter 2 then continues on to present the methodological approach of the thesis, with reference to evidence-based approaches and case study based frameworks. In this context, the chapter refers to the rise of evidence-based approaches to policy formulation and discusses evaluation methodology for assessing public works programmes. Key areas that have been identified for contribution to knowledge and theory development in the area of public works programmes relate to the role of the asset, the ability to reach the intended target and provide a macroeconomic function, and the ability of governments to administer such programmes, as well as the impact of such programmes on poverty reduction and skills development. This thesis looks at the former three issues, is not unable to consider the latter two issues due to data constraints.

Chapter 3 provides a conceptual overview of public works programmes in general and in the context of Indonesia. It highlights that academic discourse relating to public works programmes has called into question the efficiency and effectiveness of such programmes and called for research to provide further insights into the functioning of such programmes. The chapter provides a typology of public works programmes and discusses public works programmes within the context of employment policy. It summarises historical and contemporary trends in public works programmes.

Chapter 4 provides an overview of the employment situation in Indonesia, outlining issues such as the persistence of the informal economy, trends in vulnerable employment, the structure of unemployment and underemployment as well as labour force participation. The educational profile of the labour force and the sectoral composition of employment give further information on the structure of the Indonesian labour market. The chapter outlines the key challenges faced in the labour market, and highlights issues of demand deficiency, labour underutilisation and the need for interventions, such as public works programmes, that stimulate local economic development in order to bring the economy closer to full employment.

Chapter 5 provides a contextual overview of the policy environment in Indonesia. In particular, it provides an overview of the macroeconomic framework guiding development in Indonesia with focus on employment and public works programmes. The elements of employment policy are outlined, including strategies to stimulate equitable outcomes, promote productivity, protect workers and enhance workers’ welfare. Public works programmes are included under measures that stimulate equitable outcomes. These programmes are used to address issues associated with demand deficiency and promote access to employment though providing work experience and through providing investments that stimulate local economic development. The chapter concludes by providing an overview of the history of public works programmes and details the policy rationales that have underpinned their existence over time.

Chapters 6, 7, and 8 use a selection of evaluation methodologies to examine public works programmes in Indonesia. Three case studies are presented across three chapters in order to

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examine programmes in Indonesia that have used employment intensive and labour based approaches to enhance rural access, support economic stability and promote employment creation. These three chapters of the thesis report original research that makes a contribution to knowledge and theory in the area of employment policy and programme evaluation in Indonesia.

Chapter 6 uses a programme assessment methodology to analyse the effectiveness of The Ministry of Manpower’s public works programme, with attention given to planning, implementation and post implementation periods throughout the project implementation cycle. Attention is also given to quality control in terms of governance, asset quality and social inclusion. The chapter provides insights on the administration, operations and rationale of the current public works programme. It concludes by identifying areas for improving the efficiency and effectiveness of the programme through investing in planning and quality control systems.

Chapter 7 examines the labour intensive public works programme of the 2009 fiscal stimulus package and reports the results of a survey conducted with programme beneficiaries. Selected survey variables are compared against national averages to give insight into the effectiveness of programme targeting, inclusion of the poor and employment quality. This chapter looks at key issues concerning the ability of governments to administer these programmes in a timely manner for providing the macroeconomic function of demand stabilisation in times of economic uncertainty.

Chapter 8 examines the rural access dimension of a public works programme that was implemented as part of the Aceh and Nias reconstruction and rehabilitation programme. The chapter reports analysis from a baseline and endline survey that collected data on a range of transport and economic indicators over time. The chapter looks in detail at the impacts of rural access on local economies and provides evidence on how local investments can stimulate economic activity and support development. The chapter highlights the important role that public works programmes play in providing investments that have medium to long term impacts on communities through improving access to markets and services.

The final chapter, chapter 9, provides a synthesis of the discussion shared throughout the thesis and builds on the analysis presented in the earlier chapters to provide conclusions. The methodologies applied throughout the thesis are discussed in terms of their advantages and limitations in order to provide recommendations for future research on public works programmes. The contributions of this thesis to theory and knowledge are outlined and limitations are further identified, followed by recommendations for further contributions.

In summary, this thesis reports findings from empirical research that describes the contribution of public works programmes across a number of variables. This thesis ultimately uses evidence gathered from a range of methodologies to illustrate that public works programmes provide strategic interventions in the area of employment policy. Beyond this, this thesis argues that public works programmes are high value programmes that can play a broader role in economic policy through providing investments that have multiplier effects that stimulate consumption and local economic development, while also providing workers with opportunities to build soft skills and diversify their work experiences.
Chapter 2: Conceptual framework

2.1 Introduction

It is essential to embed analysis of employment policies within the context of related theory as well as the political economy and macroeconomic context. It is equally important to support the development of the related literature through evidence-based assessments. The choice between policy options is essentially a political choice; however, there is a role for evidence-based research in order to ensure that policy makers are well informed about the decisions that are made. In addition, it is important to refer to the body of literature that provides justifications for policies. This chapter provides an overview of the major macroeconomic arguments for public works programmes with reference to the body of literature from the Keynesian and Post Keynesian schools. It also provides an overview of methods that can be applied for developing further understandings of these programmes using on evidence-based approaches.

Developments over the past four decades have spawned an extensive debate regarding the objective of full employment and policies in support of this objective. In particularly the role of demand oriented employment policies has been questioned within the context of budgetary constraints, price stability, market interventions and other financial pressures. Trends in policy have seen a shift from employment programmes that were designed to ameliorate market outcomes to employment programmes that are designed to stimulate market outcomes, particularly through supply side approaches. However, after extensive reform efforts, it is evident that markets still fail and economies remain far from full employment.

This chapter outlines the conceptual framework within which this situation is examined. Section 2.2 provides a macroeconomic perspective on the role of public works programmes, with particular focus on issues such as full employment, market failure, effective demand, price stability and institutional factors. It provides an overview of the major economic justifications for such programmes from macroeconomic perspectives. Section 2.3 provides an overview of the methodological framework adopted by this thesis, with focus on the application of evidence-based approaches and case study based methods. Section 2.4 provides concluding remarks.

2.2 A macroeconomic perspective on the role of public works programmes

The oil shock of 1973-74 marked the beginning of a shift in policy for economies across the world. At this time the economic concerns of many governments began to shift from a focus on full employment to a focus on international competitiveness and employability. Simultaneously, welfare rights became increasingly linked to production, and the role of the state as an executing agency was devolved to functions associated with governance mechanisms. Over time social investments have become increasingly perceived as part of the costs of production and there have been prolonged attempts to reduce public expenditure. Fiscal policies have become increasingly passive in promoting price stability, with inflation now largely controlled through interest rate adjustments. In particular, caution is emphasized regarding the government deficit and how it impacts upon interest rates. This has seen the space for government intervention narrowed, with concern that fiscal policy is linked to reduced investment by the private sector (crowding out). The figure below sketches a depiction of the shifts in policy paradigms that have taken place over time.

In spite of the huge effort to reform economies and support the efficiency of market operations, markets still fail, effective demand remains elusive and prices fluctuate. Importantly, nations the world over are still far from their global commitment to full employment. In the context of an increasingly globalized world, which strives for enhanced competitiveness and deregulated labour markets to enable advanced flows capital, reforms have offered workers, especially those in the most vulnerable positions, little protection from dismissal and limited access to compensation. Markets have been reformed, with jobs created and destructed. The over representation of workers from vulnerable groups who are exposed to the consequences of reforms, highlights the need for programmes that can drive employment outcomes while providing a safety net function.

Full employment, and its importance for actualizing economic and social development, should arguably see the commitment to this goal as one of the foremost mechanisms for actualizing development. Indeed, each nation has a responsibility that is mandated by the United Nations for providing full employment in order to ensure a basic level of welfare for its citizens. The importance of this commitment has been re-emphasized in recent policy dialogue that has supported the preparation of the sustainable development goals (2015-2030). To illustrate, goal eight of the sustainable development goals highlights that economic growth should go hand in hand with the objective of full employment and result in shared prosperity for all:

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22 According to the 83rd International Labour Conference of the ILO, full employment is defined as a situation where “all those available, able and actively seeking work can obtain it”. This work should be as productive as possible, optimise the utilization of workers’ skills and meet preferences for hours of work. Situations that don’t meet these criteria refer to unemployment and underemployment. For further information see ILO (1996) Resolutions adopted by the International Labour Conference at its 83th Session, International Labour Office, Geneva.


25 The sustainable development goals (SDGs) will form the global framework for development between 2015-2030. They will replace the millennium development goals (MDGs) (2010-2015).
"Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all."\textsuperscript{26}

The proposed targets for achieving this goal include:

I. "Sustain per capita economic growth in accordance with national circumstances, and in particular at least 7 per cent per annum GDP growth in the least-developed countries;

II. Achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labour intensive sectors;

III. Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encourage formalization and growth of micro, small and medium sized enterprises including through access to financial services;

IV. Improve progressively through 2030 global resource efficiency in consumption and production, and endeavour to decouple economic growth from environmental degradation in accordance with the 10 year framework of programmes on sustainable consumption and production with developed countries taking the lead;

V. By 2030 achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities and equal pay for work of equal value;

VI. By 2030 substantially reduce the proportion of youth not in employment, education and training;

VII. Take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour, eradicate forced labour, and by 2025 end child labour in all its forms including recruitment and use of child soldiers;

VIII. Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, particularly women migrants and those in precarious employment;

IX. By 2030 devise and implement policies to promote sustainable tourism which creates jobs, promotes local cultures and products;

X. Strengthen the capacity of domestic financial institutions to encourage and to expand access to banking, insurance and financial services for all."\textsuperscript{27}

Based on the abovementioned goal and targets, one can observe that employment outcomes are contingent on economic outcomes. Strengthening aggregate demand along with productivity is a key ingredient for achieving full and productive employment. Innovation and gains in productivity are needed to support structural reforms and stimulate outcomes. The targets also indicate that focus is needed on equality and improving the decency of existing jobs. However, the progressive unfolding of processes associated with creative destruction and gains in employment quality do not offer guarantees of reaching full employment. The targets don’t point policy makers towards solutions for addressing issues such as demand deficiency or structural, cyclical and frictional issues in markets that hinder the realization of full employment.\textsuperscript{28}

The targets that underpin the goal of "full and


\textsuperscript{28} Although demand deficiency can result in unemployment, plugging the demand gap is not advised, as demand is a malleable concept that is contingent on factors such as production technique, composition and labour force participation, among others, that only provide a limited understanding of the capacity of the economy. For further information see
productive employment” need to address the current imbalances of the global economic system that systematically reproduce inequality and unemployment/underemployment as a norm. Further emphasis should therefore be directed towards the factors that underpin the failure of markets and strategies that support the realization of full employment to ensure a basic level of welfare for citizens. This calls for labour market interventions on both the demand side and supply side.

Trends in economic and employment policies in recent years indicate that preferences have been given to supply side policies that seek to improve the employability of job seekers. Such policies include education, skills training, entrepreneurship programmes and work experience. This approach means that the unemployed are prepared for paid employment, but does not ensure that there are enough jobs for all those available and looking for work. Policies that provide demand-side responses, such as wage subsidies and public works programmes, have been used to a lesser extent in recent times. This is in line with the shift in policy away from ameliorating market outcomes towards stimulating market outcomes, as sketched in the figure above. However, interventions are needed on both sides to drive an economy to full employment, particularly as a more highly skilled workforce will not create its own demand and approaches based on stimulating aggregate demand have rarely, if ever, seen total employment and labour force participation align. In reference to the later, this is not simply because these policies don’t work or because the stimulus needs to be bigger, it is because policies a combination of policies are needed, including policies that can address the issue of unemployment directly rather than solely through the approach of stimulating aggregate demand. Moreover, employment should not be treated as a side effect of economic growth and investment. A range of policy mechanisms, including direct measures, are needed to deliver robust results across a range of employment indicators. Moreover, an economic case can be made for policy interventions that support employment outcomes, as unemployment and labour underutilization have implications for domestic consumption. For example, the reduced purchasing power of the unemployed can suppress growth while prolonged periods of unemployment have implications for employability, with forced idleness associated with skill loss. Employers suffer under such circumstances.

On the one hand, a general expansion of fiscal and monetary policies, combined with redistributive programmes, has been widely advocated and implemented in various combinations in countries across the world. This approach relies on economic multipliers and government spending at market prices to increase aggregate demand and drive the economy towards full employment. Such a strategy is in line with traditional Keynesian pump-priming policies. However, demand expansion in isolation is unlikely to be able to offer employment opportunities for all, including vulnerable and disadvantaged workers. This strategy also fails to address spatial labour market disparities and does not incorporate explicit measures to counter inflation. On the other hand, a general expansion of public works programmes, which hire unemployed workers in unskilled work at wages equivalent to the market minimum within their local economies, represents a more flexible ‘on the spot’ approach to achieving full employment. It is argued that because these programmes are designed as safety net programmes that "hire off the bottom" at minimum conditions, the jobs offered by such

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32 Public works programme is used a generic term throughout this thesis, and encompasses terms such as public sector job creation and public works programmes, among others.
programmes do not compete with wage structures in the private sector. Therefore the following sections discuss public works programmes and their role in the realization of full employment within the context of concepts including market failure, effective demand, and price stability. Consideration is also given to institutional constraints and the critique of public works programmes.

2.2.1 Economic shocks, market failure and public works programmes

A basic analysis of employment trends over time indicates that the private sector cannot be counted on to generate employment for all those willing and able to work. This leaves unemployment and labour underutilization as a persistent feature of the prevailing economic system. Unemployment and labour underutilization can be considered to be inefficient as they are related to a loss of potential output and an unproductive use of resources. In addition, the market is prone to experiencing both intermittent (isolated) and reoccurring shocks (seasonal / cyclical), as well as a series of market failures at the micro level that impact on employment outcomes. Markets fail to efficiently allocate resources for many reasons, including:

- Coordination failures, such as pro-cyclical investment behaviour;
- The limited market potential of public goods, such as knowledge and eco system services;
- Negative externalities, such as climate change;
- Information failures, such as poor investment choices;
- Imperfect competition, such as monopolies.

Market failures are associated with rent-seeking behaviours, corruption, misallocation of resources, and crowding out, among others. They are linked with the slowing of growth, lack of confidence among investors and the emergence of higher levels of unemployment and labour underutilization within the labour market. Economic shocks generally refer to macroeconomic processes or other exogenous factors that are beyond the parameters of the micro-decisions of individual firms. Like market failures, shocks are also associated with the emergence of higher levels of unemployment and labour underutilization, as well as lower levels of aggregate and effective demand. Recurring shocks, failure and instability are persistent features of the prevailing economic system that see the persistent underutilization of human resources and the occurrence of unemployment and underemployment as a norm.

In such a paradigm various interventions are required to support the realization of commitments to full employment. The majority of public works programmes that have emerged over time seek to address market failures and economic shocks through directly creating jobs that support the maintenance of purchasing power and economic recovery. Public works programmes are thus a component of fiscal policy used to support employment outcomes and compensate for market failings associated with the underutilization of labour. Indeed, in times of economic down turn, governments often upscale their existing public works programmes in order to maintain purchasing

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37 The literature refers to “government failures” in the context of interventions designed to ameliorate market failures, indicating that government intervention can cause a more inefficient allocation of goods and resources than would occur without such intervention. However, a targeted public sector job creation programme that hires off the bottom should not should not lead to inflation, interfere with the micro-decisions of firms, replace existing jobs, or rely on the fine-tuning of aggregate demand to support the realization of full employment.
power and mitigate the macroeconomic implications of a contraction of employment. Following this approach, public works programmes can be designed to expand (decline) when private sector activity declines (expands). Therefore, the existence of public works programmes generally reflects a commitment to maintain high levels of employment and promote the expansion of employment through investments in human capital and productive assets.

There are many implementation parameters that can be applied to public works programmes, from short term project based approaches to universal employment guarantee models (see chapter 3). In spite of the scale of the various programmes that exist throughout the world, the macroeconomic objectives of the programmes are similar, that is, they are designed to play an absorption role for the purpose of minimising the real costs associated with the flux of the private sector or lack of demand for labour within the economy's prevailing condition.

Given the economic and social consequences of labour underutilization, a policy environment that neglects to achieve equitable, job-rich growth should be considered to be economically and socially inefficient. As demand from the private sector is normally insufficient to drive an economy to full employment, governments should use fiscal space to administer programmes that engage underutilized labour in meaningful work activities. Such a policy stance has the further benefit of increasing flexibility in the labour market by maintaining a supply of labour with a higher degree of employability that is more capable of meeting the expectations of private sector employers.

### 2.2.2 Effective demand and public works programmes

A range of policies can be used to stabilise fluctuations in the business cycle and support the expectations of firms, thereby promoting effective demand in the medium to long term. Effective demand is based on an understanding of the potential inputs, investments and income needed to meet future market demand — that is, satisfying expectations about what is needed to make an economy effective today and in the medium to long term.

Policy makers may draw on tools such as exchange rate policies, fiscal policies, trade policies and/or taxation and subsidy policies to promote effective demand. Investments in human capital and infrastructure are also important for supporting effective demand. Such policies will have impacts on the expectations of firms and can facilitate employment outcomes, but, in isolation, are unlikely to

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39 It has been argued that a universal job guarantee can be designed to provide a macroeconomic policy function, delivering full employment and price stability based on the principle of employment buffer stocks where job creation and destruction is but one component and wages within the programme are fixed to the national minimum wage. For further reading see Allen, E., Cook, B., Mitchell, W. and Watts, M. (2007) The failed full employability paradigm, Working Paper No. 07-04, Centre of full employment and equity, University of Newcastle, Australia.

40 For example, Amartya Sen argues that “there is plenty of evidence that unemployment has many far-reaching effects other than loss of income, including psychological harm, loss of work motivation, skill and self-confidence, increase in ailments and morbidity (and even mortality rates), disruption of family relations and social life, hardening of social exclusion, and accentuation of racial tensions and gender asymmetries.” For further reading see Sen, A. (1999) Development as Freedom. Oxford, Oxford University Press.


42 Effective demand is different to the concept of aggregate demand, which refers to total expenditure and is understood through measures of gross domestic product. Aggregate demand focuses on boosting the various components of current expenditure, while effective demand is about the factors that determine investment and expectations. For further reading see Tcherneva, P. (2008) Keynes’s Approach to Full Employment: Aggregate or Targeted Demand?, Working Paper No. 542, The Levy Economics Institute of Bard College, New York.

drive an economy to full employment. Importantly, the point of effective demand within a given economy may be below the level of full employment, even in cases where an economy has strong aggregate demand. Therefore, strategies based on increasing aggregate demand (GDP growth) may not lead to full employment, as the nature of growth may have a low employment absorption or employment elasticity. For example, growth may be driven by extractive industries that predominantly use equipment based methods and employ a limited number of people. Alternatively, spending may be directed towards savings or debt repayment.

Attention from policy makers for the strengthening of demand is needed; however, this may not necessarily entail a need for more aggregate demand. Driving an economy to full employment via aggregate demand stimuli is challenging, as when an economy approaches full employment more money expenditures can lead to inflation and erode equality. To drive an economy to full employment, strategies are needed to address the remaining gap between the employed and the underutilised work force who are available, able and looking for work. Public works programmes have a long history of being used to fill this gap. Many public works programme models have been trialled over time, with a variety of results depending on the range of macroeconomic policies that they are implemented alongside and the overall condition of the labour market.

Importantly, there is a role for public works programmes and other labour market policies in times of recovery and in times of growth, particularly for strengthening effective demand. Such policies and programmes can provide both corrective as well as preventative measures that facilitate the functioning of the economy. Strategies are needed to shield the economy from fluctuations in the business cycle, so that instability does not have long term implications on the quality of the labour force. However, attention should be directed to the specific type of spending. In particular, preference should be given to spending that supports employment creation and addresses issues such as labour underutilisation, as situations of unemployment and underemployment allow the skills and aptitude of such workers to deteriorate, leading to losses in employability. To promote effective demand, public works programmes can support underutilized workers to maintain their skills and labour market attachment, while also providing the private sector with a pool of workers from which they can recruit at a lower cost.

Analysis from the writings of Keynes indicates that he advocated for an “on-the-spot” approach to the provision of full employment, which involved the direct employment of the underutilised for prevailing minimum wages throughout all stages of the business cycle in accordance with demand across geographical locations. Such an approach follows a strategy for full employment that utilizes public works programmes and policies at its core. However, given the notional linkages between full employment and price stability, further considerations are needed to understand how such policies and programmes may interact with inflation.

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46 Keynes, J.M. (1936) The General Theory of Employment, Interest and Money, Macmillan,
50 As mentioned, full employment is often understood to be equivalent to the non-accelerating inflation rate of unemployment (NAIRU).
2.2.3 Price stability and public works programmes

Full employment has many definitions. The International labour Organization (ILO) defines full employment to be a situation where "all those available, able and actively seeking work can obtain it".\(^{51}\) This definition is distinct from the concept of the "non-accelerating inflation rate of unemployment" (NAIRU), which views true full employment as neither possible nor desirable due to linkages between full employment and price stability.\(^{52}\) Core to the NAIRU concept is the use of the unemployed population as a price anchor for the stabilization of the price of wages. It is therefore important to understand the macroeconomic implications of driving an economy towards full employment as defined by the ILO.

Inflation is understood to be caused by aggregate demand growing faster than real output capacity or through the costs of production increasing (wages, materials, energy, etc.). Put more simply, demand pull and supply push factors.\(^{53}\) Policy models that are based on aggregate demand tend to see inflation increase as the economy nears full employment, which is why true full employment is not possible via traditional pro-growth and pro-investment approaches.\(^{54}\) Strategies based on aggregate demand can also lead to chronic inflation and concentrated investment booms, which culminate in financial and economic crises. Therefore, subsidizing aggregate demand is not an optimal strategy for driving an economy towards full employment. What is needed is a strategy for full employment that does not result in instability, inflation, and/or unemployment. Following this line of thinking, targeted public sector job creation (public works programmes) may be a remaining option.

It is hypothesised that in targeted public sector job creation programmes, the Government provides a ‘market for labour’ by establishing a ‘buffer stock of labour’.\(^{55}\) In essence, the Government provides work for unemployed or underemployed labour who are willing to work at a fixed wage, while the private sector can attract workers from this market through offering better working conditions. In such a model, both demand pull and supply push factors of inflation should remain stable as the public works programme functions as a safety net programme and fixes the wage at a market minimum. Thus, in theory this approach may promote full employment with price stability.

There are many different models of public works programmes that exist, however, such programmes typically provide wages at fixed prices in line with the market minimum and should therefore attract labour from the back of the unemployment queue. A well designed public works programme should therefore have an in-built inflation control mechanism while providing an automatic stabilizer function.\(^{56}\) A crucial point is that the expansion of public works programmes does not rely on the


\(^{53}\) Demand pull refers to aggregate demand growing faster than real output capacity. The demand curve moves to the right but the supply curve is unchanged in the short-term so people are prepared to pay more and the price goes up. Supply push refers to an increase in the cost of production (wages, raw materials, energy costs etc). With supply push inflation there is no change in the demand curve but the supply curve moves to the left so that prices are higher for any given level of production. Instability in prices can be associated with many sources, including credit expansion, supply shocks, speculation and other factors that may influence the cost of inputs and operations. Government spending can also be a source of inflation, as can wage increases that are beyond the rate of inflation and gains in productivity.


\(^{56}\) Mitchell called the ratio of employment on "job guarantee programmes" to total employment the "Buffer Employment Ratio" (BER). It is hypothesized that the BER can condition wages. When the BER is high, real wage demands will be correspondingly lower. Therefore, if inflation exceeds the government’s announced target, tighter fiscal and monetary policy can be triggered to increase the BER, which entails workers transferring from the inflating sector to the fixed price.
government spending at market prices and then exploiting multipliers to achieve full employment, which characterises traditional Keynesian pump-priming. While public works programmes do have a multiplier effect (through wage transfers), the multiplier mechanism is not the primary instrument through which full employment is promoted.

2.2.4 Contextual and institutional factors impacting on public works programmes

It is important to note that in an economy such as Indonesia, with a large informal economy, the relationship between unemployment and price stability is unclear, particularly as unemployment is not an indicator of labour utilization or of constrained labour supply. For example, declining or increasing unemployment in Indonesia is unlikely to be linked to price stability and therefore should not be used as a rationale for a tightening or loosening of monetary policy. There are many reasons for this, including that unemployment trends tend to reflect shocks or asymmetries in the business cycle and that unemployment in Indonesia is a characteristic of educated people in urban areas. Rural areas tend to have low unemployment, however, much of the employment in rural areas is characterised by low productivity and low wages, which points towards the existence of a labour surplus. Inflation and price stability in Indonesia tend to reflect changes in fuel subsidies, bottlenecks in supply, global trends and adjustments in minimum wages.

In the case of Indonesia, further consideration would be needed if public works programmes were to be extended to universal levels due to underdeveloped wage structures within the country. Many workers in Indonesia earn wages in the private sector that are at minimum wage levels or below. Many people also work in non-standard forms of work that lack decent working conditions. The existing public works programmes in Indonesia provide a daily stipend that is equivalent or close to the local minimum wage. Therefore it is likely that there would be a high demand for employment on public works programmes, particularly if the employment is continuous rather than seasonal, with such employment likely to attract workers already employed in the private sector. Therefore the potential distortionary implications of the expansion of a public works programme within the Indonesian context would need to be well understood. For example, it is important to understand if there could be a shortage of labour in the private sector if public works programmes are expanded. In addition, it would be important to understand how the private sector would react and the associated political implications.

It is important that labour market institutions associated with wage structures and scales are well developed, in order to prevent the wages offered by public works programmes creating distortions throughout the economy as a whole. For example, countries with a high ratio of minimum to average wages (Kaitz index) or high minimum to median wages are likely to have poorly developed wage structures and scales throughout the economy. In this situation, many workers earn wages that are close to the minimum and it is likely that labour market institutions associated with wage

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57 According to the Government of Indonesia (2010) National Medium-Term Development Plan (RPJMN 2010-2014), Indonesia has an independent central bank and a formal inflation targeting framework, with the inflation target set within the range of 4 to 6 per cent per year between 2010 and 2014.


59 The Ministry of Manpower’s public works programme provides a daily stipend of IDR 50,000 nationally, with the Ministry of Home Affairs’ national community empowerment programme provides a locally negotiated minimum stipend that ranges between IDR 50,000 and IDR 80,000 depending on the location of the province.

setting have low capacities to support collective bargaining.\textsuperscript{61} Greater understanding of the issues of wage structure and the prevalence of low pay is needed to provide information on the potential implications of extending public works programmes that provide a safety net function in such a context.

Moreover, government institutions need to have the capacity to deliver such programmes in an efficient and effective manner. Observations from the field indicate that there is considerable diversity in competencies across regions and also that there are a range of issues linked to corruption that lead to sub-optimal project outcomes. Technical assistance may be needed to strengthening government institutions. However, the administrative structures in place should be able to absorb increases in the number of projects and the size of projects before additional human resources are needed to support implementation.

It would be important to have in place strategies that support workers on public works programmes to access jobs in the private sector through a range of job search, wage subsidy, training and self-employment programmes. Well-developed labour market institutions and policies are required to support the abovementioned placement and training policies. Similarly, strong labour market institutions in the area of wages and productivity are needed to support price stability.

2.2.5 The critique of public works programmes

Public works programmes have been the subject of much criticism from various schools of thought, with the policy instrument being criticized in the 1990s and early 2000s for not being efficient enough in helping unemployed people to get permanent jobs in the open labour market.\textsuperscript{62} However, in recent years, these programmes have begun to expand again, in part due to a need for the extension and expansion of social protection floors in developing countries as well as due to the need for policy responses to crisis and slowing economic growth. Prominent examples are India’s “Mahatma Gandhi national rural employment guarantee” programme\textsuperscript{63} and South Africa’s “expanded public works programmes as well as the programme examples from Indonesia that are discussed throughout this thesis.

Whether the programmes are “in” or “out” of vogue, there are several serious criticisms that need to be taken into consideration when discussing these programmes. In particular, the critique of public works programmes can be summed up by concepts including crowding out, inefficiency, displacement and miss-targeting.\textsuperscript{64} To further elaborate, a common critique of public works programmes is that government spending “crowds out” private spending. Another is that they tend to be inefficient in terms of the spending of public funds. For example, a major focus in the area of

\textsuperscript{61} It is possible that countries with high ratios of minimum to average or median wages have strict regimes for setting minimum wages and many would argue that this indicates that minimum wages are too high. However, analysis of low pay in Indonesia points to a situation where wage growth has been lagging, rather than a situation where minimum wage growth has been too high. In August 2014, 1 in 3 regular wage employees earned "low pay", which was defined as less than IDR 950,000 (AUD 95) per month. Low pay is two-thirds of the median wage.


\textsuperscript{63} The National Rural Employment Guarantee is considered to be an innovation in public works programmes globally. A detailed discussion on this programme is beyond the scope of this thesis, however, findings from evaluations that this programme are in line with the findings in this thesis. For example, a study from the World Bank finds that the direct benefits of the programme are most pronounced for scheduled castes and tribes and households supplying casual labour. In addition, the assets created by the programme (land improvements) have been associated with a medium-term increase in assets in communities and increases in wage income in excess of program cost. See Klaus, D. and Yanyan, L. (2013) Welfare and poverty impacts of India’s national rural employment guarantee scheme: evidence from Andhra Pradesh, World Bank, Washington D.C.

public works programmes evaluations has been on their cost-effectiveness in terms of cost per unit for building infrastructure and cost per unit of the transfer.\(^{65}\) Further critiques have highlighted issues related to the limited impact of these programmes on employment and the capacity of the government to implement.\(^{66}\) Another critique is that the programmes are prone to labour market distortions and substitution, largely associated with miss-targeting.

In terms of “crowding out”, it is generally understood that public works programmes invest in assets that have very strong public good components. Crowding out in this sense refers to the reduction of private investment due to government spending. However, there is a strong case to be made for the Government to invest in public infrastructure as such infrastructure, particular that with a high public good component, often does not support sufficient private returns from user charges to be able to guarantee that the private provider will remain profitable.\(^{67}\)

In terms of the cost-effectiveness for infrastructure construction, it is often argued that the additional administration costs associated with hiring targeted workers as well as the potential for reductions in infrastructure quality due to the use of labour intensive methods, result in public works programmes being inefficient.\(^{68}\) However, research indicates that such criticisms relate more to programme design and implementation rather than the overall concept of public works programmes themselves. For example, analysis of the comparative costs and benefits of labour-based approaches to road construction with standard methods used by the Ministry of Public Works in Indonesia finds that projects using labour based methods were comparatively more cost effective than standard approaches without any compromise on asset quality.\(^{69}\) In addition, the wage share of total costs on projects that use labour based methods can be up to 20 per cent higher than on standard projects, which is indicative of the social transfer function of the approach.

In terms of transfer efficiency, public works programmes are typically compared to cash transfer programmes.\(^{70}\) While public works programmes create jobs directly and provide beneficiaries with a wage-income transfer, cash transfer programmes create jobs indirectly through the spending of those receiving the transfer payment. Each programme supports the individual and households in a different way, while also stimulating the economy in areas that have different multiplier effects. Given the different impacts, it is important that policy makers have clarity on the primary purpose of the programme – poverty reduction, employment creation or economic growth – to ensure that they are not an inefficient use of public spending.

For example, in Indonesia simulations completed with a social accounting matrix indicate that public works programmes will stimulate the manufacturing sector (due to strong linkages with demand for inputs), while cash transfers will stimulate the food and beverage sector (due to the increasing consumption power of households).\(^{71}\) It is estimated that public works programmes will have a larger impact on sectoral output and economic growth than cash transfer programmes. In terms of


household income, the same model indicates that cash transfer programmes are likely to have stronger impacts on household income than public works programmes. In addition, cash transfer programmes can deliver more targeted transfers that benefit low income households comparatively more. In terms of employment, public works programmes are likely to have a stronger impact than cash transfer programmes. Estimates indicate that dollar-for-dollar, public works programmes will create 30 per cent more jobs than cash transfer programmes. This analysis highlights the importance for clarity on policy objectives related to growth, employment and poverty.

Evidence on miss-targeting and displacement on public works programmes is mixed and subsequently it is one of the focus areas of this thesis. For example, research from the World Bank highlights that the wage income transfer is an important factor in the efficiency of targeting on public works programmes. A high wage may attract the non-poor to the programme, which may subsequently limit the participation of the poor. In order to contribute to the literature, this thesis asks questions, such as “who gets the jobs” and “do people forgo other opportunities to work on such programmes?” in Chapter 7, which presents findings from a survey of beneficiaries of the job creation component of Indonesia’s 2009 fiscal stimulus package.

2.3 Methodological approach

If public works programmes are to play a role in full employment as outlined above, it is important that the policy model is well designed and informed by "what works" through evidence-based research. Effectiveness and efficiency in policy design is just as important as the economic theory that provides the rationale for the policy. Extensive research in the area of applied economics has attempted to answer several questions regarding public works programmes: Who benefits? Why do outcomes vary significantly between participants and across programmes? Key areas that have been identified for contribution to knowledge and theory development in the area of public works programmes relate to the 1) role of the asset, 2) the ability to reach the intended target, 3) the ability to provide a macroeconomic function, and 4) the ability of governments to administer such programmes, as well as the impact of such programmes on 5) poverty reduction and 6) skills development. This thesis looks at the first four issues in relation to public works programmes, and is unable to consider the latter two issues due to data constraints.

The majority of reports on public works programmes refer to budget realization and the self-reporting of programme targets, rather than the reporting of outcomes on the basis of independent evaluation frameworks. The shortcomings of using expenditure as a measure of effectiveness are evident, particularly as the purpose of expenditure on public works programmes is to promote both economic and employment outcomes, which therefore means that expenditure can only be a part of the assessment criteria. To further illustrate, Esping-Andersen notes that:

"If what we care about is the strengthening of social rights, equality, universalism, and the institutional division between market and politics, social-spending levels may camouflage more than they reveal."

An assessment of the direct employment outcomes of a public works programme is a basic starting point; however, such programmes should be assessed across a range of areas including factors such

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as employment growth / unemployment reduction, employability, poverty reduction, enterprise development, economic growth and market access over time. Assessment approaches that do not consider such factors may fall short of providing policy makers with the information that is needed to support informed decision making. Equating expenditure with improved employment outcomes provides little information on programme effectiveness or on the longer term implications that such programmes have on improving the overall welfare of a nation. Importantly, the dynamics of the programmes need to be well understood if they are to play a role in full employment and other macroeconomic objectives.

To address the challenges highlighted and to stimulate innovations in the area of applied policy research, this thesis adopts a pluralistic methodological approach to assessing public works programmes in Indonesia. It applies evidence-based approaches to assess the impact and evaluate the effectiveness of public works programmes using a range of methods, including survey research and programme evaluation tools. In studying public works programmes, it is viewed as essential to combine analysis of economic and political contexts as well as the outcomes of such programmes using applied evaluation approaches. This thesis therefore applies a case study based approach to analyse such programmes, and ultimately provides a detailed contextual analysis across a select number of programmes and projects.

2.3.1 Evidence-based approaches

Development programmes and policies are designed to change outcomes; therefore, it is important to understand how changes can be attributed towards interventions through a range of evidence-based approaches, particularly through evaluations that provide information on impact and efficiency. The popularization of evidence-based policy making among academic and development partners has challenged governments the world over to reform their approaches to policy design, with greater focus given to the illustration of the effectiveness and efficiency of intervention outcomes. The focus on evidence-based approaches seeks to drive a shift from ideology based decision making and/or decision making in response to short-term pressures, towards policy formulation that involves scientific reasoning, proof of effectiveness, and the collection and analysis of data in order to understand impact. Evidence-based approaches focus on outcomes and results, such as reduced unemployment, rather than on inputs, such as budget realization or provision of training. They also focus on understanding if there is a causal relationship between the intervention and outcomes. The focus on outcomes and results enhances accountability, and can be used to inform budget allocations and guide decision making processes.

Evidence-based approaches rely on information. Information can come in many forms, including expert knowledge, existing research and statistics, stakeholder consultation, monitoring systems and impact evaluations. There is a tendency to think of evidence as something that is only generated by certain methods or particular models, however, information on programme effectiveness can come from many sources. The policy question that underpins the need for evidence can be used to focus the research design and the decisions on the types of methods that are most suitable. However, it is important to note that the most complex and robust methods for assessing the impact and

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79 However, in many cases causality is difficult to determine.
effectiveness of programmes will often be foregone for other approaches that are less costly, more responsive to the needs of the context, and more receptive to the priorities of policy makers.

Evidence-based approaches are limited by the availability of data and the analysis of this data. Both the collection and analysis of data have a lag time, which means that the inputs needed for policy formulation and policy reform are not always available to policy makers at critical times. Moreover, the data that forms the basis for the monitoring and evaluation frameworks of many policies and programmes still have a focus on annual cycles and budget realization, rather than on verifying outcomes and impact in the medium term. Therefore, applying evidence-based approaches generally entails the extension and/or modification of existing monitoring and evaluation frameworks beyond the life of project cycles. In this situation, the additional data and technical inputs needed for providing evidence are often viewed to be expensive, particularly as government budget cycles have annual reporting timeframes. This makes it challenging to realize a shift from 'business as usual' to 'more effective business operations' in the policy world.

Table 1 provides an outline of the most predominant methodologies that are used to support evidence-based policy formulation. In general surveys are conducted that provide information on the baseline scenario of the target group. Following project completion, a post intervention survey is conducted with the same survey population. The baseline and post implementation data points are analysed and compared, with the difference between the two data points attributed to the intervention. Additional data points can be constructed, following a "treatment group" (receiving the intervention) and "control group" (not receiving the intervention) approach, with it assumed that the difference between the control and treatment groups over time related to the project intervention. This allows for the estimation of a counterfactual, or what would have been if the programme participants had not participated in the intervention. In an ideal situation it would be preferable to construct both a control and treatment group and to survey both groups at baseline and post implementation intervals in order to provide a counterfactual. However, the costs of such an approach are often prohibitive.

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Baseline and endline</td>
<td>Measures how programme participants improved (or changed) over time. This method assumes that the project intervention is the only factor influencing progress towards the outcome.</td>
</tr>
<tr>
<td>Control and treatment</td>
<td>Measures difference between programme participants and non-participants after the programme is completed. This method is also known as “difference in difference”. This method assumes that the difference between the control and treatment groups relates to the project intervention as the factor influencing the outcome.</td>
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In addition to the abovementioned approaches, evidence-based approaches often use randomized control trials, which are highly experimental. This approach draws on the above parameters, but goes one step further with programme participants randomly assigned to the control groups. While this approach is considered to be one of the most robust, its application for the questions that are the focus of this thesis are limited. In addition, randomized evaluation and the use of control groups

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often raises ethical concerns about denying benefits to eligible beneficiaries and regarding welfare as an academic experiment. Moreover, in some cases there may also be very little value in including a control and treatment group within the impact evaluation methodology. For example, in the case of investing in infrastructure for stimulating local economic development in rural and remote areas, standard methods for evaluation are based on tools that provide information on travel speed, traffic counts, and a survey of route users and other key stakeholders. Household surveys can also be conducted. In this situation, the baseline condition of the "treatment" location typically has an infrastructure deficit, such as an impassable road or river, and the condition only changes with infrastructure investment and the associated gains in access. Including a control group that does not receive investment within such a context has little relevance and would also be confusing for control location. Household surveys may still offer value, however, the plethora of community development interventions that are implemented by different ministries within villages in Indonesia means that it is challenging to isolate the impact of particular interventions.  

Once the data has been collected there are different methods that can be used for assessing the datasets, from descriptive analysis to various types of regression analysis. Furthermore, if the survey instruments replicate the questions from surveys completed by the national statistics office, the data from the evaluation may be compared with the national data. Differences between socioeconomic groups can be examined. At an observation level it may also be possible to compare results with other similar programmes.

Evidence-based approaches are confined by the questions asked by researchers, the variables that are examined within analysis and the researchers' knowledge of context and theory.  

Therefore, in order to provide appropriate background information, this thesis first examines the labour force situation and employment policies. Three methodologies are then applied, including programme assessment, a programme beneficiary survey, and a baseline-post implementation survey of local economic development indicators. These methods are applied in the context of public works programmes in Indonesia in order to better understand the relevance, effectiveness and efficiency of such across a number of policy and programme settings.

It is worth noting that evidence-based research is designed for the specific purpose of engaging in dialogue with policy makers for supporting the reform and further development of selected interventions. This dialogue is often an overlooked element in the literature on evidence-based approaches and much research is conducted in the absence of a strong dialogue with the decision makers. However, strong dialogue is a fundamental necessity in evidence-based policy making, as evidence does not speak for itself. Optimal research design does not guarantee that the findings from highly complex impact evaluations will support the process of development and policy reform. Therefore, the importance of engaging in dialogue and maintaining dialogue with policy makers cannot be emphasized enough.

2.3.2 Case study based approach

Evaluation methodologies for assessing public works programmes have previously used case study based approaches to understand the overall effectiveness of programmes within the particular

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83 For example see Voss, J. (2011) PNPM-Rural quantitative impact evaluation: initial findings, World bank, Jakarta. 
context in which they were implemented. The research presented in this thesis therefore uses a case study based approach to provide an assessment of such programmes in Indonesia.

In the literature it is noted that there is no inherent no method of choice for conducting programme evaluations. Indeed, there are several methods that could be applied in the assessment of public works programmes, including survey research, cost benefit analysis and macroeconomic modelling. In particular, cost benefit analysis and macroeconomic models provide information that helps to calculate and compare the benefits and costs of particular interventions. These tools are most useful for comparing policy options. However, this thesis does not seek to create a debate on policy options. It seeks to address gaps in the literature on public works programmes by researching how such programmes are inclusive of vulnerable groups, how such programmes stimulate economic development, as well as how such programmes can be strengthened. Moreover, previous research exists that compares public works programmes vis-à-vis standard methods for construction of rural roads (cost benefit analysis), as well as research that compares cash transfer programmes and public works programmes (macroeconomic modelling). Therefore, the thesis completed three case studies that provide new information derived from methods including a programme assessment, a survey of programme beneficiaries, and a baseline / post implementation survey as follows:

- **Programme assessment**: A programme assessment forms part of a programme evaluation framework, and focuses on generating descriptive and process-oriented information rather than information on the impacts of a programme. It looks at the purpose of the programme vis-à-vis programme implementation in order to identify bottlenecks and challenges in quality assurance. A programme assessment asks questions regarding human resource competences, the efficiency of bureaucracy and decision-making, the timeliness of project scheduling, and the efficiency of procurement, among others. It helps to develop understandings of whether the services being provided meets the goals of policy makers, as well as understandings of the effectiveness of the inclusion of vulnerable groups. Chapter 6 presents this study with a focus on the Ministry of Manpower's public works programme.

- **Survey of programme beneficiaries**: The overarching purpose of this research was to identify the benefits and/or effects of the job creation component of Indonesia's 2009 fiscal stimulus package. In particular, focus was given to developing an understanding of who the programme beneficiaries were and ascertaining information about their labour market experience. Guiding questions focused on inclusiveness and quality of the job opportunities as well as policy effectiveness and targeting. The survey was conducted with the direct beneficiaries of the job creation component of the fiscal stimulus package. Baseline data on the programme's beneficiaries was not available and therefore some retrospective questions were asked in the survey questionnaire. In addition, it was not possible to construct the sample using a "control" and "treatment" comparative approach due to resource constraints, therefore the survey results are reported by looking at differences among beneficiary groups. Data from the beneficiary survey was analyzed alongside data from the labour survey and national socio-economic survey, in order to compare the socio-economic status of participants with that of the local population. In addition, differences

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89 Programme assessment is also known as process evaluation or assessment of programme processes.

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between various groups, such as youth and income deciles is used to provide comparisons among the sample. Chapter 7 presents this study.

- **Baseline and post implementation survey:** The overarching research question of the baseline and post implementation study related to understanding the degree to which an enabling environment for livelihoods and human development could be facilitated by investments in rural transport infrastructure. The study examines this issue on Nias Islands in the context of a livelihood recovery project. The study used a baseline and post implementation survey approach. It incorporated techniques that included the collection of qualitative data from key informants, quantitative data on traffic volumes, origin and destination data and a route users’ survey that provides information on the cost of transport and accessibility (safety / comfort) of routes. As a baseline and post implementation survey was completed, the situation prior to the commencement of interventions was well understood and indicators of success were clearly identified from the planning phase onwards. Chapter 8 presents this study.

The three methods provide insight on public works programmes and the efficiency of targeting, the role of asset creation, the ability to provide a macroeconomic function, and the ability of governments to administer such programmes. A number of constraints were faced in conducting the three case studies, particularly in regard to data limitations that stem from budget constraints. Therefore it was not possible to apply the best practice "control group" and "treatment group" approach, which allows for the identification of a counterfactual and comparison of changes between groups over time. In addition, in Indonesia data is rarely accessible on programme beneficiaries prior to or during project implementation. This is a common problem in the analysis of programme effectiveness and programme impact. This situation makes it challenging to identify inclusiveness of the poor and how the intervention may support changes in the socio-economic status of beneficiaries.\(^\text{90}\)

The methodologies and all stages of the research process for each of the three case studies were designed and led by the thesis candidate. The thesis candidate was assisted by survey enumerators during some of the data collection processes, however, data cleaning and analysis of the data collected were undertaken by the candidate. For example, the programme assessment methodology, inclusive of questionnaire and sampling approach, was designed by the candidate. Data collection was led by the candidate with assistance from survey enumerators, while data entry and analysis was solely completed by the candidate. Experts from the ILO provided a review of the methodology design before data collection was completed as well as comments drafts of the analysis as part of a peer review process. The data collection process was financially supported by ILO projects and the results of the analysis from the thesis candidate have been used by the ILO to provide policy makers in Indonesia with advice on how to strengthen the effectiveness and efficiency of their programmes.

### 2.4 Conclusion

A general trend in policy priorities across the globe can be defined as a shift from "full employment" to "full employability". While the commitment to full employment is still evident at the highest level on the global agenda and huge efforts to reform economies in favour of efficiency have been ongoing, markets still fail, effective demand remains elusive and prices fluctuate. Importantly, economies remain far from full employment. Within the current global paradigm employment outcomes are contingent on economic outcomes and many strategies for supporting development are based on strengthening aggregate demand and improving productivity. While such strategies can

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be effective in driving an economy closer to full employment, they do not address the current imbalances of the global economic system that systematically reproduce inequality and unemployment/underemployment. Therefore, further emphasis is needed on the factors that underpin the failure of markets and strategies that support the realization of full employment to ensure a basic level of welfare for the working age population of each nation. It is argued that a range of policy mechanisms, including direct measures, are needed to deliver robust results across a range of employment indicators. This thesis explores one particular policy in detail, namely, public works programmes, as it is proposed that such programmes may constitute a more flexible ‘on the spot’ approach to full employment.

In line with this rationale, this chapter has discussed market failure, effective demand, price stability and the associated institutional constraints. It is argued that recurring shocks, market failure and instability are persistent features of the prevailing economic system that see the persistent underutilization of labour as a norm. Many times public works programmes have emerged in order to address these failures and shocks in order to create jobs, support redistribution and avoid economic depressions taking hold. These programmes have existed at limited scales and for limited durations.

A range of policies can be used to stabilise fluctuations in the business cycle, thereby promoting effective demand. However, given that the point of effective demand within a given economy may be below the level of full employment, strategies are needed to address the remaining gap between the employed and the underutilised work force who are available, able and looking for work. There are many definitions of full employment, with a tension between full employment defined as "all those available, able and actively seeking work can obtain it" and full employment defined as the "non-accelerating inflation rate of unemployment" that refers to a theoretical relationship between full employment and price stability. The priority for policy makers is closing the gap between the employed and the underutilised work force while maintaining price stability. However, strategies based on aggregate demand stimuli can lead to inflation and erode equality due to the impact of more money expenditures when an economy approaches full employment. Targeted interventions that hire off the bottom are a remaining policy option. Such interventions are known by many names, however, the term "public works programme" can be used as an umbrella concept that refers to the policy concept. Public works programmes typically provide wages at fixed prices in line with the market minimum and attract labour from the back of the unemployment queue, therefore hiring off the bottom while providing an "on the spot" approach to creating jobs. A key point is that the expansion of public works programmes does not use traditional methods based on government spending at market prices and exploiting multipliers to achieve full employment. Such a programme does have a multiplier effect, as the wages paid to workers in the programme will increase aggregate demand via multipliers, however, the multiplier mechanism is not the primary instrument through which employment is promoted.

While a theoretical case can be made for expanding public works programmes for achieving full employment, theory is not always realized as expected. The implementation of such an approach in the real world is challenging, particularly in economies with a large informal labour markets where demand for and supply of labour is challenging to understand through traditional concepts. In sum, theory needs to be understood in context. To further explain, there are many implementation issues that can be encountered that may prevent the realization of the optimal outcomes, including corruption, lack of capacity and prevailing labour market conditions. While we know from theory that public works programmes can play an important role within the macroeconomy, the body of research in this area needs to be strengthened in areas including evidence-based assessments, among others.
To emphasize, many types of public works programmes exist, and inputs from the research community are needed so that programmes can be reformed and strengthened in order to achieve optimal results, thus allowing such programmes to be more effective in supporting progress towards full employment. That is, the model of programme implementation needs to be refined, with systems and designs improved in support of enhancing the effectiveness and efficiency of government spending and beneficiary outcomes. In the case of Indonesia, further consideration would be needed if public works programmes were to be extended to universal levels due to a range of factors, including underdeveloped wage structures and a range of other decent work deficits within the country. Strong labour market institutions are needed to avoid creating distortions throughout the economy through programme interventions.

In conclusion, it is important to stress that economic theories, along with development programmes and policies, are designed to change and/or improve outcomes, therefore, it is crucial to understand how changes can be attributed towards interventions through a range of evidence-based approaches, particularly through evaluations that provide information on impact and efficiency. In addition it is important to understand context, as this will have an important influence during implementation. Therefore, this thesis first examines the labour force situation and employment policies. Three methodologies are then applied, including programme assessment, a programme beneficiary survey, and a baseline-post implementation survey of local economic development indicators, in order to examine public works programmes in Indonesia. However, first the concept of public works programmes is further conceptualized and its use in Indonesia over time is recounted.
Chapter 3  Public works programmes in practice

A simple but strong macroeconomic case can be made for the expansion of public works programmes, especially in developing countries, as chapter 2 outlines. While there is the macroeconomic role of public works programmes, this role is not always acknowledged by policy makers who usually conceptualize using public works programmes to achieve social goals which promote employment and provide social protection through workfare based approaches. This is especially the case when goals include enhancing employability and local economic development or in responding to crisis.

Public works programmes (PWPs)\(^1\) are known by many names, and broadly speaking are instruments that have the dual objectives of providing temporary work opportunities while investing in or rehabilitating community assets through use of labour-intensive and labour-based modalities.\(^2\)

In the context of social protection, public works programmes may be conceptualised as a type of "workfare" programme where activities are highly labour-intensive but restricted to appropriate and meaningful infrastructure works, community works and also social service support activities. Public works programmes usually invest in assets associated with access, education, health, administration, and support to social services, the economy and the environment. They exist in both in developing and developed country contexts and are generally considered to be high value programmes that can make significant contributions to social and economic development both directly and indirectly.

In the context of infrastructure investment programmes, public works programmes may be conceptualised as a question of technology choice, where labour-intensive or labour-based technologies can be used (without compromising asset technical specifications or quality) in place of equipment based technologies.

Public works programmes are usually highly visible programmes that involve public spending. Subsequently, they attract much recognition and criticism. For example, many critics have raised questions regarding the ability of governments to administer public works programmes.\(^3\) Such criticism often has its basis in the inability of the critics to discern between the social and the economic objectives of such programmes. For example, it is important to acknowledge that programme beneficiaries are engaged on a “labour-productivity” basis rather than engaged simply on a daily wage (no-productivity) basis. These programmes engage underutilized labour within the process of production rather than simply treating labour as an object of consumption, which is likely to strengthening resilience and contribute to effective demand in the future.\(^4\) Such criticism also usually fails to acknowledge the difference that the delivery of technically oriented programmes with either a “technical ministry” with quality assurance or a “non-technical ministry” can make.

There are also questions regarding the role of the assets provided by these programmes and the impact of such programmes on poverty reduction and employability. The issue of market distortion

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\(^1\) For the purposes of this thesis, the term "public works programme" is used as a generic or umbrella term referring to both public employment programmes and public infrastructure programmes or other programmes with similar names.


\(^4\) For example, it can be argued that cash transfers increase consumption power without engaging beneficiaries with meaningful economic activities that contribute to a more productive economy. Such a programme has the potential pitfall of increasing consumption power without increasing production and productivity capacities, which could fuel inflation. In addition, activity undertaken are likely to generate a multiplier impact, with investments made during PEPs having forwards and backwards linkages throughout the sectors of economy.
and wage rates is also a frequently raised issue. For developing economies, the degree of formality in the labour market and the functionality of labour market institutions and policies may play an important role in the overall successful implementation of such programmes. While some World Bank specialists consider that the wages offered under workfare programmes should be lower than the minimum wage in order to attract the poorest of the poor to these programmes, it can easily be argued that this does little to alleviate long term poverty and conceptually raises fundamental ethical issues.

Finally, public works programmes are typically implemented in limited forms and are often of limited duration. This has serious implications for programme effectiveness, particularly on the macroeconomic function and social protection role of such programmes.

The following sections of this chapter discuss the different types of public works programmes that exist and public works programmes in the context of employment policy. The chapter goes on to provide a historical overview of public works programmes in Indonesia before providing concluding remarks.

3.1 A typology of public works programmes

Several models of public works programmes can be identified to allow for comparative analysis. According to McCord, a typology of public works programmes can be identified, which include four distinct groups:

- **Short-term non-continuous programmes:** Such programmes are often used in the context of environmental, humanitarian or economic shocks, which are aimed at smoothing consumption and providing stimulus for supporting recovery and development;

- **Ongoing programmes:** Such programmes can be implemented on a project basis or can offer repeated or ongoing work opportunities. Such programmes are generally linked with social protection purposes through provision of a wage income transfer;

- **Technology choice programmes:** These programmes concentrate on possibilities for using labour-based and labour-intensive technologies where they are financially and technically competitive in place of equipment-based technologies;

- **Employability programmes:** These programmes link investment in assets with on-the-job training and/or classroom training in order to support skill development and increase the employability of programme beneficiaries.

In addition to the groups identified by this typology, it is important to consider factors such as targeted versus universalistic programmes, conditions of eligibility, and the level of benefits in

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95 For example, after years of stagnation, real wages for agricultural labour in rural India is rising. This rise is often attributed to the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which provides employment for a maximum of 100 days per year to some 45 million households in rural India. As the programme offers workers an alternative to lower-paid jobs in agriculture, it is hypothesised that this has increased their reservation wage. In other words, the employment guarantee scheme has established a wage de facto floor in rural areas. A growing body of research supports the view that rising MGNREGA wages also lift other wage rates – and in particular wages for the lowest-paid workers. For further reading see ILO (2015) Global Wage Report 2014/15, Asia and the Pacific Supplement, ILO Regional Office for Asia and the Pacific, Bangkok.


98 Programmes can be designed for a universal target groups, such as all households, women or youth in urban or rural areas. However, such programmes are not universal (open to all). For example see Kidd, S. (2013) Rethinking targeting in
terms of wage-income transfer, training and work experience. The extent to which the programmes are linked with strengthening an individual’s ties with the labour market and getting people into work are also important considerations. In addition, the beneficiaries of public works programmes may be considered to be employees that are entitled to protection under labour laws or they may be considered to be participants that are exempt from labour laws. The latter receive a stipend while the former receive a wage. In some countries such programmes may be associated with welfare payments (unemployment assistance), while in other countries public works programmes may be excluded from the labour code. Programmes may also use project based frameworks or they may use a different budgeting framework that is more aligned with meeting demand for employment on the programme from the general labour market.

Policy developments in public works programmes internationally can broadly be divided into two diverging trends, namely:

1. Transitioning from universal welfare-based models that include demand side programmes to workfare-based models that emphasize mutual obligation in developed countries;
2. Transitioning from project based programmes to programmes with greater regularity, social guarantees and universality in developing and transition countries.

To further illustrate, in OECD countries many public works programmes have been linked with mutual obligations and include a substantial focus on activation strategies in an attempt to increase the employability of programme participants, and shift recipients from welfare to work. These trends are linked with broader shifts in welfare state reform that have seen a move from collective responsibility towards individual responsibility for welfare. For example, a review of a range of public works programmes within the OECD indicates that within these programmes there has been a shift from provision of demand side job creation programmes to workfare based approaches. In line with this shift, programme participants have changed in classification from being considered as employees receiving the minimum wage, to workfare programmes that classify beneficiaries as unemployed and require that the recipients work in return for welfare payments.

In contrast, developing countries have been introducing and strengthening social insurance and social assistance programmes, including public works programmes, in order to meet targets associated with the Millennium Development Goals that refer to poverty reduction, employment promotion and social protection floors. Many countries have increased the range of programmes that provide cash transfers to children and to the elderly. Support has also been extended for child education and food security. In regard to unemployed, underemployed and other vulnerable groups of working age, there is a preference to engage such groups in the process of production rather than focusing solely on increasing their consumption power through cash transfer programmes. Therefore, the expansion of public works programmes is associated with political ideology and public demand that preferences workfare based approaches over welfare dependency for the working age population.

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101 Social protection floors (SPFs) are nationally defined sets of basic social security guarantees that aim to prevent or alleviate poverty, vulnerability and social exclusion. The SPF adopts a holistic approach to social protection by calling for both demand (transfers) and supply side (services) measures to be included in social security systems and welfare/workfare programmes in accordance with a country’s growing economic and fiscal capacities. See ILO Recommendation concerning national floors of social protection (No. 202).
The extension and expansion of public works programmes in developing countries has been closely watched by development partners, with the pool of evidence-based research related to these programmes growing in recent years. For example, evaluations find that public works programmes can have useful countercyclical effects; however, tracer studies reveal mixed outcomes. The design of public works programmes has improved in recent years due to the incorporation of needs analysis, skills training, job search assistance and more attention to local labour market requirements throughout the design of such schemes. In general, the results of the public works programmes are contingent on the condition of the labour market and economic circumstances, as well as programme design factors and administrative capacity. For example, for public works programmes to exhibit gains in employability for programme beneficiaries, a longer employment duration (6 months-2 years) has better outcomes than 10 - 30 day programmes. Other factors that impact on the success of public works programmes include the impact of the assets created, the programme duration, the appropriateness of design for target beneficiaries, and close linkages between the programme and job opportunities in the private sector. Importantly, programmes should be designed in the light of prevailing labour market conditions, as this will impact on the overall efficiency and effectiveness of the programme as well as the achievement of programme objectives. Therefore a good starting place when designing a public works programme is with a diagnosis of the labour market situation.

Many governments in developing countries implement public works programmes on a project basis. This means that the overall programme framework tends to be ongoing, but that it is of a limited scale and capped by targets and related budgets. In the advent of crisis, such programmes are often quickly up scaled to provide additional temporary relief. In this model of programme implementation, the government maintains a framework through which it has the capacity to administer such programmes, while being able to upscale or downscale such programmes as it deems necessary. Such a framework has the benefit of allowing for a more timely response to crisis, as administrative and financial systems are in place. In addition, technical capacity to implement and provide quality assurance is maintained within the existing government structure through its technical staff and institutional memory. Therefore, the assets created under crisis programmes need not be of low quality if governments maintain administrative capacity within their existing structures.

Programmes that are implemented on a project basis are often linked to social protection objectives, however, the limited scope of such programmes means that they offer relatively weak protections and often do not fulfil the function of a safety net programme. Programmes that are linked to guarantees and/or the right to work can provide a safety net function. Such programmes are known by names including "employer of last resort", "employment guarantee" or "job guarantee programmes". In these types of programmes, the state provides employment on a sustained or cyclical basis at wages equivalent to the prevailing minimum wage in areas of work that do not interfere with private sector markets. The various programmes that exist around the world provide a range of different rules that are associated with the wage income transfer of public works programmes. Some programmes opt for extremely low wages so that poor people “self-select” into the programmes, others use the programme to try to set a wage floor for vulnerable workers.

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The significant differences that can be observed between the implementation models of public works programmes reflect ideological foundations and the model for socio-economic development that is advocated by the state. An economically conservative government may scale down such programmes or introduce other limitations, such as targeting or mutual obligations to programme participation.\(^{105}\) While an economically liberal government may scale up such programmes so that they provide a safety function and create linkages between these programmes and other labour market policies, such as training and employment services. In addition to these political factors, the introduction of a public works programme must be prefaced by a broad recognition of need for such a programme to promote employment and poverty reduction outcomes, as political and social recognition of need creates an environment where it is acceptable to spend state budgets on such programmes.\(^{106}\)

Across the world, public works programmes have been used for a range of purposes, which include poverty alleviation, provision of short term employment, formation of soft and technical skills, service provision, and productivity promotion through workfare approaches, macroeconomic stabilisation and political stabilization (see table below).\(^{107}\) Public works programmes can be designed to address temporary labour market disruptions, cyclical and structural unemployment, and localised deficiencies in aggregate demand and supply side deficits. Therefore these programmes often form a strategic pillar of employment policy, as well as social protection and infrastructure policies. As is seen in the following table, the multiple objectives that are possible within PEPs means that there is a need to have a clear primary objective from the outset, as well as a multi-disciplinary group involved at design and implementation stages in order to optimise efficiency and effectiveness. To give prominence to one discipline over another leaves the performance assessment of the programme delivery open to weaknesses and criticism.

**Table 2: Objectives of public works programmes**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
</tr>
</thead>
</table>
| Poverty alleviation    | • Wage income transfer to enable consumption smoothing and support household incomes through temporary employment;  
                         | • Accumulation of human capital during programme participation in order to improve livelihoods. |
| Employment             | • Creation of short-term work opportunities for the unemployed and underemployed in order to reduce frictional or structural unemployment;  
                         | • Labour intensification of activities in the construction sector in order to increase aggregate employment. |
| Skills                 | • Skills and on the job training to support the development of a range of soft and technical competencies. |
| Infrastructure         | • Development of a range of social, access and environmental infrastructure at village and district levels using labour based methods. |
| Productivity           | • Provision of assets to stimulate skills and capital formation, as well as reduce trade and transport margins, at the micro and macro levels;  
                         | • Maintenance of attachment to the labour force and prevention of skill decay or loss through workfare based approaches. |


<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Support for diversification of the economy from an agrarian dominated economy to an economy with activities across the sectors of the economy.</td>
</tr>
<tr>
<td>Macroeconomic stimulation</td>
<td>• Provision of economic stimulus through the wage income transfer function of public works programmes to stabilize aggregate demand.</td>
</tr>
<tr>
<td>Political stabilization</td>
<td>• Provision of employment to support responses to social unrest that are associated with unemployment and poverty.</td>
</tr>
<tr>
<td>Disaster response</td>
<td>• Provision of support for reconstruction and rehabilitation of community assets in post-disaster and recovery settings.</td>
</tr>
</tbody>
</table>


An essential factor in successful public works programmes therefore relates to attention to process. Throughout the process of investing in community assets using public works programme approaches, close attention should be paid to many factors, including site selection and design specifications, supervision and quality control over the production process, and involvement of local resources including labour, administration, contractors, materials and equipment throughout the process. Public works programmes also need to have systems in place across district, provincial and national layers of government in order to support quality control and effective administration.

The infrastructure investments that are made through public works programmes can have a sustained impact on community welfare through livelihood improvement. However, investments should be aligned with local development priorities and should be of a quality that allows for sustained benefits over time. Assets should also fall within the domain of a public assets or public good that will benefit all groups within communities equally. Finally, it is important to ensure that the ownership of the assets is clear and that the assets are satisfactorily maintained by either the public or the community funds over time.

### 3.2 Public works programmes: A pillar of employment policy

Employment policies and programmes include a range of “active” and “passive” programmes.\(^\text{108}\) Passive programmes include unconditional unemployment assistance / insurance, redundancy compensation, bankruptcy compensation, and early retirement. Active programmes seek to facilitate supply-demand matching, increase productivity, support labour force participation and vulnerable groups’ reintegration into the labour market, among others. Public works programmes are active labour market policies that seek to create higher levels of productive employment and support improved access to basic goods and services - therefore stimulating demand. In comparison to other types of employment policies, public works programmes tend to have fewer potential unintended consequences that are associated with them.\(^\text{109}\) For example, in comparison to employment subsidies, public works programmes are likely to experience a lower incidence of deadweight loss as most participants would have fewer alternative employment opportunities and programmes can include safeguards to minimize substitution and displacement.

Public works programmes are generally considered to be one element of employment policy that is designed to absorb unemployed and underemployed workers in to productive work opportunities while providing social protection in the form of a wage income transfer. The International Labour


Organization (ILO)\textsuperscript{110} and the World Bank\textsuperscript{111} make a distinction between public employment programmes (PEPs) and public infrastructure programmes (PIPs) as two categories of public works programmes that have different objectives. The primary objective of PEPs is job creation and provision of social protection to the working age population. PEPs therefore provide beneficiaries with a wage income transfer while engaging beneficiaries in the development of or delivery of community assets. PEPs provide a social protection function through several mechanisms including both the wage income transfer function, as well as the through the provision of assets that target issues such as food security and access to markets and social services. PEPs endeavour to have the maximum percentage of their project budget attributed to labour in order to maximise job creation. For example, a typical PEP may provide 50 to 70 per cent of its project budget for labour. Therefore the work menus for PEPs are generally restricted to minor works or maintenance types of activities. Labour-intensive technologies for infrastructure investment are often used in PEPs. Labour-intensive technologies predominantly involve the use of labour with hand-tools only and this technology tends to be highly suitable for the routine maintenance of roads and environmental works.

PEPs typically hire unemployed workers in unskilled work at wages equivalent to the market minimum within their local economies. In this manner, a PEP provides an "on-the-spot" approach to promoting full employment and extending social protection. PEPs are designed as safety net programmes that "hire off the bottom" at minimum conditions and the jobs offered by such programmes don’t compete with wage structures or skills demand coming from the private sector.

The primary objective of public infrastructure programmes (PIPs) is to build quality local infrastructure in support of local social and economic development (see table below). PIPs are about technology choice and making decisions on work methods in infrastructure projects in favour of optimising job creation. As PIPs have the creation of quality assets as their primary objective, the percentage of a PIP project budget attributed to labour is generally in the range of 30 per cent. Therefore, the work menus for PIPs can be quite broad and similar in scope to projects implemented using equipment-based (EBT\textsuperscript{112}) technology. However, PIPs are designed to use labour-based technologies rather than equipment-based technologies during project implementation in order to optimise job creation. The focus of PIPs tends to be on increasing the employment content of investments in infrastructure programmes for supporting local job creation and increasing the return on investment for local economies. Therefore, PIPs see both the process of infrastructure investment, as well as the outcome of infrastructure investment, as important for job creation and employment policy.

In line with this rationale, PIPs are about increasing the employment content of public spending or improving the employment multiplier of public investment. It is important to note that while this strategy may increase demand for employment, it is unlikely to be able to offer employment opportunities for all as it relies on the fine tuning of investment spending. However, the approach makes the important point that infrastructure spending should be about creating jobs and such projects should seek to optimise job creation potential while maintaining quality standards.

\textsuperscript{110} ILO (2012) Consolidating community investment programming for optimising employment outcomes, Public Infrastructure Programmes (PIPs) and Public Employment Programmes (PEPs), ILO Country Office for Indonesia and Timor-Leste, Jakarta (unpublished).
\textsuperscript{112} EBT is the conventional technology as used in developed countries where equipment use is optimized and labour involvement is minimized due to high labour costs.
### Table 3: Objectives of public infrastructure and public employment programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>Objective</th>
<th>Labour allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public employment programme</td>
<td>1. Job creation (employment objective)</td>
<td>50 to 70 per cent of the project budget is allocated for labour</td>
</tr>
<tr>
<td></td>
<td>2. Investment in public assets (economic objective)</td>
<td></td>
</tr>
<tr>
<td>Public Infrastructure Programme</td>
<td>1. Investment in public assets (economic objective)</td>
<td>Approximately 30 per cent of the project budget is allocated for labour</td>
</tr>
<tr>
<td></td>
<td>2. Job creation (employment objective)</td>
<td></td>
</tr>
</tbody>
</table>


Both PIPs and PEPs support improvements in the employability of beneficiaries by providing work experience, which gives opportunities for beneficiaries to improve a range of workplace skills and technical skills. Both programme approaches are highly relevant for economies with low wage levels and high levels of labour underutilization, as both programmes increase demand for labour. However, employment optimization in PIPs involves a very different design approach from the social protection goals of PEPs. It is important to understand the dynamics of the labour market when deciding between the PIP and PEP options, in order to ensure that the policy is appropriately designed for the context.

In both PIPs and PEPs, the ILO promotes the optimization of employment creation through application of the "local resource based" (LRB) approach. The LRB approach involves a hybrid approach to infrastructure investment and distinguishes itself by optimizing the creation of local employment opportunities, optimizing the use of local resources such as materials and existing MSEs and SMEs, optimizing local capacity building and equal opportunities for female participants throughout the construction process. To emphasize, the LRB approach is about including the use of local resources - local labour, local materials, local employers, local administration - to support development that is socially, economically and environmentally responsible at the micro level. In addition, the LRB approach focuses on issues such as durability and sustainability within the investment process by applying life cycle costing approaches and by placing greater emphasis on the ongoing maintenance of infrastructure assets.

In recent times, some of the most innovative public works programmes have combined different strategies from other active employment policies in order to improve outcomes. For example, the South African Expanded Public Employment Programme includes a training element. For every 20 days worked, beneficiaries receive two days of training in areas such as HIV/AIDs awareness or access to finance. In addition, the programme includes a specific sub-component that focuses on developing contractors within the labour-based construction industry through provision of a two year programme that provides a combination of classroom and on-the-job training for a limited number of youth. Other programmes have been linked with job search requirements, with the aim of encouraging placement in alternative employment. For example, Australia's "work for the dole" programme includes a job search requirement in order to encourage programme participants to find more permanent employment options in the private sector.

Recent trends in developing countries, particularly in Asia, indicate that policy makers are also adopting more hybrid approaches in the implementation of public works programmes. For example, in Indonesia one of the largest programmes is called PNPM Mandiri or the "national community empowerment programme". The programme provides communities with a block grant and villages

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are to engage in a community development dialogue to make decisions on how to spend the funding. This programme typically investments in community infrastructure and may involve community members in the undertaking of this work, however, work specifications are not indicated within this programme. The programme does not specify wages or days of work quotas and encourages voluntary labour contributions in order to support community cohesion and the overall development of the local economy. In such cases, community members can become obliged to forfeit their wages so that a higher proportion of the project budget can be spent on capital. In this situation, the poor may shoulder a comparatively greater burden of the cost of investing in community assets (good publics), through the contribution of their free labour which subsidises the costs of investment.

3.3 Public works programmes in Indonesia

3.3.1 Historical overview of public works programmes in Indonesia

Prior to independence in 1945 policy on employment policy along with village development in Indonesia was limited and after independence policy in this area was still very preliminary. From 1968 onwards, the Government's approach to employment promotion and rural development began to shift, and the size and amount of investment for such policies in rural areas and in villages began increasing.114

Public works programmes first appeared in the form of food-for-work activities that were funded by USAID in the early 1960s for those areas in Indonesia that experienced food insecurity. This programme benefited more than three million people, and in 1969 the Government of Indonesia, through the Ministry of Manpower, extended labour-intensive programmes and food-for-work nationwide.115 The programme was subsequently included in Indonesia's first five year development plan, known as the "Repelitas". In 1974, the programme became a cash-for-work rather than food-for-work programme and supported three development objectives, namely:

1) an increase in food production;
2) the expansion of employment opportunities;
3) improved income equality.

From 1974 onwards public works programmes were implemented through a number of ministries, including the Ministry of Manpower and Transmigration, the Ministry of Home Affairs, the Ministry of Agriculture and the Ministry of Public Works.116 These programmes created short term employment opportunities while at the same time producing improved infrastructure, supporting production improvements in agriculture and related industries, and supporting training in entrepreneurship and business development. The programmes were therefore oriented towards improving productivity, expanding employment and supporting economic diversification - all of which were highly relevant for improving the labour market situation and expanding economic growth at that time.

The Ministry of Manpower and Transmigration implemented a public employment programme, known as "Padat Karya" in each of the Repelitas between 1969 and 1994, as seen in the table below. The results of implementing the Padat Karya Programme over 25 years include the creation of 13.2

million short term jobs (approximately 100 days per job) for unemployed and underemployed workers in 16,359 locations.\textsuperscript{117}

Table 4: Repelitas and public works programmes

<table>
<thead>
<tr>
<th>Repelita</th>
<th>Description of Padat Karya</th>
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</thead>
<tbody>
<tr>
<td>Repelita I 1969-1974</td>
<td>Repelita I included focus on using labour based technologies to open and extend employment opportunities to rural and urban areas. It also included provision for &quot;proyek-proyek pekerjaan darurat&quot; (emergency projects), which would use employment intensive methods. The results achieved during padat karya projects implemented in Repelita I include the construction of more than 3,500 km of village road, 4,500 km of irrigation, and the greening of more than 11,000 ha of land.</td>
</tr>
<tr>
<td>Repelita II 1974-1979</td>
<td>Repelita II included a range of rural development programmes, including the &quot;Proyek Padat Karya Gaya Baru&quot; and the &quot;Proyek Bantuan Pembangunan Daerah Tingkat&quot;. Through application of employment intensive and labour based methods, the unemployed and underemployed workers benefitted from a wage income transfer while contributing to local infrastructure investment. Since the year 1972/73 workers were also given in part payment for services. In addition, budget was provided for purchase of materials and equipment. During this period, padat karya projects used labour based technologies to construct approximately 6,800 km of village roads and 12 608 km of irrigation channels. This amounted to the creation of 87.6 million work days each year during the period. There was also a special programme for afforestation and reforestation, which created approximately 55.9 million work days during the period.</td>
</tr>
<tr>
<td>Repelita III 1979-1984</td>
<td>Repelita III continued to have a focus on rural development, and the &quot;Proyek Padat Karya Gaya Baru&quot; continued, as did &quot;Proyek Bantuan Pembangunan Daerah Tingkat II&quot; and &quot;Program Penghijauan dan Reboisasi&quot;. The aim was to expand productive employment opportunities both directly and indirectly, before and after the project is implemented. The projects also sought to enhance access to employment opportunities in the off season. Types of projects undertaken include the construction or rehabilitation of village roads, irrigation channels and green works, as well as investment in neighbourhood infrastructure such as the handling of waste, cleaning of storm water channels in the cities. Improvements were made in the planning, implementation and supervision of work relating to the organizing and planning the project, as well as placing additional focus on labour based technology and appropriate technology. Approximately 1,193,571 people over 5 years or an average of 238 701 people per year worked for between 3 to 6 months on Padat Karya Gaya Baru. Approximately 119 300 km of village roads and 314 600 km of tertiary irrigation channels were constructed in this time. The Program Penghijauan dan Reboisasi provided 23.8 million work days during the 5 year period.</td>
</tr>
<tr>
<td>Repelita IV 1984-1989</td>
<td>Repelita IV continued have a focus on rural development and to implement &quot;Proyek Padat Karya Gaya Baru&quot; (PPKGB), &quot;Bantuan Pembangunan Daerah Tingkat II&quot; and &quot;Program Penghijauan dan Reboisasi&quot;. These programmes aimed to provide productive employment opportunities to unemployed workers and underemployed in rural areas, especially those living around the project site. The programmes provided employment in the off-season</td>
</tr>
</tbody>
</table>

and workers were provided with a remuneration that was slightly lower than the local minimum wage. The programmes invested in the construction and rehabilitation of economic and social infrastructure including the creation and rehabilitation of waterways, dams, roads, terracing, and neighborhood development. The PPKGB was implemented in 4647 districts and employed approximately 980,441 people for between 3 to 6 months during the five year period. Approximately 13,788.2 km of village roads, 6417.7 km of tertiary irrigation canals, 1856.7 ha creation of new fields, reforestation and terracing, as well as 1543.9 km of dikes, docks and others were constructed.

Repelita V 1989-1994

Repelita V continued have a focus on rural development and to implement "Proyek Padat Karya Gaya Baru" (PPKGB). This programme sought to empower groups of unemployed and underemployed people through increasing productivity in areas that are relatively disadvantaged and densely populated. This programme responded to demand deficiency, and a need to increase purchasing power and reduce rapid migration to city areas. The programme invested in the construction of irrigation canals, reservoirs (ponds), village roads, terracing, afforestation, environmental improvements, and the provision of clean water, agricultural land clearing, pond aquaculture infrastructure and urban drainage. Priority was also given to the maintenance and rehabilitation of existing assets. In addition the "Sistem Teknologi Padat Karya" was further developed. This was a technical programme supporting the promotion of labour based technologies through the provision of field officers (Petugas Lapangan Teknologi Padat Karya (PLTPK)).

Repelita VI 1994-1999

Repelita VI used labour based technologies to provide employment opportunities for unemployed and underemployed people, with a focus on both infrastructure and productive assets. This programme focused on 1) identifying potential marketing prospects and sustainable employment opportunities, 2) disseminating the type of labor-intensive technologies in an effort to improve the ability and creativity of communities to manage and utilize natural resources efficiently and productively, and (3) implementing labour based technologies in selected sites. This programme sought to support cooperative activities as well as strengthening small businesses and home craft industry. However, in 1997/1998 unemployment began increasing significantly and the Government announced a "crash programme" to provide support to unemployment, underemployed and vulnerable people.

Source: Bappenas (selected years) Repelita I - VI, Bappenas, Jakarta.

3.3.2 Public works programmes during and post Asian financial crisis

It was not until 1997-1998, with the shift towards the decentralization of government structures and with the response to the Asian Financial Crisis, that public works programmes were up-scaled substantially throughout Indonesia. For example, during the Asian Financial Crisis the Government introduced 16 temporary employment creation programmes (padat karya programmes) across several ministries.\(^{118}\) These programmes had a range of objectives and strategies. Some programmes focused on increasing the employment content of infrastructure projects through applying labour-

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based methods (public infrastructure programme), some programmes provided block grants to villages in support of decentralization (hybrid public employment programme), while other programmes adopted sectoral strategies (public employment programme with a productivity focus on particular sectors).

Due to the need for hasty implementation, the programmes did not involve extensive spatial or social inclusion targeting, nor was there time for coordination to improve synergies between interventions. The programmes therefore largely relied on self-targeting through offering wages at or slightly below the minimum wage. However, issues such as nepotism, "ghost workers", and displacement induced by wage incentives were reported. On a positive note, an evaluation of the crisis response programmes found that those households that were worst hit by the crisis were 300 per cent more likely to participate in the programmes.

An example of one programme that began in the post Asian Financial Crisis environment was the Kecamatan Development Programme (KDP). This was a three-year project financed by a loan from the World Bank that commenced at the beginning of the Asian Financial Crisis in 1998. The main purpose of the programme was to use a grant mechanism to channel funding to villages quickly. The KDP subsequently provided communities with a block grant, and imposed a participatory planning and decision-making processes in order to foster the development of village level governance systems and democratic processes. Strengthening governance and democracy processes was very important at that time, as Indonesia was transitioning from an authoritarian regime to a democracy. The programme's cycle was 12 months in length, and began with the sensitization of communities to the programme. This was followed by participatory planning and development of proposals, which then resulted in the implementation of various village level infrastructure projects.

Approximately 70 per cent of KDP phase one and 66 per cent of KDP phase two were used to maintain and develop community infrastructure. This programme was more focused on village development and community empowerment than on providing employment opportunities or social protection to target groups. Consequently it is challenging to understand the programme in terms of profiling the programme's direct and indirect beneficiaries and understanding the nature of the work opportunities offered by the programme, as the programme entailed the involvement of all villagers throughout the process and also encouraged the use of voluntary contributions from labour to implement village level projects.

However, on average each KDP infrastructure project was worth IDR 90.8 million per village and for each IDR 51,000 of infrastructure expenditure, one worker could be employed for one day at a wage rate between IDR 10,200 and IDR 15,300. The average duration of the KDP work opportunities was seven days. Subsequently, it was estimated that the cash injection associated with the wage-income transfer of KDP would have only increased the average annual income of beneficiary households by one per cent. Therefore, with the short work opportunity and only 25 per cent of the project budget being spent on labour, the programme could be described to be capital intensive project in

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comparison to other labour-based infrastructure projects that have been implemented throughout the region.\textsuperscript{123}

At this time there was also a proposal among policy makers to improve the employment impact of infrastructure investment through expanding the use of labour-based technologies in construction works throughout Indonesia.\textsuperscript{124} An assessment was made that an additional 1.1 million full time equivalent jobs could be created over a five-year period within the existing civil works budgets if there was a modest shift from equipment-based work methods to more labour-based work methods. Such proposals have consistently been suggested by policy makers in Indonesia over the years, however, only limited resources have been committed for the technical support and training programmes are needed to realize such a shift in the way of doing business. The potential of such a strategy therefore remains untapped to a large extent.

### 3.3.3 Contemporary public works programmes

Indonesia now has a long history of implementing public works programmes. Descriptions of a sample of prominent programmes that are operating today are provided in the table below. The earlier mentioned Kecamatan Development Programme underwent a transformation and is now known as "PNPM Mandiri" (Programme Nasional Pemberdayaan Masyarakat / National Community Empowerment Programme). This programme is currently the largest nation-wide poverty reduction programme in Indonesia. PNPM-Mandiri covers all sub-districts and villages in Indonesia and research findings indicate that it has decreased the unemployment rate in rural areas where it is active by up to 1.5 percentage points.\textsuperscript{125}

#### Table 5: Current prominent public works programmes in Indonesia

<table>
<thead>
<tr>
<th>Programme name</th>
<th>Description</th>
</tr>
</thead>
</table>
| PNPM Mandiri (Programme Nasional Pemberdayaan Masyarakat / National Community Empowerment Programme) | PNPM Mandiri is a national programme for poverty reduction and community empowerment. PNPM aims at increasing the capacity of communities in finding solutions for improving their quality of life through self-empowerment. PNPM facilitates a community planning and decision-making process and provides a combination of block grants and revolving loan funds to fund communities’ self-prioritized needs. Much of the work undertaken through PNPM supports the development and maintenance of community infrastructure. The two main objectives of the PNPM Mandiri are:  
- increasing the capacity of all members of communities (poor, women, minority groups) in decision making for development;  
- increasing the capacity of village government in providing services to the communities, especially poor communities, through poor oriented policy, projects, and budgeting.  
In 2013, the budget for PNPM in totalled more than IDR 13.4 trillion, for covering more than 6750 villages throughout Indonesia. |
| PPIP (Rural Infrastructure Development) | PPIP (Rural Infrastructure Development Programme) is a poverty reduction programme under the Ministry of Public Works. It started in 2007 and the programme aims at creating access to infrastructure services for poor and |

\textsuperscript{123} ILO (2012) Consolidating community investment programming for optimising employment outcomes, Public Infrastructure Programmes (PIPs) and Public Employment Programmes (PEPs), ILO Country Office for Indonesia and Timor-Leste, Jakarta (unpublished).

\textsuperscript{124} ILO (1999) Product document for technical support and training for targeting the creation of 1.1 million jobs in Indonesia, ILO Country Office for Indonesia and Timor-Leste, Jakarta (unpublished).

\textsuperscript{125} Voss, J. (2012) PNPM rural impact evaluation, PNPM Support Facility, Jakarta.
<table>
<thead>
<tr>
<th>Programme name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Padat Karya (Labour intensive programme)</td>
<td>Padat Karya is a centrally designed public employment programme managed by the Ministry of Manpower and Transmigration (MoMT) which provides short-term job opportunities for the unemployed, underemployed and poor people in rural areas. Padat Karya has several sub-programmes, including:</td>
</tr>
<tr>
<td></td>
<td>Padat Karya Infrastruktur (PKI): offers short term employment in the construction of infrastructure projects;</td>
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<tr>
<td></td>
<td>Padat Karya Produktif (PKP): supports the increase in rural production through the construction of assets.</td>
</tr>
<tr>
<td></td>
<td>In 2013 the budget for Padat Karya was IDR 170 billion and the programme covered 1324 villages in Indonesia.</td>
</tr>
<tr>
<td>Perbaikan Infrastruktur Pertanian (Agricultural infrastructure improvement)</td>
<td>Agricultural Infrastructure Improvement Programme, also known as Perbaikan Infrastruktur Pertanian is under Ministry of Agriculture. The objective of this programme is to increase the productivity of farms/plantations and improve access to markets. The programme invests in agricultural roads, irrigation development and water resource development. The Ministry of Agriculture does not see it as an employment creation programme. Wages are not paid, and only a small incentives such as lunch and transport allowance are provided. The focus is on self-help and on the longer-term objective of increasing farm productivity (i.e. income from agricultural production). For 2013, the estimated total budget for this programme was IDR 623 billion and the programme was to rehabilitate 250 kms of road, 550,000 ha of irrigation and 686 units of water resources.</td>
</tr>
<tr>
<td>Programme</td>
<td>semi-poor communities (including women and minority groups) through a participatory planning approach. This programme is implemented under the umbrella of PNPM Mandiri. PPIP builds on the following principles:</td>
</tr>
<tr>
<td></td>
<td>- Community Empowerment: All processes (preparation, planning, implementation, monitoring, and maintenance) involve active participation of communities.</td>
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<tr>
<td></td>
<td>- Poor-oriented: The main beneficiaries of the programme are poor people.</td>
</tr>
<tr>
<td></td>
<td>- Autonomy and decentralization: local government has full responsibility for the successful implementation.</td>
</tr>
<tr>
<td></td>
<td>- Integrative: PPIP is integrated with other development programmes at village level.</td>
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<tr>
<td></td>
<td>- Institutional capacity development in poverty eradication efforts.</td>
</tr>
<tr>
<td></td>
<td>- Gender equality: The program encourages synergy between district government, communities, and other stakeholders.</td>
</tr>
<tr>
<td></td>
<td>In 2013, the PPIP covers 6640 villages with a total budget of IDR 1.96 trillion.</td>
</tr>
</tbody>
</table>

Source: Authors’ own data.

Both KDP and PNPM make use of a combination of paid labour and “swadaya labour” or “self-help”. The approach allows communities to develop village level infrastructure under the programme that could potentially support the village’s access to markets and services, and subsequently improve the livelihood of people within the village. However, this approach does not necessarily entail the same benefits that are associated with a programme that provides a wage income transfer (for example, decreases in poverty, increases in capital accumulation and increases

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in productivity). The PPIP (Rural Infrastructure Development Programme) follows a similar framework to PNPM. The agricultural infrastructure improvement programme uses voluntary labour only.

The duration of paid work opportunities provided through PNPM is also reported to be low, with considerable variation in the number of paid work days worked across programme beneficiaries. Detailed information on this is not readily available, with information published on budgets not providing detail for allocations by expenditure categories such as labour, tools and materials. However, the costs of implementing PNPM projects are much cheaper than the costs for implementation of general government projects. For example, a technical evaluation of PNPM reported the following:

"A comparison of the two data sets showed that PNPM-sponsored infrastructure projects are on average at least 15 to 25 per cent cheaper for design and implement than similar line Ministry-funded projects. In cases where PNPM sub-projects involve large unskilled work forces from the recipient village or local district, the savings can be significantly higher, sometimes exceeding 50 per cent."128

The finding from the technical evaluation raises the issue of unpaid labour being used to subsidize the costs of project implementation. Indeed, qualitative evidence from interviews with key informants suggests that many workers many assist with land clearing, the gathering of materials and other preparation exercises before the commencement of project activities. Workers who are participating in the paid work opportunities may work for between ten to twenty days throughout the duration of the project. Papanek129 had recommended that the wage income transfer of KDP/PNPM should be equivalent to work opportunities of 60 days, in order to allow the programme to have substantial impacts on the household income of poor beneficiaries. For example, a 60 day work opportunity should allow the annual household income of beneficiary families that are below the national poverty line to increase by approximately 10 per cent. However, this recommendation, which was provided in 2007, does not receive attention in the subsequent programme documentation.

Given that the Indonesian economy is characterized by rising inequality, structural change, a large informal economy, low labour productivity, limited social protection, and an emerging issue of skills mismatch, it may be that a programme with a more structured approach to the stimulation of employment and productivity would be more suited to the labour market situation. However, despite the short length of work opportunities offered by PNPM, the programme’s evaluations have generally shown that it has been effective in decreasing poverty. For instance, findings from PNPM’s longitudinal impact study indicate that real per capita consumption gains were 9.1 percentage points higher among poor households in PNPM areas in comparison to control households.130 In terms of employment, individuals in PNPM areas were 1.35 per cent more likely to be employed than control areas. The programme has also had positive impacts on market access, transport infrastructure, access to education and health services, and access to clean water. Developmental gains have been greater in poor and remote areas, than in other areas.

In comparison, the Ministry of Manpower’s Padat Karya programme provides a standardized approach, with the programme allocating a fixed share of the overall budget to labour and to capital.

Projects that are implemented under this programme must meet this standard in order to be eligible for funding. Chapters 4 and 5 will discuss this programme in further detail.

3.4 Discussion and implications

As mentioned at the beginning of this chapter, a simple but strong macroeconomic case can be made for the implementation of public works programmes. Such programmes therefore tend to be popular with policy makers. However, many models of public works programmes exist, with model variations impacting on the potential of each programme. McCord identifies four main types of public works programmes, including short-term programmes, ongoing programmes, programmes that focus on technology choice, and employability programmes. However, there are many factors outside this typology that have a high level of influence on the implementation model of the particular public works programme, particularly where there is more multi-disciplinary involvement in programme design. These factors including geographical scope, programme budget, beneficiary targeting, eligibility, level of benefit provision, linkages with other labour market programmes, and employment status of beneficiaries, among others.

In general global policy trends associated with public works programmes can be considered to fall into two categories, namely, a shift from welfare to workfare based approaches in developed countries and a shift towards the expansion of social protection floors, including public works programmes, in developing countries. The differences that can be observed between the implementation models reflect ideological foundations and the model for socio-economic development that is predominant in both developing and developed nations.

Public works programmes are used for a range of purposes, including increasing demand for labour, employability promotion, service provision, macroeconomic and socio-political stabilization, social protection for the working age population, as well as responses to crisis and other temporary labour market disruptions. However, the work component of public works programmes and the need to create jobs is the reason why policy makers often choose to implement such programmes. Public works programmes therefore form a strategic pillar of both employment policy and social protection policy.

Two categories of employment policies in the area of public works programmes exist. These programmes have different objectives that can clearly be identified, and are termed as public employment programmes (PEPs) and public infrastructure programmes (PIPs). The primary objective of PEPs is job creation and provision of social protection to the working age population. Such programmes endeavour to have the maximum percentage of their project budget attributed to labour in order to maximise job creation. In comparison, public infrastructure programmes (PIPs) seek to build quality local infrastructure in support of local social and economic development and use labour-based technologies rather than equipment-based technologies during project implementation in order to optimise job creation. PEPs provide work for unskilled labour at market minimums for the purpose of extending social protection, while PIPs focus on increasing the employment content of infrastructure investment through fine tuning expenditure. Both programme types can apply "local resource based" approaches during programme implementation in order to optimise the benefits of programme implementation for the local economy. In recent years, policy makers have experimented with the design of these programmes and coupled them with other types of labour market programmes and community development frameworks in order to optimize employment outcomes.

In several developing countries, including Indonesia, the concept of community empowerment has been merged with public works programmes. This trend has seen many of the programme concepts
that have been core to public works programmes, such as wage-income transfer and work duration specifications, relaxed and decentralized to the community level. A review of government policies since the 1960s reveals that Indonesia has a long history of implementing public works programmes in various forms. The programmes have been instrumental in creating jobs, supporting crisis recovery and stimulating local economic development. Several models of public works programmes exist, but standards between the programmes in regard to work specifications vary substantially. For example, programmes seeking to support “community empowerment” have often been found to require the contribution of “free labour” and the absence of any effective assets maintenance systems, as such the assets are often rebuilt on a cyclic basis by the very same programme.\footnote{Neate, N. (2012) PNPM Mandiri rural information: Technical evaluation report 2012, final report - findings and recommendations, PNPM Support Facility, Jakarta.}

A range of key themes arise from the discussion of public works programmes, including that the concept of public works programmes can incorporate a range of implementation models with different objectives. As public works programmes create jobs and engage beneficiaries in meaningful work activities, much of which is related to infrastructure investment, these programmes can have multiple objectives. If these objectives are not well managed, the programme may be prone to under delivering in certain areas.\footnote{McCord, A. (2012) Public works and social protection in Sub-Saharan Africa: Do public works work for the poor?, United Nations University Press, Tokyo.}

In addition, while many models of public works programmes exist, it is important that the specific parameters of each programme are tailored to the needs of the labour market, economy and society in general. Different programme models will achieve different outcomes and many programme options can only be effective in specific labour market contexts.\footnote{McCord, A. (2012) Public works and social protection in Sub-Saharan Africa: Do public works work for the poor?, United Nations University Press, Tokyo.} It is therefore highly important to understand the dynamics of the labour market in order to ensure that the programme is appropriately designed for the context. In line with this rationale the following two chapters will review the labour market situation and employment policy in Indonesia in more detail.
Chapter 4: Employment trends in Indonesia

Increasing productivity and growing the formal economy are some of the most eminent challenges for development of the economy and the labour market in Indonesia. In order to achieve gains in these areas robust economic performance is required that is underpinned by growth of jobs in the formal economy that can share prosperity. Evidence illustrates that economic growth over the last decade has supported employment expansion, however, the quantity and quality of the jobs being created have been a persistent concerns for Indonesia. High levels of labour underutilization, the persistence of the informal economy, low labour productivity and limited access to social protection have subsequently kept real incomes low for most Indonesians. The combination of these factors means that many Indonesians are vulnerable to shocks. A decline in economic growth has the potential to see the situation of many households deteriorate quickly, and reserve gains that have been made in poverty reduction and employment expansion over the last decade.

The development framework of Indonesia places economic growth at its core, with the Government setting an economic growth target of between 6.3 and 6.8 per cent per annum between 2010 and 2014. With this economic growth rate, the Government expects that the poverty rate will decline to between 8 and 10 per cent by 2014 and open unemployment will decline to between 5 and 6 per cent by 2014. Following this framework, poverty reduction and employment outcomes are understood to be outcomes of the growth process rather than a facilitator of growth or neutral to growth outcomes. It is important to understand the effectiveness of such an approach and therefore important to review progress across a range of indicators in order to understand how the employment situation in Indonesia has evolved. Such a review can be useful for providing insight into where policy measures may be needed to accelerate progress in promoting employment outcomes.

This chapter reviews a range of indicators to provide an overview of the employment situation and employment outlook in Indonesia, in order to gain insight on how employment policy may be developed in the future to support equitable development and employment expansion. The chapter outlines the key challenges faced in the labour market, including issues of rising inequality, precarious work, structural transformation and the need for employment policies and programmes, such as employment services and public works programmes that stimulate the functioning of the labour market in order to ensure that development is equitable and prosperity is shared.

Section 4.1 reviews economic trends in order to set the scene, with focus on economic growth trends and government expenditures. Section 4.2 outlines social trends, with particular focus given to the emergence of inequality and social protection systems. Section 4.3 looks into labour market trends and outlines issues including the persistence of the informal economy, trends in vulnerable employment, the structure of unemployment and underemployment as well as labour force participation. The educational profile of the labour force and the sectoral composition of employment give further information on the structure of the Indonesian labour market. Section 4.4 provides an overview of the employment outlook for 2014-2019 in order to give an overview of trends on how the labour market are expected to develop. Section 4.5 provides a discussion of the review of indicators and identifies areas of concern for employment policy, which are then further discussed in chapter 5.

135 Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
4.1 Economic trends

The Indonesian economy is one of the few economies in the world that has maintained economic growth against the backdrop of recent global economic uncertainty. As the figure below illustrates, Indonesia's GDP growth recovered steadily after the Asian Financial Crisis in 1997-1998 and Indonesia has been able to achieve growth rates above global averages in recent years. For example, between 2003 and 2013 growth averaged 5.7 per cent.

**Figure 2: GDP growth for Indonesia and the World, 1962-2011**

The Indonesian economy accounted for 0.8 per cent of global GDP in 2012 and is one of the world’s top twenty economies. Indonesia’s recent strong economic performance is linked to strong household consumption and high investment rates due to increasing infrastructure expenditure and business climate improvements. In the future factors including Indonesia’s demographic bonus, growing urbanization, investment in education and productivity, and developments within the ASEAN and broader Asian markets, will help to shape economic prospects. Democratization and a stable political environment, a young and growing population, and an increasing middle class are among the factors that will continue to attract investment to Indonesia in the future.

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137 BPS (2013) Trends of selected socio-economic indicators of Indonesia, Badan Pusat Statistik, Jakarta.

138 1.2 per cent of GDP in current prices or 0.8 per cent of GDP in constant 2005 prices.

Indonesia has put in place policies to support a structural transformation of its economy. Trends indicate that Indonesia is shifting away from an economy dominated by the agricultural sectors, towards an economy with a greater share of economic activities within the services sectors. For example, in 2004 the primary sectors accounted for 24.6 per cent of GDP, the secondary sectors for 34.8 per cent, and the tertiary sectors for 40.6 per cent. By 2013, the primary sectors accounted for 19.3 per cent of GDP, the secondary sectors for 32.9 per cent, and the tertiary sectors for 47.8 per cent. The growth of the tertiary sector has largely been driven by the expansion of the transport, storage and communication sector. Policy makers have faced challenges in growing the manufacturing sector, and while it has been growing in monetary terms, further efforts are needed to realize its expansion as a share of GDP. In this regard, the Government has been encouraging the expansion of the construction sector, through its Master Plan for the Acceleration and Expansion of Economic Development (MP3EI). This trend has seen the expansion of expenditures in the area of gross fixed capital formation, which include infrastructure investments, land improvements, plant, machinery, and equipment purchases, which should support the expansion of the manufacturing sector in the future.

**Figure 3:** GDP sectoral composition for 2004-2013 in per cent

While growth trends have been positive, the domestic climate has been affected by a number of internal and external factors that have hindered outcomes. For example, volatility in financial markets, falling demand for exports, and the tightening of monetary and fiscal policy in the US and European markets had implications for economic growth outcomes in Indonesia. While domestic factors such as the quality of infrastructure and labour productivity, as well as modification to trade
policies, fiscal uncertainty and revisions to the domestic fuel subsidy have also had implications for economic performance.\footnote{World Bank (2014) Indonesia Economic Quarterly, March 2014: Investment in flux, World Bank Country Office for Indonesia, Jakarta.}

Spending on fuel and energy subsidies are ongoing challenges that have had implications for the quality of government spending and the fiscal outlook for Indonesia.\footnote{ILO (2013) Labour and social trends report 2013: Reinforcing the role of decent work in equitable growth, ILO Country Office for Indonesia and Timor-Leste, Jakarta.} The policy is vulnerable to adjustments in international fuel commodity prices and changes in the valuation of the rupiah against various currency exchange rates. The ongoing uncertainty in fuel subsidy expenditure has had a negative effect on the Government’s expenditures, particularly the expansion of social protection programmes and investment in infrastructure. For example, expenditure on the fuel subsidy in 2011 was budgeted to account for 9.8 per cent (IDR 130 trillion) of overall government expenditure, but increased to 12.8 per cent (IDR 165 trillion) of overall government expenditures due to price fluctuations and rising consumer demand. To cope with these fluctuations the budgets of line ministries are often revised mid-year in order to minimize the expansion of the fiscal deficit. For example, the Ministry of Manpower and Transmigration’s budget for active labour market programmes has been revised downwards several times during midyear budget revisions.

It is generally acknowledged that fuel subsidies are not optimal policies for promoting equitable growth as the non-poor tend to enjoy a larger portion of the direct benefits and employment gains from such policies are minimal.\footnote{World Bank (2014) Indonesia Economic Quarterly, March 2014: Investment in flux, World Bank Country Office for Indonesia, Jakarta.} However if fuel prices increase, direct and indirect effects will be felt throughout the economy as trade and transport margins increase and business passes on these costs to consumers. Higher prices for commodities reduce purchasing power, particularly for the poor. Therefore reforms on fuel and energy subsidies, need to be combined with a deepening and expansion of programmes that provide protections and promote employment in Indonesia. Indeed, there is agreement on the need for reform on government expenditure in Indonesia in order to promote the primary goals of the Government on economic growth, employment growth and poverty reduction.\footnote{ILO (2013) Labour and social trends report 2013: Reinforcing the role of decent work in equitable growth, ILO Country Office for Indonesia and Timor-Leste, Jakarta.}

Indonesia aspires to continue to grow its economy and to be among the high income economies of the world by 2030.\footnote{World Bank (2014) Indonesia Economic Quarterly, March 2014: Investment in flux, World Bank Country Office for Indonesia, Jakarta.} Realizing this goal requires sustained high growth, infrastructure investment and reform of government policies, as well as strategies that can support the growth of the middle class and continue to strengthen demand within the domestic market. Policies to share the gains from economic growth and improve labour productivity will be vital herein. As noted in chapter 2, targeted interventions that strengthen labour market performance may be needed. It is therefore likely that employment policy will become an increasingly important component of economic development in the future.

### 4.2 Social trends

Indonesia has made substantial progress towards the achievement of the Millennium Development Goal challenge of halving poverty by 2015. To illustrate, over the last decade poverty has halved, reducing from 24 per cent in 1999 to 12 per cent in 2012.\footnote{ILO (2013) Labour and social trends report 2013: Reinforcing the role of decent work in equitable growth, ILO Country Office for Indonesia and Timor-Leste, Jakarta.} However, many people and households

\[\text{47}\]
hover just over the poverty line, and are therefore highly vulnerable to falling back into poverty if there are changes in prices or if there is a crisis. The high level of vulnerability experienced by near poor households is in part due to the limited social protection floor in Indonesia, as well as limited growth in the real incomes of such households due to livelihood insecurity and decent work deficits. To illustrate, between 2003 and 2010 the real growth of per capita consumption for the poorest 40 per cent of households was 1.3 per cent per annum, in contrast with 3.5 per cent for the next 40 per cent, and 5.9 per cent for households in the top income quintile. This trend demonstrates that the benefits of economic growth have not been shared equally across households in Indonesia and it also indicates that income inequality is a key concern. This situation suggests that social policies are in need of reform, with further attention on enabling mechanisms to reduce inequality on the one hand and reduce poverty on the other. Further consideration may also needed on the economic growth strategy as the growth model is likely to be a factor in inequality widening.

Further evidence of the emerging issue of inequality is observed in the Gini coefficient. To illustrate, between 2000 and 2014, inequality, as measured by the Gini coefficient, increased from 30.0 to 41.0. As a large portion of household income is derived from activities concerned with employment, trends regarding wages are important for understanding inequality. The table below is extracted from Indonesia's input-output tables between 1971 and 2008, and details distribution between labour and mixed income over time. The data on returns to labour indicate that the share of compensation of workers has not risen in almost 40 years, despite the increase in the share of wage employment in total employment (see table 6). Such structural transformation in factor composition should be accompanied by a shift from mixed income towards wage income and the absence of this trend is indicative of rising inequality.

Table 6: Distribution of income derived from social accounting matrices, 1971-2008 (per cent)

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<tbody>
<tr>
<td>201 Compensation of workers</td>
<td>29.2</td>
<td>24.9</td>
<td>24.1</td>
<td>27.7</td>
<td>27.4</td>
<td>30.5</td>
<td>30.7</td>
<td>30.9</td>
</tr>
<tr>
<td>202 Net operating surplus and mixed income</td>
<td>62.4</td>
<td>68.1</td>
<td>71.2</td>
<td>63.8</td>
<td>60.7</td>
<td>56.8</td>
<td>57.6</td>
<td>58.7</td>
</tr>
<tr>
<td>203 Depreciation</td>
<td>5.3</td>
<td>5.0</td>
<td>5.4</td>
<td>6.4</td>
<td>7.4</td>
<td>8.1</td>
<td>10.1</td>
<td>10.4</td>
</tr>
<tr>
<td>204 Indirect tax</td>
<td>3.1</td>
<td>2.0</td>
<td>2.3</td>
<td>2.9</td>
<td>5.0</td>
<td>4.6</td>
<td>3.9</td>
<td>3.8</td>
</tr>
<tr>
<td>205 Subsidy</td>
<td>0.0</td>
<td>0.0</td>
<td>-3.1</td>
<td>-0.8</td>
<td>-0.6</td>
<td>0.0</td>
<td>-2.3</td>
<td>-3.8</td>
</tr>
<tr>
<td>209 Gross value added</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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</table>

Source: BPS, Social accounting matrices, various years.

In addition to this trend, analysis of wages shows that the situation of those employed in more vulnerable forms of employment, such as casual labourers or own account workers, has been declining. In August 2012, the average earnings of casual workers and the self-employed was 48 per cent and 65 per cent of regular employees’ average wage respectively. While in 2001 it had been

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146 The term “Social Protection Floor” (SPF) refers to nationally defined sets of basic social security guarantees that aim to prevent or alleviate poverty, vulnerability and social exclusion. For further information see ILO Recommendation Concerning National Floors of Social Protection, 2012 (No. 202).


148 Gini index is the measure of income distribution calculated based on income classes. The gini coefficient lies between zero (perfect equality) and one (perfect inequality). A Gini coefficient of 0.4 is considered as the international warning level for dangerous levels of inequality. For further discussion see: http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_145695.pdf.


45 per cent and 75 per cent respectively. This trend indicates that casual workers have not been able to improve their position over the period, while the situation of own account workers has deteriorated.

Indonesia has a relatively high ratio of minimum wages to average wages (Kaitz ratio). This trend is associated with minimum wages becoming increasingly binding, with their adjustments having a greater impact on wage costs throughout the economy. However, as the portion of workers with low wages is so high, adjustments on minimum wages are currently one of the few mechanisms that workers and workers’ organizations can use to support wage gains across the economy. This trend also highlights that there is a need for strengthening wage bargaining through collective bargaining mechanisms that introduce wage structures across sectors and occupations in order to promote the growth of average wages. Additionally, uneven regional economic growth has led to an expanding inequality between provinces and regions, especially between western and eastern provinces in Indonesia. Gender inequalities also persist. The sum of these trends provides reasons why inequality has become an increasing concern for Indonesia.

As social protection systems in Indonesia are developing and currently only provide limited coverage for poor and vulnerable unemployed households, many of these households have no choice but to participate in the labour market in order to support themselves and their families. Figure 4 presents data on labour force participation by household expenditure decile between 2002 and 2011 from Statistics Indonesia’s Susenas survey. The figure illustrates that poorer households typically have higher rates of labour force participation than more affluent households. In the crisis years labour force participation across the deciles tends to flatten out, which is likely due to a general tightening of household income across household expenditure deciles during economic downturn. The data indicates that higher rates of labour force participation in low income households seem to have a limited impact on reducing income inequality. This is likely because such households are only able to access low quality jobs that have multiple decent work deficits.

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It is probable that poorer households in Indonesia have higher rates of labour market participation due to the lack of options for attaining income from alternative sources to support their existence. However, the labour market opportunities that poorer households are able to access are less likely to meet standards for decent living needs. Such employment may be precarious, below the minimum wage and lack other worker protections. This situation therefore highlights the urgency for policy makers to further consider the coverage of employment and social protection policies and programmes, in order to ensure that such policies and programmes are focused on supporting poor and informal households to improve their situation. Particularly as social programmes form an essential part of the "social wage", which plays a vital role in supporting redistribution and equitable development.

4.3 Labour market trends

Over the last period, Indonesia’s labour market has continued to grow, with evidence of employment expanding and conditions of work improving as vulnerable employment decreases and formal employment expands. Structural changes across sectors and occupations have continued to unfold, which has opened up new opportunities in sectors with higher levels of remuneration. Despite these gains, the overall labour market situation is still gloomy. To give a broader overview of the labour market situation in Indonesia, this section will present a series of labour market indicators.
and focus on issues that give insight into employment quality and the evolution of the labour force. Labour market information collected from employment services will also be shared to give insight on emerging trends.

The labour force was estimated at 121.9 million people in August 2014, an increase of 1.7 million people compared to August 2013 or a decrease of 3.4 million people compared to February 2014 (see table 7). The labour force participation rate was estimated at 66.6 per cent and number of people employed in August 2014 reached 114.6 million. Employment outcomes tend to fluctuate substantially from quarter-to-quarter, pointing to seasonal factors and labour market churning. Fluctuations in employment tend to be linked to inactivity more than unemployment, with outflow from employment to inactivity higher than outflows from employment to unemployment. For example, the fluctuations in labour force participation between February and August 2014 were driven by a rise in the number of women in urban areas entering and exiting the labour force. Churning is typically related to temporary employment that is associated with contract work, involvement in short term government programmes, internships, probation periods, seasonal work and task based work. In addition, international literature has identified that workers who are disadvantaged (low pay, low skills, migrant workers) are prone to labour market churning, often cycling between periods of 'low pay' and 'no pay', which can have the effect of reinforcing disadvantage. The issue of labour market churning needs to be addressed through programmes that promote labour market attachment and career progression.

Table 7: Key labour market indicators*

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<tbody>
<tr>
<td>Key variables</td>
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<td></td>
<td></td>
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<tr>
<td>Population 15 years and over (million)</td>
<td>178.8</td>
<td>179.4</td>
<td>180.0</td>
<td>180.6</td>
<td>181.2</td>
<td>181.8</td>
<td>183.0</td>
</tr>
<tr>
<td>Labour force (million)</td>
<td>123.6</td>
<td>124.1</td>
<td>120.2</td>
<td>124.7</td>
<td>125.3</td>
<td>126.0</td>
<td>121.9</td>
</tr>
<tr>
<td>- Employed (million)</td>
<td>116.4</td>
<td>117.0</td>
<td>112.8</td>
<td>117.7</td>
<td>118.2</td>
<td>118.9</td>
<td>114.6</td>
</tr>
<tr>
<td>- Unemployed (million)</td>
<td>7.2</td>
<td>7.1</td>
<td>7.4</td>
<td>7.1</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Not in the labour force</td>
<td>55.1</td>
<td>55.3</td>
<td>59.8</td>
<td>55.8</td>
<td>55.9</td>
<td>55.7</td>
<td>61.1</td>
</tr>
<tr>
<td>- Attending school</td>
<td>15.2</td>
<td>15.4</td>
<td>14.6</td>
<td>15.5</td>
<td>15.9</td>
<td>16.1</td>
<td>16.8</td>
</tr>
<tr>
<td>- House keeping</td>
<td>32.8</td>
<td>32.7</td>
<td>36.0</td>
<td>33.4</td>
<td>32.9</td>
<td>33.4</td>
<td>36.0</td>
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<tr>
<td>- Other activity</td>
<td>7.1</td>
<td>7.2</td>
<td>9.1</td>
<td>6.9</td>
<td>7.1</td>
<td>6.2</td>
<td>8.3</td>
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<tr>
<td>Key indicators</td>
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<tr>
<td>Labour force participation rate</td>
<td>69.2</td>
<td>69.2</td>
<td>66.8</td>
<td>69.1</td>
<td>69.2</td>
<td>69.3</td>
<td>66.6</td>
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<tr>
<td>Inactivity</td>
<td>30.8</td>
<td>30.8</td>
<td>33.2</td>
<td>33.0</td>
<td>30.8</td>
<td>30.7</td>
<td>33.4</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>5.8</td>
<td>5.7</td>
<td>6.2</td>
<td>5.8</td>
<td>5.7</td>
<td>5.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Employment-to-population ratio</td>
<td>65.2</td>
<td>65.2</td>
<td>62.7</td>
<td>65.2</td>
<td>65.2</td>
<td>65.4</td>
<td>62.6</td>
</tr>
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</table>

* Estimates based on revised population weights applied in February 2014 and backcast for February 2011-August 2013.

Since 2005 employment growth has generally outstripped the growth of the labour force. This robust rate of employment growth is largely attributed to Indonesia’s strong economic growth performance and is likely to have contributed to reductions in unemployment. While employment has benefited from robust economic growth, it is worth pointing out that GDP growth rates have been between 5 and 6 per cent per annum over the last period, while employment growth rates

have been comparatively lower, ranging between 1 to 2 per cent. Greater benefits may be seen in terms of gains in employment quality rather than employment quantity, however, continuing efforts are needed to strengthen the growth-to-employment elasticity and ensure that a situation of jobless growth does not emerge.\(^{159}\) In addition, it is important to emphasize that even though employment growth has been relatively strong, the employed population is often exposed due to short-term and precarious contracting modalities as well as fluctuations that businesses face due to flows in business cycle throughout the year.

The unemployment rate in February 2014 was estimated at 5.7 per cent - a significant decline from previous periods.\(^{160}\) The achievement of an unemployment rate of 5.7 per cent indicates that the target of reducing the unemployment rate to between 5 and 6 per cent by 2014 has been met by the Bambang Susilo Yudhoyono Government (see figure 5). While this is a success, unemployment is still an issue for particular groups. For example, in Indonesia unemployment is an issue for youth, with the unemployment rate for people aged between 15 and 24 years estimated at 17.1 per cent in February 2014. Youth account for over 50 per cent of the unemployed population and most unemployed youth have never worked before. Moreover, approximately 30.8 per cent of unemployed youth indicate that they have given up hope of finding work and are therefore discouraged workers. Work experience, as well as educational attainment, plays a large role in their employment outcomes, with the highest unemployment rates among those with junior or senior high school as their highest level of educational attainment and no work experience. It is therefore important that labour market policies, including employment services and active labour market programmes, support these workers to find work and transition from school-to-work successfully.

Unemployment has been decreasing in tandem with underemployment (figure 5). Underemployment is a term given to workers who are already employed but would like to work additional hours. These workers are considered to be part of the “time related” underemployed (working less than 35 hours and willing to work more hours.\(^{161}\) In February 2014, 8.9 per cent of the employed population were considered underemployed. The decline in underemployment is most likely due to men in rural areas shifting in to full time employment and women in rural areas shifting from underemployment to part time work.


Part time employment in Indonesia has been increasing and is playing an important role in expanding employment opportunities. Voluntary part time employment, defined as employment that is less than 35 hour per week, was estimated at 22.3 per cent in February 2014. Part-time work is highest among women, those with a low educational attainment and those residing in rural areas. Part time workers are found in the agriculture, trade and community/personal services sectors. As part time work is typically found in rural areas among low skilled workers, it may indicate that part time work is linked to limited access to opportunities in the labour market and therefore signal a role for employment policy to play a more active role in opening employment access for rural populations.

Approximately half of the labour force are located in urban areas. Indonesia is leading the world in terms of urbanization and it is expected that as much as 68 per cent of the population may residing in urban areas by 2025. The trend towards urbanization is associated with structural changes in the composition of the economy and labour force. For example, in recent times job creation has been more dominant in urban areas within the services sector, reflecting a tertiarization of the economy. Trends across educational, sectoral and occupational provide further insight on this. In particular, the changes in sectoral composition of the economy and the labour force have altered demand for skills (see figure 6). With the growth of the service sector, workers with higher levels of educational attainment are increasingly in demand. To further illustrate, the figure below shows that the agricultural sector employs workers that have lower levels of educational attainment, while the services industries hire more university graduates than the other sectors. If the current trend of


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structural transformation towards a service economy continues, it follows that more educated workers will be in demand. It is therefore important that policy makers continue to provide support for the working age population, particularly youth, to continue their education, in turn reducing the number of low-educated workers in the labour force in the future.

Figure 6: Employed population by economic sector and educational attainment, February 2014

While processes to support structural transformation are in process, the agricultural sector is still the largest absorber of employment in Indonesia (see figure 6), employing 40.8 million people, followed by the trade sector (25.8 million) and the social and government services sector (18.5 million) in February 2014. The manufacturing sector employed 15.4 million people or 13 per cent of total employment in same period. Employment in manufacturing has been growing rapidly in recent years and is now higher (in terms of sectoral share and absolute numbers) than its pre-1998 status, when it was a driver of economic and job growth in Indonesia. Similarly, the construction sector is now experiencing strong job growth, with employment in the sector at its highest ever. The construction sector employed 7.21 million people or 6.10 per cent of total employment in February 2014. This trend reflects the implementation of Indonesia’s Masterplan for the Acceleration and Expansion of Economic Development, which focuses on investment to support connectivity and sectoral growth. The combination of growth trends in manufacturing and construction provide important information on investment and growth for Indonesia. These trends also provide an important signal to policy makers, regarding the need for reflection on the quality of labour supply to support the future demands of the economy.

In this regard, there are some emerging signs of structural issues from administrative data on demand and supply from the Ministry of Manpower and Transmigration's job seeker, vacancy and placement database. For example, the proportion of registered job vacancies for workers with a tertiary education was in surplus when compared to the number of job seekers with a tertiary education. In general the data indicates that the number of registered job openings for workers with a primary education, junior high school and senior high school has been falling, while vacancies for tertiary education have increased. This situation indicates that there is a mismatch between the education level of job seekers and requirements of the respective job vacancies. This situation suggests that unemployment in Indonesia is in part caused by a skills mismatch between registered job seekers and the vacancies on offer. As access to labour market information and employment services are limited and recruitment processes tend to be informal, it is likely that weak labour market institutions and policies exacerbate the problem of mismatch.

The share of employment in the formal and informal economies in Indonesia has been shifting in recent years (see figure 7). In August 2010 it was estimated that approximately 59.0 per cent of those employed were working in the informal economy. By February 2014 it was estimated that 53.6 per cent of jobs were in the informal economy and 46.4 per cent of jobs were in the formal economy. In addition, most of the jobs that have been created in Indonesia since 2001 have been in the formal economy. For example, of the 22 million jobs added to the Indonesian labour market between 2001 and 2013, approximately 82 per cent are considered formal. Despite solid progress, many jobs in Indonesia are still informal, and thus provide little protection to workers.

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The considerable progress toward the formalization of employment has been driven by continuing economic growth and improved access to formal employment resulting from better education. While these factors have supported formalization, many workers in the formal economy still do not have formal written contracts and are often paid below the minimum wage. For Indonesia, expanding the formal economy requires investment across many fronts, including reducing barriers to doing business, investing in social protection systems, increasing access to vocational training and tertiary education, and increasing the efficiency of labour markets to promote formalization.

Vulnerable employment is another measure of employment quality that is useful to examine. Indonesia defines vulnerable employment to include own-account workers, employers assisted by temporary workers, casual workers and unpaid family workers. Vulnerable employment has decreased - both in terms of share of employment and absolute numbers - substantially in recent years (see figure 8). In February 2014 vulnerable employment was estimated at 59.8 per cent of total employment, which is a solid improvement from February 2011 when vulnerable employment was estimated at 65.8 per cent of total employment. The trend that is underpinning the reduction of vulnerable employment and the increase of formal employment in Indonesia relates growth in wage employment or workers on "regular employee" contracts. The figure below illustrates that

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168 The Indonesian definition of vulnerable employment and the ILO definition of vulnerable employment varies somewhat. ILO defines vulnerable employment as the sum of own-account workers and contributing family workers, while Indonesia also includes casual workers and employers assisted by temporary worker/unpaid worker in their definition of vulnerable employment. This is because of the nature of casual employment in Indonesia, which is often informal and lacking in decent working conditions, and characterised by inadequate earnings, low productivity and working conditions that undermine workers’ fundamental rights.

employment for regular employees has increased substantially from 27.5 per cent in February 2007 to 36.5 per cent in August 2013. It is also worth mentioning that many people who gain temporary employment through government programmes would be classified as ‘casual employees not in agriculture’ and over time the number of workers in this category has been slowly increasing, from 4.5 per cent in August 2007 to 5.4 per cent in August 2013.

Figure 8: Status in employment, 2007-2013


While this trend is largely positive, it is important to point out that the term "regular employees" refers to workers that have had the same employer during the past month. The definition therefore includes contract workers and outsourced workers as well as permanent employees. Subsequently, the measure provides only limited information on contract stability and the precariousness of work in Indonesia. General trends associated with economic liberalization have been connected with reforms in workplace practices, particularly regarding flexible hiring and firing practices, and this has seen the rise of non-standard employment relationships across the world. Non-standard employment relationships in Indonesia include informal workers, outsourced workers and contract workers.\(^{170}\) Within the context of this increasing global trend, it is important that employment services and related safety net programmes support workers to maintain labour market attachment.

Finally, it is worth noting that in Indonesia the labour force participation rate of women is quite low, ranging between 50 and 53 per cent over the last five years. This leaves a substantial proportion of women outside the world of work. The high incidence of women not participating in the labour force is largely attributed towards the domestic responsibilities, with a large portion of women reporting

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to be fully engaged in housekeeping activities. The ability for women to participate in the labour force is related to various economic and social factors that interact in a complex fashion both within households as well as within the world of work. For example, limited access to childcare services, limited maternity leave, and lack of flexible work time arrangements limit women’s participation in the labour force. Furthermore, analysis of trends over time reveals that women shift between being not-in-the-labour-force due to “housekeeping duties” and entering the labour force as “unpaid family workers” in the agricultural or trade sector throughout the year. This trend indicates that women are highly vulnerable and have a comparatively weak labour market attachment, due to household responsibilities and that they have difficulties in transitioning from work within the household to the world of work beyond the household.

4.4 Employment outlook for 2014-2019

To provide information on the employment outlook, employment projections are produced regularly by the International Labour Organization (ILO) and Ministry of Manpower and Transmigration using a variety of methodologies. In generating employment projections, it is generally perceived to be ideal to use a combination of forecasting methodologies, as all methods have a number of strengths and weaknesses and a combined approach can provide policy makers with more credible information on possible scenarios. Methodologies include demand-side models that use multiplier frameworks based on input-output tables, as well as time series models and econometric models that use univariate and multivariate regression techniques. In 2013-2014, the Ministry of Manpower and Transmigration used a sectoral simultaneous equation econometric model for generating employment projections, while additional forecasts from three employment projection models were prepared by the ILO (see table 8).

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia Employment Projection Model (IEPM)</td>
<td>The IEPM follows the ILO-Inforum approach and is based on the 2008 Input-Output table, Sakernas microdata and projections of GDP growth by expenditure category. The IEPM uses endogenously determined productivity ratios and/or exogenous assumptions on labour productivity growth to obtain employment projections by sector. The model uses industry-occupation-status coefficients, which follow historical trends (2007-2012) to obtain projections across these variables. The model provides employment projections for 22 economic sectors and for occupations at the 3 digit ISCO level. IEPM is a demand-side model, and therefore does not provide labour supply projections or identify imbalances.</td>
</tr>
<tr>
<td>Exponential Smoothing With Damped Trend model (ESWDT)</td>
<td>The ESWDT model is a univariate approach to forecasting that describes a time series by its evolving “level” and “trend”. The ESWDT algorithm is implemented through a Microsoft Excel VBA programme that was developed by the Department of Employment in Australia. The ESWDT is based on historical trends (1997-2013) observed in the labour force survey for occupations and industry. The model does not include parameters related to national accounts or population growth into consideration. Employment projections were prepared for 9 economic sectors and 8 occupations.</td>
</tr>
<tr>
<td>ILO Global</td>
<td>The ILO’s GET model is a multivariate econometric model that produces estimates</td>
</tr>
</tbody>
</table>

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173 The data requirements for developing employment projections typically consist of an input-output table, the latest information from national accounts by economic sector, forecasts for gross domestic product, and a time series of microdata from the labour force survey. Indonesia has a time series of data dating back to 1990 that can be used to generate employment projections.
The Global Employment Trends (GET) Model aims to provide information on a selected number of key labour market indicators for a large number of countries, while the Indonesia Employment Projections Model (IEPM) and the Exponential Smoothing with Dampen Trends (ESWDT) Model are designed to provide more detailed information on occupations and sectors. The IPEM and ESWDT models provide information that is important for education and skills policies, particularly for identifying potential bottlenecks in demand for skills.\(^{174}\)

Information from the employment projection models forecasts that employment in Indonesia is expected to continue to grow as Indonesian reaps the benefits of a demographic dividend which will see the number of people that are part of the working age population increase.\(^{175}\) To further illustrate, employment projections indicate that by 2019 Indonesia’s labour force is projected to have increased to at least 126 million people and the number of people employed is expected to reach between 118 and 123 million people (see table below). In particular, the labour force participation of young women is expected to increase, due to benefits from greater access to education and training, and it will be important that strategies are in place to support these women to access emerging employment opportunities. In addition, new entrants to the labour force are benefiting from better access to education and are therefore likely to boost the overall productivity of labour and support economic growth (see table 9).

\[\text{Table 9: Employment projections of key labour market indicators for 2019}^{176}\]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline 2013</th>
<th>IEPM (GDP growth rate)</th>
<th>ESWDT</th>
<th>GET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working age (millions)</td>
<td>180.0</td>
<td>191.8</td>
<td>191.8</td>
<td>191.2</td>
</tr>
<tr>
<td>Labour force (million)</td>
<td>120.2</td>
<td>129.4</td>
<td>130.3</td>
<td>131.2</td>
</tr>
<tr>
<td>Employed (million)</td>
<td>112.8</td>
<td>120.6</td>
<td>122.4</td>
<td>123.6</td>
</tr>
<tr>
<td>Unemployed (million)</td>
<td>7.2</td>
<td>8.8</td>
<td>7.9</td>
<td>7.6</td>
</tr>
</tbody>
</table>

\(^{174}\) On the one hand, a benefit of the IEPM is that it allows for employment projections to vary in accordance with GDP growth assumptions, as it uses endogenously determined productivity ratios and/or exogenous assumptions on labour productivity growth to obtain employment projections by sector. The development framework of Indonesia places economic growth at its core, with it anticipated that economic growth will see poverty decline and employment expand. Therefore, an employment projection model that is based on an employment multiplier framework is highly suitable for the Indonesian context. However, employment in Indonesia is characterized by can be termed as a "two speed economy", with distinct variations between the productivity of micro and small enterprises and the productivity of medium and large enterprises. Therefore, an approach based on a multiplier framework may over or underestimate gains associated with economic growth depending "who" is driving the growth. On the other hand, the ESWDT model has the benefit of closely following trends provided in a time series of data. That is, employment forecasts from this model are based on employment trends rather than output-to-employment elasticities. However, this approach has weaknesses in accounting for fluctuations due to economic shocks or economic booms and also has weaknesses as it does not incorporate information on population growth.

\(^{175}\) Indonesia is currently experiencing a “demographic bonus” or “demographic dividend”, which refers to a high percentage of the population that are working age and a low dependency ratio.

\(^{176}\) In February 2014 Statistics Indonesia revised the population weights for its labour force survey and provided backcasting for the time periods between February 2011 and August 2013. The employment projections provided were developed in January 2014 and are therefore based on the original population weights in the SAKERNAS microdata files. For information, BPS estimates that the working age population (15 years and over) is projected to increase to 197.4 million by 2019. See BPS (2013) Indonesia population projections 2010-2035, Badan Pusat Statistik, Jakarta.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline 2013</th>
<th>IEPM (GDP growth rate)</th>
<th>ESWDT</th>
<th>GET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4.5% 6% 7.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour force participation rate</td>
<td>69.2%</td>
<td>67.5% 67.9% 68.4%</td>
<td>66.0%</td>
<td>67.4%</td>
</tr>
<tr>
<td>Employment-to-population ratio</td>
<td>62.7%</td>
<td>62.8% 63.8% 64.4%</td>
<td>62.2%</td>
<td>63.7%</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>5.7%</td>
<td>6.8% 6.1% 5.8%</td>
<td>5.9%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

Source: Projections are based on estimates from 1) the ILO’s Global employment trends model (GET Model), 2) the exponential smoothing with damped trends (ESWDT) model based on methods from the Department of Employment, Australia, and 3) the Indonesia Employment Projection Model (IEPM) from ILO Trends. The IEPM includes employment projections for three GDP growth scenarios, namely low growth (4.5%), average (6.0%) and high (7.5%).

With unemployment projected to remain relatively stable, it is expected that employment growth will continue to outpace the growth of the labour force. To further elaborate, Indonesia’s unemployment situation is projected to remain steady or improve slightly, with the unemployment rate projected to remain in the vicinity of 6 per cent by 2019.\(^{177}\) This is a positive trend given the projected fast growth in the working-age population and labour force, and Indonesia’s history of high youth unemployment.\(^{178}\) However, it is important to point out that the projections indicate that under the current policy paradigm it is unlikely that the labour market will be driven closer to full and productive employment.

The projections also forecast that the number of people working as regular employees will grow and vulnerable employment will decrease by 2019. To further illustrate, the number of people working as employees is projected to increase by as much as 14 million workers by 2019, and vulnerable employment is projected to decline to 51 per cent of total employment by 2019.\(^{179}\) The gender gap in vulnerable employment is also projected to narrow, driven by a decline in women working as unpaid family workers. As it is challenging to transition from being an unpaid family worker to the world of work that is external to the family unit, policies and programmes that support women to build their skills and access formal employment will be needed.

It is projected that structural change will continue to unfold for the Indonesian economy over the next period, entailing the movement of workers from primary to secondary and tertiary sectors.\(^{180}\) Employment in agriculture is projected to decline from 34 per cent of total employment in 2013 to between 25 per cent and 32 per cent of total employment in 2019. The share of employment in industry is projected to increase from 20 per cent of total employment in 2013, to between 22 per cent and 24 per cent in 2019. The share of services is projected to increase from 45 per cent of


\(^{178}\) Some authors have linked youth employment trends to rises in minimum wages and a slowdown in manufacturing activity. However, in recent years, the manufacturing sector has experienced employment growth and along with strong growth in minimum wages, while youth employment outcomes have not seen an improvement, suggesting that factors beyond sectoral trends and wages are playing a role. See Manning, C. and Junankar, P. (1998) Choosy youth or unwanted youth, A survey of unemployment, Bulletin of Indonesian Economic Studies, Vol 34, Issue 1.

\(^{179}\) Projections are based on estimates from 1) the ILO’s Global employment trends model (GET Model), 2) the exponential smoothing with damped trends (ESWDT) model based on methods from the Department of Employment, Australia, and 3) the Indonesia Employment Projection Model (IEPM) from ILO Trends. The Indonesian definition of vulnerable employment and the ILO definition of vulnerable employment varies somewhat. ILO defines vulnerable employment as the sum of own-account workers and contributing family workers, while Indonesia also includes casual workers and employers assisted by temporary worker/unpaid worker in their definition of vulnerable employment. This is because of the nature of casual employment in Indonesia, which is often informal and characterized by inadequate earnings, low productivity and poor working conditions.

\(^{180}\) Projections are based on estimates from 1) the ILO’s Global employment trends model (GET Model), 2) the exponential smoothing with damped trends (ESWDT) model based on methods from the Department of Employment, Australia, and 3) the Indonesia Employment Projection Model (IEPM) from ILO Trends.
employment in 2013, to between 46 per cent and 50 per cent in 2019. These structural changes should have implications for labour productivity and prosperity in Indonesia.

The ongoing structural transformations that are seeing a transition from a predominantly agricultural economy, to an economy with a greater share of economic activity in industry and services, will also have implications for the factor composition of the labour force across skills and occupations. Employment is projected to grow for professionals and associate professionals occupations by 2019. It is projected that there will be up to an additional 5 million people working in these occupations. In addition, employment is expected to decline for unskilled and low skilled labourers in the agricultural sector, with this sector shedding a minimum of 1 million workers in these occupations by 2019. The bulk of new jobs created will be for service workers and production labourers as the services and manufacturing sectors expand.

Structural changes are associated with churning in the labour market. Demand is likely to decrease in some occupations and sectors, and lead to job shedding. Similarly, demand is likely to strengthen in some sectors for some occupations, which will create new job openings. Throughout the process of structural transformation displaced workers need to be supported through active labour market programmes in order to access new employment in more productive sectors, otherwise they may become trapped in unemployment or in vulnerable employment situations. Mitigating the adjustment costs associated with structural transformation requires the implementation of well-designed sectoral policies, robust social protection systems, policies to support enterprises, and investments in skills and training institutions.

Indonesia’s national employment outlook is also expected to be impacted by the realization of the ASEAN Economic Community in 2015, which envisages a single common market and production base for ASEAN countries. The trade and investment liberalization associated with the ASEAN economic community will have implications for the structure of the ASEAN economies, as well as labour markets in terms of job creation, skills demand, wages growth, and labour mobility. Simulations forecast that the ASEAN Economic Community could add an additional 1.9 million jobs to the Indonesian economy and expand GDP growth by a further 2.5 per cent by 2025. The additional stimulation from the realization of the ASEAN Economic Community is likely to accelerate structural changes and move Indonesia to higher productivity sectors, with most of the new jobs being created for higher skilled workers in the industrial and services sectors. However, simulations also indicate that workers with insufficient qualifications are likely to fill 63 per cent of all high-skill employment in Indonesia by 2025. The projected skills gap could lead to bottlenecks and hinder efficiency gains. It is therefore important that the skills and labour market policies of today focus a priori on building a more productive and competent labour force.

The employment outlook indicates that employment policies in Indonesia in the future need to focus on supporting the employability of workers through both skills training programmes and activation programmes. Such interventions can help to correct skill mismatches and also provide a pathway for the most vulnerable segments of the labour market to access better quality jobs. In addition, as workers move towards higher levels of skills and drive gains in productivity, industrial relations policies will need to support dialogue on gains sharing through wages in order to ensure that growth is sustainable and equitable.

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181 ASEAN includes Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

182 ADB and ILO (2014) ASEAN Community 2015: Managing integration for better jobs and shared prosperity, ILO Regional Office for Asia and the Pacific, Bangkok.
4.5  Discussion and implications for employment policy

The Indonesian economy has maintained strong growth, linked to domestic demand and investments across a range of areas. The economic and employment outlook for Indonesia are fairly positive, with it projected that employment will continue to grow and unemployment will remain steady over the next five years. While these trends are positive, it is implicit in the analysis that the current policy approach is unlikely to drive the economy closer to full employment.

There are, however, a number of reforms that may help to strengthen the overall employment situation. For instance, the reform of fiscal policies in order to divert spending on fuel subsidies towards interventions that can stimulate employment, poverty reduction and economic growth more directly. This is particularly needed for supporting employment outcomes in the future, as employment expansion in Indonesia has historically tended to be a direct result of economic growth, with slight declines in economic growth having significant implications for the labour market. It is likely that many of "quick wins" across a range of development indicators have already been taken advantage of and that labour market institutions and policies will need to play a more active role in supporting additional employment gains in the future.

Rising inequality is a key concern, with substantial gains made towards poverty reduction targets but evidence of decline on indicators of equitable growth. Evidence indicates that deficits in employment quality may be playing a role in inequality, with higher rates of labour force participation among low income households having a limited impact on reducing income inequality. This situation also points to the need for a more active employment policy.

Vulnerable employment has been decreasing and formal employment expanding. This trend is underpinned by growth in workers on "regular employee" contracts. However, many of these workers are contract workers and therefore in precarious work and lacking employment stability. The trend of rising inequality while vulnerable employment declines points to a need for gains to be made on employment quality as well as within social protection systems.

Overall, the review of the employment situation reveals that gains in labour force participation and employment growth have been made over the last period, with employment growth outstripping the growth of the labour force and therefore contributing to low unemployment. Progress on reducing unemployment has been solid, though unemployment remains a challenge for particular groups, such as youth. In particular, interventions are required to strengthen outcomes across educational attainment and school-to-work transition for youth. Another interesting trend relates to the decline in underemployment and simultaneous increase in part time work. As part time work is typically found in rural areas among low skilled workers, this trend may be indicative of limited access to job opportunities and therefore signal a role for employment policy to play a more active role in opening employment access for rural populations.

There is evidence of structural transformations occurring across economic and employment indicators, with shifts away from agriculture and shifts towards services. This trend is being reinforced by increasing urbanization. The changes in the sectoral composition of the economy and the labour force have altered demand for skills, with demand for workers with higher levels of educational attainment increasing. It is projected that these structural changes will continue to unfold, with employment expanding for skilled workers and contracting for low and unskilled workers. Simulations also indicate a likelihood of workers with insufficient qualifications filling many of high skill vacancies in the future. This could lead to bottlenecks and it is therefore important that current skills and labour market policies focus a priori on building a more productive and competent labour force. Moreover, labour market policies in support of structural transformation are needed,
particulariy as there are signs of mismatches in skills expectations arising between job seekers and employers.

There are indications of churning within the labour market, with employment outcomes varying substantially across economic quarters by location, gender and sector. This means that even though employment growth has been relatively strong, the employed population is often exposed due to short-term and precarious contracting modalities. Moreover, the ongoing structural changes taking place within the Indonesian labour market further contribute to churning and policies are required to support displaced workers to maintain attachment to the labour market.

A range of key themes arise from the review of the employment situation in Indonesia, including rising inequality, structural change, labour market churning, growing urbanization, low growth-to-employment elasticity, precarious employment amidst the decline of vulnerable and informal employment, increasing voluntary underemployment, low labour productivity, increasing youth entrants associated with a demographic bonus, limited social protection, and an emerging issue of skills mismatch.

In summary, the review of the employment situation in Indonesia indicates that economic growth has supported gains across employment indicators, but that investments are needed across a number of labour market policies, including employment services, skills and vocational training providers as well as public works programmes in order to address arising challenges and support progress towards full employment. Put simply, the current development framework has achieved outcomes; however, more needs to be done. In the future it will be important for employment policy to become a more active component of policies related to economic development in order to facilitate outcomes and address bottlenecks. This is particularly important as Indonesia will benefit from a demographic bonus until 2025 and policies need to be in place to optimize the utility and productivity of the labour force for meeting Indonesia’s target of becoming one of the world’s lead economies by 2030.

A number of implications arise from the review of the current employment situation in Indonesia, including:

- To sustain economic and labour market momentum, a focus on strengthening employment creation is needed. The projected fast growth of the working-age population and labour force highlights the importance of having productive employment as a core component of the national development strategy.
- With a large share of workers employed in the informal economy with poor quality and low-paid jobs that have intermittent and insecure work arrangements, greater focus needs to be given to addressing the challenge of vulnerable employment and informal employment as progress in this area is likely to have significant development dividends.
- The structure of the Indonesian labour market will change between 2013-2019, including shifts in industrial structure and in the factor composition (including occupational and skills composition). Fluctuations, associated with labour market churning, are likely to continue quarter-to-quarter. Structural change can carry significant adjustment costs, highlighting the need to strengthen labour market institutions and policies in order to mitigate the costs.
- Progress has been made across a range of development indicators which has elevated Indonesia to the status of a middle income country. In order to ensure continued progress, it is likely that labour market institutions and policies will need to play a more active role in supporting employment gains in the future. A policy approach that is led by
growth is unlikely to be sufficient to drive the economy closer to full and productive employment, and efforts will be needed from institutions to ensure outcomes.
Chapter 5:  Employment policy in Indonesia

Indonesia has sustained economic growth and social stability for more than a decade. The Asian financial crisis of 1997-1998 led to social and political unrest that ended Suharto's authoritarian regime, and resulted in the transformation of Indonesia into a modern democracy. In 1999 Indonesia held its first free and fair national elections and officially transitioned to democracy. By January 2001, the Government had begun an ambitious programme of policy reform, which saw the decentralization of national government functions to provincial and district level governments, as well as policy reforms on education, health, employment and investment that have supported improvements on a range of social and economic indicators across the nation.

The nature of growth within the Indonesia economy is associated with structural changes that are seeing it transform from an economy dominated by the agricultural sector to a more diverse economy with greater activities in the industrial and services sectors. However, issues remain, particularly in regard to employment policy, which is essential for driving productivity gains and equitable development. For example, the low growth-to-employment elasticity and the structural changes that are taking place within the economy indicate a potential risk for increasing labour market churning and for the emergence of structural unemployment or skills mismatches. In addition, the initial condition of the labour market is remains quite weak, with informality and precarious work noted as key issues. These factors, among others, provide considerable challenges that need to be addressed by employment policy.

It is the role of employment policy to address these challenges while building the competitiveness of the labour force. However, it is important to note that employment is a complex and multidimensional issue involving many economic, social, political and other factors. For example, on the one hand, economic policies on investment are closely linked with employment expansion as greater investment can lead to the creation of more job opportunities and reductions in unemployment. On the other hand, market failures and price instability can lead to job losses and increases in unemployment. To support employment expansion, reforms can be promoted in a number of areas, such as in bureaucracy and regulatory environments, in order to improve efficiency across its core concerns that include employment expansion, productivity growth, protection and welfare. However, throughout the reform process, employment policy needs to take factors from other policies into consideration as well.

In line with this rationale this chapter provides an overview of economic policy and social policy in Indonesia and then goes on to describe employment policy, in order to pave the way for further discussions on employment programmes in chapter 6, 7 and 8. The chapter outlines the key challenges faced in employment policy, including the need for policies to drive increases in productivity while supporting equitable outcomes, as well as the role of institutions and programmes in stimulating the functioning of the labour market and ensuring that prosperity is shared. The chapter identifies several areas where employment policy may be developed in the future to support employment expansion and improvements in employment quality. In particular, it identifies the need for using evidence-based approaches to support policy reform.

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Section 5.1 reviews economic policies in order to set the scene, with focus on economic growth trends and government expenditures. Section 5.2 outlines social policies, with particular focus given to the emergence of inequality and social protection systems. Section 5.3 looks at employment policy, and discusses the employment policy measures to support productivity, access, protection, and welfare within the labour market. It details policies, strategies and programmes that are implemented by the Ministry of Manpower and Transmigration. Section 5.4 provides a summary of the policies reviewed and section 5.5 identifies areas of concern that should be considered during the review of employment programmes, which is provided in subsequent chapters.

5.1 Economic policy

Indonesia’s development strategy is spelled out in its medium term development policy (RPJMN) that has a duration of five years. The RPJMN for 2010-2014 focuses on sustainable and equitable growth. The Government has identified four key elements that inform the medium term development policy, including pro-growth, pro-poor and pro-jobs and pro-environment. In particular, the current RPJMN seeks to foster a nation that is self-reliant, advanced, just and prosperous.\textsuperscript{186} It prioritizes price stability and exchange rate stability, long-term economic growth, poverty reduction and employment creation. The 2010-2014 RPJMN has identified 11 national priorities to help achieve this vision, including:

1) Reform of the bureaucracy and administration;
2) Education;
3) Health;
4) Reducing poverty;
5) Food security;
6) Infrastructure investment;
7) Investment in the business sector;
8) Increasing access to energy;
9) Environment and natural disasters;
10) Development of left-behind, frontline, most outer, and post-conflict regions; and
11) Culture, creativity, and technological innovation.

As mentioned in Chapter 4, Indonesia's development strategy largely relies on the economy being able to achieve a robust growth rate of between 6.3 and 6.8 per cent per annum.\textsuperscript{187} If the economy is able to achieve growth rates within this range, the incidence of poverty should be reduced to between eight and ten per cent and unemployment to between five and six per cent by 2014. Within this policy framework approach, poverty reduction and employment gains are understood to be an outcome of the growth process rather than a facilitator of growth or neutral to growth. However, the review of the employment situation in chapter 4 highlighted several areas where more active measures are needed to stimulate outcomes, particularly for promoting equitable growth.

To realize the goals outlined in the RPJMN, the Government has developed policy frameworks to inform the use of fiscal and monetary policy to stimulate the economy, support employment creation and reduce poverty.\textsuperscript{188} To illustrate, Indonesia uses monetary policy to control price stability through inflation targeting and exchange rate stability policies. The Bank of Indonesia has set an inflation target of 4.5 per cent with a range of plus or minus one per cent per annum and this goal

\textsuperscript{186} Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
\textsuperscript{187} Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
\textsuperscript{188} Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
has generally been within reach. In addition, regulations on fiscal policy cap the annual budget deficit at three per cent of GDP. However, high spending on fuel subsidies and weaknesses in revenue collection often means that the deficit can be higher than expected. In light of this, the Government hopes to increase tax revenue to between 12.4 per cent and 14.2 per cent of GDP between 2010 and 2014 in order to improve fiscal space for the expansion of infrastructure and social programmes, among others.

In addition to the medium term development plan, Indonesia’s long term development strategy is spelt out in its overarching "Masterplan for the Acceleration and Expansion of Indonesia Economic Development" (Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia – MP3EI). This is a long term policy document that provides the framework for developing the Indonesian economy until 2025.\(^{189}\) It applies a three-pronged approach to promoting economic prosperity in Indonesia, including:

- Sectoral development in six economic corridors across regions;
- Investing in infrastructure to promote connectivity; and
- Strengthening human resources and investment in science and technology.

The six economic corridors include the Sumatra economic corridor, the Java economic corridor, the Kalimantan economic corridor, the Sulawesi economic corridor, the Bali - Nusa Tenggara economic corridor and the Papua – Kepulauan Maluku economic corridor.\(^{190}\) The policy is encouraging large scale investment across 22 main economic activities, the revitalization of performance in the real economy, and the development of centres of excellence in each economic corridor following a "cluster" based strategy. The MP3EI has mapped out strategic investments that are needed to enhance connectivity across Indonesia and linked these investments to needs for investment in human capital and innovation (science and technology) that are essential for enabling economic development and employment creation.

Since the policy was published in 2011, it has been subject to criticism due to its conceptualization of expansion across regions, as well as its limited focus on environmentally sustainable development and its limited mapping of investments needed to support the realization of the plan.\(^{191}\) For example, 74 per cent of investments (monetary value) being constructed between 2011 and 2014 were to be located in Sumatera, Java, and Kalimantan, while only 26 per cent of investment were to be located in Sulawesi, Bali - Nusa Tenggara, and Papua - Maluku Islands. The uneven share of investment across regions may be indicative of the prioritizing of growth over equity. Similarly, the policy includes a plan for creating an agricultural food hub on 1.2 million hectares of land in West Papua, known as the Merauke Integrated Food and Energy Estate (MIFEE). This would involve the clearing of 550,000 hectares of primary forest and peat lands for the creation of palm oil plantations, and would impact significantly on Indonesia’s carbon emission reduction targets.\(^{192}\) Therefore, there is a disharmony between some of the selected investments that will underpin economic growth and commitments for sustainable low-carbon development.

In addition to domestic economic policies, the Association of Southeast Asian Nations (ASEAN) free trade area will come into effect in 2015. The ASEAN economic community is envisioned to be a


\(^{191}\) Hidayatullah, M. S. (2011) Critiquing the Anomalies of MP3EI, Indonesia Infrastructure Initiative, Jakarta.

\(^{192}\) http://www.greenomics.org/docs/Report_201202_Merauke_Food_and_Energy_Estate.pdf
single market and production base. The trade and investment liberalization associated with the ASEAN economy community will impact the structure of economies, jobs, skills, wages, and labour mobility. It will require the acceleration of gains in labour productivity and drive competitiveness within the business community.

The goals outlined in the economic policies of Indonesia are in line with the global framework for promoting economic growth and full employment. For example, sustaining economic growth through strategies for achieving productivity gains including diversification, technological upgrading and innovation, as well as supporting enterprises development. This framework is likely to support the economy to grow and strengthen over time, but it is also likely to allow inequality and unemployment/underemployment to persist as a norm. In addition, the policy tool that is most efficient for achieving the policy objective is not always selected, which reduces the effectiveness of policy interventions (for example see the chapter 4 on fuel subsidies). This indicates a need for expanding the pool of evidence-based research that can be used to inform policy.

5.2 Social policy

In terms of social protection, Indonesia’s current poverty reduction policies comprise of a range of social security, social assistance and government subsidies. These policies include subsidies for fuel, food and fertilizers, provision of social security in areas of injury, death, old age pension and health insurance, as well as conditional and unconditional cash transfers, community based employment intensive and community empowerment programmes, and microfinance services.

Social security policies largely refer to workers in the formal economy and provide social security services through contributory schemes. Contributions are paid by the employers for health care, work injury and death and shared by workers and employers for old age benefits. As workers in the informal economy work in enterprises that are not properly registered with public administration, it is difficult to enforce or monitor the implementation of social security programmes for this segment of the population. Since social security provision is related to employment and the welfare of workers, it is further discussed in section 5.3.4.

Indonesia’s range of social assistance policies can be clustered into three groups, namely:

- Cluster 1: Household social assistance;
- Cluster 2: Community empowerment; and
- Cluster 3: Employment and enterprise development.

Cluster 1 on household social assistance seeks to support very poor households through universal and targeted interventions. Programmes include health insurance for the poor (Jamkesmas), rice for the poor (Raskin), conditional cash transfers (PKH), scholarships for the poor (BOS), and social assistance for the disabled, the poor elderly and abandoned children. Cluster 2 on community empowerment is intended to improve the capacity and income of poor households, while involving

193 ADB and ILO (2014) ASEAN Community 2015: Managing integration for better jobs and shared prosperity, ILO Regional Office for Asia and the Pacific, Bangkok.
195 Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
197 Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
poor communities in the development process and creating jobs. Programmes in cluster 2 include PMPN Mandiri, which provides villages with a block grant that is used for investing in a range of community assets. Cluster 3 on employment and enterprise development supports access to credit for enterprises as well as labour market programmes, employment services, and vocational training. The bulk of investment and policy reform that has taken place under social assistance programmes has focused on clusters 1 and 2, while cluster 3 has received only limited attention to date.

Policies on social protection, particularly the PKH and the BOS, reinforce the goals of education policy. Education policy is important for social development and employment promotion as it will determine the overall skills of the labour force. Provision of education is considered to be an investment as it will add value for general public. Education policy promotes two core issues including improving the quality of the labour force and retaining students in order to optimise the educational attainment of the labour force and reduce the incidence of child labour. In particular, education policy targets are associated with student retention, illiteracy and average schooling years.  

Finally, as discussed in Chapter 4, the Government provides fuel and energy subsidies in support of increasing the purchasing power of the poor and stabilizing prices. The subsidies are provided for these strategic commodities, as they are high use commodities that have implications for the budget of all household across Indonesia. It can be argued that to some extent fuel and energy subsidies act as a form of social assistance, as they bring down transportation costs and help to stabilize the trade and transport margins associated with commodities. However, a large share of the subsidy is captured by the growing middle class for use of personal vehicles, while low income households only benefit indirectly for this subsidy as they cannot afford their own vehicles. This policy is therefore perceived to have significant problems associated with mis-targeting.

In summary, a range of social policies exist to support poverty reduction and support the welfare of formal economy workers. However, there are gaps in the extent to which Indonesian citizens are covered by social policy, particularly for the non-poor workers in the informal economy, as well as poor households. There are several issues with social assistance programmes, including inefficient targeting, lack of coordination and overlapping initiatives. Moreover, often social assistance programmes provide only a small transfer that lifts the consumption capacity of households in the short term, but has little impact on the long term situation of households. There are also issues in social security programmes, with social security coverage limited due to high levels of contribution evasion in both the formal and informal economies.

5.3 Employment policy

The goals of Indonesia's employment policy for 2010-2014 build on the frameworks provided by the MP3EI and the RPJMN, which rely on the acceleration and expansion of economic development in order to reduce unemployment. In this context, employment growth needs to continue to outpace the growth of the labour force over the next period in order to close the gap between the employed and the underutilised work force who are available, able and looking for work. As mentioned, it is planned that an economic growth rate of between 6.3 and 6.8 per cent per annum should see the

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198 Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
The unemployment rate reduce to between five and six per cent by 2014. In order to achieve this goal, employment policies and their related strategies and programmes in Indonesia cover four areas, including:

- Strengthening the productivity of labour and empowering workers;
- Promoting access and equity in the world of work;
- Supporting the protection of workers; and
- Advancing the welfare of workers and employers.

These four pillars of employment policy in Indonesia are discussed in further detail in the following sub-sections. This policy framework is informed by laws and regulations on employment, which provide guidance on issues such as minimum wages, social security, severance pay, the use of temporary employment and production outsourcing contracts, and freedom of association, among others. In particular, of labour law No. 13 of 2003 provides the overarching framework for employment and work relations in Indonesia.

In addition to laws and regulations, employment policy is informed by data from the labour force survey on the current employment situation, as well as by employment projections that forecast estimations for workforce supply and demand in the medium term. Employment projections help to plan for the meeting of employment policy targets by providing information sectoral and occupational growth trends. This information is combined and used to plan the associated interventions and institutional support mechanisms that are needed to support the target of reducing the unemployment rate. It should however be noted that employment projections often have limited reliability, particularly as policy interventions are designed to address issues that may be identified during the running of such models. In addition, due to government budgetary constraints, the level of demand or need for support that is identified through modelling approaches typically outstrips the resources that are available to meet this demand.

Employment policy is complex and extensive as it relies on the simultaneous success of a range of social, economic, education, and investment policies that are implemented across the Government. Table 10 provides a summary of investments that are required across sectors in order to be able to achieve the objectives of employment policy.

<table>
<thead>
<tr>
<th>Economic sector</th>
<th>Policy measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Hunting and Fishery</td>
<td>As the sector with the largest number of workers, policies need to support skills standardization and profession certification, access to finance and supply chain development. Investments are needed in productive and access infrastructure. In addition, the impact of the National Programme on Community Empowerment (PNPM) and the Maritime and Fishery Programme and Fishermen Improvement Programme (PKN) need to be improved so that the investments provided by these programmes lead to jobs.</td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>The mining and quarrying sector employs relatively low number of people and strategies are needed to promote employment in this sector. For example, it</td>
</tr>
</tbody>
</table>

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201 Government of Indonesia (2010) Regulation of the President of the Republic of Indonesia, Number 5 of 2010 regarding the national medium-term development plan (RPJMN) 2010-2014, Office of the President, Jakarta.
<table>
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<tr>
<th>Economic sector</th>
<th>Policy measure</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>may be effective to establish partnerships between companies and local communities so as to recruit local workers who live near the mining and excavation sites. Local governments may also play a role in supporting local employment and in the creation of secondary enterprises to manage resources.</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>The manufacturing sector has begun to absorb more workers, and a range of measures are needed to sustain momentum, including investment in education and skills training for productivity gains, investment in access, production and energy infrastructure, value chain development, reform on taxes and import / export regulations and the upgrading of micro and small enterprises. In addition, to build competitiveness, industrial cluster approach, through establishing &quot;one village, one product&quot; focal points will be promoted.</td>
</tr>
<tr>
<td>Electricity, Gas and Water</td>
<td>Despite its strategic role, this sector only has a small contribution to GDP and employment. However, this sector is expected to absorb more workers in the next two years following increasing demand for electricity from homes and industries. Therefore, the extension of electricity and water networks is needed to support employment in this sector.</td>
</tr>
<tr>
<td>Construction</td>
<td>The construction sector is growing as investment grows and investments are needed in the skills and competencies of construction workers in order to ensure the quality of infrastructure and that workers can benefit from growth within the sector. In addition, policy reforms are needed in the area of land tenure, licensing, inspection and compliance. Public private partnerships should be expanded to accelerate investment.</td>
</tr>
<tr>
<td>Wholesale Trade, Retail Trade, Restaurant and Hotels</td>
<td>In overall, the trading sector provides a large contribution to national revenue and is also a large provider of employment. Support is needed in the area of inspection and compliance, access to finance, and reform for improving licensing and the general ease of doing business. Investments are also needed to strengthen small and medium enterprises and to allow domestic companies to compete in international markets. Hotel and restaurants are expected to expand with the development of tourism, and investments in skills and service management are needed, as well as the sustainable management of tourism destinations.</td>
</tr>
<tr>
<td>Transportation, Storage and Communication</td>
<td>Communication and transport are growing with increasing consumer demand. It will be important to support the development of skills and technology transfer in this area, as well as improving the integration of transport and communication systems throughout the country.</td>
</tr>
<tr>
<td>Financing, Insurance, Real Estate and Business Services</td>
<td>This sector plays a significant role in boosting economic growth in Indonesia through providing access to finance. Policies are needed to increase access to finance and insurance services, as well as to support the development of enterprises throughout the economy. Supervision and compliance is essential for ensuring the confidence of the business community.</td>
</tr>
<tr>
<td>Community, Social, and Personal Services</td>
<td>As structural transformations take place and the middle class grows, this sector will increase its absorption of labour. In particular, policies are needed to support and stimulate private sector development.</td>
</tr>
</tbody>
</table>


One of the roles of employment policy is to reduce distortions in the labour market. In particular, policies are required in the area of labour supply, placement and labour utilization. The three instruments of employment policy used in Indonesia include labour market institutions that facilitate
communication between workers and employers, as well as training institutions and direct job creation programmes.205

There are many challenges to realizing the objectives of employment policy in Indonesia. Key challenges that cut across the various aspects of employment policy include decentralized government structures, the need to strengthen governance, lack of resources both in terms of human and financial resources, as well as poor coordination within and between regions.206 There has been a major underinvestment in employment institutions by many regional governments. Moreover, regional policies on staff rotation have impacted on the capacities and development of employment institutions, therefore weakening the overall capacity of employment institutions for supporting the realization of policy objectives. Moreover, knowledge management systems that collect information for monitoring, evaluation, inspection, and grievances require investments to improve the quality and usability of the data.

Productivity enhancement is also a major challenge for employment policy. While productivity is not noted as an official target of development policy in Indonesia, it is needed to ensure that Indonesia continues to remain competitive within the context of a globalized economy. Many workers in Indonesia have low levels of educational attainment and work in informal micro and small enterprises (MSEs) that are characterized by low levels of labour productivity and unregulated working conditions.207 The Government’s capacity for the extension of services to enforce regulations and provide institutional support to these settings is limited. However, policy interventions are urgently needed in this context, including education and skills investment as well as the organization of workers and enterprises, in order to drive productivity gains and support formalization.

Labour market policies play an important role in supporting employment outcomes, particularly for vulnerable groups to access opportunities in the labour market. For example, public employment programmes that support the development of the informal economy in Indonesia, provide opportunities for unskilled and low-skilled workers to gain work experience and develop basic skills for improving their productivity. Ideally these programmes would be closely linked to employment services centres and technical training programmes. However, the current scope and scale of these programmes and institutions limits the role they can play in further stimulating employment outcomes.

In the future employment policy in Indonesia will continue to place emphasis on improving the investment climate to create more jobs, which is intricately linked to issues such as macroeconomic stability, infrastructure, good governance, skills and education, employment regulations, and taxation, among others. Particular focus will be given to reducing poverty through decent work strategies, as well as reducing open unemployment. However, within this framework labour underutilization will continue to be a norm.

5.3.1 Policies supporting the productivity of labour

Employment policies in Indonesia that seek to optimise the productivity of the labour force use a combination of supply side interventions and institutional services to support productivity and empowerment. Training policies seek to improve the skill, expertise, competencies and the
productivity of the labour force, in order to improve the overall competitiveness of the Indonesian economy. Training policies rely on data from labour market information systems (see section 5.3.2), as well as dialogue with employers and workers, in order to ensure that supply side interventions are well matched with the skills and competencies being demanded in the labour market.

Policies that support productivity and empowerment focus on a number of key issues, including:

- **Skills investment**: Investments in human resources for strengthening productivity, operations, management and skills to enhance competitiveness.
- **Strengthening markets**: Strengthening markets and the value chain through supporting skills improvement in marketing and business management, building linkages with buyers, and investing in processing facilities and infrastructure.
- **Local competitiveness**: Support local industry and domestic labour to strengthen services and improve productivity in order to compete with foreign labour and foreign industry.
- **Enterprise formalization**: Provision of incentives and services for the formalization of enterprises, including support for licensing, import/exports and taxation.

To improve productivity and support empowerment, Indonesian workers need to meet competency standards and such standards should be monitored and revised over time. Therefore a number of institutions, such as the National Professional Certification Authority (BNSP), professional certification institutions, and competency assessment centres as well as public and private vocational training centres have been established. However, the training needs that are identified typically outstrip the provision of training that is provided through the Ministry of Manpower and Transmigration. To further illustrate, the Ministry provides vocational training to an average of 80,000 students each year, but the need for such training is estimated to be ten times higher - if not greater. While similar training may be provided through other Ministries or private providers, the scope and scale of such services is unclear and the recognition of competencies through other mechanisms is not guaranteed. Therefore, both the optimization, as well as the expansion of training facilities and services, are identified as key investments for enhancing the skills and competencies of the labour force in Indonesia, particularly as existing human capital is considered to be a critical constraint to growth.

Strategies that seek to increase the productivity of the labour force are therefore focusing on investing in the abovementioned areas within the context of macroeconomic and regional development frameworks. The MP3EI, which uses an industry cluster based approach to promoting economic growth and regional prosperity, is the overarching policy that influences training policy. However, as mentioned, interventions on productivity improvement are constrained in scale, and this is a hindrance to the realization of gains in competitiveness and innovation that are required for the MP3EI policy to be effective.

As policy interventions in this area are limited by budgetary constraints, strategies for productivity improvement focus on supporting the expansion of employment under three types of employment status, namely:

- **Own account worker**: A person who works at her/his own risk without being assisted by a casual worker or unpaid worker include technical job or skill job.

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Employer assisted by casual / unpaid workers: A person who works at her/his own risk and assisted by temporary worker/unpaid worker.

Employee: A person who works permanently for an employer or institution/office/company for a wage/salary. A worker who does not have a permanent employer is not categorized as an employee but as a casual worker.

Own account workers and employers assisted by casual / unpaid workers are targeted as such workers are linked with entrepreneurship and the creation of employment opportunities for additional workers within those enterprises. Employees are identified as a target as these workers are formal economy workers that have access to social protection, fixed income, and job security.210 Training programmes are focused on supporting core training needs, such as farming, carpentry, automotive, electricity, secretarial, and hairdressing. In addition, the strategy focuses efforts on interventions in sectors including agriculture, manufacturing, trade, finance and services.

Employment policy programmes promoting productivity are provided by the Ministry of Manpower and Transmigration under the Directorate General for Training and Productivity (Direktorat Jenderal Peminaan Pelatihan dan Produktivitas). Programmes that support productivity focus on policy formulation, the development of technical standards, norms, and guidelines, and technical oversight and evaluation. In particular, support is provided through training institutions, provision of standardized training programmes and through producing reliable, competent graduates as well as through engaging employers in the development of training programmes and in ongoing workplace training. The specific programmes implemented by the Ministry relate to:

- Strengthening productivity through the standardization of competencies for technical and entrepreneurship training programmes and through promoting the independent operation of certification authorities. This includes developing and adapting standardized competencies that are equivalent to standards in neighbouring countries, developing linkages between education and vocational training systems, and increasing the skills of trainers and examiners.
- Improving training and instruction through setting standards for the skills and competencies of trainers in public and private training institutions, as well as through providing staff training and sharing best practices pedagogical approaches and on curriculum development with training providers.
- Developing and improving technical vocational education and training facilities through setting standards and supporting accreditation programmes, as well as through investing in training infrastructure.
- Supporting access to employment for young people through apprenticeship programmes that provide a combination of classroom learning and on-the-job training, including developing programmes and the associated standards, supporting enterprise licensing and accreditation, and promoting the expansion of the apprenticeship programme.
- Promoting entrepreneurship and productivity through providing support for improving productivity in enterprises, measuring productivity and identifying best practices interventions, provision of entrepreneurship training and promoting entrepreneurship and strategies for improving productivity.

In the next medium term development plan (2015-2019) further emphasis will be placed on improving productivity and the competency of human resources, which is closely related to

210 Employment status 4 of BPS refers to “permanent employees” and defines a worker to be a permanent employee if he/she has the same employer during the past month. The definition therefore includes contract workers and permanent employees.
competency-based training programmes, assessment and certification, as well as the development and recognition of competency standards and a qualifications framework.

5.3.2 Policies supporting access to employment

Employment policies for promoting access and equity in the world of work are provided through institutional mechanisms that seek to expand employment and ensure equal access to employment opportunities for all Indonesians based on their talents, interests and abilities.\(^{211}\) Policies for promoting access and equality in the domestic labour market refer to employment services, labour market information systems and public employment programmes for informal economy development. These interventions may be referred to as a sequence of “active labour market policies and programmes” as follows:

- **Employment services**: Provision of employment services to support access to employment through employment counselling, mentoring, job-matching services, including support for disadvantaged job seekers.
- **Labour market information systems**: Management of labour market information to facilitate supply and demand matching, including provision of an online job seeker - job vacancy website, job fairs and analysis of trends in supply and demand for labour.
- **Informal economy development**: Public employment programmes that provide investments in areas relating to access infrastructure, productive infrastructure and appropriate technologies, as well as entrepreneurship and mentoring to support informal economy development.

To address issues related to frictional unemployment, labour market information and employment services provide job matching services to facilitate the matching of supply and demand, particularly for the formal economy. The information gathered by employment services and labour market information systems is used in combination with data from Statistics Indonesia to provide job seekers and vocational training institutions with information on employment. This information can be used to facilitate the matching of supply and demand, and can also be used to support job seekers to make better informed decisions about where to pursue careers in the future. Information on demand for labour is shared with vocational training institutions to ensure that training programmes are in line with the expectations of future employers.

While employment services and labour market information systems provide vital roles that facilitate the functioning of the labour market, these institutions are likely to be among the weakest institutions in Indonesia. The national budget provides local governments with grants to support the functioning of these institutions; however, there is often insufficient budget to cover all districts. Private providers also operate employment services, however reporting and coordination between the private sector and the Government is limited. Moreover, the service currently lacks a labour market signalling framework, which can provide detailed analysis of fluctuations in labour market supply and demand.

To address structural issues in the world of work, public employment programmes support livelihood development for the informal economy. Public employment programmes in support of informal economy development seek to stimulate local development and provide short term employment opportunities for marginalized groups, particularly in areas with high unemployment or demand deficiency. Such programmes also support gains in the employability of workers through provision of

short term work opportunities and/or short term training opportunities to empower workers and support enterprise development.

The scope and scale of public employment programmes in Indonesia is limited. While the policy covers all districts, it operates on a short term project basis and provides only a limited number of packets of funding per district. The programme facilitates employment outcomes directly by providing short term work opportunities, however, as it is limited in scale, it is difficult for the programme to be used to address structural issues associated with unemployment or to operate as a workfare safety net programme.

The integration between employment services and programmes for supporting informal economy development is not well established. Employment services currently do not provide a referral service for unemployed job seekers that are interested in the short term employment opportunities offered through public employment programmes. Moreover, there is no mutual obligation attached to public employment programmes. That is, the programme beneficiaries are not required to enlist in employment services and undertake job search. Employment services currently focus on supporting placements in the formal economy only. However, given the size of the informal economy in Indonesia, there is a need for policy instruments to be more inclusive and responsive of activities occurring in the informal economy in order to accelerate the expansion of formalization.

While the absence of unemployment benefits and a single window service for social and employment services is a barrier to the functioning of workfare instruments, the incentives structures that are in place can already be reformed and used to improve the effectiveness of employment outcomes that are facilitated through labour market policies. If such obligations and synergies are not established, than there is a high risk that the short term work opportunities offered through the public employment programmes will provide only a "blip" in one's overall livelihood situation.

In addition to interventions that focus on access to employment in the domestic labour market, employment is also expanded through Indonesian migrant workers going abroad. While the number of Indonesian migrant workers going abroad each year remains steady (approximately half a million per year), the Government is actively reforming policies regarding migrant workers, in support of placement in employment within the formal economy. The Ministry provides pre-departure training programmes along with placement services and post-placement services to support these workers. In order to improve the working conditions of migrant workers, the Government has introduced tighter regulations, including a moratorium against sending migrant workers without a formal employment contract from a registered employer, and additional regulations for ensuring employment is properly defined and remunerated. Employment policy also guides the utilization of foreign workers in Indonesia. In general regulations regarding the use of foreign labour require the preferential use of Indonesian workers in all jobs, with the exception of particular occupations and sectors where domestic skills are still being developed. Some occupations are also prohibited for foreign workers. A tax in the form of a training levy is placed on foreign workers, which requires their employers to pay USD 100 per month per foreign worker. This tax is goes into a training fund for training Indonesian workers through the vocational training system.

Programmes promoting access to employment are provided by the Ministry of Manpower and Transmigration under the Directorate General for Employment Promotion and Placement (Direktorat Jenderal Peminaan dan Penempatan Tenaga Kerja). Support is provided for policy

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formulation, the development of technical standards, norms, and guidelines, and technical oversight and evaluation. Employment programmes relate to:

- Provision of public and private employment services to support workers in-between work and workers with special needs, through provision of employment counselling and mentoring services, and worker empowerment programmes.
- Promoting access to employment through the development of labour market information systems, including provision of job fairs and online job matching services, collection and analysis of data on job seekers and job vacancies, and analysis of emerging sectors and occupations.
- Expanding employment through public employment programmes that provide short-term work opportunities for informal economy development for vulnerable groups - particularly the unemployed, underemployed, and the poor - in areas including:
  - Padat Karya Infrastructure - Applies labour based methods to invest in village level infrastructure that strengthen access to socio-economic services and facilities.
  - Padat Karya Productive - Applies labour based methods to invest in village level productive infrastructure (agriculture, fisheries, livestock, and rural industry) to support livelihood development.
  - Teknologi Tepat Guna - Applies labour based methods to invest in village level appropriate technologies to support community empowerment and microenterprise development.
  - Tenaga Kerja Mandiri - Provides training and mentoring in entrepreneurship and microenterprise development for business groups and community groups.
  - Tenaga Kerja Sukarela - Provides assistance for the implementation of the above programmes, including monitoring and mentoring.
- Expanding employment through supporting Indonesian migrant worker placements, including provision of pre-departure training, placement abroad, improvement of the procedures and protections for Indonesian migrant workers, international cooperation.
- Regulating foreign workers through improving the efficiency of foreign worker licensing and associated regulation compliance, as well as utilization of the foreign workers' training levy fund to support Indonesian workers to increase their capacity.

In the next medium term development plan (2015-2019) further emphasis will be placed on extending the government's public employment programmes for informal economy development for the unskilled and low skilled. The programmes will seek to optimize employment creation potential through use of labour intensive approaches, as well as through investing in assets that have employment multiplier effects for communities. In addition, investments will be made in employment services and online information systems to facilitate job matching for job seekers and employers. Finally, further support will be provided for migrant workers to access better working conditions in both domestic and international settings through improving services that provide worker protection, employment placement and pre/post-employment counselling.

5.3.3 Policies on the protection of workers

Workers' protections are supported through employment policies and strategies on labour inspection, which are closely coordinated industrial relations mechanisms (see section 5.3.4). Labour inspection supports, the implementation of labour laws and regulations through inspection and auditing functions. Labour inspectors not only examine how national labour standards are applied in the workplace, but also advise employers and workers on how to improve the application of national laws on issues such as working time, wages, occupational health and safety, gender inclusiveness
and child labour. In addition to this, labour inspection plays a role in advising the national authorities on loopholes and weakness in the current national law. Labour inspection occurs in a number of employment settings, including pre-placement, workplace, and post-placement situations. Inspection in pre-placement settings focuses on inter-regional and international cooperation for placing Indonesian migrant workers. Inspection during employment and post-employment focuses on the realization of labour rights, including provisions that relate to social security, occupational health and safety, and severance pay.

The effectiveness of labour inspection systems are linked to facilities and infrastructure that support monitoring, data management and reporting. The Ministry at the national level provides grants to province and district governments in order to support these functions, however, often times the national budget is limited and there are gaps in extension of support. Without support from the national level, many districts and provinces are unable to support tasks related to labour inspection, which therefore opens potential for the violation of worker protections due to lack of ability to enforce sanctions. At the same time the importance of labour inspection is being heightened, as international buyers, that subcontract work to factories in Indonesia, are under increasing pressure from consumers to ensure decent working conditions throughout their supply chains.

The Directorate General for Labour Inspection (Pembinaan Pengawasan Ketenagakerjaan) within MOMT is the technical unit that is responsible for labour inspection. In 2013, it was planned that this unit would be supported by 4202 labour inspectors and 267 specialist inspectors who supervise health and safety in the workplace across the national, provincial and district levels of government (see table below). Data from the economic census of 2006 indicates that there were approximately 22.7 million micro and small enterprises and 3.8 million medium and large enterprises in Indonesia. Current labour inspection services only reach between 200,000 and 250,000 firms per year (see table 11). This leaves a large gap in provision of services, with it being estimated that less than 1 per cent of enterprises are serviced by labour inspectors each year. Due to the decentralisation of many government functions, the closing of the gap on labour inspection services requires coordination with, as well as co-investment from, provincial and district governments.

Table 11: Targets for the expansion of labour inspection in Indonesia, 2009-2013

<table>
<thead>
<tr>
<th>Labour inspection</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012**</th>
<th>2013**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies reporting</td>
<td>208,737</td>
<td>216,547</td>
<td>225,082</td>
<td>237,846</td>
<td>252,117</td>
</tr>
<tr>
<td>Workers covered</td>
<td>13,998,035</td>
<td>15,950,143</td>
<td>16,847,382</td>
<td>17,653,260</td>
<td>18,712,456</td>
</tr>
<tr>
<td>Labour inspectors</td>
<td>1,986</td>
<td>2,354</td>
<td>2,255</td>
<td>3,964</td>
<td>4,202</td>
</tr>
<tr>
<td>Specialist inspectors</td>
<td>131</td>
<td>162</td>
<td>254</td>
<td>268</td>
<td>283</td>
</tr>
<tr>
<td>Child labour reduction</td>
<td>NA</td>
<td>3,000</td>
<td>3,360</td>
<td>10,750</td>
<td>12,367</td>
</tr>
</tbody>
</table>


Employment policy programmes on labour inspection provide support for policy formulation, the development of technical standards, norms, and guidelines, and technical oversight and evaluation. Programmes implemented by the Ministry relate to:

- Strengthening compliance through monitoring and inspection on workplace norms, freedom of association and the right to organise, provision of workplace training and the implementation of social security requirements;

214 Authors’ estimation based on MOMT data and data from BPS SAKERNAS.
• Improving conditions at work through monitoring and inspecting standards related to occupational health and safety, monitoring the use of hazardous materials, and reporting findings in the information technology system;
• Strengthening worker protection through inspection of discrimination in the workplace and advocating for gender inclusiveness in the workplace, as well as through the implementation of the national action plan on the elimination of the worst forms of child labour;
• Strengthening compliance through grievance investigation and enforcement of employment laws and regulations.

5.3.4 Policies on the welfare of workers and enterprises

Employment policy in Indonesia advances the welfare of workers through provision of an industrial relations system and contributory social security programmes. Social security is available in areas of accident, illness, death and old age. Unemployment insurance and unemployment assistance is currently not available. The currently social security system seeks to provide basic protection for fulfilling the minimum needs of workers and their families, while also compensating workers for their efforts over the course of their career. In 2010, 133,580 employers and 9,337,423 workers were active members of PT Jamsostek, the largest social security provider in Indonesia. This represented approximately 4 per cent of employers with permanent workers and approximately 28 per cent of regular employees, therefore, social security coverage in Indonesia is quite low (see table 12). The number of workers on employee contracts has been rapidly increasing since 2010, which has seen a greater number of workers access social security services, however, the ratio of workers and employers who are active members has remained relatively constant over time. In 2014 the system was reformed and is now called the Agency for the Coordination of Social Security (Badan Penyelenggara Jaminan Sosial (BPJS)).

Table 12: Social security coverage in Indonesia

<table>
<thead>
<tr>
<th>Program</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jamsostek occupational injury, old age, death insurance</td>
<td>8,495,732</td>
<td>9,337,423</td>
<td>10,257,115</td>
<td>11,246,457</td>
<td>12,041,995</td>
</tr>
<tr>
<td>Jamsostek health insurance</td>
<td>4,402,525</td>
<td>5,397,977</td>
<td>5,884,528</td>
<td>6,978,248</td>
<td>7,600,371</td>
</tr>
</tbody>
</table>

Source: http://www.bpjsketenagakerjaan.go.id/

To advance the welfare of workers, social security policies are accompanied by efforts to reduce workplace accidents. However, claims on occupational injury and death insurance have been increasing over time. While these trends may relate to the increase of employment within the formal economy, the reduction of workplace accidents is a high priority. The National Occupational Safety and Health Council (NOSHC), which is a tripartite body consisting of representatives from local government, businesses, and labour unions, has been mandated with formulating a national occupational safety policy in order to reduce workplace accidents. Labour inspection policies are closely coordinated with efforts on occupational health and safety.

Industrial relations mechanisms also support workers’ welfare through providing systems for dispute resolution and the negotiation of workplace agreements for enterprises in the formal economy.

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215 Source: http://www.bpjsketenagakerjaan.go.id/
216 Authors’ estimation based on PT Jamsostek data and data from BPS SAKERNAS.
218 Source: http://www.bpjsketenagakerjaan.go.id/
which are underpinned by rights such as freedom of association and the right to organise.\textsuperscript{219} Instruments of industrial relations include company regulations, collective bargaining agreements, employers’ and workers’ organizations, mediators, and bipartite and tripartite cooperation institutions. The resolution of disputes through mediation and bipartite mechanisms at the corporate level is promoted, as it can minimize industrial disputes and strikes / lockouts. It is generally perceived that the best way to resolve industrial disputes is through dialogue between workers and employers in order to find a win-win solution. This dialogue is supported through mediators. The tasks and functions of mediators allow each mediator to support industrial relations processes in approximately 100 companies through the course of one year. There are currently approximately 1200 mediators in Indonesia and need for an additional 1200 mediators, which need to be trained and certified in mediation services. The number of enterprises that can be supported by mediators is therefore quite limited, and this means that underlying tensions in labour market governance can persist.

Finally, to promote the welfare of workers, each year governments at the province and district levels set minimum wages, which are the lowest permissible wage allowed by law.\textsuperscript{220} To set the provincial minimum wage, each province’s wage council, which consists of workers, employers and government, as well as advisors from academia, undertake a survey of a basket of goods to determine the wage that is needed to obtain a “minimum decent standard of living” or the “kebutuhan hidup layak” (KHL). Following the recommendations from the provincial wage council, the governor of each province sets the provincial minimum wage annually. Ideally, the minimum wage should be equivalent to the KHL, however, over time a gap between the KHL assessment and the minimum wage has emerged.\textsuperscript{221} To illustrate, in 2013 the national average minimum wage was 89 per cent of the national average KHL. In order to improve workers’ purchasing power, the Ministry of Manpower and Transmigration notes that the annual increase in minimum wages should be three per cent higher than the inflation rate.\textsuperscript{222} In 2013 and 2014, the average annual inflation rate was 4.5 per cent, therefore, the average annual minimum wage increase should be in the range of 7.5 per cent. As mentioned in chapter 4, the portion of workers that receive a wage that is close to the minimum wage is high and the ratio of the minimum-to-average wage is also high. The number of companies with collective bargaining agreements is low and wage scales and structures are not well developed. This has led to a situation where minimum wage bargaining has become the main bargaining mechanism for increasing wages, rather than the minimum wage functioning as a safety net wage.

Therefore, the main strategies in support of advancing workers welfare therefore relate to the strengthening of employers’ and workers’ organizations, particularly bipartite and tripartite dialogue mechanisms for resolving disputes and building a more conducive environment for the welfare of both enterprises and workers. Provision of social security in areas of accident, illness, death and old age is also a key strategy for advancing workers welfare.

Programmes strengthening welfare are provided by the Ministry of Manpower and Transmigration under the Directorate General for Industrial Relations and Social Security (Direktorat Jenderal Peminaan Hubungan Industrial dan Jaminan Sosial Tenage Kerja). Support is provided for policy

\textsuperscript{219} MOMT (2011) National manpower planning, 2012-2013, Secretariat General, Ministry of Manpower and Transmigration, Jakarta.


formulation, development of technical standards, norms, and guidelines, and technical oversight and evaluation. Programmes relate to:

- **Improving workers' remuneration** and reducing discrimination through supporting the documentation of work agreements, analysis of discrimination, the setting of wages, and the development of structures and pay scales for enterprises and sectors.
- **Supporting employment relations** through developing regulations and guidelines on particular issues, such as outsourcing. These regulations and guidelines are then referred to in work agreements, company regulations, and collective bargaining agreements.
- **Supporting democratization in Indonesia** through strengthening industrial relations institutions, including workers' organizations, employers' organizations, bipartite institutions and tripartite institutions, including facilitating the development of workers' cooperatives, secondary enterprises, and the construction of housing for workers.
- **Supporting the functioning of social security services** through the socialization of laws on social security, expanding the number of employers and workers registered by social security providers, coordinating and managing contributions and grievance processes, and extending social security services to workers in the informal economy.
- **Supporting dispute resolution** related to disputes over rights, interests and termination of employment, as well as disputes within and between workers' or employers' organizations. Disputes can be settled through bipartite deliberation, mediation, conciliation, and arbitration.

In the next medium term development plan (2015-2019) further emphasis will be placed on improving labour regulations and social protection system for workers. Particular efforts will be made for promoting labour market flexibility, decentralised industrial relation systems, collective bargaining, dispute resolution, and developing code of good faith bargaining. In addition, strategies will be identified for establishing further social security systems for workers, such as unemployment insurance.

### 5.4 Discussion and implications for employment policies and programmes

The backdrop of dynamic growth has created many opportunities for Indonesia, but policy makers still face considerable challenges in putting the economy on an equitable growth track, particularly in regard to achieving full and productive employment. In this regard, employment policy can be considered to be among the most complex and multidimensional of policies, as it relies on simultaneous success across a range of social, economic, education, and investment policies that are implemented by the Government. Perhaps because of the astronomical challenge, full and productive employment is not the objective of employment policy, rather employment policy seeks to reduce the unemployment rate to between 5 and 6 per cent.

Indonesia's development framework is spelled out in its medium term and long term development strategies, which focus on sustainable and equitable growth. It is assumed that robust growth should lead to gains in employment and reductions in poverty. There are inconsistencies between the ideology and implementation of policies, particularly regarding equitable growth across regions and the trade-off between economic growth and environmental conservation. However, one of the biggest challenge of policy in Indonesia seems to be related to a lack of fiscal space to invest in policies that programmes that will help to build the capacities of human resources and therefore enhance the sustainability of growth. One of the main concerns is related to spending on the fuel subsidy, with reform on this policy important for freeing up space for spending on policies that can have greater multiplier effects.
A range of social policies exist to support poverty reduction and support the welfare of formal economy workers. However, there are gaps in the coverage of social policy, particularly for the non-poor workers in the informal economy, as well as poor households. Income from employment is likely to be the main source of income for such households, therefore making employment quality highly important for vulnerable households.

Employment policies in Indonesia focus on productivity, access, protection and welfare. Employment policy is informed by a range of laws and regulations as well as analysis of the employment situation. It gives direction on how to support labour supply, employment placement and the utilization of labour through a range of institutional, dialogue and training mechanisms. Employment policy seeks to reduce distortion in the labour market, however, the overall weak condition of labour market programmes and services means that their effectiveness in addressing distortions is limited. Significant challenges associated with decentralization and the need to enhance productivity plague employment policy. Importantly, while productivity is not noted as an official target of development policy in Indonesia, gains in this area are needed to ensure that Indonesia continues to remain competitive within the context of a globalized economy. Like social policy, employment policy faces government budgetary constraints, which limited its scope and scale and therefore its overall effectiveness.

Policies that support productivity focus on skills investment, competitiveness and supporting the formalization of enterprises. Employment programmes in this area focus on competencies, instruction, vocational training, apprenticeships and entrepreneurship. While a range of institutional support mechanisms are in place to support productivity, demand for training typically outstrips the provision of training, which leads to delays in the acceleration of human capital investment. In order to optimize the use of existing resources, the Government focuses on supporting own-account workers as well as employees, in order to promote employment growth on the hand and productivity gains on the other hand.

Policies that promote access to employment provide employment services, labour market information systems and a range of public employment programmes to support informal economy development. These policies seek to address frictional and structural unemployment issues through facilitating labour market attachment for job seekers and coordination for employers. However, the integration between employment services and programmes on for supporting informal economy development are not well established. It would be beneficial to establish linkages between the policy instruments in order to support improvements in employment outcomes, rather than the short term work opportunity offered through the public employment programme will offer only a “blip” in one’s overall livelihood situation.

Policies on protection and welfare focus on labour inspection and are closely linked to industrial relations mechanisms. Labour inspection provides oversight in workplaces in order to ensure that working conditions are consistent with the specifications in the labour law. However, labour inspection - like vocational training and employment services - is handicapped by government budgetary constraints. Investments in labour market institutions that support protection and welfare, as well as other labour market institutions, are becoming increasingly important due to the demands that buyers are facing from consumer markets. Improving labour market governance and the functioning of labour markets is important for facilitating trade and investment.

Policies on welfare cover social security, industrial relations, and wage negotiation. Due to the large portion of the people within the economy that work in informal settings, policies on welfare are only able to provide direct support to a small portion of the labour force, which means that underlying tensions in labour market governance can persist. The large number of people that receive a wage
that is close to the minimum wage also creates distortion in the labour market, however, as the portion of workers with low wages is so high, adjustments on minimum wages are currently one of the few mechanisms that are able to support gains for informal economy workers who are unorganized.

Employment policy in Indonesia covers all the strategic components of the world of work that are needed to promote employment, however, the overall weak condition of labour market institutions, programmes and services, as well as budgetary constraints, means that the effectiveness of employment policy in facilitating outcomes is relatively limited. Moreover, employment policy in Indonesia appears to be fragmented, with limited linkages between the range of services that are provided and a lack of ability to ensure compliance with regulations. The size and nature of the informal economy is also a hindrance to the realization of gains in the work of work, however, only with the gradual strengthening of labour market institutions - and therefore labour market governance - can provide assurances on gains in employment quality that are certifiable.

A range of key themes arise from the review of employment policy in Indonesia, including the challenge of supporting formalization as well as productivity gains, government budgetary constraints that hamper progress towards human capital acceleration, the importance of policy and related institutions in addressing labour market distortions and enhancing labour market governance, and the need to enhance the efficiency of investments made through employment policy. There is a need to understand the effectiveness of the strategies that are implemented through employment policy and for reforms to be identified that can help to increase the efficiency of government spending in order to improve employment outcomes.

In summary, a number of implications arise from the review of the current employment policy in Indonesia, including the importance of enhancing understanding of the overall effectiveness of the various labour market institutions and programmes that are directed by employment policy, so that reforms can be identified to strengthening their function. In order to strengthen the strategic instruments of employment policy, which include employment services, public employment programmes, training programmes, social security, labour inspection, and dialogue mechanisms for supporting industrial relations, it is important to undertake evidence-based research that can provide information on the effectiveness of such interventions and identify areas for strengthening policy outcomes. This thesis does this for public employment programmes and the following three chapters use a range of evaluation methodologies to support this goal.
Chapter 6: A programme assessment of Indonesia's public works programme

The analysis provided in chapters 4 and 5 presented a situational overview of the labour market and on employment policy in Indonesia, in order to provide a better understanding of the need for a range of labour market programmes to address issues such as wide spread informal employment, labour market churning and low labour productivity. The analysis provided indicates that institutional responses need to be strengthened in order to accelerate gains in employment for Indonesia. Building on this analysis, the following three chapters use evidence-based approaches to identify how policy interventions, particularly those provided by public works programmes, can be strengthened. Enhancing understandings of the overall effectiveness of the various labour market institutions and programmes that are directed by employment policy is an essential part of this process. As a first step towards this goal, this chapter provides a programme assessment of the Ministry of Manpower and Transmigration's public works programmes. Chapters 7 and 8 will further analyse the short-to-medium term impacts of such programmes.

Chapter 6 provides a programme assessment to analyse the effectiveness of Indonesia's public works programme, with attention given to planning, implementation and post implementation periods throughout the project implementation cycle. Attention is also given to quality control in terms of governance, asset quality and social inclusion. The chapter provides a historical overview of public works programmes in Indonesia, as well as insights on the administration, operations and rationale of the current public works programme. It concludes by identifying areas for improving the efficiency and effectiveness of the programme through investing in planning and quality control systems. This chapter provides a methodology for assessing public works programmes that is extensive and systematic. The method is based on an adaptation of programme assessment methodology.

In order to set the scene, section 6.1 provides a discussion of the methodological approach to programme assessment that was applied in order to develop a better understanding the overall effectiveness of public works programmes in Indonesia. Section 6.2 reports the findings from the programme assessment. It examines the effectiveness of the operations, implementation and service delivery of the current public works programme. Section 6.3 provides a summary of the findings from the programme assessment and identifies a number of recommendations for supporting the development of public works programmes. Chapters 7 and 8 go on to look at particular issues that shed further light on the inclusiveness of vulnerable groups in public works programmes and how such programmes stimulate local development.

6.1 A methodology for programme assessment

Within the context of evidence-based policy making, programmes should be periodically assessed across aspects such as purpose, scope, planning, operations, implementation and post-implementation in order to understand the quality of service delivery and to ensure that programmes are continuing to meet their purpose effectively and efficiently. A programme assessment223 forms part of a programme evaluation framework, and focuses on generating descriptive and process-oriented information rather than information on the short-term or long-term impacts of a programme.224 It looks at the purpose of the programme vis-a-vis programme implementation in order to identify bottlenecks and challenges in quality assurance. A programme assessment therefore identifies strengths, weaknesses, challenges and opportunities that programmes face in order to support programme reform and development. More specifically, a

223 Programme assessment is also known as process evaluation or assessment of programme processes.
programme assessment asks questions regarding human resource competences, the efficiency of bureaucracy and decision-making, the timeliness of project scheduling, and the efficiency of procurement, among others. It helps to develop understandings of whether the services being provided meets the goals of policy makers, as well as understandings of the effectiveness of the inclusion of vulnerable groups.

It is important to undertake a programme assessment in addition to other types of impact evaluation methods, as the overall impact of a programme will be heavily influenced by whether it is well implemented. For example, if a programme is poorly implemented, an impact assessment is likely to produce a neutral or negative result of the programme concept. Similarly, if a programme is well implemented, but is based on a poor concept, an impact evaluation will not provide insight on this. Therefore, the role of a programme assessment in evaluation research is to analyse the operational elements of programme design, in order to reduce errors in understanding the effectiveness of programmes. Otherwise an innovative programme may be incorrectly categorized as ineffective when it may be that it was not implemented as per design specifications.

A description of the research approach and sampling strategy applied throughout the programme assessment of the public works programme is provided below.

6.1.1 Research approach

The method applied for completing the programme assessment used research methods consisting of structured interviews, focus group discussions, field observation and literature review. The first step involved a review of programme documents, including manuals, budgets, project reports and technical guidelines. The review allowed issues relating to programme objective and programme scope to be examined.

The next step involved data collection through a series of structured interviews with Government officials from the Ministry of Manpower and Transmigration at a national and district levels. In addition, in order to gain a community perspective on the functioning of the public works programme at the local level, site visits were conducted across a number of locations, followed by group discussions with workers who had participated in the projects. Triangulation of information from different sources was completed with a view to substantiating findings from the programme assessment.

The interview structure followed throughout the programme assessment reviewed three main stages of the project management cycle, namely, planning, implementation and post implementation. The table below provides a further description of the core issues that were covered in each phase of the assessment framework.

<table>
<thead>
<tr>
<th>Programme assessment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Core considerations related to political process, capacity and targeting.</td>
</tr>
<tr>
<td>Implementation</td>
<td>Core considerations related to adaptability, safeguards and competencies.</td>
</tr>
<tr>
<td>Post implementation</td>
<td>Core considerations related to maintenance, linkages with other services, and monitoring systems</td>
</tr>
</tbody>
</table>

Questions relating to the planning stage the programme enquired about the consultation processes and planning capacities of national and district level government, aiming to understand how proposals are developed and receive approval. The selection of beneficiaries and area targeting methods were examined along with information regarding the existence of coordination and linkages with other labour market and poverty reduction programmes. Regarding implementation, an understanding was sought on procurement procedures and working arrangements, including the payment of wages. Additional questions were asked concerning the challenges faced during the implementation of projects, including challenges relating to record keeping, quality control measures, asset quality and the capacity in technical areas. The issues of the inclusion and targeting of vulnerable workers, occupational health and safety and complaints handling procedures were also explored. Post implementation inquiries focused on monitoring, evaluation and reporting processes following project completion. Issues surrounding asset maintenance were also explored, along with issues regarding staff training at all governmental levels. Post implementation linkages with other community development programmes were also explored at this stage.

6.1.2 Sample selection

The districts selected to be involved in the programme assessment were chosen using a purposive approach, based on the distribution of projects implemented by the public works programme across Indonesia, proximity to Jakarta, and the presence of projects implemented by the International Labour Office within provinces.

In 2012 projects from the public works programme were concentrated in Java (119) and Sumatera (108), with fewer projects in Sulawesi (63), Kalimantan (32), Nusa Tenggara (17), Papua (13) and Maluku (8). Therefore, the selection of districts included in the programme assessment reflects the public works programme's spatial distribution across Indonesia, as well as a range of varying cultural backgrounds and social conditions that occur across different regions of Indonesia. The areas of data collection included:

- Pidie District, Aceh Province
- Bireuen District, Aceh Province
- Kota Medan, North Sumatera Province
- Lebak, Banten Province
- Bogor Kabupaten, West Java Province
- Kota Palangkaraya, Central Kalimantan Province
- Ambon, Maluku Province
- Tabanan, Bali Province

6.2 Findings from the programme assessment

As mentioned in chapter 5, the Ministry of Manpower and Transmigration has a mandate for promoting the expansion of employment and development of the informal economy through programmes that support employment expansion and livelihood development. To implement this mandate the Directorate for the Expansion of Employment Opportunities and the Informal Economy Development within the Directorate General for Employment Placement operates a public works programme that provides short-term work and livelihood development opportunities to vulnerable groups - particularly the unemployed, underemployed, and the poor. The public works programme includes five flagship initiatives, namely:
- **Padat Karya Infrastruktur** - Applies labour based methods to invest in village level infrastructure that strengthen access to socio-economic services and facilities.
- **Padat Karya Produktif** - Applies labour based methods to invest in village level productive infrastructure (agriculture, fisheries, livestock, and rural industry) to support livelihood development.
- **Teknologi Tepat Guna** - Applies labour based methods to invest in village level appropriate technologies to support community empowerment and microenterprise development.
- **Tenaga Kerja Mandiri** - Provides training and mentoring in entrepreneurship and microenterprise development for business groups and community groups.
- **Tenaga Kerja Sukarela** - Provides mentoring and monitoring services to business and community groups to support the implementation of above programmes.

In 2013 the budget for these programmes totalled IDR 378 billion (approximately AUD 37 million) and created over 120,000 short-term work opportunities. The bulk of programme funding is directed towards the programme titled "padat karya infrastruktur" (the public works programme for infrastructure) and the programme assessment therefore focuses its analysis this intervention. The following section reports the findings from the programme assessment across five areas that analyse the objective, scope, planning, implementation and post-implementation aspects of the programme.

### 6.2.1 Objective

In Indonesia, economic and employment goals often come together in the context of public works programmes, as such investments are seen to create both short-term during construction works and medium-to-long term jobs opportunities through accelerating local economic development. Indonesia has used public works programmes to achieve a variety of objectives, including the reduction of poverty, provision of social protection, promotion of job creation and economic development, as well as demand stabilization, improving connectivity, formal economy transition and environmental conservation.

Indonesia’s public works programme that is executed by the Ministry of Manpower and Transmigration incorporates a range of objectives. It seeks use labour based and labour intensive methods to build facilities and infrastructure in villages that support economic development and productivity gains. The primary objective of this public works programme is to boost aggregate employment through the creation of short-term work opportunities. The programme therefore has a target of creating 100,000 additional work opportunities per year for poor, unemployed and underemployed people. The second objective of the programme is to create assets that can support gains in productivity. Productivity gains may be associated with investment in infrastructure that promotes access to markets and services or through improved competencies associated with skills and on-the-job training. Based on these objectives, the programme applies a range of criteria in the selection of activities that it will support, in order to ensure that focus is given to labour intensity, local economic development and empowerment throughout its implementation.

One global criticism of public works programmes relates to their multiplicity of objectives. To further explain, it has been suggested that multiple objectives can reduce the overall impact of programmes, due to conflicting operational priorities that are related to differences in managerial and administrative requirements of particular objectives. Previous programme assessments in

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Indonesia have suggested a tension between the social transfer function and the asset creation objectives of public works programmes.\textsuperscript{228} While the assessment observed that the programme does have a number of objectives, the main challenge does not seem to come from multiple objectives, but from a governance context that has a plethora of other community based programmes that don’t hold the same standards as the public works programme. This creates confusion at the local level for planners and implementers. In addition, lobbying from various levels also creates tensions in the realization of the programme purpose.

Given that many people in Indonesia are engaged in low productivity work in the informal economy, a programme that boosts aggregate employment and supports productivity gains is highly suitable for the context. The objectives of Indonesia's public works programme are therefore prioritized and logical in accordance with the employment situation. However, the programme scope and the duration of work opportunities, as well as other implementation factors, limit the achievements of the programme.

6.2.2 Scope

The legal basis for the provision of public works programmes and related programmes in Indonesia is defined in Law No. 13 of 2003 on Labour. In particular, the law requires that:\textsuperscript{229}

- \textbf{Article 39:} The government is responsible for making efforts to extend job opportunities either within or outside of employment relationships.
- \textbf{Article 40, paragraph (1):} Extension of employment opportunities outside of employment relationships shall be undertaken through creation of productive and sustainable activities by efficient use of natural resource potentials, human resources, and effective practical technologies.
- \textbf{Article 40, paragraph (2):} Extension of employment opportunities as referred to under subsection (1) shall be undertaken through formation and development for the self-employed, the application of labour-intensive system, the application and development of effective practical technology, and efficient use of volunteers or other patterns that may encourage the creation of job opportunity extension.

Therefore, the terms of employment on public works programmes are generally considered to be outside employment relationships, which means that the conditions of employment offered on such programmes are defined by each programme rather than provided by an overarching framework or by Law No. 13 of 2003 on Labour. For instance, the Ministry of Manpower and Transmigration’s Public works Programme specifies the amount of the daily stipend and the number of work days to be provided to beneficiaries who work on the programme at the national level.\textsuperscript{230} The Ministry of Home Affair’s National Community Empowerment Programme (PNPM Mandiri) has a more flexible approach, which allows the village to propose payment of a stipend that is equivalent to the locally negotiated minimum wage as well as use of voluntary labour on its projects.\textsuperscript{231}

The parameters of Indonesia’s public works programme are specified at the national level. The programme is implemented on a project basis through district offices in selected villages. In 2013,


\textsuperscript{229} Republic of Indonesia (2003) Number 13 Year 2003 concerning manpower, Republic of Indonesia, Jakarta.


\textsuperscript{231} CMPW (2012) General Guidelines of the National Program for Community Empowerment (PNPM Mandiri), Coordinating Ministry for People’s Welfare, Jakarta.
there were a total of 1,783 projects and each district in Indonesia was allocated funding for the implementation of between one to five projects. There are 79,939 villages and 503 districts in Indonesia. Therefore, approximately 2 per cent of villages in Indonesia are allocated a project from the public works programme in any given year. While the programme is comparatively small, the administrative architecture of the programme is maintained and each district is able to rely on receiving a small number of projects annually. The projects may go to the same village or a new location in subsequent years.

The basic elements of a project of the public works programme for 2013 are detailed in the programme operation guidelines and include the following:

- Each project provides 80 persons with 30 days of paid work at a rate of IDR 45,000 for 5 hours of work per day. The 80 persons are divided into four teams of 20 people, and each team is then assigned a group leader who would be paid IDR 50,000 per day and a skilled worker who would be paid IDR 55,000 per day.
- The package budget includes: (i) provision for equipment renting, survey and design and a first aid kit, and (ii) allowances for officials, resource person for socialisation and transport allowances for field officers and others.

Therefore each project is designed to provide short term work opportunities for 88 persons for 30 days. The overall wage-income transfer of the public works programme for individuals is valued at IDR 1,350,000. The national average poverty line for per capita expenditure per month in rural areas was IDR 253,273 and urban areas was IDR 289,042 in 2013. Consequently, programme beneficiaries should be able to surpass the poverty line within six or seven days of participating on the programme. The daily stipend of IDR 45,000 is either at or slightly below a wage that is equivalent to existing provincial minimum wages that apply to formal economy workers. Therefore, the daily stipend of the public works programme provides a benefit that supports poverty reduction while causing little, if any, distortion in the labour market.

In 2013 the programme provided temporary work for 120,416 people (see below). The overall labour force was estimated at 120.3 million people in August 2013 and the number of people employed and unemployed was 112.8 million and 7.4 million people respectively. Therefore, the scope of the programme is only able to reach 0.1 per cent of the labour force or 1.6 per cent of the unemployed. This means that while the programme may support aggregate employment and support reductions in unemployment, its contribution is small. In such a context, the programme's objective of empowering the people and increasing productivity, which can have a greater contribution in the longer term, may become more important.

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233 BPS (2013) Trends of Selected Socio-Economic Indicators of Indonesia, August 2013, Badan Pusat Statistik, Jakarta.
235 AUD 1 = IDR 10,000
236 Equivalent to AUD 135.
237 BPS (2013) Trends of Selected Socio-Economic Indicators of Indonesia, August 2013, Badan Pusat Statistik, Jakarta.
Table 14: Overview of the programme and budget for the public works programmes

<table>
<thead>
<tr>
<th>Programme name</th>
<th>Unit</th>
<th>No.</th>
<th>IDR</th>
<th>Total IDR</th>
<th>Worker</th>
<th>Total Workers</th>
<th>Work days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure Project</td>
<td>Project</td>
<td>1025</td>
<td>252,650,000</td>
<td>258,966,250,000</td>
<td>88</td>
<td>90,200</td>
<td>1,804,000</td>
</tr>
<tr>
<td>Productive Project</td>
<td>Project</td>
<td>296</td>
<td>180,225,000</td>
<td>53,346,600,000</td>
<td>66</td>
<td>19,536</td>
<td>390,270</td>
</tr>
<tr>
<td>Appropriate technology</td>
<td>Project</td>
<td>290</td>
<td>139,000,000</td>
<td>40,310,000,000</td>
<td>20</td>
<td>5,800</td>
<td>28,000</td>
</tr>
<tr>
<td>Enterprise development</td>
<td>Project</td>
<td>172</td>
<td>139,000,000</td>
<td>23,908,000,000</td>
<td>20</td>
<td>3,440</td>
<td>17,200</td>
</tr>
<tr>
<td>Volunteering west</td>
<td>Person</td>
<td>1260</td>
<td>1,500,000</td>
<td>1,890,000,000</td>
<td>N/A</td>
<td>1,260</td>
<td>8,820</td>
</tr>
<tr>
<td>Volunteering east</td>
<td>Person</td>
<td>180</td>
<td>2,000,000</td>
<td>360,000,000</td>
<td>N/A</td>
<td>180</td>
<td>1,260</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td>378,780,850,000</td>
<td></td>
<td>N/A</td>
<td>120,416</td>
<td>2,249,550</td>
</tr>
</tbody>
</table>


Based on the analysis of the programme scope, Indonesia's public works programme is designed to offer short-term work opportunities that support gains in productivity using a project-based approach that is repeated annually. The scale of the programme is not determined on a demand basis and the entitlement is time-bound (not open ended). The legislative background to the programme indicates that the Government is responsible for making efforts to extend job opportunities either within or outside of employment relationships due to structural constraints in the condition of local economies that may result in poor purchasing power, higher unemployment and other failures in the labour market. The programme is therefore about supporting the functioning of the economy and the labour market. However, government budgetary constraints and its project-based approach to administration have kept the programme at a limited scale. This limits the role that the programme can play in addressing structural issues.

6.2.3 Planning

The parameters of the guidelines for the public works programme indicate that planning should be based on community needs, with consideration given to the unemployment situation, geographical location, social, cultural, and local potential. This framework therefore entails the combination of bottom-up and top-down planning approaches. The programme assessment therefore examined both the national and district planning phase of public works programme, and how these planning processes were coordinated with community priorities. This section considers issues related to political process, capacity and targeting, in further detail.

The "musrenbang" process functions as the framework for deciding on development activities in Indonesia. Musrenbang is the combination of two words in Bahasa Indonesia, namely, 'musyawarah' which means 'community discussion' and 'perencanaan pembangunan' meaning 'development planning'. The two words are combined to form the term musrenbang, which refers to community planning. The musrenbang process is a multi-stakeholder consultation process with the aim of

reaching an agreement on development priorities between communities and the government across village, district, provincial and national levels. The development planning agency facilitates, leads and manages the process at these different levels. The consultation process is held annually and is an amalgamation between participatory, bottom-up and top-down planning approaches. Community representatives are involved in the planning process through methods such as public hearings and participatory planning.

The extent to which the musrenbang process is democratic and effective in the identification of needs at different levels varies. The process has the potential to guide decisions regarding development in favour of the poorer segments of the population, however, lobbying from various groups, including elected officials, influences the outcomes of the process. While the musrenbang process promotes access, transparency and inclusiveness, it is still difficult for quality assurance mechanisms to guarantee the authenticity of this process. While a range of protocols and safeguards are followed during the planning and project selection processes, lobbying from officials at the village and district levels plays an influential role in decision making processes. Moreover, the transparency of the announcement of call for proposals between villages and district level government is also weak.

In terms of process, proposals are coordinated at the district level and approved by the head of the district (Bupati) who forwards them with recommendations for funding to the Ministry of Manpower and Transmigration at the national level. In some cases, proposals are sent to the Provincial Manpower office for funding. The proposals received at the national level are reviewed by a committee in February and March each year, and the results of the selection are communicated to the district and village thereafter. The implementation of the physical works normally takes place between May and November. The figure below explains the proposal submission mechanism further.

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241 USAID (2009) Musrenbang as a Key Driver In Effective Participatory Budgeting: Key Issues and Perspectives for Improvements, United States Agency for International Development, Jakarta.

Village governments design the proposals for the public works programme so that they are integrated with the developmental priorities of villages. Proposals are therefore typically related to the construction of assets rather than related to addressing structural issues associated with unemployment and underemployment. This creates a mismatch between the purposes of the programme at the policy level and how the programme is realized in the field. The majority of proposals submitted to the public works programme are related to road construction. Road infrastructure is generally viewed to be an investment that can benefit the whole community rather than being reserved for specific target groups. However, there are indications that some projects have been co-opted by elites. For example, some projects are proposed that open access to private land or private dwellings, and therefore, don’t benefit the whole community. Given the mandate of the Ministry of Manpower, officials from the Manpower District Office may be able to play a more active role in reducing the mismatch between proposals from the local level and the programme objective. In addition, these officials could play a more active role in ensuring that the workers that are selected to work on the project are from vulnerable groups within communities.

A related conceptual issue is that the framework of the public works programme sets a fixed budget for labour, materials and equipment usage, and does not allow for the costs to vary across proposals. This creates standards and homogeneity among projects that are implemented under the public works programme, but it also has some limitations. For example, the job creation potential of particular projects does not play a determining factor in project approval, nor is there an assessment of infrastructure needs within villages that are comparatively more labour intensive. Therefore, there is no competition. In order to improve the employment impact of projects implemented under the public works programme, the budget division between labour costs and equipment should not
be seen as fixed, and continued efforts should be made to increase the labour component and decrease the equipment component.

However, human resource capacities (both in terms of quantity and quality) to support the systematic and strategic review of proposals and reports from the public works programme is lacking. Skills for planning, monitoring and evaluation need to be strengthened in order to improve the programme’s effectiveness. Increased capacities are likely to strengthen quality control both in terms of proposal clearance and area targeting. For this to be achieved, ongoing investments need to be made in staff training in terms of project planning and administration. In addition, private sector consultancy services may be used to strengthen service provision.

The public works programme is a complex programme that requires a number of specific skill sets to ensure its effective implementation. Given human resource rotation within government and the need for further developing existing human resources, it is necessary to have clear understanding of existing capacities and needs for skill development to improve programme effectiveness. However, there is currently no documentation that provides an inventory of existing capacities for implementing the programme nor is there a strategic plan for building the Ministry's capacity for implementing the programme more effectively. Planning for human resource development would be useful for supporting programme improvements and also for strengthening motivation within the Ministry for implementing the programme more efficiently.

The public works programme reaches almost all districts across Indonesia. In such a framework, the spatial distribution of projects tends to be a priority, rather than a spatial approach to poverty targeting. There is a preference for sharing funding among regions and provinces rather than targeting specific disadvantaged areas. The programme’s geographic distribution is more pronounced than it was 13 years ago, however, the challenges associated with reaching pockets of unemployment and underemployment persist.242 The Ministry uses a range of planning tools to support the planning of programme allocations across districts, including the use of geographic information systems tools that provide understandings of the spatial distribution of unemployment, underemployment and poverty. However, this data is rarely available with detail below the district level, which makes it difficult ensure the efficient targeting of funds to villages that perform poorly across a range of socio-economic indicators. If such data were readily available, it could be used to support a more efficient spatial distribution of projects and result in a different spatial patterning of funding allocations to the current procedures. Therefore, it is important to strengthening planning tools and data that is used for planning, in order to address the employment promotion objectives of the programme more efficiently and improve the effectiveness of programme targeting.

In addition, using a range of technical tools in the planning process have provide a safeguard against influences from lobbyist. Standards can also be set that provides a benchmark for selection criteria. For example, villages may be required to have a certain rate of unemployment, underemployment or poverty in order to meet eligibility criteria for applying to the public works programme. Alternatively, youth unemployment or improving women’s participation in the labour force could be a criteria.

6.2.4 Implementation

Elements that are critical to the success of public works programmes during project implementation include the ability of those responsible for implementing the project to provide quality assurance.

Programme frameworks also need to be flexible and adaptable to local conditions. Most importantly, success during project implementation hinges upon the target beneficiary being included in the programme and the assets that are created through the programme need to support objectives associated with stimulating the economy. A programme assessment can provide a range of useful information across process-oriented information, however, the effectiveness of programmes at including target groups and the role of the asset will be assessed in chapters 6 and 7 that use a range of research instruments to look more at programme impact. Therefore, this section considers a range of issues associated with adaptability, safeguards and competencies.

While the public works programme is centrally designed, it is locally implemented in a flexible way and to a large extent adapted to local conditions. For example, this can be seen through division of the available jobs between more people than the prescribed number or by the lowering of wage levels. Considerable variety is shown across the projects, hence demonstrating real influence from the users. For example, the programme sets national standards for daily wages that are based on a five hour day, with remuneration at IDR 45,000. However, at the local level the rates of daily wages vary substantially, depending on the consensus between the head of village and the prospective workers, as well as the local prevailing minimum wage for informal economy workers. Many of the sampled locations applied piece rate approaches rather than daily wages to compensate workers during project implementation.

In this context, it may be better to acknowledge such trends and introduce more flexible arrangements that can support the regulation of the trend rather than allowing noncompliance to continue. Flexible arrangements that allow for the use of both time based and piece rate payment approaches may be allow on the programme to better adapt to local circumstances. However, safeguards will be needed to ensure that flexible conditions do not jeopardise beneficiaries' ability to receive a decent wage income transfer.

In addition to this trend, it needs to be acknowledged that infrastructure investment is in high demand within villages, and this need can lead to a tension related to the programme's purpose of addressing structural issues associated with unemployment and underemployment. For example, during focus groups discussions some villages reported the voluntary forfeiting of wages or the contribution of additional materials, equipment and labour for free in order to extend the scale of investment being made by the project. To further explain, in some locations workers had chosen to forgo wages and use the allocations to purchase additional inputs for supporting the infrastructure investment. Such phenomenon needs to consider obligation and responsibility, that is, who is “obligated” to contribute their free labour and what this means for the most vulnerable groups being able to access the wage income. While it is noted that the convenience benefits associated with infrastructure investment is a high motivating factor and a reason why people contribute their labour for free, this should not undermine the programme's objective and social function. Similar phenomenon is also observed on other village level programmes, such as PNPM. Research on PNPM has reported incidence of the daily wages of workers on infrastructure projects being deducted or there being expectations that workers would contribute their labour voluntarily. Research on PNPM Urban indicates that workers employed on non-project sites receive wages higher than those that are working for PNPM Urban, suggesting that the communities are subsidizing labour costs through providing voluntary labour.

The programme uses community targeting based approaches and the beneficiary selection process is typically lead by village government representatives. The concept of community targeting involves the community in the identification of vulnerable households that should be targeted by the

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However, often times the community tends to view village level programmes as interventions that support community development, rather than poverty reduction or unemployment reduction, and subsequently programme targets are not applied as intended. In general, the beneficiaries of the public works programme, particularly the infrastructure component, tended to be men rather than women. However, there was considerable geographical variation in the inclusion of women. For instance, in Bali almost 50 per cent of workers were women, while in Kalimantan and Java workers were predominantly male. In some locations there was a preference for giving the employment opportunities to the heads of households. The programme does not set quotas to ensure the inclusions of vulnerable groups, therefore variation in outcomes is expected. However, quotas could be introduced to promote women's participation in the planning processes and in the work opportunities that are generated through the programme. Priority may also be given other disadvantaged groups such as youth and people with disabilities. To support this, district officials may need to play a more active role in ensuring that the most vulnerable groups in villages have access to the programme. In addition, in order to support women's participation in the programme, flexible working hours or task-based work options may be needed (as noted above). These measures should need to strengthen transparency and improve poverty targeting outcomes.

While enhancing the role of district officials is likely to have beneficial effects, is it noted that programmes that seek to invest in village level infrastructure have to grapple with existing social structures and hierarchy in order to be implemented effectively. Findings from assessments of similar village level programmes have found that even if individual programmes are successful in terms of participation, transparency and accountability, these impacts often tend to be confined to the programme itself rather than the programme having a broader impact on village administration or on how other village level programmes are implemented.

Quality control services are provided by the district level officials and this involves representatives from the manpower office as well as a technical line agencies or private consultants. For example, if the project will construct a road, an official from the public works office is normally engaged to support the design and supervision of the project. However, ensuring adequate competencies to implement technical projects is an ongoing challenge, particularly as budget for accessing external expertise is very limited. At district level, the availability of technical training on infrastructure investment is limited. Some districts have been able to send staff from the district manpower office to the National Vocational Training Centre of the Ministry of Public Works in Bandung for training on infrastructure works. However, this training is only held on an adhoc basis due to funding limitations.

Whilst the roads constructed under the public works programme do not need to be of the highest standard, many of the roads that are supported through the project are not constructed to a quality standard that allows them to be maintained. For example, inadequate drainage was often provided for the design of the structure. The long-term economic benefits of investing in the asset may therefore be easily lost. With standard designs, good quality control and supervision, the quality of the roads can be improved and the life of the asset extended. Therefore, increasing technical expertise is fundamental to improving programme implementation. Training and re-fresher courses on village level infrastructure investment should be provided to district manpower officials systematically. Partnerships with technical line ministries need to be strengthened so that technical expertises on engineering can easily sourced and asset quality improved.

244 MOMT (2013) General guideline for the public works programme for 2013, Ministry of Manpower and Transmigration, Jakarta.

In addition, officials from the manpower office also have limited skills and capacities in providing support on the social safeguard side of the project. Ability to provide explanations on how the programme supports the functioning of the labour market were also limited. This makes it difficult to realise the programme's role in addressing structural issues associated with unemployment and underemployment. As the programme purpose is designed to boost aggregate employment, improve productivity and support formal economy transition, it is important that officials have the capacity to be able to support the strategic function of the programme as a labour market programme and as strategic intervention within employment policy.

Central to this is building the capacity of officials so that they can more effectively provide quality assurance across a range of safeguards and prevent corruption. Social safeguards can be introduced or strengthened in a number of areas, such as procurement, complaint handling, record keeping, targeting, environmental management and occupational health and safety. For example, there are a range of environmental safeguards that have been developed in Indonesia, which apply to a range of development activities. In particular, safeguards include environmental impact assessments, environmental management efforts and environmental monitoring efforts. Activities implemented by the public works programme are not obligated to follow these protocols. However, they are required to prepare an affidavit regarding environmental management and monitoring that indicates measures that projects apply to minimise activities that may potentially be harmful to the environment. In order to strengthen efforts on sustainable environmental management, guidelines from the existing tools could be adapted for the purpose of the programme. This is important, as the programme is operating in remote areas and undertakes small scale activities, such as land clearing, that have an environmental impact. In particular, Indonesia has a large spans of tropical peat land and rainforest that are vulnerable to degradation and these assets need to be well managed through ecosystem based approaches. Therefore, projects that are implemented in these areas may need additional safeguards to ensure that efforts support development that is sustainable from social, economic and environmental perspectives.

6.2.5 Post implementation

Elements that are critical to the success of public works programmes in the short and medium term relate three main vectors, including:

- The effectiveness of the wage income at smoothing consumption for target households;
- The quality, sustainability and utility of the assets created;
- The effectiveness of support for human resource development.

The contribution of a public works programme to the national social protection framework will be dependent on the programme's performance on these three areas. A public works programme has the potential to provide transformative social protection functions and social assistance functions. Indonesia's public works programme seeks to support the accumulation of financial capital, productive capital and human capital. This can be achieved if the wage allows for accumulation beyond daily subsistence needs, if the assets support livelihood improvements, and if strengthened capacities can open new livelihood opportunities.

246 Ministry of Environment (2010) Filtering guidance of business plan types and/or activities must be completed in conjunction with environmental management and monitoring efforts and statement of ability in environmental management and monitoring, Regulation of the Ministry of Environment, No 13, 2010.
These features can only be realised if a number of parameters are in place. For example, if a public works programme includes scope for human capital development, the beneficiaries may benefit from access to public works services that can support job search and placement or they may benefit from access to other training programmes, particularly on financial literacy and enterprise development, that can further support capacity development and ensure that new skills do not atrophy. If the public works programme is supporting the development of assets, it is essential that maintenance strategies be in place to ensure that the gains associated with investment do not deteriorate. Finally, quality assurance mechanisms are needed to monitor and evaluate outcomes, in order to ensure the ongoing efficacy of the programme. Therefore, this section considers issues related to maintenance, linkages with other services, and monitoring systems in further detail.

A range of factors impact on asset maintenance, including the initial condition of the asset, as well as commitment and capacity. Limited support from technicians and limited independent supervision during construction periods means that there are instances where the assets created under the programme are not in a maintainable condition when they are handed over to the village government at the end of the project cycle. Asset maintenance is rarely discussed in the planning and implementation phases of the programme and government officials from the district level do not have a responsibility to monitor asset quality after the asset is handed over. If an asset is low quality from the outset, its contribution to local economic development is likely to rapidly deplete.

Firm commitment and detailed plans from villages on asset maintenance are needed to ensure the sustainability of the infrastructure investments made under the programme. The maintenance programme should be monitored by government officials every three-to-six months. Such safeguards would help to ensure that the investments help to stimulate the local economy and that the improved access to markets and social services is maintained. Assessment of the village's capacity to undertake asset maintenance should be included in the formulation phase of projects, with training on how to conduct routine maintenance provided for two days after the asset has been constructed if needed.

The Ministry has been active in implementing measures to improve the quality of the assets created, particularly through allocating a proportion of the project budget for the hiring of light equipment from 2013 onwards. However, asset quality can be further strengthened through improving monitoring systems and through provision of technical support that can provide greater assurance on asset quality.

In regard to monitoring, evaluation and reporting mechanisms and systems, it was found that the data presented in post implementation reports did not always consistently reflect what occurred on project sites. For example issues related to piece rate wages or the forfeiting of wages were not visible in the reports. In addition, report templates do not include a section for lessons learned, and therefore field staff are unable to note issues and challenges of the programme and make suggestions for development opportunities. Lessons learnt should be captured in reporting templates and systematically reviewed annually to support programme development. Currently, district level officials informally use their own lessons learned to inform future planning at the district level. However, this knowledge is not transferred and easily lost with the mobility of staff.

Improved monitoring, evaluation and reporting mechanisms and systems are needed for greater transparency at village, district and national levels. Variables that are collected during reporting need to be strengthened to provide further insight on how the programme is functioning within Indonesia's social protection framework. The currently monitoring, evaluation and reporting system is not integrated through a digital knowledge management system. This means that information and knowledge on the programme can be rapidly lost. In addition, independent organizations do not
undertake social audits to support the verification of programme achievements. To strengthen programme transparency in the future, it will be important to ensure that monitoring and evaluation is coordinated through a knowledge management system. To support future planning, the locations of projects should be clearly mapped electronically to allow for improved monitoring of investment outcomes, as well as improved coordination with other complementary labour market and poverty reduction programmes.

It is critical that programmes that operate within Indonesia’s social protection framework have coordination mechanisms in order to create a social protection floor\(^{249}\) and provide strategic contributions to employment policy. However, the programme assessment found that there are limited connections that exist between the public works programme and the other labour market programmes of the Ministry of Manpower and Transmigration as well as other social protection programmes of the Government (such as PNPM, PPIP, PKH, BOS). The public works programme provides work opportunities to unemployed and vulnerable workers and could therefore be used as a platform to access the network of social protection programmes currently implemented in Indonesia. For example, participants of the public works programme could be supported to enrol in the public works service.

It is important to create such linkages, as the public works programme provides only short-term job opportunities for a limited number of unemployed, underemployed and vulnerable people. There is a high risk that the short-term work opportunities offered through the public works programme will provide only a "blip" in the overall livelihood situation of programme beneficiaries. However, this may be able to be addressed by strengthening linkages with other programmes. In addition, the introduction of mutual obligations, such as coupling job search requirements with participation in the public works programme, may strengthen employment outcomes. Moreover, developing such linkages is likely to strengthen the strategic nature of the role that public works programmes play in employment policy. As a way forward, the Ministry could formulate a pilot that supports cooperation between the public works programme and another programme within the Ministry, in order to provide recommendations for strengthening coordination and building synergies. Build partnerships with similar community based infrastructure programmes that are implemented by other ministries could be explored through joint missions, technical reviews and piloting initiatives.

6.3 Discussion of findings

A programme assessment provides useful framework for understanding process-oriented aspects of programme execution. It also allows researchers to distil differences between conceptual and performance issues, so that more comprehensive understandings of effectiveness can be constructed. The programme assessment provides insight on a number of issues that impact upon the performance of the public works programme, including factors that relate to budget, administration, politics and human resource capacity. The programme assessment tool is therefore an important part of a comprehensive monitoring and evaluation framework. A contribution of this thesis to the body of literature therefore relates to an adaptation of a programme assessment framework for the context of public works programmes.

Indonesia’s public works programme incorporates a range of objectives, with the primary objective relating to boosting aggregate employment through the creation of short-term work opportunities and the secondary objective relating to supporting gains in productivity. Given that low productivity and the informal economy are some of the major challenges of the labour market in Indonesia, a programme that boosts aggregate employment and supports productivity gains is highly suitable.

However, the limited scope of the programme and its project based implementation approach restricts the contribution that it can make to improve the overall employment situation in Indonesia.

Factors that influence the planning phases of the public works programme include political process, human resource capacities and mechanisms for targeting. The programme assessment considered how these factors play a role in bottom-up and top-down planning processes that take place. It was found that lobbying at various levels plays an influential role in decision making processes. Proposals for projects follow a bottom up planning approach, in that they are prepared by village governments and are therefore aligned with village priorities for local development. However in some cases this is associated with a tension between the employment policy objective of the programme and how the programme is realized in the field. Moreover, the programme provides a framework that fixes budget allocations across expenditure categories. This means that the programme does not provide incentives for project proposals to optimize their job creation potential. While it would be optimal to have a flexible budget framework, the human resource capacities to support the systematic and strategic review functions that would be required in this context is limited. In terms of targeting, the programme faces pressure to distribute its projects across all districts in Indonesia, and there are significant challenges to adopting a spatial approach to poverty targeting. For example, the limited availability of data on employment below the district level is a constraint to adopting more efficient targeting approaches. It is therefore important that planning tools and data sets are strengthened in order to provide more robust information for planners, which can be used to safeguard against influences from lobbyist. These findings are important as they raise awareness on a range of reforms that policy makers may consider adopting in order to improve the employment impact of their programme.

Factors that influence implementation success are largely related to quality assurance mechanisms, particularly in the area of programme adaptability or flexibility to local conditions, as well as social and technical safeguards implementation, and human resource competencies. The programme assessment found that the programme is implemented in a flexible manner at the local level, but that further reform is needed, particularly in the area of wage payments, in order to promote consistency with the purpose of the programme. Disparities were observed in the inclusion of vulnerable groups during project implementation, with space for district level officials to play a greater role in quality assurance mechanisms through the adoption of quotas, among other strategies. Project implementation fosters cooperation between government agencies, however, asset quality remains a key challenge. Increasing technical expertise is fundamental to improving programme implementation. In addition, it is equally important to strengthen management skills and knowledge on the functioning of the labour market. Central to this is building the capacity for quality assurance across a range of safeguards to prevent corruption. In particular, social safeguards can be introduced or strengthened in areas such as procurement, complaint handling, record keeping, targeting, environmental management and occupational health and safety.

Factors that determine the success of public works programmes in the medium-to-long term relate to the effectiveness of the wage income at smoothing consumption, the quality and maintenance of the asset, and the effectiveness of capacity building efforts at translating into livelihood gains. These features can only be realised if a number of programmatic parameters are in place and working effectively, namely maintenance frameworks, linkages with other services, and monitoring systems. The programme assessment found that maintenance systems were not well formed, that the reporting framework should be strengthened to support transparency and knowledge management, and that linkages with other services are currently limited and need to be strengthened to improve the sustainability of livelihood development. It is important that policy makers respond to this situation, as it raises issues related to the sustainability of interventions.
A range of key themes arise from the programme assessment, including the critical role of human resources in supporting programme execution, the importance of coordination mechanisms across programmes for strengthening Indonesia’s social protection floor, the need for a continual strengthening of safeguards to support transparency and accountability, and the need for policy and planning to incorporate short, medium and long term needs in programmes that are providing investments in assets and human resources. In addition, monitoring, evaluation and reporting systems provide the foundations of accountability and therefore require systematic investment so that the effectiveness and efficiency of interventions can be enhanced. Finally, the largely informal nature of the economy and labour market, as well as the persistence of low productivity, creates barriers to transparency and accountability. Weakness across these features indicate that there are high risks that contributions from policy interventions will rapidly deplete and that realizing local economic development will be very challenging.

The benefit of the programme assessment methodology is that it is a holistic assessment procedure. It allows for a systematic, yet nuanced assessment of programmes. Programme assessment methods need to be adapted to the context. A contribution of this thesis is therefore the adaptation and testing of this methodology for the purpose of assessing public works programmes.

In summary, the programme assessment found that improvements in quality control on both the social safeguards and on the infrastructure standards are required in order to optimise the short and long term of developmental impacts of the programme. Investments in planning, monitoring, reporting and evaluation processes are needed to improve programme transparency and effectiveness. The findings from the programme assessment also highlight a need for strengthening cooperation with other government social protection and livelihood development programmes.

On a positive note, the Ministry of Manpower and Transmigration continually renews its framework for the public works programme on an annual basis. Reforms that are introduced seek to strengthen both the employment and local economic development outcomes of the programme. Therefore, many of the findings from this programme assessment can be used by the Ministry to strengthen its programme in the future.

A general issue with public works programmes is that the monitoring and evaluation frameworks of these programmes often focus on achievements at the outcome level rather than achievements at the impact level. To further explain, programmes are often reported to be effective if they are able to reach a job creation or training target, rather than measures that shed light on the direct or indirect contribution to poverty reduction or employment that are associated with programme participation. Therefore, the following two chapters will look at impact in more detail.

The short-term impact and counter-cyclical effectiveness of public works programmes also needs to be understood. The existing monitoring and evaluation frameworks of these programmes provide only limited insight and further research is needed to understand how such programmes provide safety nets and what the quality of these safety nets are. It would be beneficial to gain insight into beneficiaries that are being drawn into these programmes and valuable to better understand the quality of employment that is being provided and how the programmes contribute to social protection. The following chapter looks into these issues within the context of the job creation component of the 2009 fiscal stimulus package.

Chapter 7: A survey of the job creation component of Indonesia’s 2009 fiscal stimulus

While the programme assessment provided in chapter 5 offers useful information for understanding process-oriented aspects of programme execution, it is just as important to understand programme impact across a series of measures that can provide insight on performance vis-a-vis objective. In the case of public employment programmes, it is important to understand the short-term impact and counter-cyclical effectiveness, as well as the programme’s inclusiveness of vulnerable groups and impact on local economic development. The existing monitoring and evaluation frameworks of many public employment programmes in Indonesia provide only limited insight across these aspects. Therefore, further research in this area is warranted in order to understand how such programmes provide safety nets together with assessing the quality of these safety nets.

This chapter therefore provides insights into the effectiveness and efficiency of Indonesia’s public employment programmes, in order develop better understandings of the ability of the Government to administer job creation programmes in the context of financial and economic downturn. Particular focus is given to understanding employment quality, the inclusion of vulnerable groups and the social protection function of such programmes. This chapter looks into these issues within the context of the job creation component of Indonesia’s 2009 fiscal stimulus package, which used the Government’s existing programme architecture to provide a discretionary policy response to an economic crisis and therefore stabilize aggregate demand through channelling additional government budgetary resources to these programmes. This survey is important as it was the only survey that was completed among the beneficiaries of the 2009 fiscal stimulus package. The results of this survey therefore represent an important contribution on two front, namely: i) an assessment of programme implementation effectiveness, and, ii) a source of evidence for policy makers, which they may use to support policy reform or the extension / expansion of such programmes in the future.

In order to set the scene, section 7.1 of this chapter provides an overview of Indonesia’s 2009 fiscal stimulus package, with focus given to the job creation component of the programme. Section 7.2 presents the methodology that was developed to analyse the effectiveness of the job creation component of the fiscal stimulus. Section 7.3 presents the findings from analysis of the work opportunities created under fiscal stimulus package by examining the profile of workers’ and their households, local community’s participation, employment conditions, workers’ previous labour market experience and their savings and debt trends. Section 7.4 discusses the findings from the survey in more detail. This chapter therefore sheds light on the inclusiveness of public employment programmes, while the following chapter focuses more on how such programmes stimulate local development.

7.1 Response to the global financial crisis

During the latter part of 2008 the consequences of the Global Financial and Economic Crisis of 2008-2009 began to show signs of penetrating into the Indonesian economy. Economic growth deteriorated from an average of 7.1 percentage points to 5.2 percentage points in the fourth quarter of 2008. Growth projections for the following years were subsequently revised downward and in 2009 the GDP growth target was set at 4.3 percentage points. Largely due to a declining economic outlook in 2008,

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252 The fiscal stimulus package was announced in the lead up to the April 2009 national legislative and July 2009 presidential elections. Incumbent President Susilo Bambang Yudhoyono trumpeted the programmes and his broader stewardship of the
the Government of Indonesia announced a stimulus package worth IDR 73.2 trillion\(^{253}\) in January 2009, which was equivalent to 1.4 per cent of GDP.\(^{254}\) The fiscal stimulus package was one of the smallest in size among G20 countries and considerably smaller than the stimulus packages of China, Thailand, Malaysia and Vietnam.\(^{255}\) It was financed through unused funds from the previous year's government budget and through raising capital through selling government bonds in the international bond market.

The fiscal stimulus package comprised of three core components that sought to maintain purchasing power, prevent job loss and accelerate local development.\(^{256}\) The key instruments that were used included a selection of tax cuts, subsidies and increased spending on infrastructure through a range of government job creation employment programmes. Tax cuts accounted for approximately 77.2 per cent of the package, while infrastructure spending accounted for 16.3 per cent of spending. The composition of this fiscal stimulus package was quite different from other stimulus packages in the region and indicative of the Indonesia's priority to maintain purchasing power, stimulate domestic demand and to support the private sector.\(^{257}\) By the end of 2009, the Government had realised 83.8 per cent of its targeted expenditure and injected an additional IDR 61.4 trillion into the economy (see table 15).

### Table 15: Composition of the 2009 fiscal stimulus package (IDR '000,000,000)

<table>
<thead>
<tr>
<th>Fiscal stimulus component</th>
<th>Fiscal stimulus instrument</th>
<th>Budget allocation</th>
<th>Budget realisation</th>
<th>Per cent realisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain and improve purchasing power</td>
<td>Personal income tax cut</td>
<td>24500.0</td>
<td>19526.7</td>
<td>79.9</td>
</tr>
<tr>
<td></td>
<td>Value added tax cut</td>
<td>1250.0</td>
<td>828.2</td>
<td>61.4</td>
</tr>
<tr>
<td>Prevent employees' contract termination and improve product competitiveness</td>
<td>Employee income tax cut</td>
<td>6500.0</td>
<td>5180.6</td>
<td>79.9</td>
</tr>
<tr>
<td></td>
<td>Corporate income tax cut</td>
<td>19300.0</td>
<td>19300.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Value added tax cut</td>
<td>2500.0</td>
<td>1006.7</td>
<td>40.27</td>
</tr>
<tr>
<td></td>
<td>Tariff import tax cut</td>
<td>2500.0</td>
<td>7.2</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>Subsidy</td>
<td>4172.8</td>
<td>4157.8</td>
<td>99.64</td>
</tr>
<tr>
<td></td>
<td>Subsidy to SOEs</td>
<td>500.0</td>
<td>500.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Increase investment in labour intensive infrastructure</td>
<td>Public Works</td>
<td>6601.2</td>
<td>6433.4</td>
<td>97.5</td>
</tr>
<tr>
<td></td>
<td>Transport</td>
<td>2198.8</td>
<td>2079.7</td>
<td>94.6</td>
</tr>
<tr>
<td></td>
<td>Energy and mineral resources</td>
<td>500.0</td>
<td>492.4</td>
<td>98.5</td>
</tr>
<tr>
<td></td>
<td>Public Housing</td>
<td>500.0</td>
<td>493.9</td>
<td>98.8</td>
</tr>
<tr>
<td></td>
<td>Trade</td>
<td>315.0</td>
<td>289.2</td>
<td>91.8</td>
</tr>
<tr>
<td></td>
<td>Agriculture and fisheries</td>
<td>650.0</td>
<td>253.3</td>
<td>84.4</td>
</tr>
<tr>
<td></td>
<td>Labour and transmigration</td>
<td>300.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Health</td>
<td>150.0</td>
<td>149.79</td>
<td>99.9</td>
</tr>
<tr>
<td></td>
<td>PNPM</td>
<td>601.5</td>
<td>601.5</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Cooperatives and SMEs</td>
<td>120.0</td>
<td>120.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>73,259.3</td>
<td>61,420.4</td>
<td>83.8</td>
</tr>
</tbody>
</table>

 Indonesian economy through the 2008 global credit crisis as a reason why he should be elected. Some of Yudhoyono's critics, however, suggest that the programmes amounted to vote buying ahead of the election.

\(^{253}\) Approximately AUD 7.3 billion; IDR 10,000 = Approximately AUD 1.


The infrastructure component of the stimulus package was worth IDR 12 trillion and was to create an additional one million short-term work opportunities through upscaling the budget of a range of existing programmes that were administered across ten ministries. Each of these programmes was to use a range of labour intensive and labour based approaches to invest in infrastructure that would provide short-term work opportunities and stimulate local economic development.

What was important for Indonesia was using this stimulus to not only respond to the economic downturn, but to increase the resilience of the overall economy and to create jobs. Therefore, policy makers chose to direct resources to investments that had a high labour to capital ratio, including gravel roads, irrigation and flood protection infrastructure investments, which could be implemented through the Ministry of Public Works. Table 16 outlines the employment creation targets of the fiscal stimulus package by ministerial allocation (full-time equivalent (FTE) for 12 months). The employment estimates were generated based on best practice assumptions from implementation of previous programmes. For example, it was assumed that approximately 30 per cent of the budget for public works programmes would go towards the wages of low and unskilled labourers. The infrastructure component of the fiscal stimulus package was expected to create an additional one million short term jobs.

<table>
<thead>
<tr>
<th>Government Ministry/Department</th>
<th>Budget allocation IDR billion</th>
<th>% of total</th>
<th>No. jobs to be created (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public works</td>
<td>6601</td>
<td>55.3%</td>
<td>944,170</td>
</tr>
<tr>
<td>– Centre</td>
<td>3617</td>
<td>30.3%</td>
<td>259,375</td>
</tr>
<tr>
<td>– Regional</td>
<td>2984</td>
<td>25.0%</td>
<td>684,795</td>
</tr>
<tr>
<td>Transport</td>
<td>2198</td>
<td>18.4%</td>
<td>45,962</td>
</tr>
<tr>
<td>Energy and mineral resources</td>
<td>500</td>
<td>4.2%</td>
<td>N/A</td>
</tr>
<tr>
<td>Public Housing</td>
<td>500</td>
<td>4.2%</td>
<td>N/A</td>
</tr>
<tr>
<td>Agriculture and fisheries</td>
<td>650</td>
<td>5.4%</td>
<td>12,450</td>
</tr>
<tr>
<td>Labour and transmigration</td>
<td>300</td>
<td>2.5%</td>
<td>8,300</td>
</tr>
<tr>
<td>Health</td>
<td>150</td>
<td>1.3%</td>
<td>400</td>
</tr>
<tr>
<td>Trade</td>
<td>315</td>
<td>2.6%</td>
<td>5,150</td>
</tr>
<tr>
<td>Cooperatives and SMEs</td>
<td>120</td>
<td>1.0%</td>
<td>5,720</td>
</tr>
<tr>
<td>PNPM</td>
<td>601.5</td>
<td>5.0%</td>
<td>8,300</td>
</tr>
<tr>
<td>Total</td>
<td>11,935.5</td>
<td>100.0%</td>
<td>1,030,452</td>
</tr>
</tbody>
</table>


Interestingly, in the response to the 1997-1998 Asian Financial Crisis, Indonesia also up-scaled a number of programmes to supplement the purchasing power of poor households and to stimulate local economic development.  

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economic development. The programmes included a community block grant programme (Kecamatan Development Programme) implemented through the Ministry of Home Affairs, switching from capital intensive to labour intensive approaches to infrastructure investment through the Ministry of Public Works, and upscaling the Ministry of Manpower and Transmigration's public employment programme. Therefore, many similarities can be observed between the crisis response programmes that were implemented in 1997-1998 and the Fiscal Stimulus Package of 2009. In addition, these trends also illustrate that Indonesia has a long history of using a range of programmes that create jobs at the local level to provide macroeconomic functions and support demand stabilization.

Due to proactive macroeconomic policies and previous reforms that were implemented after the Asian Financial Crisis, Indonesia was able to exceed its GDP growth target and achieved an average growth rate of 4.5 percentage points in 2009. The favourable growth outcomes have been attributed to the large portion of GDP (approximately 58.6 per cent) that is derived from household consumption and a comparatively low dependency on exports, as well as the use of fiscal stimulus to stimulate aggregate demand. The following sections therefore look more closely at the fiscal stimulus programme, particularly the job creation component, in order to understand more about its impacts and effectiveness.

### 7.2 Methodology

The overarching purpose of this research was to identify the benefits and/or effects of the job creation component of Indonesia’s 2009 fiscal stimulus package. This required developing an understanding of who the programme beneficiaries were and ascertaining information about their recent labour market experience, within the framework of programme design and the contextual factors influencing implementation. Guiding questions focused on inclusiveness and quality of the job opportunities as well as policy effectiveness and targeting. The methodological tool selected to examine the research question involved a survey. In particular, a survey instrument adapted from Statistics Indonesia questionnaires was determined to be the most appropriate approach, as such an approach follows standard practices for generating employment statistics in Indonesia.

#### 7.2.1 Research approach

A questionnaire was developed based on surveys previously implemented by the ILO’s Employment Intensive Investment Programme, as well as Indonesia’s labour force survey (SAKERNAS) and the national socio-economic survey (SUSENAS). The key issues to be investigated through the questionnaire included:

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261 Sumarto, Suryahadi and Pritcheet, 2000


263 Due to the relatively closed nature of Indonesia’s economy, volatility in global financial markets had a limited impact on the local financial institutions. Non-performing loans were at a low and capital adequacy ratios were well above requirements. The main entry points for contagion were therefore associated with a tightening on access to credit for small and medium sized enterprises from national banks that were becoming more stringent in loans criteria as well as the tightening of access to credit in foreign markets. In response the Bank of Indonesia lowered interest rates and injected additional liquidity into the banking sector.
Individual and household characteristics: demographic composition; educational attainment; savings and debt. This provided insight on the degree to which vulnerable groups were drawn into the programme.

Nature of the work opportunity: the average number of work days per work opportunity; wage range; distribution of work opportunities in the community; source of labour market information. This provided insight into the dynamics of the job creation programme.

Recent labour market history: labour transfer (occupation/sector); recent employment history; previous wage rates; future plans. This provided insight into worker vulnerability and strategies for improving employment outcomes.

The survey was conducted with the direct beneficiaries of the job creation component of the fiscal stimulus that was implemented through the Ministry of Public Works. Baseline data on the programme's beneficiaries was not available and therefore some retrospective questions were asked in the survey questionnaire. In addition, it was not possible construct the sample using a "control' and "treatment" comparative approach due to resource constraints, therefore the survey results are reported by looking at differences among beneficiary groups.

7.2.2 Sample selection

Information on the locations of projects funded by the fiscal stimulus was provided by the Ministry of Public Works for four selected districts in two provinces, namely, Banten and West Java. The two provinces were chosen as the development indicators of Banten and West Java tend to lie close to Indonesia’s mean. For example, in 2007 the average human development index score for Indonesia was 70.6, with scores ranging between 63.4 and 76.6. The scores of Banten and West Java were close to the mean, being 69.3 and 70.7 respectively.264

Project sites to be sampled were selected based on a stratified sampling strategy, which considered project size, project type, funding for local or national levels, and geographic location.265 In total there were 74 projects across 4 districts that formed the survey population (see table 17). 32 per cent (n = 24) of projects that were funded by the fiscal stimulus within the four districts were included in the survey sample. The stratification represented as much as possible the types of activities being implemented across the portfolio of investments and the relative size (number and budget) of the investments in each of the four districts. For example, 62 per cent of projects funded were for road development, therefore a larger number of roads projects were included in the sample.

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264 BPS (2009)
265 Consolidated information about the projects and investments under the 2009 FSP in the four selected provinces, based on information obtained from the Bureau of Planning of the Ministry of Public Works is provided in Annex I.
Table 17: Fiscal stimulus projects by district, budget allocation and project type

<table>
<thead>
<tr>
<th>District</th>
<th>Water</th>
<th>Human settlement</th>
<th>Roads</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
<td>Per cent</td>
</tr>
<tr>
<td>Bekasi</td>
<td>2</td>
<td>2.70</td>
<td>4.00</td>
<td>5.41</td>
</tr>
<tr>
<td>Bogor</td>
<td>1</td>
<td>1.35</td>
<td>6.00</td>
<td>8.11</td>
</tr>
<tr>
<td>Lebak</td>
<td>2</td>
<td>2.70</td>
<td>16.00</td>
<td>21.62</td>
</tr>
<tr>
<td>Tangerang</td>
<td>15</td>
<td>20.27</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>27.03</td>
<td>26.00</td>
<td>35.14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>District</th>
<th>Water</th>
<th>Human settlement</th>
<th>Roads</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IDR*</td>
<td>Per cent</td>
<td>IDR*</td>
<td>Per cent</td>
</tr>
<tr>
<td>Bekasi</td>
<td>6250</td>
<td>3.07</td>
<td>2952</td>
<td>1.45</td>
</tr>
<tr>
<td>Bogor</td>
<td>2500</td>
<td>1.23</td>
<td>12949</td>
<td>6.36</td>
</tr>
<tr>
<td>Lebak</td>
<td>2432</td>
<td>1.19</td>
<td>29531</td>
<td>14.50</td>
</tr>
<tr>
<td>Tangerang</td>
<td>21427</td>
<td>10.52</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>32610</td>
<td>16.01</td>
<td>45433</td>
<td>22.30</td>
</tr>
</tbody>
</table>

Source: Ministry of Public Works (2009) Fiscal stimulus programme and budget, Ministry of Public Works, Jakarta (unpublished); * Denotes IDR'000,000

A lack of up-to-date information on activities meant that project sites that were preselected in the sampling procedure had to be adjusted in situ. Moreover, at the time of data collection most projects (90 per cent) had already finished. Thus there was difficulty in accessing some workers as some projects had employed both local workers and workers from outside the district and province. Enumerators traced these workers through the muster rolls of contractors to locations as far as Brebes in Central Java.

Random sampling of workers prior to commencement of data collection was not possible. Lists had to be obtained from local leaders, public works officials, contractors or the work site. The sampling of workers was therefore undertaken in situ. In spite of the aforementioned challenges, the quota sample size for each project was reached. The total sample size was 429 (see table 18). The minimum number of workers interviewed per project site was four and the maximum number was 21. For projects where activities were on-going, workers who were present on the work-site were randomly selected. For works that had been completed, the local village leaders and/or contractors were contacted in order to access the sample.

Table 18: Sample size by district and project type

<table>
<thead>
<tr>
<th>District</th>
<th>Water</th>
<th>Human settlement</th>
<th>Roads</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per cent</td>
<td>Per cent</td>
<td>Per cent</td>
<td>No. of projects</td>
</tr>
<tr>
<td>Bekasi</td>
<td>8.16</td>
<td>0.47</td>
<td>10.26</td>
<td>5</td>
</tr>
<tr>
<td>Bogor</td>
<td>3.03</td>
<td>7.93</td>
<td>38.00</td>
<td>10</td>
</tr>
<tr>
<td>Lebak</td>
<td>0.47</td>
<td>0.47</td>
<td>6.99</td>
<td>4</td>
</tr>
<tr>
<td>Tangerang</td>
<td>6.99</td>
<td>0.00</td>
<td>17.25</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>18.65</td>
<td>8.86</td>
<td>72.49</td>
<td>24</td>
</tr>
</tbody>
</table>

Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste
Descriptive techniques (cross-tabulations) were used to analyze the survey data. To analyze the level of congruency between the programme’s inclusiveness of poor households, population-weighted household income deciles, using Indonesia’s national socio-economic survey (SUSENAS) from August 2008 were derived for Java.\textsuperscript{266} 71.33 per cent (n = 306) of the sample came from the poor median of households in Indonesia, while 28.67 per cent (n = 28.67) came from the more affluent median of households. Where appropriate the data was also analyzed by project type and by geographic location, in order to explore the differences in participation and programme outcomes. 24.01 per cent (n = 103) of workers came from urban households and 75.99 per cent (n = 326) came from rural households.

### Findings from the survey of the fiscal stimulus programme

The fiscal stimulus package was designed to provide support to vulnerable groups of the working age population and to temporarily boost demand in the context of an economic downturn. As the job creation component of the fiscal stimulus package was a crisis response programme that was developed in a relatively short period of time, a clear social target for the receipt of the social assistance was not identified. However, it would be expected that the wage targeting mechanism of such an initiative would see the majority of the work opportunities going to poorer households or unemployed/underemployed workers.

The following sections analyze the results of the survey conducted with the beneficiaries of the fiscal stimulus package by considering the profile of workers' and their households, the participation of the local community in the project, employment conditions on the project, workers' previous labour market experience and their savings and debt trends.

#### Profile of the workers’ households

The structure of the household, including the size, income and the number of wage-earners are important factors to be considered when assessing the effectiveness and efficiency of programmes with social protection functions. The overall situation of the household in comparison to the average is important, as is identification of where the household is positioned in terms of poverty estimates and income distribution.

In Indonesia in 2009 the poverty line was set at IDR 222,123 for urban areas and IDR 179,835 for rural areas per capita per month.\textsuperscript{267} 11.91 per cent of people in urban areas and 20.62 per cent of people living in rural areas fell below this line. Examination of the survey sample by poverty line suggests that approximately 7.8 per cent of the beneficiaries from urban areas and 17.2 per cent of beneficiaries from rural areas fell below the national per capita monthly poverty line. Initial comparison of the survey population with national data may lead one to question the initiative’s inclusiveness of the poor. However, further examination of the data indicates that many respondents earned only slightly more than the poverty line, suggesting that much of the sample were vulnerable to shocks and susceptible to falling below the poverty line if their main source of income is disrupted.

The average monthly household income for the overall sample was IDR 1,790,123 (ranging between IDR 100,000 and IDR 11,000,000). With an average of 4.69 people per household, the average per capita monthly income for the sample was estimated at IDR 410,818. While the average per capita monthly

\textsuperscript{266} Population weighted income deciles for Java were provided by BPS.

\textsuperscript{267} (BPS, 2012)
The income of beneficiaries is estimated at close to twice the average monthly per capita poverty line for Indonesia, it is far less than other measures, such as the Indonesian “decent living needs” (Kebutuhan Hidup Layak - KHL), which forms the basis for determining the minimum wage. The KHL was created in 2006 and indicates the minimum income that a single worker should earn in order to meet the basic needs, which includes food, clothing, transport and education, among others. It is used as a basis for determining the legal minimum wage by province and is generally set slightly above the minimum wage. The simple national average for KHL was IDR 1,010,372 per month for one worker in 2009 (IDR 917,638 for Banten and IDR 731,680 for Jawa Barat). It is therefore likely that a large number of households included in the sample were vulnerable and poor or near-poor. Households in such situations are particularly vulnerable during economic downturn as they tend to have limited savings and their main sources of income can become disrupted.

To analyze distribution and the survey respondents’ overall comparative position in society, population weighted deciles based on household income, where ‘Decile 1’ represents the poorest 10 per cent of households and ‘Decile 10’ represents the richest 10 per cent of households, were derived for Java with the assistance of Statistics Indonesia. The household income of the survey respondents was correlated with the population weighted income deciles for Java to provide insight on the degree to which jobs created from the fiscal stimulus went to households with different income levels. Analysis of the data by income decile allows for consideration of the survey respondents’ overall position in society, and provides insights that go beyond poor / non-poor poverty measures outlined above.

Table 19 shows that many of the jobs created through the job creation component of the fiscal stimulus package went to the poorest households in Indonesia. For instance, 16.1 per cent of survey respondents were from the poorest decile of households, while 71.3 per cent of survey respondents were from the poorest median of households in Java. Analysis through this measure indicates that the jobs created were broadly targeted towards low income households, that is, for every 10 jobs that were created seven went to the poorest median of households. This indicates that the intervention was a pro-poor intervention and included some of the most vulnerable households in Indonesia. This finding is consistent with evaluations from the previous public works programmes that were implemented in the Asian Financial Crisis, which found that poor households were more likely to benefit than non-poor households.

Table 19: Distribution of survey respondents by household income decile

<table>
<thead>
<tr>
<th>Decile</th>
<th>Number of survey respondents</th>
<th>Per cent of survey respondents</th>
<th>Accumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decile 1 (lowest)</td>
<td>69</td>
<td>16.08</td>
<td>16.08</td>
</tr>
<tr>
<td>Decile 2</td>
<td>50</td>
<td>11.66</td>
<td>27.74</td>
</tr>
<tr>
<td>Decile 3</td>
<td>60</td>
<td>13.99</td>
<td>41.72</td>
</tr>
<tr>
<td>Decile 4</td>
<td>70</td>
<td>16.32</td>
<td>58.04</td>
</tr>
<tr>
<td>Decile 5</td>
<td>57</td>
<td>13.29</td>
<td>71.32</td>
</tr>
<tr>
<td>Decile 6</td>
<td>42</td>
<td>9.79</td>
<td>81.11</td>
</tr>
<tr>
<td>Decile 7</td>
<td>47</td>
<td>10.96</td>
<td>92.07</td>
</tr>
</tbody>
</table>

---

269 The population weighted income quintiles for Java were prepared by Statistics Indonesia using the SUSENAS 2008 August survey.
<table>
<thead>
<tr>
<th>Decile</th>
<th>Number of survey respondents</th>
<th>Per cent of survey respondents</th>
<th>Accumulative per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decile 8</td>
<td>24</td>
<td>5.59</td>
<td>97.67</td>
</tr>
<tr>
<td>Decile 9</td>
<td>9</td>
<td>2.10</td>
<td>99.76</td>
</tr>
<tr>
<td>Decile 10 (highest)</td>
<td>1</td>
<td>0.23</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

In summary, initial comparison of the survey data collected with poverty measures in Indonesia provides mixed results on the inclusiveness of poor and vulnerable people in the intervention. To provide further information on distribution and the beneficiaries' comparative position in society, population weighted deciles based on household income were defined. It was found that 16.1 per cent of jobs from the sample of fiscal stimulus beneficiaries went to households from the poorest 10 per cent of households, while 71.3 per cent of jobs went to households in the poorest median of households. This implies that the programme was inclusive of vulnerable households.

Interestingly, analysis from the job creation programmes that were implemented in response to the Asian Financial Crisis in 1997-98 found that the programmes were also inclusive of poor households. For instance, in a survey that collected data from 100 villages in 1998, it was found that 8.31 per cent and 6.89 per cent of households in the lowest and second lowest income quintiles were able to access the jobs created from employment creation measures of Indonesia's Asian Crisis policy response programmes.\(^{271}\) Households from the top two income quintiles were half as likely to gain access to the same jobs. Although the survey approach taken in the study by Sumarto, Suryahadi and Widyanti in 2002 study is different to the survey approach in the current study, it is likely that the fiscal stimulus package of 2009 was at least on par with, if not more, inclusive of vulnerable households than the previous Asian Crisis policy response programmes.

### 7.3.2 Profile of workers and their households

Factors such as household size and composition, workers' educational attainment and their relation to head of household, as well as information regarding workers' age and gender provide important information about the beneficiaries of the fiscal stimulus package and the extent to which vulnerable groups were included in the job opportunities that were created.

Analysis of the survey data collected indicates that the average size of households in the sample was 4.69, which was higher than the average of 4.0 of Indonesia in 2009.\(^{272}\) Interestingly, it seems that respondents from poorer households were more likely to have a smaller household size than respondents from more affluent households. In addition, respondents from poorer households had a lower number of household members working than respondents from more affluent households. To further illustrate, table 20 shows that the average number of people working in the poorest household quintile was 1.15 persons, while more affluent quintiles were more likely to have more household members working (for example, 2.4 in quintile 4 and 2.9 in quintile 5). Therefore it seems that as the household income of the sample increases, so does the average size of households and the number of household members working. The larger size of households in the more affluent quintiles may be due to


the merging of households, which can be a strategy to increase economies of scale and household income.

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Average no. in household</th>
<th>Average no. working</th>
<th>Average no. under 15</th>
<th>Average no. in school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>4.36</td>
<td>1.15</td>
<td>1.43</td>
<td>1.13</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>4.45</td>
<td>1.38</td>
<td>1.30</td>
<td>0.98</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>4.89</td>
<td>1.90</td>
<td>1.36</td>
<td>1.00</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>5.65</td>
<td>2.42</td>
<td>1.37</td>
<td>1.21</td>
</tr>
<tr>
<td>Quintile 5 (Richest)</td>
<td>7.00</td>
<td>2.90</td>
<td>1.40</td>
<td>1.30</td>
</tr>
<tr>
<td>Average</td>
<td>4.69</td>
<td>1.64</td>
<td>1.36</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

The households of the fiscal stimulus beneficiaries had 1.36 persons below 15 years, while the number of children reported to be in school was lower, at an average of 1.07. The discrepancy between the number of people in the household aged under 15 and the number of children in school is perhaps due to a decline in school enrolment for children aged 13 to 15 years. For example, in 2009 the national average school enrolment rate for children aged 7 to 12 years was 97.95, while the enrolment rate for children aged between 13 and 15 was 84.47.273

The majority of programme beneficiaries had completed elementary schooling. However, workers from the poorer median of households were likely to have a lower educational attainment than more affluent households (see table 21). When compared to the national average, the educational attainment of the sample was lower. Closer examination of the data by income group reveals that households from the more affluent median had an educational attainment that was closer to the national average than the households from the poorer median. Inclusion of a higher proportion of poor households in the jobs created from the fiscal stimulus could be an explanation for the lower educational attainment of the sample.

<table>
<thead>
<tr>
<th>Highest education</th>
<th>Lower median</th>
<th>Upper median</th>
<th>Sample average</th>
<th>Indonesia August 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>No schooling</td>
<td>3.59</td>
<td>3.25</td>
<td>3.50</td>
<td>24.37</td>
</tr>
<tr>
<td>Elementary school not complete</td>
<td>16.01</td>
<td>6.50</td>
<td>13.29</td>
<td>28.27</td>
</tr>
<tr>
<td>Elementary school</td>
<td>48.69</td>
<td>31.71</td>
<td>43.82</td>
<td>18.49</td>
</tr>
<tr>
<td>Junior high school</td>
<td>17.97</td>
<td>30.08</td>
<td>21.45</td>
<td>28.86</td>
</tr>
<tr>
<td>Senior high school and above</td>
<td>13.73</td>
<td>28.46</td>
<td>17.95</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste; BPS (2012) Trends of the selected socio-economic indicators of Indonesia – August 2012, Katalog BPS: 3101015, Badan Pusat Statistik, Jakarta.

In two-thirds of cases, the head of the household was the project beneficiary. However, when scrutinized by household income quintile, the poorest households tended to have their head of household as the project beneficiary, while more affluent households were more likely to have another person from the household take up the work opportunity (see table 22). This is interesting as it may indicate that the wage income transfer of the fiscal stimulus package may have been supplementary in more affluent households, while in poorer households it may have been the main source of household income for that period.

Table 22: Worker’s relation to head of household

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Head of household</th>
<th>Not head of household</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>80.67</td>
<td>19.33</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>73.08</td>
<td>26.92</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>54.55</td>
<td>45.45</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>52.11</td>
<td>47.89</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 5 ( Richest)</td>
<td>40.00</td>
<td>60.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Average</td>
<td>66.67</td>
<td>33.33</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

The average number of workers per household was 1.1 for road works and 1.2 for irrigation projects, as shown in the table 23. This implies that the benefits of the initiative were not as dispersed as would have been if the work opportunities were rationed to one worker per household. However, given the limited time period that was available for project implementation and the need for workers to complete the works, a more equitable distribution of the work opportunities may not have been possible.

Table 23: Involvement of households in fiscal stimulus projects

<table>
<thead>
<tr>
<th>Project type</th>
<th>Average No. of beneficiaries per household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road and bridge works</td>
<td>1.11</td>
</tr>
<tr>
<td>Water and sanitation</td>
<td>1.00</td>
</tr>
<tr>
<td>Irrigation and water resources</td>
<td>1.21</td>
</tr>
<tr>
<td>Total average</td>
<td>1.12</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

It was important for youth to be included in fiscal stimulus crisis response programme, as labour market experiences during transition from education to the labour force can have an important influence on one’s long-term outcomes in the labour market. Moreover, youth unemployment is generally much higher than that of the overall labour force in Indonesia. For instance, in 2009 youth unemployment (15-24) was 22.2 per cent, while unemployment overall for Indonesia was 7.9 per cent. Youth are five times more likely to be unemployed than the general population and youth account for over 50 per cent of the unemployed population. During times of crisis, youth unemployment can become accentuated, as the number of unemployed people that are competing for the same job becomes greater. In such an environment, youth may be subject to a ‘bumping down’ effect, as employers choose to hire those with more experience and education, which can worsen their employment prospects.

On average 46.86 per cent of the surveyed beneficiaries were aged between 15 and 29 (see table 24). This indicates that the jobs created from the fiscal stimulus were inclusive of youth. Participants from lower income households were more likely to be older than participants from higher income households.

### Table 24: Participation of youth by household income

<table>
<thead>
<tr>
<th>Income group</th>
<th>15 to 29</th>
<th>Above 29</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower median</td>
<td>41.83</td>
<td>58.17</td>
<td>100.00</td>
</tr>
<tr>
<td>Upper median</td>
<td>59.35</td>
<td>40.65</td>
<td>100.00</td>
</tr>
<tr>
<td>Average</td>
<td>46.85</td>
<td>53.15</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

Further consideration should be given to youth targeting and its role in such initiatives, as objectives such as supporting access to employment and reducing poverty may have different target groups. For example, in general the expenditure and consumption patterns of male youth differ from the expenditure and consumption patterns of women with children. Targeting strategies should consider how to optimize outcomes, include vulnerable groups and also take into consideration the spending patterns of those groups, as this will impact on how the initiative benefits households and communities. An initiative that is intended to address structural issues related to poverty will likely have a different target group to a programme that is seeking to provide short-term employment in response to economic downturn.

Notably, none of the survey respondents were women, signifying that women had limited access to the job opportunities created through the fiscal stimulus. In general women have limited access to jobs in the construction sector, with only 2.4 per cent of jobs within this sector going to women in August 2009. Issues of gender inclusiveness in infrastructure investment programmes are therefore likely to be more related to sector-wide structural factors rather than the particular characteristic of the fiscal stimulus initiative. However, the findings of the survey indicate a need to enhance the gender inclusiveness of job creation initiatives, particularly those that are targeted to vulnerable groups and those that have social protection objectives. This is an important point, as transfers to women can strengthen the human and social capital outcomes of development efforts as women's expenditure patterns differ from men.

While the direct participation of women in the fiscal stimulus package is likely to have been limited, it is important to note that women may have benefited from the spill-over effects associated with the programme. Qualitative evidence from construction sites throughout Indonesia indicates that women are often involved in the gathering of local construction materials (stones and sand) and are remunerated on a piece-rate basis for these materials from the procurement allocations in project budgets prior to the commencement of construction works. In addition, local women often provide food vendor services to workers on construction sites during meal breaks. However, the economic viability of women's enterprises that provide small meals in such contexts is unknown, but likely to be limited.

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In summary, it was found that the poorest households tended to have their head of household as the project beneficiary (primary income), while better-off households were more likely to have another person from the household take up the work opportunity (supplementary income). This indicates that the programme was providing a social protection function for lower income households, but a supplemental function for higher income households. Such a trend may justify the introduction of stricter targeting criteria in order to allow poorer households to benefit more from the programme. Youth participation in the jobs created from the fiscal stimulus was also high, which was appropriate given the increased vulnerability of youth entering the labour market in times of labour market contraction. However, further attention should be placed on the inclusion of vulnerable groups, including women, in order to enhance the social protection function of the programme.

7.3.3 Participation of the local community

Infrastructure investment can provide important stimulation for local economic development. The outcomes of such investments can be optimized if local work opportunities go to members of local communities, as the multiplier affects of the investment have more opportunity to circulate within the local economy.\(^{277}\) The employment of workers from outside the community / region may dilute the impact of the investment on the local economy due to wages being remitted outside the local area.

Findings from the data set collected indicate that work opportunities funded through the fiscal stimulus did not always go to local labourers. On average only 33 per cent of jobs went to people from the local village, while 67 per cent of jobs went to people from outside the local village (see table 25). Participants from poorer households were more likely to have come from the same village that the project was operating in than participants from higher income households.

<table>
<thead>
<tr>
<th>Quintile</th>
<th>From the same village as project</th>
<th>From a different village to project</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
</tr>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>55</td>
<td>46.22</td>
<td>64</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>36</td>
<td>27.69</td>
<td>94</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>33</td>
<td>33.33</td>
<td>66</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>18</td>
<td>25.35</td>
<td>53</td>
</tr>
<tr>
<td>Quintile 5 (Richest)</td>
<td>1</td>
<td>10.00</td>
<td>9</td>
</tr>
<tr>
<td>Average</td>
<td>143</td>
<td>33.33</td>
<td>286</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

Workers were more likely to have come from the same district (Kabupaten / Kota) where the project was located, however on average 42 per cent of the sample came from outside the district (see table 26). As above, workers from poorer households were more likely to have come from the district where the project was located than participants from better-off households. Possible reasons for non-local labour accessing the employment opportunities may relate to the contractors’ recruitment methods, the individual’s access to labour market information, and limited government engagement with community and/or lack of local labour supply.

Table 26: Project location and workers’ district of residence

<table>
<thead>
<tr>
<th>Quintile</th>
<th>From the same district as project</th>
<th>From a different district to project</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per cent</td>
<td>No.</td>
</tr>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>91</td>
<td>76.47</td>
<td>28</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>70</td>
<td>53.85</td>
<td>60</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>52</td>
<td>52.53</td>
<td>47</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>32</td>
<td>45.07</td>
<td>39</td>
</tr>
<tr>
<td>Quintile 5 (Richest)</td>
<td>3</td>
<td>30.00</td>
<td>7</td>
</tr>
<tr>
<td>Average</td>
<td>248</td>
<td>57.81</td>
<td>181</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

The reasons for use of non-local labour should be seen in light of the objectives of the fiscal stimulus and in light of the role of infrastructure investment in Indonesia. The fiscal stimulus investment intended to increase aggregate demand in order to circumvent an economic downturn, therefore the main priority was not associated with emphasizing localized economic outcomes. However, consideration should be given to the policy’s social protection objectives and the role of local labour and local resources in optimizing outcomes. Adopting eligibility criteria may be a possible strategy for ensuring outcomes are optimized.

In summary, analysis found that only 58 per cent of workers employed on projects funded by the fiscal stimulus were residents of the district where the project was located. The remaining 42 per cent of workers came from outside the district. Given that the aims of the fiscal stimulus package were to maintain purchasing power, prevent job loss and accelerate development, the programme could have been more effective in achieving its goals if more jobs went to local labour. This is because local labourers tend to consume locally, which in turn stimulates growth in the local economy. Migrant workers tend to remit wages and therefore the overall impact of such workers on the local economy tends to be less.

7.3.4 Employment on the programme

Jobs created with funding from the fiscal stimulus package were intended to stimulate the economy and create short-term jobs in order to safeguard against the potential consequences of the economic downturn associated with the global financial crisis of 2008. The work opportunities generated were intended to be short-term jobs that would produce meaningful assets, which could lead to an increase in access to markets and services, thereby supporting improvements in growth and productivity in the longer term. To have achieved this outcome it would have been important for recruitment practices to have allowed disadvantaged groups access to the work opportunities and for the work opportunities to support consumption smoothing. This section therefore considers recruitment practices and working conditions.

Survey respondents were asked how they learned of the job opportunities that were to be created through the fiscal stimulus package. For most of the sample interviewed, the primary source of information regarding this work opportunity came from within their social network rather than from formal networks (see table 27). Workers from the poorer median of households were slightly more likely to learn about the work opportunity from friends than the more affluent median of households. Similarly, the more affluent median households were more likely to access labour market information.
from within their family network than poorer households. This reflects research which indicates that access to labour market information and employment opportunities are greatly influenced by the share of people in a person’s social environment.278

Table 27: Source of labour market information by household income (per cent)

<table>
<thead>
<tr>
<th>Source</th>
<th>Lower median</th>
<th>Upper median</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend</td>
<td>68.63</td>
<td>65.04</td>
<td>67.60</td>
</tr>
<tr>
<td>Family</td>
<td>9.80</td>
<td>17.89</td>
<td>12.12</td>
</tr>
<tr>
<td>Government official</td>
<td>10.46</td>
<td>7.32</td>
<td>9.56</td>
</tr>
<tr>
<td>Contractor</td>
<td>10.78</td>
<td>8.94</td>
<td>10.26</td>
</tr>
<tr>
<td>Other</td>
<td>0.33</td>
<td>0.81</td>
<td>0.47</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

It is also interesting to see that workers from the poorer median of households were more likely to learn about the work opportunities from government officials or contractors than more affluent households. This may suggest that a pro-poor targeting strategy was being pursued. However, the high frequency of the use of informal networks suggests a need for further improvements in the sharing of labour market information through local democratic announcement mechanisms, in order to ensure that all members of the communities in which the projects are operating have an equal opportunity to access employment opportunities. This may also help to ensure that more of the work opportunities go to workers in the local village or district rather than to workers from outside the local area.

From the time of the announcement of the fiscal stimulus and onwards, the Ministry of Public Works commenced planning processes to facilitate the implementation of the fiscal stimulus. However, the additional funding from the fiscal stimulus package only became available in July 2009 and had to be disbursed and reported on by 31 December 2009. Time needed for contract bidding and procurement meant that most works started in October 2009. Funds from the fiscal stimulus were to be spent by the end of the year, and the additional public holidays in December also limited the number of working days available for completion of works. These factors should be taken into consideration when evaluating the duration of the work opportunities.

Table 28: Average length of work opportunity by project type

<table>
<thead>
<tr>
<th>Project type</th>
<th>Average number of days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road and bridge works</td>
<td>46.06</td>
</tr>
<tr>
<td>Water and sanitation</td>
<td>49.21</td>
</tr>
<tr>
<td>Irrigation and water resources</td>
<td>49.81</td>
</tr>
<tr>
<td>Average</td>
<td>47.03</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

Work opportunities funded through the stimulus package had an average duration of 47 days (see table 28). Work on roads projects went for a slightly shorter number of days than work on sanitation or irrigation projects. Workers from the poorer median of households tended to have a shorter duration of

employment (45 days) than workers from more affluent households (53 days). Workers generally worked for six days per week, for eight hours per day.

The length of the average work opportunity created through the fiscal stimulus package (47 days) exceeds the average duration of work opportunities that are created through other similar programmes. For instance, the Ministry of Manpower and Transmigration’s public employment programme provides 20 days of work per project package in 2009.\textsuperscript{279} PNPM provided between 10 to 20 days of work for workers under its project during the same time period.\textsuperscript{280} The longer duration of employment, and the associated increased wage-income transfer observed under the fiscal stimulus package, indicates that the programme may have been more effective at providing a social protection function and at maintaining purchasing power for its beneficiaries than other programmes.

While employed on the project, respondents most commonly worked as construction labourers. This reflects general trends within the construction sector, which indicate that approximately 91 per cent of construction sector jobs go to labourers (BPS, 2010) (see table 29).\textsuperscript{281}

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Occupations in FSP project</th>
<th>Occupations in construction sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labourer</td>
<td>91.38</td>
<td>91.21</td>
</tr>
<tr>
<td>Supervisor</td>
<td>4.90</td>
<td>4.24</td>
</tr>
<tr>
<td>Clerical</td>
<td>1.86</td>
<td>1.87</td>
</tr>
<tr>
<td>Other</td>
<td>1.86</td>
<td>2.67</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>


The majority of workers were paid wages below IDR 50,000 per day. 18.4 per cent of workers were paid above IDR 50,000 per day. In comparison, in 2009 the Ministry of Manpower and Transmigration’s public employment programme provided a work incentive of IDR 40,000 per day to labourers and anecdotal evidence from PNPM suggests that the work incentive on this programmes ranged between IDR 30,000 and IDR 50,000 depending on the prevailing local minimum wages in particular districts.\textsuperscript{282} Therefore the wages paid to the beneficiaries of the fiscal stimulus were likely to be similar to the work incentives of similar programmes.

Closer examination of the data reveals that workers from more affluent households were more likely to receive a higher daily wage than poorer households, which may relate the educational attainment of households across income quintiles and the associated qualifications that are needed to work as a semi-skilled or skilled worker (see table 30).


\textsuperscript{281} BPS (2010) Labourer situation in Indonesia, Badan Pusat Statistik.

Table 30: Daily wage by household income quintile (per cent)

<table>
<thead>
<tr>
<th>Quintile</th>
<th>0 to 50,000 IDR</th>
<th>50,000 to 75,000 IDR</th>
<th>More than 75,000 IDR</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>96.64</td>
<td>2.52</td>
<td>0.84</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>86.92</td>
<td>12.31</td>
<td>0.77</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>73.74</td>
<td>25.25</td>
<td>1.01</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>64.79</td>
<td>26.76</td>
<td>8.45</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 5 (Richest)</td>
<td>30.00</td>
<td>30.00</td>
<td>40.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Average</td>
<td>81.59</td>
<td>15.38</td>
<td>3.03</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

The average monthly wage of labourers in the construction sector was IDR 944,652 for 46 hours of work per week August 2009. Therefore, the equivalent daily wage for labourers would fall between IDR 35,000 and IDR 45,000 per day. The average monthly wage for employees in the construction sector was IDR 1,233,507 for 46 hours of work per week in August 2009. Therefore the equivalent daily wage for employers would fall between IDR 45,000 and IDR 55,000 per day. Based on this information, it is likely that workers employed through the fiscal stimulus initiative received a wage at the lower end of the construction sector’s wage continuum. That is, a daily wage similar to the average for construction labourers rather than construction sector employees.

Comparison of workers’ previous wage to their wage on the project funded by the fiscal stimulus package reveals that workers previously paid above IDR 50,000 were more likely to accept a lower wage in order to participate in the project (see table 31). In general, workers paid below IDR 50,000 most likely received a similar wage to their previous wage while working on the project. This trend may reflect the tightening of the labour market during periods of economic downturn.

Table 31: Previous and current wages (per cent)

<table>
<thead>
<tr>
<th>Previous wage</th>
<th>Wage on project</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 to 50,000 IDR</td>
<td>50,000 to 75,000 IDR</td>
</tr>
<tr>
<td>0 to 50,000 IDR</td>
<td>91.67</td>
<td>7.37</td>
</tr>
<tr>
<td>50,000 to 75,000 IDR</td>
<td>57.94</td>
<td>38.32</td>
</tr>
<tr>
<td>More than 75,000 IDR</td>
<td>20.00</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

In summary, the access of poor and vulnerable households to the employment opportunities created through the fiscal stimulus package could have been improved through further efforts on project socialization within the target areas by government officials. Given the short timeframe for project implementation, the outcome for employment duration was notable and this suggests that the programme was effective in providing a consumption smoothing function for the beneficiaries of the programme. Most workers were employed as labourers and paid below IDR 50,000 per day, which is consistent with existing general wage trends for labourers within the construction sector. Workers were also likely to accept a lower daily wage on this project than the daily wage that they had received in their previous job, which is indicative of a tightening labour market and reduced access to work.

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opportunities. This trend supports the justification for the implementation of the fiscal stimulus package.

7.3.5 Labour market experience

Previous economic crisis in Indonesia have resulted in the loss of employment in the formal economy and an increase in the number of workers to be considered to be vulnerable. During and after the Asian Financial Crisis many formal workers lost their jobs and subsequently self-employment in the agricultural and informal economy increased. Due to the structure of the labour market in Indonesia, such trends are not well reflected unemployment statistics, but can be seen in labour shifts between sectors and changes in employment status.

Lack of panel data and the limited number of questions in the labour force survey in Indonesia make it difficult to examine the labour market experience of individuals in terms of mobility, job security and labour market churning. In order to gain insight into the recent labour market experiences of fiscal stimulus beneficiaries, retrospective questions that provide insight into the previous occupation and sector that the respondent worked in were asked. Information about the gap between previous and current employment and plans after exiting the project was also asked. These questions provided information about mobility between sectors and insight on the individual’s experience in the labour market.

Most respondents previously worked in the construction or agricultural sector (see table below). The most common previous occupations of respondents were as agricultural or construction labourers. Poorer households were more likely to have worked in agriculture, while more affluent households were more likely to have previously worked in construction. 89.3 per cent of participants were previously active in the labour market, while 10.72 per cent reported that they were previously not active in the labour market. This may mean that the work opportunities extended by the fiscal stimulus resulted in the opening of opportunities for discouraged workers to (re)enter the labour market (see table 32).

Table 32: Previous sector by quintile (per cent)

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Not in labour force</th>
<th>Agric, forestry, fishery</th>
<th>Construction</th>
<th>Transport/communication</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>9.24</td>
<td>33.61</td>
<td>29.41</td>
<td>10.92</td>
<td>16.81</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>6.92</td>
<td>16.15</td>
<td>43.08</td>
<td>10.00</td>
<td>23.85</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>16.16</td>
<td>15.15</td>
<td>46.46</td>
<td>5.05</td>
<td>17.17</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>9.86</td>
<td>7.04</td>
<td>49.30</td>
<td>7.04</td>
<td>26.76</td>
<td>100.00</td>
</tr>
<tr>
<td>Quintile 5 (Richest)</td>
<td>30.00</td>
<td>0.00</td>
<td>60.00</td>
<td>0.00</td>
<td>10.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Average</td>
<td>10.72</td>
<td>18.88</td>
<td>41.49</td>
<td>8.39</td>
<td>20.51</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

This is interesting as it shows that the jobs created through the fiscal stimulus gave an opportunity to for the poorest households in Indonesia to transition from agricultural to non-agricultural labor markets, where remuneration can be higher. While it is not possible to track the sustainability of this shift in the current study, it would be interesting understand this in order to gain insight into whether the work

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284 All beneficiaries working on the jobs created by the fiscal stimulus package were employed in the construction sector.
opportunities created by the fiscal stimulus package provided just a "blip" or a lasting impact in one's labour market experience. Such analysis could also provide insight into how a shift from the primary to the secondary and tertiary sectors can be optimized.

When asked the reason why respondents stopped working at their previous job, the most common reason noted was that the previous project had finished (see table 33). This corresponds with the high number of workers who were previously working in the construction sector, where employment can be short term, especially when it is based on a particular project. For example, Statistics Indonesia notes that in for the construction sector a worker can only be considered to be a permanent employee if she/he has had the same employer during the past 3 months.285

Respondents also reported that the wage incentive and lack of time to continue previous work were reasons for leaving their previous job. This suggests that approximately 25 per cent of programme beneficiaries may have given up or reduced their alternative labour market activities in order to commit to this work opportunity. 9.6 per cent reported that the business they had been working for had become insolvent, while 11.4 reported that they were still continuing with their previous job. The latter of which may reflect the episodic nature of the fiscal stimulus work opportunity and low productivity in ongoing work.

<table>
<thead>
<tr>
<th>Table 33: Reason for leaving last job (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for leaving last job</td>
</tr>
<tr>
<td>Laid-off</td>
</tr>
<tr>
<td>Business insolvent</td>
</tr>
<tr>
<td>This job pays more</td>
</tr>
<tr>
<td>Did not like previous job</td>
</tr>
<tr>
<td>Not enough time</td>
</tr>
<tr>
<td>Previous job continued</td>
</tr>
<tr>
<td>Project finished</td>
</tr>
<tr>
<td>Not harvest season</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Not in the labour force</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

The duration of time between previous and current contract was greater for workers from rural areas than workers from urban areas, which likely reflects the availability of jobs in urban areas (see table 34). While most beneficiaries seemed to report short durations of unemployment, this should be seen in the context of both the short-term duration of the work opportunity (47 days on average) and the tendency towards self-employment in the informal economy in Indonesia. Most respondents reported that once the work opportunity on this project was finished they would either resume job search or their previous self-employment activities. As Indonesia does not provide unemployment assistance or other types of social protection to people of the working age population, it is likely that job search and business start-up (which entail idol periods without income) activities would be undertaken at one's own cost. Within this type of scenario savings patterns and access to finance become more important, so that households can better cope with income fluctuations.

Table 34: Duration of unemployment (per cent)

<table>
<thead>
<tr>
<th>Geography</th>
<th>Less than 3 months</th>
<th>3 to 6 months</th>
<th>More than 6 months</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>70.42</td>
<td>16.90</td>
<td>12.68</td>
<td>100.00</td>
</tr>
<tr>
<td>Rural</td>
<td>57.14</td>
<td>22.58</td>
<td>20.28</td>
<td>100.00</td>
</tr>
<tr>
<td>Average</td>
<td>60.42</td>
<td>21.18</td>
<td>18.40</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author’s analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

The mean daily wage of workers in their previous job was IDR 39,000, ranging between IDR 6,000 and IDR 150,000 per day. On average workers from West Java received a slightly lower wage in their previous job than workers from Banten (see table 35). The average previous daily wage of workers was on par with the provincial daily minimum wages. However, the average previous daily wage of workers was much lower than the average wage of employees within the construction sector. For West Java 39 per cent of the sample were paid below the minimum wage in their previous job, while in Banten 46 per cent of the sample were paid below the minimum wage in their previous job. The higher minimum wage in Banten province could be a possible explanation for the higher rate of underpayment / non-compliance with minimum wage standards.

Table 35: Analysis of wages from previous job (IDR)

<table>
<thead>
<tr>
<th>Province</th>
<th>Provincial minimum wage 2009</th>
<th>Construction average wage August 2009</th>
<th>Previous average daily wage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly</td>
<td>Daily</td>
<td>monthly</td>
</tr>
<tr>
<td>Banten</td>
<td>917,500</td>
<td>40,000*</td>
<td>1,414,443</td>
</tr>
<tr>
<td>Jawa Barat</td>
<td>628,200</td>
<td>30,000*</td>
<td>1,140,456</td>
</tr>
</tbody>
</table>

Source: BPS (2010) Labourer situation in Indonesia, Badan Pusat Statistik. *Daily wage is derived from average monthly income divided by average hours worked and is based on an 8 hour day.

When workers were asked what they would do once work on this project was complete, 61.1 per cent reported that they would search for new employment and 31 per cent noted that they would return to their previous employment (see table 36). Only 3.3 per cent of workers considered starting their own business. Workers from the poorest quintile were more likely to continue their previous job (in the informal agricultural economy) than other quintiles. Similarly, workers from the better-off quintiles were more likely to look for new employment or start a business than poorer households.

Table 36: Future labour market activities by household income quintile (per cent)

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Job search</th>
<th>Start business</th>
<th>Exit labour market</th>
<th>Continue previous job</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1 (Poorest)</td>
<td>49.6</td>
<td>1.7</td>
<td>2.5</td>
<td>42.9</td>
<td>3.4</td>
<td>100</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>67.7</td>
<td>4.6</td>
<td>3.8</td>
<td>23.8</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>64.6</td>
<td>2.0</td>
<td>4.0</td>
<td>29.3</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>62.0</td>
<td>2.8</td>
<td>4.2</td>
<td>31.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Quintile 5 (Richest)</td>
<td>70.0</td>
<td>20.0</td>
<td>10.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
</tr>
<tr>
<td>Average</td>
<td>61.1</td>
<td>3.3</td>
<td>3.7</td>
<td>31.0</td>
<td>0.9</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste
In summary, most respondents previously worked in the construction or agricultural sector. The most common previous occupations of respondents were agricultural or construction labourers. The fiscal stimulus provided opportunities for discouraged workers to re-enter the labour market, with approximately 11 per cent of beneficiaries indicating that they were previously "not in the labour force" before joining the programme. The jobs created through the fiscal stimulus gave an opportunity for the poorest households in Indonesia to transition from agricultural to non-agricultural labor markets, where remuneration is generally higher. However, it is unclear if the fiscal stimulus intervention provided only a "blip" or a lasting impact on the beneficiaries' labour market experience.

Most respondents reported that once the work opportunities on this project were finished they would either resume job search or their previous self-employment activities. In addition, many of the beneficiaries of the jobs of the fiscal stimulus package were previously unemployed before joining the project. Only 25 per cent of beneficiaries indicated that they had given up or reduced alternative their labour market activities in order to commit to this work opportunity. Therefore, the programme may have been associated with some minor labour market distortion effects. However, it is important to note that as the public works programme invested in assets with very strong public good components, it is unlikely that the investments would have been funded by the private sector. Therefore it is reasonable to conclude that the jobs that were created by the fiscal stimulus package were new jobs that would not have been created without the programme. While the beneficiaries of the programme may have engaged in some other work activities in absence of the programme, workers indicated that the wage on their previous job was higher than the wage on this job, therefore the labour market distortion effects associated with the fiscal stimulus are unlikely to have been purely wage oriented. For instance, participants from the local village may have decided to participate in the programme in order to support asset construction as the new assets provide benefits (in terms of access) to their other economic activities. As the jobs created were new jobs with additional funds, there was no evidence of displacement (replacement of existing private or public sector workers) due to the fiscal stimulus programme.

7.3.6 Savings and debt

The average rate of savings among survey respondents was generally low, with only 13.5 per cent of the sample reporting that they had savings (see table 37). The likelihood of having savings was much lower for the poorer median of households than the more affluent median of households. When respondents were asked whether their savings had increased since working on the project, more than 80 per cent of workers who had savings reported an increase. However, the overall low rate of workers with savings suggests that the wage income transfer from the project does little to enhance workers' ability to save.

Table 37: Savings patterns by household income (per cent)

<table>
<thead>
<tr>
<th>Income group</th>
<th>Savings</th>
<th>No savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower median</td>
<td>7.84</td>
<td>92.16</td>
</tr>
<tr>
<td>Upper median</td>
<td>27.64</td>
<td>72.36</td>
</tr>
<tr>
<td>Average</td>
<td>13.52</td>
<td>86.48</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

Indonesia currently does not provide unemployment assistance and has only a limited number of other forms of social protection programmes that can support unemployed people of the working age population. Subsequently, many workers become self-employed in unproductive work in the informal
economy in order to cope. Self-employment in the informal economy often does not offer a stable or adequate source of income. Therefore, the ability to save during periods of regular wage employment and the duration of such work opportunities are of high importance.

Respondents were asked whether they currently had any debt and what the purpose for borrowing was. Approximately one in four respondents reported that they had debt. Respondents from urban areas were more likely to have debt than those from rural areas, which may reflect access to finance (see table 38). Workers from better-off households were more likely to have debt than poor households.

### Table 38: Debt trends by household income and location (per cent)

<table>
<thead>
<tr>
<th>Household classification</th>
<th>Debt</th>
<th>No debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>35.93</td>
<td>64.08</td>
</tr>
<tr>
<td>Rural</td>
<td>20.25</td>
<td>79.75</td>
</tr>
<tr>
<td>Lower median</td>
<td>22.88</td>
<td>77.12</td>
</tr>
<tr>
<td>Upper median</td>
<td>26.83</td>
<td>73.17</td>
</tr>
<tr>
<td>Average</td>
<td>24.01</td>
<td>75.99</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

When respondents were asked about their purpose for borrowing, it was reported that the majority of respondents borrowed in order to pay for food purchases. The purpose for borrowing differed in urban and rural areas, with urban workers more likely to borrow to purchase assets and rural workers more likely to borrow for investment in enterprise activities (see table 39). However, only three per cent of the sample reported that they had borrowed for investing in business ventures.

### Table 39: Borrowing purpose (per cent)

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Urban</th>
<th>Rural</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No debt</td>
<td>64.08</td>
<td>79.75</td>
<td>75.99</td>
</tr>
<tr>
<td>Food</td>
<td>20.39</td>
<td>9.20</td>
<td>11.89</td>
</tr>
<tr>
<td>Health</td>
<td>1.94</td>
<td>0.61</td>
<td>0.93</td>
</tr>
<tr>
<td>Education</td>
<td>2.91</td>
<td>1.53</td>
<td>1.86</td>
</tr>
<tr>
<td>Durable goods (TV, motorcycle, phone)</td>
<td>8.74</td>
<td>1.84</td>
<td>3.50</td>
</tr>
<tr>
<td>To support enterprise activities</td>
<td>0.97</td>
<td>3.68</td>
<td>3.03</td>
</tr>
<tr>
<td>Other</td>
<td>0.97</td>
<td>3.37</td>
<td>2.80</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Source: Author's analysis from data courtesy of the ILO Country Office for Indonesia and Timor-Leste

In summary, as Indonesia has a limited number of programmes that provide support to the working age population, it is important that the wage income transfer associated with government job creation programmes, such as the fiscal stimulus package, can improve the overall situation of beneficiary households. However, based on the analysis of saving and debt patterns, it is likely that the wage income transfer of the fiscal stimulus was largely used to support the daily consumption needs of households and that the households had limited access to microfinance. As maintaining purchasing power was the main purpose of the fiscal stimulus package, use of the wage income to support daily consumption was desired. However, it is noted that developmental impacts could potentially have been enhanced in the longer term if the income could have contributed to asset accumulation.
7.4 Discussion of findings

This survey of the beneficiaries who received the work opportunities of the 2009 fiscal stimulus package investigated factors such as the profile of workers' and their households, the participation of the local community in the project, employment conditions on the project, workers' previous labour market experience and their savings and debt trends. The survey provided insight into the ability of the Government to quickly upscale government spending and administer employment creation programmes in times of financial and economic turmoil. The survey also shed light on the quality of the jobs that were created and on the degree to which the policy was inclusive of poor and vulnerable households, which provides important information on the impact and effectiveness of the programme. The contributions of this study to the body of literature on public works programmes are therefore twofold. Firstly, the survey documented information on the effectiveness of the fiscal stimulus policy in terms of inclusiveness vulnerable groups and the quality of the transfer for supporting purchasing power. Secondly, it provides policy makers with evidence that can be used to support the design of future programmes.

The findings of the survey indicate the following:

- **Inclusiveness of vulnerable groups**: Even though no poverty target was specified for the job creation component of the 2009 fiscal stimulus package, 71.3 per cent of jobs went to households in the poorest median of households. These findings are similar to previous survey research that looked at job creation programmes during the Asian Financial Crisis, and indicates that the work opportunities created from the fiscal stimulus package of 2009 were at least on par with, if not more, inclusive of vulnerable households than the previous crisis response programmes.

- **Role of transfer varies by household income**: The programme functioned as a social protection programme for low income households through providing the primary source of income for beneficiary households, while it functioned as a supplementary income support programme for more affluent households.

- **Inclusive of youth**: The programme was inclusive of youth, which was appropriate given the increased vulnerability that youth experience when entering the labour market in times of economic downturn. The programme was also of inclusive of people with a lower educational attainment, with 60.6 per cent of beneficiaries having a maximum of six years of schooling. However, women had limited access to the work opportunities of the fiscal stimulus package, and therefore further attention should be placed on the inclusion of women, in order to enhance the social protection function of the programme.

- **Longer than average duration**: Work opportunities funded through the stimulus package had an average duration of 47 days, which is longer than other similar programmes. The increased employment duration, and the associated increase in size of the wage-income transfer, indicates that the programme may have been more effective at providing a social protection function and at maintaining purchasing power for its beneficiaries than other comparable programmes.

- **Migrant workers**: Only 58 per cent of workers employed on projects funded by the fiscal stimulus were residents of the district where the project was located. The remaining 42 per cent of workers came from outside the district. While the aims of the fiscal stimulus package were to maintain purchasing power, prevent job loss and accelerate development, the programme could have been more effective in achieving its goals if more jobs went to local labour.
• **Labour market information:** Many people learned about the work opportunities funded by the fiscal stimulus package from their social network, rather than official sources. The access of poor and vulnerable households to the work opportunities created through the fiscal stimulus package could have been improved through further efforts on project socialization within the target areas by government officials.

• **Lower wage than previous job:** Most workers were employed as labourers and paid below IDR 50,000 per day, which is consistent with existing general wage trends for labourers within the construction sector. Workers were also likely to accept a lower daily wage on this project than the daily wage that they had received in their previous job, which is indicative of a tightening labour market and reduced access to employment opportunities. This trend supports the justification for implementing a fiscal stimulus package.

• **Discouraged workers:** The fiscal stimulus provided opportunities for discouraged workers to re-enter the labour market, with approximately 11 per cent of beneficiaries indicating that they were previously "not in the labour force" before joining the programme. It also provided work opportunities for workers who were previously unemployed.

• **Employment outside the agriculture sector:** The jobs created through the fiscal stimulus gave an opportunity for the poorest households in Indonesia to temporarily transition from agricultural to non-agricultural labor markets, where remuneration can be higher. However, it is unclear if the fiscal stimulus intervention provided only a "blip" or a lasting impact on the beneficiaries' labour market experience.

• **Minimal distortion:** As the majority of workers indicated that the wage on their previous job was higher than the wage on this job, the labour market distortion effects associated with the fiscal stimulus were likely to have been very minimal. For instance, participants from the local village may have decided to participate in the programme in order to support asset construction as the new assets provide benefits (in terms of access) to their other economic activities.

The analysis of the survey data indicates that given the numerous constraints that government administrators face in preparing and administering a fiscal stimulus programme, the programme was effective and able to support the purchasing power of vulnerable groups. The survey indicated that Government could quickly increase government spending and administer employment creation programmes in times of financial and economic turmoil. Moreover, the survey provided information into the quality of the jobs that were created and on the degree to which the policy was inclusive of poor and vulnerable households.

The major strength of the job creation component on the fiscal stimulus package included the capacity of the Government to design and implement a programme that provided employment outcomes that were at least on par with other ongoing government programmes within a constrained time period. The fiscal stimulus package was announced in January 2009, and the funds for implementing the programme only became available to the implementing ministries in late July 2009. Given the time needed for selection of works by location and type, and the time needed for bidding and approval processes, the average length of work opportunity of 45 days is an achievement. Especially in comparison with other programmes that create jobs and invest in village level infrastructure.286

However, the outcomes of the fiscal stimulus package could have been strengthened through ensuring the provision of safeguards to improve transparency and socioeconomic efficiency. For example, the majority of workers learned about the work opportunities of the fiscal stimulus package through social

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networks and the recruitment process for selecting workers was therefore largely informal. Moreover, contractors are in a powerful position in that they are able to determine to a large extent who works on their projects. Therefore, there is need to increase the transparency of recruitment strategies through enhancing community socialization processes or through usage of the public employment service, in order to enable access and improve inclusiveness. It is recommended that information about the projects should be disseminated as widely as possible to local communities through community notices and community meetings, so that people living in the areas where the projects are operating can access the work opportunities equally. A representative from the government could be invited to community socialization meetings to support the inclusion of women and improve the access of poor and vulnerable households to the work opportunities. Improving the socialization process of the programme may also increase women's access to the programme. This is important as the results of the survey indicate that women did not directly benefit from the work opportunities generated through the fiscal stimulus package. In order for women to derive a greater benefit from the investment, they would need to be included in village meetings on development projects. Barriers related to gender-based occupational stereotypes also need to be addressed. The effectiveness and efficiency of such interventions could be increased if an explicit targeting strategy was adopted.

Due to need for timely implementation of the fiscal stimulus package, targeting specifications of the job creation programme were limited to creation of a set number of short term work opportunities. The programme’s monitoring and evaluation activities were therefore limited to the tracking of budget realization and overall job creation. It would be important to strengthen the monitoring and evaluation systems for implementing such programmes. It is important that government investments that contribute to broader socioeconomic goals, such as social protection and maintaining purchasing power, are monitored so that future efforts can become more effective and efficient. It is recommended that monitoring systems collect data on infrastructure related variables and on socio-economic variables. Government administrators should also have budget allocated for effectively monitoring and independently evaluating such programmes. Moreover, it is recommended to undertake survey research, using a baseline and endline approach, so that impact evaluations can be undertaken and policy effectiveness better understood. The research presented in this study contributes a way forward in this regard.

In order to enhance the impact of a fiscal stimulus programme, an explicit targeting strategy could be adopted to ensure that the investment reaches poor households and vulnerable groups. For instance, the Expanded Public Works Programme in South Africa specifies that 20 per cent of the work opportunities created will go to youth.\(^{287}\) In addition, 60 per cent of the beneficiaries should be women and two per cent of beneficiaries should be people with disabilities. Projects implemented by the ILO Country Office for Indonesia and Timor-Leste in Aceh and Nias Islands after the tsunami of 2004 have successfully demonstrated that 30 per cent of the work opportunities created in village and district level infrastructure investment projects can go to women.\(^{288}\) This sets an important benchmark for similar projects in Indonesia.

The Ministry of Public Works, as well as other line ministries in Indonesia, have very limited monitoring and evaluation systems in place that record the progressive spending of budget allocations and progress towards other targets, including job creation. Often reports on targets are based on a comparison of


original estimates with project completion reports rather than independent monitoring systems. The job creation targets for individual projects of the fiscal stimulus package were based on an assumption that approximately 30 per cent of the budget for these projects would go towards the wages of low and unskilled labourers. In order to improve the robustness of these targets, it would be beneficial to validate job creation outcomes more accurately and also to gain insight into other socioeconomic variables. Such information could give insight into the effectiveness of the intervention’s outreach to disadvantaged groups and give insight into how the investment could be improved in order to enhance poverty reduction outcomes. In this regard, it would be useful to collect data on the inclusion of youth, women, and low income groups. Information on the labour market history of programme beneficiaries would also give insight into labour transfer and the degree to which such programmes are directly or indirectly responding to policy targets or reducing unemployment.  

Under the current monitoring and evaluation system, administrative constraints see monitoring reports submitted late and monitoring units without capacity to maintain data systems or budget to undertake field monitoring missions. This limits the effectiveness of progressive monitoring activities and the responsiveness of monitoring officers to implementation issues in the field. Once projects are concluded, monitoring activities are handed over to evaluation units who then compare outcomes with planning targets. However, independent evaluation of the socio-economic outcomes of such programmes are rare.

This study has shown that it is possible to administer programmes that seek to create short-term work opportunities through emergency programmes that invest in infrastructure in the context of an economic downturn. The survey research undertaken in this study found that the work opportunities created through Indonesia’s fiscal stimulus package of 2009 were inclusive of vulnerable households and provided on average 45 days of work to beneficiaries. The socioeconomic outcomes of such programmes could be strengthened in the future through specifying social inclusion targets within policy documents and through investing in both administration and independent monitoring and evaluation systems.

In addition, an on-going challenge is to ensure the appropriateness of fiscal stimulus and other similar policies, given the situation of the labour market and the persistence of informality, low productivity and limited access to social protection. The challenge is for policy in the future to come to grips with these issues as well as socio-spatial dimensions of labour market inequalities. The persistence of poor public infrastructure, coupled with extensive labour underutilization indicates potential for these broad and extensive societal problems to be addressed through an expanded public employment strategy for unskilled workers. Such an approach would seek to address local deficiencies in infrastructure (and could be extended to include social and environmental service), while stimulating localized economic development and drawing the most disadvantaged into the labour market. The following chapters looks more at the impacts that investing in infrastructure have on local economies, in order to provide insight on the appropriateness of such interventions for support economic and employment outcomes in Indonesia.

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289 It is assumed that the global financial crisis has entailed job loss across a range of sectors and skill. It is therefore assumed that the subsequent contracting of the labour market would generate a “bumping down” effect.
Chapter 8: Public works programmes: The role of the asset in promoting local development

8.1 Introduction

The tsunami that hit Indonesia in 2004 and the subsequent earthquake of March 2005 devastated infrastructure and the livelihoods of many communities in Nias and Aceh. In response the Government of Indonesia established a rehabilitation and reconstruction programme and the Multi Donor Fund for Aceh and Nias (MDF) was created to support the implementation of this programme. In particular, the rehabilitation and reconstruction programme focused on supporting the recovery of communities, investing in infrastructure and transportation, strengthening capacity and rebuilding governance, supporting sustainable management of the environment and economic development. To respond to the need for infrastructure investment, restoration of livelihoods and the associated need for capacity building, the ILO designed and implemented a project titled the “Nias Islands Rural Access and Capacity Building Project” (Nias-RACBP), which was funded by the MDF (see box below). The project focused on providing strategic investments within rural transport networks on Nias Islands through a public works programme that used local resource-based methods in order to contribute to the higher-level development objective of the Government, namely:

“To facilitate post-disaster economic recovery and poverty alleviation by creating an environment for improved livelihood and human development in the Nias Islands for the communities affected by the tsunami and the earthquake.”

In rural and remote areas accessing social and economic services and facilities takes a substantial amount of time and physical effort. Often the conditions of transport networks in rural areas are poor and require community members to travel via foot for part or all of their journeys. At times roads and bridges can also be impassable. The time that community members spend travelling to access markets and services has implications for the time that remains for community members to engage in other productive income generating activities.

To better understand the impact that infrastructure investment through public works programmes in rural and remote areas has on livelihoods and human development, an evaluation methodology was designed using a baseline and post implementation assessment framework. It was envisaged that the baseline and post implementation survey research would provide information on both the nature and scope of impact of public works investments in rural and remote areas and how such investments create an environment for improved livelihoods and local economic development. Beyond this, the findings from this study may be used to provide recommendations on village, sub-district, district, province and national policy in the area of infrastructure investment, employment creation and livelihood promotion.

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290 http://www.multidonorfund.org/
Box: Nias Islands Rural Access and Capacity Building Project (Nias-RACBP)

Nias-RACBP supported improvements in rural transport infrastructure in selected areas using a local-resource approach, so that the people of Nias Islands could benefit from enhanced participation in markets and enhanced access to services. Nias-RACBP was designed to support two main objectives, namely:

1. **Construction works**: Provision of cost-effective, durable and environmentally-sound rural transport infrastructure that improves access to economic and social and services / facilities for the people living in the targeted clusters using local resource-based (LRB) approaches.
2. **Training and capacity-building**: Increased capacity of district-level government officials, small-scale contractors, supervisors and communities in planning, managing, implementing, supervising and maintaining construction works, using technically and environmentally sound LRB methods/technologies through on-the-job training and mentorship.

By end of 2012, 21.4 kms of road and 47.2 kms of motorbike trails, as well as 1,966 running meters span or 71 units of bridges and crossings were constructed. The total number of work days generated from these investments was 361,610 work days, with 29 per cent of work days going to women. In addition to time spent on construction works, the capacity building component of the project provided a total of 29,114 days of practical on-the-job training and classroom training to young people on Nias Islands.


### 8.1.1 Improving access to socio-economic services and facilities

For rural populations the quality of the transport network is a key factor associated with accessing and being accessed by social and economic services and facilities. Often accessing markets and services can entail long and slow journeys that involve breaks in subsistence and other income generating activities, which may lead to loss of earnings. Improvements in access can have transformative effects on rural communities. For example, with improved road access, teachers may be more willing to work at schools in rural and remote areas, subsequently leading to an increase in human capital in these poorer areas over time. With improved transport systems, agricultural extension workers may be able to better reach farmers to provide them with technical know-how and advice for increasing their productivity. Improved transport systems also allow producers and traders better access to markets, which can lead to improvements in income and stimulate local economic development. Better connectivity and improved infrastructure is likely to attract greater investments in rural economies, while poor transport networks are likely to hinder the growth and development of rural areas.\(^{293}\)

Transport infrastructure can benefit local economic development by enhancing productivity, by supporting private sector investment, job creation and access to markets.\(^{294}\) Transport infrastructure also impacts on social development outcomes, such as health and education outcomes. For example,


research on transport networks in the rural areas of Indonesia by Yamauchi\textsuperscript{295} indicates that when rural road quality improves household income also improves, especially for households that have post-primary educational attainment. This study also found that a deterioration of the transport network - largely due to lack of maintenance or poor quality new infrastructure - has a negative impact household income.

Savings that farmers gain from investment in transport infrastructure are associated with a) the reduced cost of transport, b) increased access to markets (increased frequency of market / trader trips), and c) increased volume of goods that can be transported to markets. Both monetary and opportunity costs can be decreased. For instance, investments in transport infrastructure can have a positive impact on the household income of all farmers and substantially reduce poverty of smallholder farmers, due to the high dependency of farmers on land transport for crop distribution.\textsuperscript{296} Investment in the transport network can increase access to markets and subsequently also decrease the cost of transportation of goods. Indicators on traffic volumes and travel speed can provide important information on how the local economy is supported through such investments.

The condition of the transport network impacts on access to social services. Both access to education and the quality of education are affected by the quality of transport infrastructure, as reflected in student and teacher absenteeism as well as in the ease of sourcing teachers to staff schools. Poor transport infrastructure also impacts on the access of schools to materials and equipment, with delivery of textbooks and computers often delayed due to poor route conditions. Access to education also has a long term impact on society, with it increasing the capacity of communities to develop their local economies and to manage community health, which contributes to improvements in productivity and livelihoods. Investment in transport infrastructure complements education investments and can increase demand for non-agricultural labour, and subsequently lead to gains in incomes in rural and remote areas.

In regard to health care, a poor quality transport network can have implications for timely access to health services and the cost of accessing services. Many expenses associated with accessing health care services can be thought of both in real and in opportunity cost terms, with transport expenses often comprising the largest financial outlay of health care after expenditure on medicines.\textsuperscript{297} Poor access to health services impacts on the health and wellbeing of individuals through delays in making visits to health care facilities if routes are in poor condition and this may subsequently impact on social indicators such as mortality and maternal health.

While such benefits of infrastructure investment are well known, there is a need to deepen knowledge on the effectiveness of developing infrastructure in the context of public works programmes through the application of various impact evaluation methodologies.\textsuperscript{298} In particular, McCord states that:

\textsuperscript{297} Molesworth, K. (2006) Mobility and health: The impact of transport provision on direct and indirect determinants of access to health services, Swiss Centre for International Health, Swiss Tropical Institute, Basel.
"... the assumption that assets created through PWPs will contribute to sustained livelihood benefits for programme participants, may, in many cases, be based on little more than wishful thinking."^{299}

Given this criticism, it is important to further investigate the impact of assets that are created through such programmes. However, one can expect that if particular projects are well designed and well implemented, benefits should be forthcoming. In summary, transport infrastructure impacts on employment and livelihoods through time and cost savings, increasing transport safety, supporting local market access, and increasing access to social services. Infrastructure investments can therefore support productivity gains and reduce opportunity costs. Such impacts can be expected from projects, including public works programmes, if the projects apply the principles of quality project cycle management and involve a multi disciplinary team of experts.

8.1.2 Overview of the chapter

This chapter reports the findings from a survey investigating the impact of investment in transport infrastructure in rural and remote locations through public works programmes. Section 7.1 has provided an overview of the scope of the study and a discussion of the literature. Section 7.2 details the methodology used to collect the baseline and post implementation survey data. Section 7.3 presents analysis of the baseline and post implementation data and section 7.4 provides a discussion of the findings from the analysis.

8.2 Methodology

The overarching research question of the baseline and post implementation study related to understanding the degree to which an enabling environment for livelihoods and human development could be facilitated by investments in rural transport infrastructure made through public works programmes. The specific underlying research questions that guided the formation of the indicators and related survey instruments included the following:

- To what degree have the investments in rural transport infrastructure reduced travel time for men and women?
- To what degree have the investments in rural transport infrastructure reduced travel costs for men and women?^{300}
- To what degree have the investments in rural transport infrastructure increased traffic volumes?
- How have the investments in rural transport infrastructure increased transport safety and comfort for men and women?^{301}

An assessment of pre intervention and post intervention conditions was required in order to properly quantify and qualify outcomes. Based on a review of the monitoring and evaluation frameworks of similar projects that focused on promoting rural access using public works programmes, a select number of indicators, including travel speed, transport cost, traffic volumes and transport safety and comfort were identified to be important in assessing the impact of the investments made.^{302} The research instruments used in the data collection process were adapted from previously applied instruments that had been tested for reliability (the same result is achieved

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^{300} Transport cost can be measured in both monetary values and in terms of time savings.

^{301} Transport safety and comfort is viewed in terms of the ease of passability of the route.

^{302} See http://www.ilo.org/eiip
on a number of occasions) and validity (measures what it is intended to measure).\textsuperscript{303} Table 40 provides an overview of the indicators measured and the instruments used to measure these indicators. The survey instruments are further discussed in the following sections.

### Table 40: Overview of indicators and measurement instruments

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced travel time for men and women</td>
<td>Travel speed survey</td>
</tr>
<tr>
<td>Reduced transportation costs for men and women</td>
<td>Route users’ survey Structured key informant interviews</td>
</tr>
<tr>
<td>Increased traffic volumes</td>
<td>Traffic count</td>
</tr>
<tr>
<td>Increased transport safety and comfort for men and women</td>
<td>Route users’ survey Structured key informant interviews</td>
</tr>
</tbody>
</table>


The baseline and post implement study therefore applied a mixed method approach, in that it incorporated techniques that included the collection of qualitative data from key informants, quantitative traffic volume data, origin and destination data and a route users’ survey that provides information on the cost of transport and accessibility (safety / comfort) of routes.

Data was collected from four of 21 sites receiving infrastructure investments.\textsuperscript{304} In order to construct the sample, a mapping of the infrastructure investment sites and their relation to the transport network was provided. The sites included in the study were selected through a multi-stage cluster sampling technique that was guided by the following criteria:

- The economic cluster in which the site is situated (north, west, south, central);
- The type of works being undertaken (light traffic road, motor bike trail, bridge);
- The location of the works (near coastal or mountainous areas);
- The remoteness of the works (near or far from main roads);
- The relative cost of the works.

In general, the data collection sites were located within rural and remote areas that had a difficult terrain. All survey locations were located in remote areas, far from the district capitals. The locations were between five to ten kilometres from the sub-district capital. Data for the study was collected in April 2011 and in November-December 2012. The baseline data was collected prior to commencement of the works and the post implementation data after the works were completed.

Survey enumerators were trained techniques on data collection and provided with an orientation to the purpose of the study. All instruments were prepared and checked prior to going to the field and in addition the survey enumerators had to take food and cooking equipment as catering services were not available at the data collection locations. Another factor that provided a challenge was the climatic condition on Nias, which is characterised by frequent and heavy downfalls of rain. This meant that data collection points had to provide shelter that could withstand heavy rainfall. In addition, the weather patterns affected the mode of transport that could be used by the data.

\textsuperscript{304} The study benefits from the Kecamatan Spatial Framework and Action Plans (KSF-AP), which were prepared under the leadership of the Asian Development Bank in 2009. The KSF-AP maps existed for Mandrehe Utara and Tuhemberua, but not for Fanayama and Gunung Sitoli Idanoi.
collection team as many of the data collection points could not be reached by with a motorcycle during rainy periods (particularly in the baseline study).

In preparation for collecting the data for the baseline and post implementation studies, community meetings were organized in partnership with village heads to invite local communities to participate in the study. The meetings outlined the purpose of the study and the activities that would be associated with data collection and community stakeholders were given the option to endorse the activities.

8.2.1 Travel speed survey method

To be able to understand the impact of investing in the rural transport network, it is important to collect data on the average speed of travel and on the mode of transport used on routes before and after the investments are completed. This can be undertaken with a travel speed survey which consists of measuring the time it takes to travel from an origin to a destination in both directions. The survey is undertaken using a motorbike or on foot if the route does not provide vehicle access, and yields results that reflect the condition of the route (route passability). Travel speed data collected before and after investments allows for comparison of the time spent travelling and assessment of time savings. Travel speed data also helps to provide an understanding of the implications that such investments have on access to markets and services and on the cost of transport.

The travel speed survey was undertaken using a GPS device to measure distance travelled and time taken to travel from one point to another point. The mode of transport used to complete the travel speed survey varied with the condition of the route. Where possible data was collected while travelling on a motorbike, however, if routes were not passable by motorbike, data was collected while travelling on foot. Depending on the condition of the route, the transport mode used may have needed to be changed from motorbike to foot at a point during the journey. The travel speed applied in the data collection process used the normal speed of travel for the particular transport mode and route conditions. Travel speed data was collected on the route in both directions on the same day. The specific locations are illustrated in the figure below.

Information was collected on distance travelled in kilometres and on travel speed in seconds. The number of kilometres travelled was divided by the travel speed in seconds and multiplied by 3600 to estimate the average travel time in terms of kilometres per hour.

8.2.2 Traffic count method

The main purpose and objective of the traffic count survey was to obtain information on the changes in traffic volume and transportation modes before and after infrastructure investments were made. A traffic count records the volume of traffic passing a point or segment of a route, in both directions, during a specific time period. Traffic counts are conducted to record the level of use of a route by vehicles and pedestrians. The main output from a traffic count is a measure of average traffic flow, recorded as the total traffic passing in both directions over a 12 hour period.

The method of traffic count used was a traditional method traffic count method involving placing observers at specific locations to record vehicle and pedestrian movements. Traffic counters used a tally sheet that included information on the transport mode of route users. The traffic count data collection points were carefully selected in an attempt to avoid under or over counting of traffic volumes by applying the following criteria:
• Avoiding counting too close to towns and villages;
• Being aware of the location of junctions and the impact of these on traffic flows;
• Being aware of alternative pedestrians routes and ensuring that the count station is located at a point that captures all traffic;
• Being aware that people in rural areas predominantly travel at sunrise and sunset.

Traffic count data was collected from a number of points (16 data collection sites) within the sampled transport network (4 sites). The sites are outlined in figure 10 below and include:

• 4 sites between Hilinawalo fau and Onohondro in Fanayama,
• 4 sites between Lahagu and Taraha/Ononamolo in Mandrehe Utara,
• 4 sites between Siwalubanua II and Hiliweto Idanoi in Gunungsitoli Idanoi,
• 4 sites between Dan Botolakha and Banuagea in Tuhemberua.

Figure 10: Location of traffic counts
Onohondro in Fanayama 
Ononamolo Mandrehe Utara

Siwalubanua II – Hiliweto Idanoi Gunungsitoli Botolakha – Banuagea Tuhemberua Idanoi
Traffic was counted from 6:00 am to 6:00 pm for seven days. As manual counts give rise to safety concerns, traffic counters worked in teams of three in split shifts throughout the day. One person worked from 6:00 to 14:00; one person worked from 10:00 to 18:00; and one person worked a split shift from 6.00 to 10.00 and 14.00 to 18.00. Team members rotated shifts on a daily basis.

The traffic count form was designed to collect administrative data, as well as data on pedestrians, two wheeled vehicles and four wheels vehicles using the route. The table below provides an overview of the traffic count form.

**Table 41: Description of the traffic count form**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>Location, date, time, weather</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>Adults (16 years and over), children (15 and under) wearing uniform and not wearing uniform</td>
</tr>
<tr>
<td>Two wheeled vehicles</td>
<td>Bicycle, motorbike, pedicab</td>
</tr>
<tr>
<td>Four wheeled vehicles</td>
<td>Public transport (L-300, minivan, people truck), private transport (car, pick-up, truck, tractor)</td>
</tr>
</tbody>
</table>

It is important to note that in low volume rural transport networks, the variation in traffic flow from day to day can be very high. Seasonality and weather patterns may also be important. The reliability of traffic count data can be improved by using local knowledge to determine whether there are days within the week or periods during the year when the flow of traffic is particularly high or low. Factors that may influence traffic flows include market days, religious days, national holidays, community meetings, elections, wet weather and seasonal harvest.

8.2.3 Route user survey method
The main purpose for undertaking the route users’ survey was to investigate a) transportation costs for men and women and b) transport safety and comfort for men and women. The route users’ survey was designed to record information on the transport mode, the purpose for travel, transport cost, and the safety and comfort of travelling routes that were receiving investments. The survey questions were designed to help understand and estimate changes in transportation costs and transport safety and comfort for men and women on the Nias Islands.

The route users’ survey provides structured information on route users in a way that allows for examination of variations among individuals and communities across a number of indicators over time. The data for the route users’ survey was collected from the same location as the traffic count locations. As mentioned, traffic count data was collected from a number of points (16 data collection sites) within the sampled transport network (4 sites). Pedestrians and vehicles passing the traffic count point were the target survey population and a random sample of this survey population was invited to complete the route users’ survey.

The approximate population within any of the given transport networks was estimated to be 2000 people. It was estimated that approximately 20 to 25 per cent (400 to 500) people would be actively using the route within the data collection periods. The number of people to be interviewed per traffic count data collection point was therefore guided by estimates of the local population size. An average of 18 people per traffic count site were interviewed over a six day period and this amounted to 72 surveys per transport network and 288 surveys in total for both the baseline and the post implementation survey (see table below). Therefore the sample size of the baseline and post implementation survey represents approximately 20 per cent of active route users and approximately 5 per cent of the local population. The dataset collected thus has both a high confidence interval (95 per cent) and a low sampling error (2 per cent). In addition, the total number of people interviewed was guided by a stratified sampling approach, which considered gender (men and women) and transport mode (pedestrian and vehicle).

Table 42: Targeted number of route users’ surveys to be completed

<table>
<thead>
<tr>
<th>Day</th>
<th>No. surveys per traffic count point</th>
<th>No. of traffic count points</th>
<th>No. of surveys completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day one</td>
<td>0</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Day two</td>
<td>3</td>
<td>16</td>
<td>48</td>
</tr>
<tr>
<td>Day three</td>
<td>3</td>
<td>16</td>
<td>48</td>
</tr>
<tr>
<td>Day four</td>
<td>3</td>
<td>16</td>
<td>48</td>
</tr>
<tr>
<td>Day five</td>
<td>3</td>
<td>16</td>
<td>48</td>
</tr>
<tr>
<td>Day seven</td>
<td>3</td>
<td>16</td>
<td>48</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>16</td>
<td>288</td>
</tr>
</tbody>
</table>


The first day of the traffic count was spent focusing on completing the traffic count and observing the traffic flows in preparation for the following days. The route users’ survey data was therefore collected between day two and day seven of the traffic count. Data was collected over the course of the day, rather than at one interval, as follows:

- Interview 1 pedestrian (male or female) or 1 vehicle user between 06.00 and 10.00
- Interview 1 pedestrian (male or female) or 1 vehicle user between 10.00 and 14.00

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305 The survey population is the complete population from which the survey sample can be drawn.
306 A confidence interval is the range of values between which the population parameter is estimated to lie.
307 A sample error is the extent to which the sample differs from the population.
• Interview 1 pedestrian (male or female) or 1 vehicle user between 14.00 and 18.00

The survey collected baseline and post implementation information to help understand a) to what degree the infrastructure investments reduced transport costs for men and women; and b) how the investment in rural transport infrastructure could increase transport safety and comfort for men and women. In particular, the survey asked general questions on location, age and gender, as well as more specific questions on transport mode, origin and destination, and transport cost. This information allowed for disaggregation of the data by spatial and social variables, while also providing insight on transport cost and how the quality of the rural transport network influences transport mode and mobility. Due the need for informed consent, interviews with route users that were below 18 years of age were not completed. A safeguard questions was also asked of survey participants to ensure that they had not completed the questionnaire previously.

8.2.4 Semi-structured interview method

The semi-structured interviews with key informants from communities sought to build an understanding of the infrastructure investment's role in supporting economic development through improving access to markets and services. In particular, the purpose of the structured interviews was to shed light on transport cost as well as transport safety and comfort for men and women and how these factors are associated with the investments made in the rural transport network on Nias Islands.

Interviews were undertaken with key informants from local clinics, education providers, local businesses and village heads within the proximity of investments in the rural transport network in Mandrehe Utara, Fanayama, Gunung Sitoli Idanoi and Tuhemberua. The method selected for collecting the data took the form of a semi-structured key informant interview, which included a list of prepared questions that drew up previous ILO experience in assessing infrastructure investments. The well defined objectives of the baseline and post implementation studies allowed the application of a straight forward questionnaire style interview for the formation of a case data grid. Table 43 provides an outline of the scope of each interview.

Table 43: Description of structured interviews

<table>
<thead>
<tr>
<th>Target</th>
<th>Description of interview scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local clinics</td>
<td>The scope of the interview with local clinics focused on understanding:</td>
</tr>
<tr>
<td></td>
<td>• client flows, outreach services and how this is affected by the condition of the transports network;</td>
</tr>
<tr>
<td></td>
<td>• travel time and the mode of transport used by clients and outreach service providers.</td>
</tr>
<tr>
<td></td>
<td>It was envisaged that this information would provide insight on factors related to transport safety and comfort and access to health care.</td>
</tr>
<tr>
<td>Schools</td>
<td>The scope of the interview with schools focused on understanding:</td>
</tr>
<tr>
<td></td>
<td>• the patterns of school attendance of students and teachers and the condition of the rural transport network;</td>
</tr>
<tr>
<td></td>
<td>• the mode of transport of students and teachers.</td>
</tr>
<tr>
<td></td>
<td>It was envisaged that this information would provide insight on how transport safety and comfort are related to education and social services more broadly.</td>
</tr>
<tr>
<td>Local businesses</td>
<td>The scope of the interview with local businesses focused on understanding:</td>
</tr>
<tr>
<td></td>
<td>• the main mode of transport used by the business, suppliers and</td>
</tr>
</tbody>
</table>

---

The description of the interview scope included customers and how trade is affected by route quality; the cost of transporting key commodities to the local business. It was envisaged that this information would provide insight on transport cost and how the quality of the rural transport network influences trade and local businesses.

Village heads

The scope of the interview with village heads focused on understanding:
- transport modes and the condition of the rural transport network;
- trade and the cost of transporting key commodities to the village.

It was envisaged that this information would provide insight on transport safety and comfort, transport cost and how the quality of the rural transport network influences trade.


8.3 Results of the baseline and post implementation survey

The baseline and post implementation survey collected data from locations in four sub-districts on Nias Islands, including Fanayama, Mandrehe Utara, Gunungsitoli Idanoi and Tuhemberua. The total population in the sub-districts surveyed ranged between 8,000 and 21,000 people, with the average number of people per village ranging between 600 to 1,300 (see table 44). The number of people per village in the survey locations was small and well below the national average, while the locations had higher population densities than the Indonesian average. Another feature of the survey locations was that the male-to-female sex ratio was lower than the national averages, meaning that there were more females than males were in the surveyed areas. As the survey locations are in rural and remote areas where employment opportunities and access to markets tend to be limited, this trend may be a reflection of the migration of males for economic purposes.

Table 44: Selected statistics for Indonesia and survey locations (2010)

<table>
<thead>
<tr>
<th>Location</th>
<th>Area km²</th>
<th>No. of villages</th>
<th>Male population</th>
<th>Female population</th>
<th>Total population</th>
<th>Sex ratio</th>
<th>No. people per village</th>
<th>Population density km²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fanayama</td>
<td>78</td>
<td>16</td>
<td>10,163</td>
<td>9,807</td>
<td>19,970</td>
<td>100</td>
<td>1,248</td>
<td>256</td>
</tr>
<tr>
<td>Mandrehe Utara</td>
<td>40</td>
<td>12</td>
<td>3,825</td>
<td>4,169</td>
<td>7,994</td>
<td>92</td>
<td>666</td>
<td>204</td>
</tr>
<tr>
<td>Gunungsitoli Idanoi</td>
<td>135</td>
<td>26</td>
<td>10,536</td>
<td>10,946</td>
<td>21,482</td>
<td>96</td>
<td>826</td>
<td>159</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>56</td>
<td>8</td>
<td>5,177</td>
<td>5,297</td>
<td>10,474</td>
<td>97</td>
<td>1,309</td>
<td>187</td>
</tr>
<tr>
<td>North Sumatera</td>
<td>72,981</td>
<td>5,876</td>
<td>6,483,400</td>
<td>6,498,800</td>
<td>12,982,200</td>
<td>100</td>
<td>2,209</td>
<td>178</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1,910,931</td>
<td>77,548</td>
<td>119,630,900</td>
<td>118,010,400</td>
<td>237,641,300</td>
<td>101</td>
<td>3,064</td>
<td>124</td>
</tr>
</tbody>
</table>


Each of the locations included in the baseline and post implementation survey had different interventions that were tailored to the specific needs of the local transport network. The investments included roads (3 metres wide), trails (1.5 metres wide) and a range of foot bridges. Due to the conditions in the survey areas, which were characterised by high rainfall and clay soils in remote areas, roads and trails were first constructed with a Telford base and sealed with cold
bitumen emulsion or concrete to allow for use in all-weather conditions.\textsuperscript{310} A description of each investment is provided in table 45.

Table 45: Description of investment by sub-district

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>Description of investment and impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fanayama</td>
<td>The investment entailed 0.3 km of road and 1.3 km of motorbike trail between Hilinawalo Fau and Onohondro in Fanayama Sub-district.</td>
</tr>
<tr>
<td>Mandrehe Utara</td>
<td>The investment constructed 3.7km of motorbike trail and a 134m suspension bridge between Lahagu – Taraha – Ononamolo in Mandrehe Utara Sub-district.</td>
</tr>
<tr>
<td>Gunungsitoli Idanoi</td>
<td>The investment constructed 2.5 km of motorbike trail between Siwalubanua II – Hiliweto Idanoi in Gunungsitoli Idanoi Sub-district.</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>The investment constructed 7.6 km of motorbike trail between Botolakha – Banuagea in Tuhemberua Sub-district, however survey data was only collected for 3.1 km of the investment.</td>
</tr>
</tbody>
</table>

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author's own analysis.

The roads, trails and bridges were built with durable materials and are expected to be relatively low maintenance, requiring routine maintenance (grass cutting and removal of debris) and periodic maintenance. The assets are estimated to have a life cycle of a minimum of ten years, after which they may need to be rehabilitated. However, if the asset is used incorrectly (i.e., beyond the load bearing capacity) or if there is a natural disaster, the asset life may be reduced. The foot bridges were constructed with galvanised steel parts that were procured from Medan, in North Sumatra Province.\textsuperscript{311} The foot bridge technology was based on designs from Nepal, and due to the durable nature of galvanised steel parts the foot bridges are expected to be relatively maintenance free for up to 25 years.\textsuperscript{312}

In each of the cases, the roads, trails and bridges were either not passable by vehicle or only partially passable before the investment. The conditions of the routes were in general reported to be narrow and muddy, which made the routes slippery and unsafe for travelling. In addition, the terrain of the routes was often steep, which also had implications for journey time. Three of the four routes were passable by motorbike in certain sections only, while one route was passable on foot only. The most common reasons given for routes becoming impassable were associated with flooding. Other reasons mentioned include river rising, rains, lack of maintenance and muddiness / slipperiness. Nias Island is a high rain fall area, having rain fall between 200 to 250 days per year, therefore flooding is a common occurrence. When roads and trails become impassable, they are generally impassable for between one day to one week, with access most commonly hindered for 24 to 48 hours. Therefore, prior to the investments villagers often had to travel by foot in order to access the area receiving the investment. In addition, community members often found themselves left with rotting produce which could not be taken to market as roads were not passable or the way was blocked by uncrossable rivers.

After the investment, all the routes were passable in all weather conditions by motorbike. In general, analysis of the baseline and post implementation datasets finds that the investments made reduced journey time, increased traffic volumes, improved route passability, and reduced commodity transport margins.\textsuperscript{313} In the future these investments may impact upon socio-economic variables

\textsuperscript{310} For further information on best practices in building rural roads see: Johannessen, Bjørn (2008) Building rural roads, ILO Regional Office for Asia and the Pacific, Bangkok.
\textsuperscript{311} The survey location is within the province of North Sumatra.
\textsuperscript{312} http://www.nepaltrailbridges.org/
\textsuperscript{313} The amount of money that villagers spent on transport in the selected areas increased between the baseline and post implementation survey, largely due to improved access to markets and services, as well as changes in transport mode.
such as employment, household income as well as the sub-district sex ratio, as increasing access to markets and services opens up new possibilities for livelihoods as well as possibilities for commuting rather than migrating. The sections below report the results of the comparison between the baseline and post implementation survey for travel speed, traffic count, and route users, as well as key informant interviews.

8.3.1 Travel speed survey

Many of the investments made were on routes that were either severely damaged or originally poorly constructed and subsequently these roads and trails were not passable by motorbike before the reconstruction works commenced. After the construction works were completed, the roads and trails were passable in all weather conditions by motorbike. To illustrate, 0.3km of road and 1.3km of motorbike trail were constructed between Hilinawalo Fau and Onohondro in Fanyama Sub-District on Nias Islands. Before the investment, the route was not passable by vehicle and it took villagers 30 minutes to walk 1.6 kms along this route. After the investment villagers could use a motorbike to travel the distance in 5 minutes and 30 seconds. Further examples of the impact of the investments are provided in table 46.

Table 46: Results of the travel time baseline and post implementation survey

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>Description of investment and impact</th>
</tr>
</thead>
</table>
| Fanayama           | • The average travel speed on this route before the investment was 3.2 km per hour in one direction and 3.5 km in the opposite direction. After the investment was complete the average travel speed on the route increased to 15.5 per hour in one direction and 17.5 km in the opposite direction.  
                      • Travel speed on this route increased by between 480 to 500 per cent and the number of minutes needed to travel the route decreased from 30 minutes to 5 minutes and 30 seconds. |
| Mandrehe Utara     | • The average travel speed on this route before the investment was 4.6 km per hour in one direction and 4.4 km in the opposite direction. After the investment was complete the average travel speed on the route increased to 14.9 per hour in one direction and 14.8 km in the opposite direction.  
                      • Travel speed on this route increased by between 320 to 340 per cent and the number of minutes needed to travel the route decreased from 55 minutes to 15 minutes. |
| Gunungsitoli Idanoi| • The average travel speed on this route before the investment was 5.8 km per hour in one direction and 3.5 km in the opposite direction. After the investment was complete the average travel speed on the route increased to 18.1 per hour in one direction and 17.5 km in the opposite direction.  
                      • Travel speed on this route increased by between 310 to 500 per cent and the number of minutes needed to travel the route decreased from 26 minutes to 8 minutes. |
| Tuhemberua         | • The average travel speed on this route before the investment was 6.2 km per hour in one direction and 6.1 km in the opposite direction. After the investment was complete the average travel speed on the route increased to 28.9 per hour in one direction and 31.2 km in the opposite direction.  
                      • Travel speed on this route increased by between 450 and 500 per cent and the number of minutes needed to travel the route decreased from 30 minutes to 7 minutes. |

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author’s own analysis.

Data is detailed in Annex VII.
The investments made in rural access in the remote areas that were surveyed improved the speed that one could travel on particular roads and trails by between 310 to 500 per cent, reducing travel time by more than half in the survey areas. Prior to the investment, the speed at which the routes could be travelled ranged between 3 and 6 km per hour. After the investment travel speeds on the surveyed routes had increased to between 15 and 31 km per hour. The gains in travel time were largely associated with roads and trails shifting from pedestrian access only to allowing for motorbike access. The results of the travel speed survey demonstrate the benefits of providing infrastructure in rural and remote areas that have underdeveloped infrastructure.  

8.3.2 Results of the traffic count survey

The investments made in rural access also increased the traffic flow on the roads, trails and bridges that were constructed, with a growth in traffic flows ranging from between 18 per cent to 230 per cent (see figure below). To illustrate, the 135 metre bridge installed in Mandrehe Utara saw traffic volumes increase in the location of the asset by more than 100 per cent between the baseline and post implementation data collection periods. Moreover, the bridge enabled community members to cross the river safely during rainy periods, instead of crossing with a boat in flood waters or delaying trips to markets and services. In Tuhemberua, the motorbike trail investment from Banugea to Botolakha saw traffic volumes increase significantly (230 per cent), as the trail connects several villages, namely Banuagea, Silimabanua, La’aya, Ladara, Alo’a and Botolakha to each other. The trail in Tuhemberua is also close to a rubber market, which is the main reason many route users travel on the trail, highlighting the importance of the infrastructure investment for supporting both market development and opening new livelihood opportunities. The increased transports flows observed between the baseline and post implementation data collection periods indicate that the infrastructure investment stimulated local activity (increased traffic), which is also likely to stimulate local economic development and improve community welfare. The results indicate that the volume of traffic present at a particular point on a route is associated with the condition of the route. That is, if the route is in a poor condition and does not allow for two-wheel or four-wheel vehicle access, the volume of traffic on the route is likely to be low. Similarly, as route quality improves, so does the traffic volume.

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315 Impacts may differ substantially for peri-urban and rural areas, such as conditions on the island of Java.
Traffic count data was collected throughout the day according to time intervals - morning, afternoon and evening. The data indicates that approximately 31 per cent of traffic flows on the routes occurred between 06.00 and 10.00. Similarly, 33 per cent occurred between 10.00 and 14.00 and the remaining 36 per cent occurred between 14.00 and 18.00. Comparison of the baseline and post implementation survey by time interval shows that the share of traffic on the routes was relatively constant at certain times of the day across the survey period. However, closer analysis of the data indicates that the growth rate of traffic flows was slightly higher at times later in the day than at times earlier in the day, with the growth rate of traffic flows at 184 per cent between 06.00 and 10.00, 189 per cent between 10.00 and 14.00, and 198 per cent between 14.00 and 18.00 between the baseline and post implementation survey (see figure below). The higher growth rate of traffic flows later in the day in the post implementation survey may be indicative of villagers being able to work longer days or may be indicative of village's increased mobility between origin and destination throughout the day.
As the quality of the roads, trails and bridges improved, more people started to transition from travelling by foot to using a motorbike in the data collection areas. In the baseline study it was found that most people travelled by foot (64 per cent), followed by motorbike (29 per cent). Only a small portion of the sample travelled by bicycle or with a four wheel vehicle (L-300, car, pick-up, truck or tractor). In the post implementation study many people still travelled by foot (51 per cent), while the number of people travelling by motorbike had increased (38 per cent). Given the investment in the transport network and increased access to markets and services, the increasing trend of motorbike use is likely to continue, and also likely to provide valuable time savings for producers, traders and workers.

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author’s own analysis.
8.3.3 Findings of the route user survey

Approximately two-thirds of the sample interviewed were men and one-third were women, which indicates that despite of high number of women in the data collection areas more men than women were using the routes during the data collection periods. Almost half of the sample interviewed in the route users’ survey were aged between 30 and 44 years (47 per cent in the baseline and 46 per cent in the post implementation survey). In terms of transport mode, it was more common for women to travel by foot or by bicycle as their main mode of transport, while for men it was more common to travel by foot or by motorbike. People aged 45 years and over were also more likely to walk, while people aged 44 and below were more likely to use a motorbike.

The main reason that survey participants reporting using the route during the baseline and post implementation survey related to agricultural activities, such as accessing rice paddy fields or other crops, or accessing cocoa or rubber plantations (see table 47). The second most common reason for using the route related to visiting family and friends. The route was also used to access a range of different markets, as well as the local school, local clinic and local government office. Comparison of the baseline and post implementation survey indicates that the reasons why villagers were using the route changed after the roads and bridges were upgraded. In particular, there is a marked increase in route usage for economic purposes. For example, in the baseline survey 17.7 per cent of route users reported using the route to access the sub-district market, while in the post implementation survey 41.0 per cent of route users used the route to access the sub-district market. Similar patterns are observed for local shops, the district market and the rubber market. Usage of the route for agricultural purposes also increased between the baseline and post implementation survey periods.

<table>
<thead>
<tr>
<th>Destination</th>
<th>Baseline survey</th>
<th>Post implementation survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local shop</td>
<td>25.7%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Village market</td>
<td>28.0%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Sub-district market</td>
<td>17.7%</td>
<td>41.0%</td>
</tr>
<tr>
<td>District market</td>
<td>12.7%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Rubber market</td>
<td>19.3%</td>
<td>32.1%</td>
</tr>
<tr>
<td>Local school</td>
<td>10.0%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Local clinic</td>
<td>22.0%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Kamat’s Office(^{316})</td>
<td>10.7%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Agriculture / plantation</td>
<td>61.7%</td>
<td>70.1%</td>
</tr>
<tr>
<td>Fishing</td>
<td>1.7%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Visit friend / relative</td>
<td>38.3%</td>
<td>48.5%</td>
</tr>
<tr>
<td>Other</td>
<td>12.7%</td>
<td>7.9%</td>
</tr>
</tbody>
</table>

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author’s own analysis.

In addition, survey participants reported that they used the route to access other income generating activities, including wage employment. The men surveyed were more likely to visit markets than the women surveyed (18 per cent of men, compared with 10 per cent of women). Similarly, people aged 30 and above were much more likely to be using the route to access markets than people below 30. Usage of the route to support agriculture related activities was shared almost equality across gender and age. People interviewed that were on their way to the local clinic were 45 years or older.

\(^{316}\) Kamat is the government official appointed head of the sub-district.
In the baseline study it was found that interviewees spent approximately IDR 12,500 per week on transport and approximately IDR 50,000 per month on transport. People surveyed in Fanayama travelled primarily by foot and did not report any monetary costs associated with travel. During rainy periods and in floods it was also reported that villagers often delayed trips due to additional costs (both in monetary, time and safety terms) associated with travel, particularly with dangerous flood waters in rivers.

In the post implementation survey weekly spending on transport had increased to an average of IDR 40,000, and monthly spending had increased to an average of IDR 120,000 (see table 48). The increases in spending on transport associated was influenced by changes in transport mode, travel speed and the condition of the route. Moreover, the cost of travelling on a route during rainy periods and in flooding had reduced substantially. In the baseline study many people had to travel by foot or delay their trip if passability on the routes was low, with it being too expensive to cross rivers and use muddy roads. While in the post implementation study villagers were able to use vehicles on the routes in all weather conditions. Here it is important to highlight that the cost of transport in the selected sub-districts is associated with the monetary costs as well as time and opportunity costs.

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>Baseline Weekly</th>
<th>Baseline Monthly</th>
<th>Post implementation Weekly</th>
<th>Post implementation Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fanayama</td>
<td>N/A</td>
<td>N/A</td>
<td>35,000 IDR</td>
<td>120,000 IDR</td>
</tr>
<tr>
<td>Gunung Sitoli Idanoi</td>
<td>14,000 IDR</td>
<td>53,000 IDR</td>
<td>30,000 IDR</td>
<td>110,000 IDR</td>
</tr>
<tr>
<td>Mandrehe Utara</td>
<td>8,000 IDR</td>
<td>32,000 IDR</td>
<td>60,000 IDR</td>
<td>170,000 IDR</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>19,000 IDR</td>
<td>79,000 IDR</td>
<td>38,000 IDR</td>
<td>100,000 IDR</td>
</tr>
<tr>
<td>Average</td>
<td>12,500 IDR</td>
<td>50,000 IDR</td>
<td>40,000 IDR</td>
<td>120,000 IDR</td>
</tr>
</tbody>
</table>

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author’s own analysis.

It is likely that the amount that individuals were spending on transport increased due to the extension of further agricultural activities and due to the improved transport network that allowed higher motorbike usage and better access to markets. The data from the traffic count survey provides supporting evidence that traffic volumes had increased, which means that villagers (or those visiting the village) were making more trips. The data from the route user survey indicates that the routes were being used for economic purpose more than before, with most trips associated with the undertaking of agricultural activities or accessing markets, both of which have implications for transport costs and for the income of workers. The reduced journey time needed to reach destinations may have also made it more feasible for villagers to increase the number of trips made for economic purposes. Therefore, although the amount of money that villagers were spending on transport increased between the baseline and post implementation survey, it is likely that this is associated with increased income and economic activities rather than increased transport costs. In addition, it may be that travelling became more affordable, particularly as villagers reported that travelling on unsafe routes with low passability was expensive. This finding is particularly relevant for remote rural locations, and highlights the importance of the transport network for improving access to income generating activities.

8.3.4 Findings from key informant interviews

The quality of roads, trails and bridges impacts on access to markets and services. In the case of health care, poor access to health services impacts on the health and wellbeing of individuals.

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317 On average the price of one litre of gasoline was 6,000 IDR per litre and remained constant over the baseline and post implementation survey periods due to the Government’s fuel subsidy policy.
through delays that community members make in taking visits to health care facilities (or being access by health care facilities) if roads and trails are in poor condition. This may subsequently impact on social indicators, such as life expectancy and maternal health. In terms of income and livelihoods, impacts may relate to limited opportunities to access markets or to sell goods at optimal prices, with perishable goods often going bad. Impacts many also be reflected in limited access to employment opportunities that are external to the agricultural sector.

Table 49: Local clinics and the condition of the rural transport network

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>Average No. of clients per month</th>
<th>Outreach services and travel time</th>
<th>Route quality and access to health care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandrehe Utara</td>
<td>180</td>
<td>60 mins to Taraha by foot</td>
<td>Low due to damaged routes, muddy routes and landslide</td>
</tr>
<tr>
<td>Fanayama</td>
<td>160</td>
<td>30 mins by foot</td>
<td>Low due to damaged routes, muddy routes and flooding</td>
</tr>
<tr>
<td>Gunung Sitoli Idanoi</td>
<td>N/A</td>
<td>30 mins by motorbike</td>
<td>Medium due to damaged routes, muddy, landslide</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>20</td>
<td>30 mins by motorbike</td>
<td>Medium due to damaged routes, muddy, flooding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>Average No. of clients per month</th>
<th>Outreach services and travel time</th>
<th>Route quality and access to health care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandrehe Utara</td>
<td>300</td>
<td>30 mins to Taraha by motorbike</td>
<td>High though still slippery when wet</td>
</tr>
<tr>
<td>Fanayama</td>
<td>200</td>
<td>15 mins by motorbike</td>
<td>High and accessible even when it is raining</td>
</tr>
<tr>
<td>Gunung Sitoli Idanoi</td>
<td>300</td>
<td>15 mins by motorbike</td>
<td>High though still slippery when wet</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>60</td>
<td>15 mins by motorbike</td>
<td>High and accessible even when it is raining</td>
</tr>
</tbody>
</table>

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author’s own analysis.

Data collected from health clinics during the baseline and post implementation study indicates that the number of clients accessing their services had increased since the upgrading of infrastructure within the sub-district (see table above). In addition the time needed to travel to nearby villages for provision of outreach services had decreased. Subsequently, the frequency of outreach service provision had increased. For example, in Tuhemberua outreach services from the local health clinic increased from an average of two visits per week in the baseline study, to daily visits in the post implementation study. The staff members of local health clinics in areas where infrastructure was upgraded could now travel by motorbike, rather than foot, to the surrounding villages in all weather conditions. All clinics reported that the improvements made to the transport infrastructures positively impacted the access to health care services. For example, the health clinic in Fanayama reported in the baseline study that one of the main problems that they faced in provision of health care services was associated with poor transport infrastructure:

“One of the main problems is associated with the condition of the roads, trails and bridges. Frequent flooding makes the bridge impassable and muddy roads and trails allow pedestrian access only.”

In the post implementation study, the head of the local health clinic in Fanayama noted that:

"With the new bridges and motorbike trail that has been constructed, the villagers can access the clinic at all times, even when it is raining."

The analysis of the baseline and post implementation data indicate that a poor quality transport network has implications for timely access to services and the frequency of access to extension services. Many expenses associated with accessing health care services can be thought of both in real and in opportunity cost terms, with transport expenses often comprising the largest financial outlay of health care after expenditure on medicines. The investments made are therefore likely to have reduced the costs associated with accessing health services, due to the increased provision of outreach services and the reduced time needed for travelling to health clinics.

Data was also collected from local businesses that provide communities with general household products and groceries (see table below). Interviews collected information on the price of goods and the cost of transporting goods, particularly for a bag of cement and a crate of soft drink (12 bottles). In the baseline study it was found that a bag of cement within the selected sub-districts cost between IDR 80,000 and IDR 90,000 and that cost for transportation ranged between IDR 15,000 and IDR 20,000. In the post implementation study it was found that a bag of cement within the same sub-districts cost between IDR 60,000 and IDR 63,000 and that cost for transportation ranged between IDR 5,000 and IDR 25,000. In general the price of cement reduced over the baseline and post implementation data collection period, while the associated transport cost reduced by between 0 to 50 per cent. For example, the fee for transporting a bag of cement to Fanayama was IDR 15,000 in the baseline and IDR 7,500 in the post implementation study.

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>Bag of cement</th>
<th>Crate of soft drink (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Price</td>
<td>Transport fee</td>
</tr>
<tr>
<td>Baseline survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandrehe Utara</td>
<td>80,000 IDR</td>
<td>20,000 IDR</td>
</tr>
<tr>
<td>Fanayama</td>
<td>90,000 IDR</td>
<td>15,000 IDR</td>
</tr>
<tr>
<td>Gunung Sitoli Idanoi</td>
<td>85,000 IDR</td>
<td>20,000 IDR</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>80,000 IDR</td>
<td>20,000 IDR</td>
</tr>
<tr>
<td>Post implementation survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandrehe Utara</td>
<td>63,000 IDR</td>
<td>20,000 IDR</td>
</tr>
<tr>
<td>Fanayama</td>
<td>60,000 IDR</td>
<td>7,500 IDR</td>
</tr>
<tr>
<td>Gunung Sitoli Idanoi</td>
<td>63,000 IDR</td>
<td>12,000 IDR</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>60,000 IDR</td>
<td>10,000 IDR</td>
</tr>
</tbody>
</table>

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author's own analysis.

The cost of a crate of soft drink (12) was IDR 48,000 (IDR 4,000 per bottle) for both the baseline and post implementation data collection periods. In the baseline study the cost for transportation of a crate of soft drink ranged between IDR 5,000 and IDR 15,000, while in the post implementation study the cost for transportation ranged between IDR 5,000 and IDR 10,000. In general the price of a crate of soft drink remained the same over the baseline and post implementation data collection period, while the associated transport cost reduced. Areas that were comparatively more remote

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had higher transport margins (Mandrehe Utara) than those closer to trade hubs (Gunung Sitoli Idanoi).

Aside from the direct costs associated with transport margins, local businesses also have indirect costs and opportunity costs associated with the transport network. Local businesses owners reported that they generally use motorbikes as their main mode of transport to access markets and that the transportation of commodities was often hindered by the quality of the transport network. The local businesses that were interviewed in the baseline study reported that they often delayed trips due to rain as many routes and bridges become impassable during rainy periods. In the post implementation survey local business owners reported that they had greater access to markets and did not have to delay trips to markets as frequently.

Interviewees reported that the price of goods and the cost of transporting goods are influenced by the condition of the rural transport network as well as other factors, such as market distortions, which impact on prices. For instance, it was mentioned that if the price of rubber increases, the price of freight also increases for rubber and for other goods. However, comparison of the baseline and post implementation survey data finds that in general the cost of transporting commodities reduced after the investment in the transport network had been completed.

It is likely that the costs of transporting commodities reduced due to the improvements in the condition of the roads, trails and bridges. The improvements in the transport network mean that the time needed for traders and producers to reach markets has been reduced and the ease of access has increased, both of which should reduce the transportation margins and opportunity costs associated with buying and selling commodities. With the improved transport network, traders and producers have the opportunity to use a motorbike in all weather conditions to bring commodities to enterprises and markets in these rural and remote villages in a shorter period of time.

Finally, data was collected from village heads. When asked about the key problems with the rural transport network within their village it was generally reported that routes were in poor condition due to heavy rains, flooding, landslides and lack of maintenance. In many cases, it was also reported that roads and bridges were poorly constructed from the outset, and that this impacted on the sustainability and durability of the asset. Village heads often mentioned that in wet conditions the routes frequently became muddy, slippery, or flooded and sometimes impassable, and at these times the routes were unsafe for both pedestrian and motorbike traffic.

In the baseline interview with village heads it was reported that the main traffic within the village area was pedestrian, in particular, the selected routes receiving the investments allowed pedestrian traffic only and were not passable by motorbike. This information is confirmed by traffic count data. Due to the condition of the local transport network, village heads reported that only a small portion of local community members owned motorbikes in the baseline interview (see table below). It was reported that motorbikes were generally used to travel longer distances rather than within the village area.

<table>
<thead>
<tr>
<th>Sub-district</th>
<th>No. of motorbikes in the baseline survey</th>
<th>No. of motorbikes in the post implementation survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandrehe Utara</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Fanayama</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Gunung Sitoli Idanoi</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Tuhemberua</td>
<td>60</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: Data courtesy of the ILO Country Office for Indonesia and Timor-Leste; Author’s own analysis.
In the post implementation interview with village heads it was found that motorbike ownership had changed considerably within the villages (see table above). Motorbike ownership had increased by up to 50 per cent between the baseline and post implementation survey periods in the surveyed villages. This is a substantial increase within a time period of less than two years and indicative of both improved livelihood prospects of villagers and the increased utility of motorbikes which is associated with an improved transport network.

Finally, interviews with the village heads confirmed that most people within the communities derive their livelihoods from working in the rubber and cocoa sub-sectors. They reported that community members usually sell their harvest once a week or once a fortnight and may either go to the nearest commodity market for selling their goods or wait for a trader to come to the community to purchase their goods. The frequency of interacting with markets for cocoa and rubber had not changed over the baseline and post implementation survey, however, an increasing number of community members were becoming involved in the harvesting and selling of these products. The decreased cost of transport margins and the reduced opportunity costs associated with accessing markets and services, both of which are associated with infrastructure investment, are therefore likely to have stimulated local economic activities.

In general data from the semi-structured interviews indicates that both the provision of and access to markets and services is hampered or promoted by the condition of the transport network. Similarly, the cost of transporting commodities is influenced by remoteness and the condition of the rural transport network. As heavy rains and flooding are frequent on Nias Islands, there is a great need for transport infrastructure that can be used efficiently in all types of weather conditions.

8.4. Discussion of findings

This chapter has presented an analysis of a baseline and post implementation survey of a public works programme located in a rural remote area of Indonesia. In particular, indicators on travel time, traffic volumes, ease of route passability and transport costs were assessed in order to understand the role of the asset in promoting local development. The survey shed light on the time savings associated with infrastructure investment and the degree to which this influences access to economic facilities and social services, therefore providing important information on the degree to which such investments can stimulate local economic development. It is important to note that the project studied in this chapter was implemented by the ILO’s Country Office for Indonesia and Timor-Leste. The ILO has a particular framework for implementation of such projects, which sees greater emphasize on creating quality assets while optimizing the employment outcomes. This approach is considered to be a best practice framework for implementation of public works programmes. For example, the ILO has published research on the comparative costs and benefits of the local resource-based approach to rural road development. The study gives insight into the effectiveness and relevance of the ILO’s “local resource based” approach to rural road development in comparison to standard methods. It was found that, dollar-for-dollar, the ILO method is more cost effective and has a higher employment impact than standard approaches to rural road development. The findings from this study are therefore particular to the ILO’s “local resource based” approach. The contributions of this study to the body of literature on public works programmes are therefore twofold and include i) the documentation of the results of the ILO’s best practice approach and ii) documentation of the impact of assets created through public works programmes.

The study used four survey instruments to analyse the research question, including a traffic speed survey, a traffic count survey, a route user survey and semi-structured interviews. The travel speed survey provided information on the various transport modes that could be used on the selected routes and provided information on how fast one could travel on the route. The traffic count data provided information on the volume of traffic and on the transport modes that were being used on the selected routes. The route users’ survey provided information on transportation costs for men and women as well as transport safety and comfort for men and women (ease of route passability). The structured interviews with local clinics, education providers, local businesses and village heads provided information on transportation costs for men and women as well as transport safety and comfort for men and women. In addition the interviews provided information on access to social and economic services and facilities.

In summary, the findings from analysis of the baseline and post implementation survey data include:

- **Increased travel speed**: The investments made in rural access in the survey areas improved the speed that one could travel on particular roads and trails by between 310 to 500 per cent, reducing travel time by more than half. Prior to the investment, the speed at which the routes could be travelled on ranged between 3 and 6 km per hour. After the investment travel speeds on the surveyed routes had increased to between 15 and 31 km per hour.

- **Shift in transport mode**: Infrastructure investments made through public works programmes in rural remote areas influence the mode of transport that people use within a given area. With improvements to the transport network, shifts can be seen from pedestrian only access to access with motorbikes and other vehicles. Such changes have significant implications for labour productivity, and the journey time of trips to markets and services. It also has reduces the opportunity costs that producers, traders and workers face in engaging in economic activities.

- **Increased traffic volumes**: The investments made in rural access increased the traffic flow on the roads, trails and bridges that were constructed, with a growth in traffic volumes ranging from between 18 per cent to 230 per cent. The increased transport volume observed on the selected routes between the baseline and post implementation data collection periods indicates that the infrastructure investment increased mobility and stimulated local activity (increased traffic), which is also likely to stimulate local economic development and lead to improvements in community welfare.

- **Increased mobility later in the day**: Comparison of the baseline and post implementation survey highlights that the growth rates for traffic flows later in the day had grown throughout the survey period. This may be indicative of villagers being able to work longer days or may be indicative of village's increased mobility between origin and destination throughout the day.

- **Gender and transport**: There were some gender inequalities observed between men and women in route usage. For example, it was more common for women to travel by foot or by bicycle as their main mode of transport, while for men it was more common to travel by foot or by motorbike. In addition, of the people surveyed, men were more likely to visit markets and engage in trade activities than women (18 per cent of men, compared with 10 per cent of women). This may be indicative of the patriarchal structure of families and communities in rural remote areas of Indonesia. The male-to-female sex ratio in the survey locations was also lower than the national averages, which may be a reflection of the migration of males for economic purposes. The improvements to the transport network may open up new possibilities for livelihoods as well as for commuting rather than migrating.

- **Increased use for routes for economic purposes**: As the quality of the route improved, villagers began to use the route more for economic purposes than before. Usage of the
route for agricultural purposes also increased between the baseline and post implementation survey periods.

- **Spending on transport increased**: The amount of money that villagers were spending on transport increased between the baseline and post implementation survey, with this likely associated with the extension of further agricultural activities and improvements in the transport network that allowed for higher motorbike usage and better access to markets. Therefore, although the amount of money that villagers were spending on transport increased between the baseline and post implementation survey, it is likely that this is associated with increased income and economic activities rather than increased transport costs as an overall proportion of income.

- **Transport margins on commodities decreased**: The direct costs associated with the transportation of goods (transport margins) remained steady or declined over the duration of the baseline and post implementation survey. The improvements in the transport network reduced the time needed by traders and producers to reach markets and the ease of access increased. Both these factors are associated with a reduction in the transportation margins and opportunity costs associated with the trading and transportation of commodities.

- **Increased access to social services**: Data collected from health clinics indicates that the number of clients accessing their services had increased since the upgrading of infrastructure within the sub-district. In addition the time needed to travel to nearby villages for provision of outreach services had decreased, seeing the frequency in provision of outreach services increase.

- **Reduced delays in accessing economic facilities and markets**: In the post implementation survey, business owners reported that they no longer had to delay trips due to the poor quality of transport infrastructure, which is likely to lead to improvements in market efficiency, as well as reductions in loss of income due to goods perishing. With the improved transport network, traders and producers have the opportunity to use a motorbike in all weather conditions to bring commodities to enterprises and markets in these rural and remote villages in a shorter period of time.

- **Increased motorbike ownership**: In the post implementation interview with village heads it was found that motorbike ownership had changed considerably within the villages. Motorbike ownership had increased by up to 50 per cent between the baseline and post implementation survey periods in the surveyed villages. This is a substantial increase within a time period of less than two years and indicative of both improved livelihood prospects of villagers and the increased utility of motorbikes which is associated with an improved transport network.

In general, the impact of the infrastructure investment in the surveyed sub-districts was most pronounced in Mandrehe Utara, Fanayama and Tuhemberua, and least pronounced in Gunung Sitoli Idanoi. For example, reductions in the cost of transport margins, increases in traffic volumes and increases in motorbike ownership were lower in Gunung Sitoli Idanoi than in the other survey locations. This may be due to Gunung Sitoli Idanoi being located in a relatively less remote location (closer to Gunung Sitoli City) when compared to the other three locations. Therefore, the degree of remoteness plays an important role in the overall impact of infrastructure investment, with more remote areas benefiting more. This finding is very much in line with earlier research from Yamauchi\textsuperscript{323} and Gibson and Olivia,\textsuperscript{324} which indicate that gains in local connectivity depend on


village remoteness. These studies were based on data collected through independent household surveys and village census data from Statistics Indonesia. As the data collected in this study focused on transport and local economic development indicators within the context of infrastructure investment, this study represents a unique contribution to the literature by providing tangible examples of the impacts that can be expected when investing in rural access.

Further observations from the areas surrounding the roads, trails and bridges that were built in Mandrehe Utara, Fanayama and Tuhemberua indicate that those areas have since been developed into agricultural or plantation areas by villagers. This demonstrates increases in the productive use of land and is an illustration of the multiplier effects of infrastructure investment. It is likely that the extension and expansion of agricultural activities in these areas will improve the welfare and household incomes of families within these sub-districts. The findings from this study therefore indicate that infrastructure investment can have a transformative effect on rural remote villages, particularly when the investment can address bottlenecks in access to markets and services. While impacts may not be as striking in areas closer to urban or peri-urban settings, such investments can still play an important role in improving the local transport network and in provision of social protection to vulnerable households through the wage-income function of public works programmes that create jobs for local people.

In summary, the findings from the analysis of the baseline and post implementation surveys indicates that infrastructure investments increase mobility and increase access to services and markets. Comparison of data from the baseline and post implementation surveys indicates that in rural remote areas there is a linkage between infrastructure investments and livelihood development. That is, infrastructure investment can provide a catalyst for accelerating local economic development. This finding reflects early research from the World Bank, the International Labour Organization, and the Asian Development Bank that indicates that transport networks play an important role in outcomes for both labour and households, particularly in regard to income improvements and poverty reduction.

This research contributes to the literature by highlighting that the benefits of greater ease of access, and the associated savings in journey time and the reduced commodity transport margins, may allow traders, producers and workers to increase their productivity and improve their income in the future. In very practical terms, prior to the construction of the new roads, trails bridges, villagers often found themselves left with perishable produce that could not be transported to market as roads were impassable or rivers had become uncrossable. In this context, both accessing markets and not accessing markets could be very expensive and time consuming. Comparisons of the baseline and post implementation datasets indicates that the investments provided resulted in increased traffic volumes within villages, reduced journey time on the selected routes, improvements in route passability and reductions in the transport margins of commodities. The results from this study therefore offer tangible insights on processes associated with infrastructure investment that take place at the village level over time that lead to development. It therefore complements the existing body of literature that reports the effects of infrastructure investment on development at the more aggregate level.

Given the increasing recognition of the linkage between infrastructure investment and the creation of an enabling environment for employment promotion and livelihoods development, it would be

beneficial for rural development strategies to use public works programmes as a catalyst for stimulating local economic development and employment creation. In order to optimise the value of such programmes, it would be important to adopt an integrated rural accessibility planning (IRAP) approach to identifying locations where infrastructure investments are likely to have a high return on investment. Policies that support the use of local resources - labour, materials, contractors - throughout the process of investment may also increase returns to the local economy and stimulate local development more effectively. In addition, rural infrastructure programmes can also be linked with other programmes, such as job matching services, enterprise development, skills training, mentoring and value chains to provide a more integrated approach to rural development. It is important to link infrastructure investment with employment policy, and vice-versa, in order to optimize the efficiency of economic and employment outcomes.

Furthermore, in addition to the indicators that have been monitored in the baseline and post implementation study, in future programmes it would be important to consider the assessment of the following factors within the monitoring and evaluation frameworks, in order to enable a more comprehensive assessment of infrastructure investment on local economic development, employment creation and community welfare:

- Diversification of the economy and employment opportunities;
- Gains in household income and income from employment;
- Gains in enterprise development;
- Transport indicators across speed, volume and mode variables;
- Commodity prices and transport fees associated with key commodities;
- The nature and frequency of access to various traders and suppliers;
- Gender and use of transport infrastructure;
- Motorbike ownership and public transport provision;
- Attendance of students and teachers at schools;
- Travel time of teachers from their home to school;
- Health care and usage of drop-in services;
- Outreach health care services in terms of frequency and travel time.

Selected socio-economic variables, such as household income, household consumption, employment and enterprise development, among others, can be examined through the use of micro datasets available from the national statistics office (Badan Pusat Statistik, BPS). In particular, the labour force survey, the national socio-economic survey and the surveys of enterprises would be useful.

Finally, there are many rural infrastructure investment programmes and projects in Indonesia that are operated across several different ministries and supported by various donor and technical agencies. Each of these programmes undertakes similar activities at the local level, but all have different outcomes on asset quality, community participation, employment and local development. Different technologies, approaches and incentives are provided in each of these programmes, with each programme having its own strengths and weaknesses. Greater coherence is needed across programmes, in order to support the standardization of outcomes and benefits while minimizing corruption.

In support of policy coherence, policy makers in Indonesia may consider uniformly adopting the ILO's "local resource-based approach", which gives particular attention to creating quality assets while

optimizing the employment outcomes of infrastructure investment programmes through focusing on including local resources (labour, enterprises, materials, etc) throughout the investment process. The study presented in this chapter examined a public works programme that used this approach throughout its implementation. The findings from the baseline and post implement surveys indicates that the project is a good example of how a focus on employment and comprehensive planning processes, which includes consideration of market potential as well as access to markets and services, can build synergies that enhance developmental outcomes of investments for local communities.
Chapter 9: Lessons learned from public works programmes in Indonesia

This thesis aimed to apply an evidence-based assessment of public works programmes in order to provide illustrations of how employment policies can support labour market outcomes. This thesis has discussed the overall context of public works programmes and drawn upon case studies from Indonesia in order to better understand the different angles of such programmes. Public works programmes have been widely criticized in the literature due to poor targeting, political corruption, and low quality assets. However, the studies undertaken throughout this thesis indicate that it is the design and implementation of such programmes that plays a critical role in overall performance, rather than a deficit in the policy concept itself. Importantly, the studies found that public works programme can perform and that such programmes do support employment creation and local economic development policy objectives.

Public works programmes can transfer benefits through three core modalities, including the wage income transfer, the assets created and the skills transferred. This thesis contributes to the literature through providing case studies that consider the wage income transfer and the role of the assets created within public works programmes. These case studies address gaps in the literature and provide policy makers with evidence that can be used to support reform. The case studies also contribute to the debate within the literature. For example, McCord notes that short term public works programmes can provide important functions during periods of crisis, but that there is:

"no evidence or theoretical basis for expectations that such programmes will be effective instruments in situations of chronic labour market failure."  

The evidence presented in this thesis highlights the contention of this statement as the assets provided by such programmes can address bottlenecks and thus facilitate the functioning of labour markets, as presented in chapter 8. In addition, evidence presented in chapter 7 highlights that such programmes are inclusive of vulnerable groups and that many participants were unemployed before joining the programme and many participants accepted a wage on the programme that was lower than the wage they received on their previous job. These findings highlight that the investments made by these programmes stimulate local economic development, are inclusive of vulnerable groups and have minimal distortion, all of which are factors that are needed to address situations of market failure.

This thesis has presented a theoretical discussion of issues related to public works programmes and detailed the methodologies applied throughout the thesis. It has provided a contextual overview of the labour force situation and employment policies in order to set the scene and answer the core question of "whether public works programmes are a suitable employment policy given the context in Indonesia?". Three methodologies were then applied, including programme assessment, a programme beneficiary survey, and a baseline-post implementation survey of local economic development indicators, in order to examine public works programmes in Indonesia. These three methodologies shed light on the two principal research questions that guided this thesis, namely "Can public works programmes support the purchasing power of vulnerable groups during times of crisis?" and "How do the assets created through public works programmes stimulate local economic development?"

The final chapter of this thesis brings the theory and evidence together in order to better understand and further conceptualized public works programmes in Indonesia. It provides a summation of the core question of regarding "What lessons can be taken from evidence-based approaches to strengthen policy performance?". Section 9.1 summarizes theoretical concepts and methodologies applied throughout the thesis. Section 9.2 summarises the findings from the review of the employment situation and employment policy in Indonesia. Section 9.3 reviews the findings from research that was reported in chapters 6, 7 and 8. Section 9.4 summarizes the contribution of this thesis. Section 9.5 provides a number of recommendations for employment policies and programmes in Indonesia. Section 9.6 identifies the limitations of the current research. Finally, section 9.7 identifies areas for further research.

9.1 Theory and concepts

The commitment to full employment is highly visible on the global development agenda and extensive efforts to reform economies in favour of promoting full employment have been ongoing. However, economies the world over remain far from full employment. As chapter 2 highlights, a general trend in policy priorities across the globe can be observed and defined as a shift from "full employment" to "full employability", where states provide policies to that focus on ensuring that workers are "work ready" rather than demand side policies that ensure that people are employed. In terms of public works programmes, global trends can be considered to fall into two categories, namely, a shift from welfare to workfare based approaches in developed countries and a shift towards the expansion of public works programmes in developing countries in order to extend social protection to the working age population.

The prevailing discourse in theory and policy assumes that employment outcomes are contingent on economic outcomes and many strategies for supporting employment are based on strengthening economic performance through raising aggregate demand and improving productivity. While such strategies are needed, particularly for supporting competitiveness and innovation, this theoretical and policy framework also presumes the continuing existence of labour underutilization as a norm. Moreover, shocks, market failure and instability are persistent features of the prevailing economic system and strategies are needed that can protect the labour force from such phenomenon. The prevailing policy framework focuses on narrowing the gap between the employed population and the underutilized; however, narrowing the gap does not offer policy makers with a solution to the problem. The persistent nature of unemployment and underemployment in economies across the world indicates that there is a need for alternative strategies that can support the realization of full employment. This thesis explores one policy option in detail, namely, public works programmes, as it is proposed that such programmes may constitute a more flexible "on the spot" approach to full employment, where full employment is defined to be a situation where "all those available, able and actively seeking work can obtain it".

As chapter 3 explains, public works programmes can be thought of as targeted interventions that typically provide wages at fixed prices in line with the market minimum and attract labour from the back of the unemployment queue, therefore hiring "off the bottom" while providing an "on the spot" approach to creating jobs. A common feature of public works programmes includes the policy objective to create jobs and the associated work component of the programme. Public works programmes therefore form a strategic pillar of employment policy. However, it is important to note that many models of public works programmes exist, including short-term programmes, ongoing programmes, programmes that focus on technology choice, and employability programmes, with model variations impacting on the potential of each programme. There are also many factors outside this typology that have a high level of influence on the implementation, including geographical scope, programme budget, beneficiary targeting, benefit level, linkages with other
labour market programmes, the employment status of beneficiaries and the inclusion of a multidisciplinary team in programme design and implementation, among others. All these factors impact on the overall effectiveness of individual policies.

Indonesia has a long history of implementing public works programmes in various forms. The programmes have been instrumental in creating jobs, supporting crisis recovering and stimulating local economic development. Many models of public works programmes exist across the country, with different models achieving different outcomes. In this context, it is important to understand the various implementation models that exist and to take lessons from these models in order to support the overall development of such programmes within the country. In this regard, it is important to understand the dynamics of the labour market in order to ensure that the concepts underpinning various programme are appropriately tailored to the context.

While a theoretical case can be made for expanding public works programmes for achieving full employment, theory is not always realized as expected. The implementation of policies in the real world is challenging, particularly in economies with a large informal labour markets where demand for and supply of labour is challenging to understand through traditional concepts. Therefore, it is important to have a deep understanding of the context in which such policies will be applied, as this will have an important influence on implementation. Moreover, as many different versions of public works programmes exist, inputs are needed from the research community so that programmes can be reformed and strengthened in order to match the context and optimise results.

9.2 The labour market situation and employment policy

The Indonesian economy has maintained strong growth, linked to domestic demand and investments across a range of areas. The review of the employment situation provided in chapter 4 reveals that gains in labour force participation and employment growth have been made over the last period, with employment growth outstripping the growth of the labour force and therefore contributing to low unemployment. It is projected that employment will continue to grow and unemployment will remain steady over the next five years in Indonesia. However, it is important to note that employment expansion in Indonesia has historically tended to be a direct result of economic growth, with slight declines in economic growth having significant implications for labour market outcomes. Given the strong relationship between growth and employment, it will be important for employment policy to be able to come to grips with fluctuations in growth outcomes.

There are indications of churning within the labour market, with employment outcomes varying substantially quarter by quarter. This means that even though employment growth has been relatively strong, the employed population is often exposed. Moreover, the structural transformations that are currently taking place within the Indonesian labour market are likely to continue to unfold, with fluctuations in employment outcomes and labour market churning continuing due to these adjustments. The structural changes include a shift away from unskilled employment within the agriculture sector in rural areas, towards an expansion of low skilled and skilled employment in the industry and services sectors within urban areas. As structural change can carry significant adjustment costs, there is a need to strengthen labour market programmes in order to mitigate the costs.

With a large share of workers employed in the informal economy, in poor quality and low-paid jobs that have intermittent and insecure work arrangements, greater focus needs to be given to addressing the challenge of vulnerable employment and informal employment, as progress in this area is likely to have significant development dividends. It is important to note that "regular wage employment" has been increasing in recent years. However, this trend is associated with the rise of
contract work that is generally precarious and lacking of stability. This trend raises the issue of the "informalization of formal sector work" and as safety net programmes in Indonesia are limited for the working age population, this is a core concern.

Progress has been made across a range of development indicators which has elevated Indonesia to the status of a middle income country. Chapter 5 highlights that in order to ensure continued progress, it is likely that labour market policies will need to play a more active role in supporting employment gains in the future. One of the biggest challenges of policy in Indonesia is the limited fiscal space to invest in policies and programmes that help to build the capacities of economic and human resources and therefore enhance the sustainability of growth. Significant challenges associated with decentralization and the need to enhance productivity plague policy. To illustrate, employment policy in Indonesia covers all the strategic components of the world of work that are needed to promote employment, however, the overall weak condition of labour market institutions, programmes and services, as well as budgetary constraints, means that the effectiveness of employment policy in facilitating outcomes tends to be relatively limited.

Employment policies in Indonesia focus on productivity, access, protection and welfare. In particular, policies that promote access to employment include a range of public works programmes to support informal economy development. These policies seek to facilitate labour market attachment and strengthen demand for labour through investing in community assets and in human capital. Linkages between these policies and other employment policies are not well established, which limits the synergies that can be exploited for supporting the functioning of the labour market.

The largely informal nature of the economy and labour market, as well as the persistence of low productivity, is associated with barriers to transparency and accountability. Weaknesses across these features indicate that there are high risks that contributions from policy interventions will rapidly be depleted and that realizing local economic development will be very challenging. In general there is a need to enhance the efficiency of investments made through employment policy. To emphasize, there is a need to better understand the effectiveness of the strategies that are implemented through employment policy and for reforms to be identified that can help to increase the efficiency of government spending in order to improve employment outcomes.

In summary, there is a strong relationship between economic growth and employment outcomes in Indonesia. There are also a number of challenges within the labour market, including labour market churning and a high prevalence of vulnerable employment. The situation points to a need for the strengthening of labour market institutions. In order to strengthen the strategic programmes of employment policy, which include public works programmes, among others, it is important to undertake evidence-based research that can provide information on the effectiveness of such interventions and identify areas for strengthening policy outcomes. This thesis does this for public works programmes.

9.3 Findings from evidence-based research

Economic theories, along with development programmes and policies, are designed to change and/or improve outcomes. In this regard, it is crucial to understand how changes can be attributed towards policy interventions through a range of evidence-based approaches, particularly through evaluations that provide information on impact and efficiency. Moreover, when theories are converted into policies and programmes in the real world, their overall impact will be heavily

331 Institutions include employment services, public works programmes, training programmes, social security, labour inspection, and dialogue mechanisms for supporting industrial relations.
influenced by programme design elements and how well programmes are implemented.\textsuperscript{332} There are many implementation models of public works programmes that exist and an important part of policy reform is to understand what works, so that successful initiatives can be upscaled and the outcomes of policy strengthened.

A good starting place is with a programme assessment. The programme assessment presented in chapter 6 provides a useful framework for understanding process-oriented aspects of programme execution. It also allows researchers to distil differences between conceptual and performance issues, so that more comprehensive understandings of effectiveness can be constructed. The programme assessment presented in chapter 6 identified a number of key themes that have an important role in the outcomes of public works programmes, including the critical role of human resources in supporting programme execution, the need for a continual strengthening of safeguards to support transparency and accountability, and the need for policy and planning to incorporate short, medium and long term needs in programmes that are providing investments in assets and human resources.

In addition, it was noted that monitoring, evaluation and reporting systems provide the foundations of accountability and therefore require systematic investment so that the effectiveness and efficiency of interventions can be enhanced. The programme assessment found that improvements in quality control on both the social safeguards and on the infrastructure standards are required in order to optimise the short and long term of developmental impacts of the programme. Investments in planning, monitoring, reporting and evaluation processes are needed improve programme transparency and effectiveness.

Chapter 7 then reported the findings from a survey of beneficiaries of the job creation component of Indonesia’s 2009 fiscal stimulus package. The survey provided insight into the ability of the Government to upscale government spending and to administer employment creation programmes in times of financial and economic turmoil. The survey also shed light on the quality of the jobs that were created and on the degree to which the policy was inclusive of poor and vulnerable households, which provides important information on the impact and effectiveness of the programme. In particular, it was found that the programme was inclusive of vulnerable groups and that it supported the maintenance of purchasing power among poor households. An issue was that women had limited access to the job opportunities created under the programme and also that jobs did not always go to workers from local areas.

The programme had limited distortionary effects on the labour market, with workers accepting lower daily wages on fiscal stimulus programme than in their previous job, which is indicative of a tightening labour market and the need for such policy interventions. The programme encouraged discouraged workers to re-enter the labour market and gave an opportunity for poor households to temporarily transition from agricultural to non-agricultural labor markets. A major strength of the job creation component on the fiscal stimulus package included the capacity of the Government to design and implement a programme that provided employment outcomes that were at least on par with other ongoing government programmes within a constrained time period.

The outcomes of the fiscal stimulus package could have been strengthened through ensuring the provision of safeguards to improve transparency and socioeconomic efficiency, as well as through extending monitoring and evaluation frameworks beyond budget realization parameters. In particular, the targeting specifications of the programme were limited to the creation of a set number of short term work opportunities, and didn’t refer to a particular vulnerable group. As such

women had limited access to the intervention. This highlights that investments are needed in both administration and independent monitoring and evaluation systems to provide evidence to policies for supporting reform in the future.

Chapter 8 presented an analysis of a baseline and post implementation survey of a public works programme located in a rural remote area of Indonesia. In particular, indicators on travel time, traffic volumes, ease of route passability and transport costs were assessed in order to understand the role of the asset in promoting local development. The survey shed light on the time savings associated with infrastructure investment and the degree to which this influences access to economic facilities and social services, therefore providing important information on the degree to which such investments can stimulate local economic development.

In summary, the findings from analysis of the baseline and post implementation survey data indicate that the interventions supported gains in travel speed, shifts in transport mode and increases in traffic volumes; therefore mobility increased. The degree of remoteness plays an important role in the overall impact of infrastructure investment, with more remote areas benefiting more. It was observed that the routes were increasingly used for economic purposes and that communities reported reduced delays in accessing markets, which may lead to gains in livelihoods. The amount that villagers spent on transport increased, with this likely associated with increased economic activities and income, rather than increased transport costs as transport margins remained steady or declined. The areas surrounding the investments were converted for more productive uses, which points to a multiplier effect of infrastructure investment.

Comparison of data from the baseline and post implementation surveys indicates that in rural remote areas there is a linkage between infrastructure investments and livelihood development. That is, infrastructure investment can provide a catalyst for accelerating local economic development. This finding reflects early research from the World Bank, the International Labour Organization, and the Asian Development Bank that indicates that transport networks play an important role in outcomes for both labour and households, particularly in regard to income improvements and poverty reduction. The research undertaken in this thesis indicates that public works programmes are effective modalities for investing in infrastructure that supports local economic development.

9.4 Contribution of this thesis

This thesis used a mixed method approach applied within an evidence-based assessment framework. This has proven to be a successful vehicle for assessing public works programmes and provides understandings of how such programmes operate and how they may be improved. The major conclusions that can be made from the research undertaken in this thesis include the following:

- Public works programmes in Indonesia have been successful in supporting employment creation and local economic development. They are thus a strategic pillar of employment policy and should be extended in an effort to drive the economy closer to full employment;
- Public works programmes in Indonesia are inclusive of vulnerable groups, however, targeting measures may help to increase the efficiency of the programmes to some degree;

• Public works programmes in Indonesia are successful in achieving objectives other than job creation. For example, they support local economic development through investing in assets which stimulates economic activity;

• Public works programmes in Indonesia have been worthwhile and an expansion of the public works programmes should be accompanied by reforms to ensure that public spending optimizes efficiency.

In terms of methodology, this thesis has demonstrated the application of programme assessment methodology and a range of survey research tools, which allowed for a systematic, yet nuanced assessment of public works programmes. A contribution of this thesis is therefore the adaptation and testing of these methodologies for the purpose of assessing public works programmes. This is an important contribution given the shift towards evidence-based approaches to policy and programme development.

The contribution of this thesis to the school of economics and the body of work within the area of public works programmes is threefold:

• The policy framework of public works programmes;

• The beneficiaries of public works programmes;

• The role of assets in public works programmes.

The three sections below discuss this contribution in further detail.

9.4.1 Creating effective labour markets: The policy framework of in public works programmes

This thesis provided a programme assessment of a public works programme in order to better understand how various features and implementation mechanisms may impact upon the overall results of such policy instruments. This case study fills a gap in the literature by providing a thorough examination of the process-oriented features of public works programme. This case study responds to the arguments raised by Roosi et al on the need to undertake a programme assessment in addition to other types of impact evaluation methods, as the overall impact of a programme will be heavily influenced by whether it is well implemented.

The programme assessment found that investments in quality control on both the social safeguards and on the infrastructure standards are required in order to optimise the short and long term of developmental impacts of public works programme. Investments in planning, monitoring, reporting and evaluation processes are needed improve programme transparency and effectiveness. The information reported in the programme assessment highlights that the implementation of policies on the ground is a major challenge in Indonesia. This thesis has illustrated that the inclusion of a programme assessment in the evaluation of public works programmes is important because it allows researchers to understand the differences between implementation performance and programme concept.

9.4.2 Creating effective labour markets: The beneficiaries of public works programmes

The public works programme associated with Indonesia's fiscal stimulus package of 2009 created short-term jobs for the purpose of smoothing consumption and providing social protection through a workfare based modality. In order to fulfil this objective, it is important that the jobs created through this programme were accessible to vulnerable groups. A survey of beneficiaries is therefore

a critical instrument for understanding the effectiveness of such programmes. The contributions of this study to the body of literature on public works programmes are therefore twofold. Firstly, the survey documented information on the effectiveness of the fiscal stimulus policy in terms of inclusiveness vulnerable groups and the quality of the transfer in terms of supporting purchasing power. Secondly, it provides policy makers with evidence that can be used to support the design of future programmes.

The case study provided in this thesis fills a gap in the literature by providing an understanding of who the beneficiaries of public works programmes are in Indonesia. This case study responds to the concerns raised by McCord337 and Subbarao et al338 that highlight issues associated with targeting in public works programmes, as the effectiveness of targeting has a substantial impact of the results of policy intervention. In this case, the targeting criteria of the fiscal stimulus package were not explicit and were solely based around the setting of the wage rate. The results of the analysis indicate that the wage rate offered was low enough to enable a large number of people from poor households to access the programme, while the transfer was high enough to support the maintenance of purchasing power. However, the inclusion of additional targeting criteria could enhance the efficiency of programme outcomes. For example, outcomes on women's participation, inclusion of local labour, and also the participation of the working poor could be improved. This thesis has illustrated why the inclusion of such analysis in the evaluation of public works programmes is important for improving programme outcomes through evidence-based mechanisms.

9.4.3 Creating effective labour markets: The role of assets in public works programmes

Given that investments in infrastructure create short-term jobs during the process of construction, it is important that the assets that are created through these programmes provide benefits to communities in the medium to long term. In particular, the assets that are created should lead to medium and long term direct and indirect benefits for local economic development that result in the promotion of livelihoods for local communities. An important component herein is the quality of the assets created and systems for asset maintenance, as well as the involvement of local stakeholders throughout the processes of investment.

Assets that are created through public works programmes are intended to promote livelihoods and economic growth. Asset evaluation is therefore a critical factor in understanding programme effectiveness. In general, there is an assumption that the production of assets is synonymous with economic and employment growth, without sufficient consideration of the quality or relevance of the assets created.339 It is therefore important to understand the impact of the asset in order to avoid the assumption that asset creation goes hand-in-hand with the achievement of poverty reduction, employment promotion and/or economic development.

This thesis provided a case study of the linkage between public works programmes and how these programmes impact upon the local economy. This case study fills a gap in the literature by providing empirically founded analysis on the impacts of the asset provision component of public works programmes. This case study responds to the arguments raised by McCord,340 Ravallion341 and

Devereux342 on the need to consider the impacts of investment during and after the period of disbursement, in order to understand investments in the light of higher level development objectives ascribed to such programmes. In this case, the higher level objective was to facilitate post-disaster economic recovery and poverty alleviation by creating an environment for improved livelihood and human development. The gains reported from this study, including improved access to economic and social facilities and services, highlight the tangible gains communities received from the investments. This thesis has illustrated why the inclusion of such analysis in the evaluation of public works programmes is significant. In addition, the evaluation indicates that the policy choice was justified.

9.4 Recommendations for employment policy and program design

On a positive note, the Ministry of Manpower in Indonesia continually renews its framework for the public works programme on an annual basis. Reforms that are introduced seek to strengthen both the employment and local economic development outcomes of the programme. Therefore, many of the findings from this programme assessment can be used by the Ministry to strengthen its programme in the future.

The recommendations from this thesis can be grouped into several key areas that refer to strategies for enhancing programme effectiveness and programme efficiency as follows:

- **Monitoring and evaluation:** A general issue with public works programmes is that the monitoring and evaluation frameworks of these programmes often focus on achievements at the outcome level rather than achievements at the impact level. To further explain, programmes are often reported to be effective if they are able to reach a job creation or training target, rather than measures that shed light on the direct or indirect contribution to poverty reduction or employment promotion that are associated with programme participation.

- **Targeting strategy:** In order to enhance the impact of a fiscal stimulus programme, an explicit targeting strategy could be adopted to ensure that the investment reaches poor households and vulnerable groups. For instance, the Expanded Public Works Programme in South Africa specifies that 20 per cent of the work opportunities created by their programme will go to youth.343 In addition, 60 per cent of the beneficiaries should be women and two per cent of beneficiaries should be people with disabilities. Projects implemented by the ILO Country Office for Indonesia and Timor-Leste in Aceh and Nias Islands after the tsunami of 2004 have successfully demonstrated that 30 per cent of the work opportunities created in village and district level infrastructure investment projects can go to women.344 This sets an important benchmark for similar projects in Indonesia.

- **Alignment with the needs of the labour market:** In addition, an on-going challenge is to ensure the appropriateness of employment policies for the situation of the labour market. Given the persistence of informality, low productivity and limited access to social protection, public works programmes have a role to play in employment policy. The challenge is for policy in the future to come to grips with these issues as well as socio-spatial dimensions of labour market inequalities. The persistence of poor public infrastructure, coupled with extensive labour underutilization indicates potential for these broad and extensive societal


problems to be addressed through an expanded public works strategy for unskilled workers. Such an approach would seek to address local deficiencies in infrastructure (and could be extended to include social and environmental service), while stimulating localized economic development and drawing the most disadvantaged into the labour market. However, given that Indonesia is already a lower-middle income country, public works programmes need to focus not only on employment targets, but also on asset quality, so that the multipliers associated with investment can be realized.

- **Employment policy**: Public works programmes are a strategic pillar of employment policy. It is therefore important to strengthen the linkage between public works programmes and employment policy. Introduction of linkages between public works programmes and other labour market interventions, such as job search, job matching services, enterprise development, skills training, mentoring and value chains or training programmes, is also important for improving impact. This may include the piloting of mutual obligations or conditionality for participation in various labour market programmes. Such measures may be warranted as many times people participate in programmes, receive investments and are trained, yet there is no differences in employment outcomes. It is important that public works programmes are used as an instrument to get people into work. Therefore the results after programmes have been completed are highly important.

- **Rural development**: Given the increasing recognition of the linkage between infrastructure investment and the creation of an enabling environment for employment promotion and livelihoods development, it would be beneficial for rural development strategies to use public works programmes as a catalyst for stimulating local economic development and employment creation. It would be important to strengthen dialogue with the private sector to ensure that assets that are being created through public works programmes support local economic development.

- **Best practices**: In order to optimise the value-added of public works programmes, it would be important to adopt an integrated rural accessibility planning (IRAP) approach to identifying locations where infrastructure investments are likely to have a high return on investment. Policies that support the use of local resources - labour, materials, contractors - throughout the process of investment may also increase returns to the local economy and stimulate local development more effectively.

- **Synergies across ministries**: Finally, there are many rural infrastructure investment programmes and projects in Indonesia that are operated across several different ministries and supported by various donor and technical agencies. Each of these programmes undertakes similar activities at the local level, but all have different outcomes on asset quality, community participation, employment and local development. Different technologies, approaches and incentives are provided in each of these programmes, with each programme having its own strengths and weaknesses. Greater coherence is needed across programmes, in order to support the standardization of outcomes and benefits while minimizing corruption.

In support of policy coherence, policy makers in Indonesia may consider uniformly adopting the ILO's "local resource-based approach", which gives particular attention to creating quality assets while optimizing the employment outcomes of infrastructure investment programmes through focusing on including local resources (labour, enterprises, materials, etc) throughout the investment process. The study presented in chapter 8 of this thesis examined a public works programme that used this approach throughout its implementation. The findings from the baseline and post implement surveys presented in chapter 8 indicate that the project is a good example of how a focus on employment and comprehensive planning processes, which includes consideration of market

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potential as well as access to markets and services, can build synergies that enhance developmental outcomes of investments for local communities.

9.5 Limitations and areas for further research

There are several limitations associated with this thesis. In general, the case study based approach of this thesis means that it is difficult to generalise research findings from the projects and programmes that were analysed to more aggregate levels or to other programmes that may be similar. The case studies were confined to particular geographic locations, while Indonesia has a highly decentralised government structure that may lead to distinctions in programme operation and impact. Additional research in urban, rural and remote areas across the provinces of Indonesia would be needed to further understand the effectiveness of public works programmes in Indonesia. In addition, the studies did not use randomized control and treatment sample structures to complete the evaluations.

Second, understandings of the dynamic impact of public works programmes on livelihoods, poverty reduction and economic development are limited as it was not possible to collect longitudinal data on programme beneficiaries. In relation to this, it was also not possible to provide a counterfactual. That is, that studies undertaken do not provide an understanding of what would have would have been if the programme participants had not participated in the intervention. Third, the case study based approach has focused on understanding and assessing three public works programmes, and omits other important programmes, such as Indonesia's National Community Empowerment Programme (PNPM) that also has an important impact on living standards and on the community empowerment.

It is important to recognise that employment is dynamic and is constantly changing. This means that the needs for different types of policy interventions are constantly evolving and it is the challenge of researchers and policy makers to keep abreast of the needs of the labour market. It is therefore important to develop comprehensive understandings of the labour market and employment policies through a range of evidence-based approaches constantly. It is also important that reforms are introduced that allow interventions to become more responsive to needs. This thesis has demonstrated how evidence-based approaches can be used to support policy assessment and programme development. In essence, it has provides a range of assessments in order to build understanding of public works programmes, their role in employment policy and how this role can be strengthened. However, there are several caveats and the main limitations of the presented research are as follows:

- **Limited application of programme assessment methodology:** There are many public works programmes in Indonesia and it would have been beneficial to apply this methodology across a range of programmes in order to strengthen the analysis through comparative assessment. However, this was not feasible due to time constraints, financial constraints and lack of access to information across all programmes.

- **Limited understanding of gains to programme beneficiaries:** It was not possible to construct a control and treatment group approach in the fiscal stimulus study, as information on the beneficiaries was not available before going to the field. In addition, it was not possible complete follow surveys with the fiscal stimulus beneficiaries due to financial and time constraints. This means that the long term impacts of programme interventions on beneficiaries in terms of poverty reduction, employment promotion and employability need to be understood through further research.

- **Limited comparative assessment:** It was not possible to compare different types of interventions in order to assess that which may be comparatively more effective due to
financial and time constraints. Nor was it possible to adopt a control/treatment group approach to programme evaluation. Cultural constraints also played a role herein, with it not appropriate to collect data in villages that do not receive investments.

In sum, time and resource constraints meant that certain issues, methods, processes could not be included within the scope if this thesis. The core limitations of this thesis are linked to constraints around time, financial resources and information resources. To emphasize, it was not possible to collect data on the longer term impacts of investments made through public works programmes due to both financial and time constraints. In addition, assessment of employability was considered to be beyond the scope of the studies conducted in this thesis due to the need for panel data on such variables over a longer time period.

The areas for further research include replication of the methodologies presented in this thesis across other public works programmes in order to build a deeper understanding of the comparative effectiveness of various policy interventions. It will also be important to build panel data sets that allow for the assessment of issues such as poverty reduction, employment promotion and employability on public works programmes and other programmes over time. While Indonesia acknowledges full employment as a core objective of its development framework, in reality the economy is far from full and productive employment. Indonesia still has many people who live on a day to day basis from subsistence agriculture or rudimental activities in the service sector. It is important that further research address policy issues and provide evidence that can be used to strengthen policy and programme design for promoting employment and prosperity for Indonesia.
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Annex I : Questionnaire for Evaluating the 2009 Fiscal Stimulus Package

<table>
<thead>
<tr>
<th>Rationale of questions</th>
<th>Evaluating the 2009 Fiscal Stimulus Package</th>
<th>Survey for individual workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hello. You have been randomly selected to participate in monitoring and evaluation activities of the Government of Indonesia’s 2009 Fiscal Stimulus Package. The questionnaire aims to</td>
<td>1) verify the job creation component of the Stimulus</td>
<td></td>
</tr>
<tr>
<td>2) learn more about your labour market experience over the last year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This information will help us to understand if the programme is well targeted and helping to address the consequences of the global financial crisis.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. General information – to be completed by interviewer prior to interview

<table>
<thead>
<tr>
<th>1.1 Questionnaire number</th>
<th>Administrative records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Location of project site</td>
<td>Administrative records</td>
</tr>
<tr>
<td>1.3 Name/contact of site supervisor</td>
<td>Administrative records</td>
</tr>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
</tr>
<tr>
<td>1.4 Description of project being undertaken</td>
<td>Differentiate outcomes by type of project – for comparative purposes</td>
</tr>
<tr>
<td>1) Human settlement development (sanitation)</td>
<td></td>
</tr>
<tr>
<td>2) Road works</td>
<td></td>
</tr>
<tr>
<td>3) Water resource development (irrigation, flood control, catchment management)</td>
<td></td>
</tr>
<tr>
<td>4) Other:</td>
<td></td>
</tr>
<tr>
<td>1.5 In which sub-district is this project located?</td>
<td>Administrative records</td>
</tr>
<tr>
<td>1.6 In which village is the project located?</td>
<td>Administrative records</td>
</tr>
<tr>
<td>1.7 Please describe the locality</td>
<td>Differentiate outcomes by location of project – for comparative purposes</td>
</tr>
<tr>
<td>1) Urban formal</td>
<td></td>
</tr>
<tr>
<td>2) Urban informal</td>
<td></td>
</tr>
<tr>
<td>3) Peri urban</td>
<td></td>
</tr>
<tr>
<td>4) Traditional settlement</td>
<td></td>
</tr>
<tr>
<td>5) Farming</td>
<td></td>
</tr>
<tr>
<td>2. Individual/household information</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>2.1 How long have you been living in the community?</strong></td>
<td></td>
</tr>
<tr>
<td>1) Less than 3 months</td>
<td></td>
</tr>
<tr>
<td>2) Less than 1 year</td>
<td></td>
</tr>
<tr>
<td>3) Less than 5 years</td>
<td></td>
</tr>
<tr>
<td>4) More than 5 years</td>
<td></td>
</tr>
<tr>
<td>To understand if local labour is being used to implement these projects as use of local contractors and local labour can support local economic development.</td>
<td></td>
</tr>
<tr>
<td><strong>2.2 Are you male or female?</strong></td>
<td></td>
</tr>
<tr>
<td>1) Male</td>
<td></td>
</tr>
<tr>
<td>2) Female</td>
<td></td>
</tr>
<tr>
<td>It is important to include women in job creation opportunities as they can have comparatively marginal attachment to the labour force, which increases vulnerability. Moreover, research shows that distribution of income and consumption of households can be more evenly spread by targeting women.</td>
<td></td>
</tr>
<tr>
<td><strong>2.3 Are you aged between 15-29?</strong></td>
<td></td>
</tr>
<tr>
<td>1) Yes</td>
<td></td>
</tr>
<tr>
<td>2) No</td>
<td></td>
</tr>
<tr>
<td>It is important to include youth in job creation opportunities as they can be vulnerable due to lack of experience and skill. An unsuccessful transition between education and the labour market can entail long term loss of labour productivity and earning potential. All “no” answers are assumed to be over 29.</td>
<td></td>
</tr>
<tr>
<td><strong>2.4 What is the highest level of education that you have completed?</strong></td>
<td></td>
</tr>
<tr>
<td>01. No schooling</td>
<td></td>
</tr>
<tr>
<td>02. SD</td>
<td></td>
</tr>
<tr>
<td>03. Madrasah Ibtidaiyah</td>
<td></td>
</tr>
<tr>
<td>04. SMP Umum/Kejuruan</td>
<td></td>
</tr>
<tr>
<td>05. Madrasah Tsanawiyah</td>
<td></td>
</tr>
<tr>
<td>06. SMA</td>
<td></td>
</tr>
<tr>
<td>07. Madrasah Aliyah</td>
<td></td>
</tr>
<tr>
<td>08. SMK</td>
<td></td>
</tr>
<tr>
<td>09. Program D.I/D.II</td>
<td></td>
</tr>
<tr>
<td>10. Program D.III</td>
<td></td>
</tr>
<tr>
<td>11. Program D.IV/S1</td>
<td></td>
</tr>
<tr>
<td>12. S2/S3</td>
<td></td>
</tr>
<tr>
<td>It is important to include those with low educational attainment as they are a vulnerable group, especially due to the presences of “bumping down effects” that ensue from a tight labour market.</td>
<td></td>
</tr>
<tr>
<td><strong>2.5 How many people live in your household?</strong></td>
<td></td>
</tr>
<tr>
<td>No of people:</td>
<td></td>
</tr>
<tr>
<td>To estimate the number of people directly affected by the income transfer function to the 2009 fiscal stimulus package.</td>
<td></td>
</tr>
<tr>
<td><strong>2.6 How many people in your household earn an income?</strong></td>
<td></td>
</tr>
<tr>
<td>No of people:</td>
<td></td>
</tr>
<tr>
<td>To understand the effectiveness of the programme’s targeting.</td>
<td></td>
</tr>
<tr>
<td><strong>2.7 What type of house do you live in?</strong></td>
<td></td>
</tr>
<tr>
<td>1) Formal housing</td>
<td></td>
</tr>
<tr>
<td>2) Informal housing</td>
<td></td>
</tr>
<tr>
<td>3) Traditional housing</td>
<td></td>
</tr>
<tr>
<td>4) Other</td>
<td></td>
</tr>
<tr>
<td>To understand the standard of living and/or wealthiness of programme participants.</td>
<td></td>
</tr>
<tr>
<td><strong>2.8 Does your household produce food for its own consumption?</strong></td>
<td></td>
</tr>
<tr>
<td>1) Yes</td>
<td></td>
</tr>
<tr>
<td>2) No</td>
<td></td>
</tr>
<tr>
<td>To understand the household’s dependence on cash income for basic needs; to understand household vulnerability</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Option 1</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>2.9 Do you currently have any savings? (in MFI/Bank and in cash)</td>
<td>1) Yes</td>
</tr>
<tr>
<td>2.10 Have your savings increased since working on project X?</td>
<td>1) Yes</td>
</tr>
<tr>
<td>2.11 Do you currently have any debt?</td>
<td>1) Yes</td>
</tr>
<tr>
<td>2.12 How much debt do you have? (including loans from Banks/MFIs and family/friends)</td>
<td>IDR:</td>
</tr>
</tbody>
</table>

3. Involvement with the project

<table>
<thead>
<tr>
<th>Question</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Are you currently employed by this project?</td>
<td>1) Yes</td>
<td>2) No</td>
<td>Verification of employment in the project</td>
</tr>
</tbody>
</table>
| 3.2 What is your job title?                                             | 1) Field worker (Labourer - Paving and surfacing labourers, Builder’s labourer, Garden Labourer) | 4) Others
2) Supervisor
3) Office/Administrative Worker | Understanding of the skill of the work undertaken |
<p>| 3.3 How many hours per day do you work on this project?                  | Hours per day:                               |          | Many jobs work in shifts; it is therefore important to learn the number of hours worked |
| 3.4 How many days a week do you work on this project?                    | Days per week:                               |          | Important for calculation of wages and verifying budget estimations |
| 3.5 In the last 6 months, how many weeks did you work for the project?   | Number of weeks:                             |          | Important for calculation of wages and verifying budget estimations and employment quality |
| 3.6 How much do you get paid per day for your work on this               | 1) 0 to 50,0000                              | 4) 100,000 to 125,000 | Important for calculation of wages and verifying budget estimations and employment quality |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7 How long (months/weeks) will the project that you are working for go?</td>
<td>1) 75,000 to 100,000</td>
<td>Important for calculation of wages and verifying budget estimations and employment quality</td>
</tr>
<tr>
<td>Length of project:</td>
<td>2) More than 150,000</td>
<td>Important for calculation of wages and verifying budget estimations and employment quality</td>
</tr>
<tr>
<td>3.8 Do you expect to work for the project until the work is completed?</td>
<td>1) Yes</td>
<td>Important for calculation of wages and verifying budget estimations and employment quality</td>
</tr>
<tr>
<td></td>
<td>2) No</td>
<td>Important for calculation of wages and verifying budget estimations and employment quality</td>
</tr>
<tr>
<td>3.9 How did you learn about this project?</td>
<td>1) Word of mouth</td>
<td>Helps to understand how community members access employment opportunities offered by the programme</td>
</tr>
<tr>
<td></td>
<td>2) Ad in newspaper</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) Ad on radio</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) Headhunted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5) Employment office</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6) Local leader</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7) Other:</td>
<td></td>
</tr>
<tr>
<td>3.10 Do any other members of your immediate family also work for this project currently?</td>
<td>1) Yes</td>
<td>To estimate the number of households directly affected by the income transfer function to the 2009 fiscal stimulus package.</td>
</tr>
<tr>
<td></td>
<td>2) No</td>
<td></td>
</tr>
<tr>
<td>3.10.1 If yes, how many?</td>
<td>Number:</td>
<td>To estimate the number of households directly affected by the income transfer function to the 2009 fiscal stimulus package.</td>
</tr>
<tr>
<td>3.11 Have any other members of your family worked for this project previously?</td>
<td>1) Yes</td>
<td>To estimate the number of households directly affected by the income transfer function to the 2009 fiscal stimulus package.</td>
</tr>
<tr>
<td></td>
<td>2) No</td>
<td></td>
</tr>
</tbody>
</table>

### 4. Labour market information

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Before you began work on this programme what job did you do in order to earn an income?</td>
<td>Occupation:</td>
<td>This question will give insight into the type of labour transfer occurring between sectors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 Before you began work on this programme what sector did you work in order to earn an income?</td>
<td>Sector:</td>
<td>This question will give insight into labour transfer between sectors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### PROBE - sector

#### 4.3 When was the last time that you had work before this job?

1. Less than three months  
2. Between three months and six months  
3. Between six months and a year  
4. More than one year  

*This question will give insight into the labour market experience and periods of unemployment experienced by low and unskilled workers.*

#### 4.4 Thinking back to your last job, what was the average daily/monthly income that you earned?

- Daily IDR:  
- Monthly IDR:  

*This question will give insight into previous and current rates of pay. It may give insight into displacement effects or indicate an increase in employment quality.*

#### 4.5 What activities did you stop or reduce in order to participate in this project?

1. Regular work  
2. Casual work  
3. Subsistence agriculture  
4. SME activities  
5. Home or care work  
6. None  
7. Other: _____________  

*This will give insight into income stability and possible displacement effects.*

#### 4.6 Why did you give up these activities?

1. Not enough time  
2. This job pays more  
3. My employer was not making enough profit  
4. My business was not making enough profit  
5. Lost my job (fired / let go)  
6. Needed a change  
7. Other (record answer):  

*This will give reason for unemployment/ inactivity or reason for entry into this programme. This question could indicate a connection to the Global Financial Crisis.*

#### 4.7 If the programme were to end tomorrow, what would you most likely do?

1. Look for other work  
2. Start own business  
3. Stay at home  
4. Subsistence agriculture  
5. Other (record answer):  

*This will give insight into the future labour market activities of the programme beneficiary.*

---

Thank you for your participation!
Annex II: Programme assessment for Indonesia's Padat Karya programme

Interview with district level government

As a response to the high unemployment rate in Indonesia, the Government of Indonesia established a labour-intensive programme known as "Padat Karya" to expand employment opportunities to unemployed people and support development of the informal sector. The Padat Karya programme aims to create and expand temporary occupation in unemployment pockets, and build supporting infrastructures for economic activities within the areas. With implementation in more than three hundreds districts/municipality, the Padat Karya is one of the strategic national programmes designed to reduce poverty and inject cash to the communities in the border areas and in the disadvantaged regions. It is expected to invest in access infrastructure and productive infrastructure, while optimizing the number of short-term jobs could be created. It is intended that these investments will produce multiplier effects which impact on local economic development and lead to the creation and development of new employment opportunities after the investment.

The ILO and the Ministry of Manpower and Transmigration are partnering to undertake a review of the Padat Karya Programme in order to identify recommendations for supporting development of the programme in the future. The questionnaire provided below is for district officials at the Manpower and Transmigration Office, and covers planning, implementation and post implementation issues.

Planning

1. What is the nature of the consultation with communities prior to submission of proposals? What information is given to communities?

2. What support is provided during the preparation of the proposals to communities?

3. What are the selection criteria for determining which proposals will be approved at the district level?

4. What are the selection criteria for determining which proposals will be approved at the national / provincial level?

5. Can you explain the time line from proposal development, to approval, to implementation, to completion?

6. Is an AMDAL or "lighter version" of the AMDAL completed before the project implementation commences?

7. How do the proposals for PK projects relate to the district level plans (RKPD or EPJMD), including spatial plans (RTRW)?

8. What consultation or coordination takes place between Padat Karya and other programmes, such as PNPM or PPIP? If none takes place, should it take place?

9. Which agencies does DisNaker coordinate with in implementing Padat Karya?

10. Do you have "joint planning" with other agencies? If there is joint planning, is it documented or in the "work culture"?

11. Are previous investments under the PK documented and used to inform future planning processes?

12. What planning tools (GPS, software programmes, data/statistics, maps) do you have in this Office to support planning of PK projects? What suggestions do you have to improve planning?

Implementation

1. Once the proposal is approved, how does the DisNaker socialise the project and select workers and form groups (given that 88 workers should work for 20 days)?

2. Are the jobs created rotated among community members? Do community prefer flexible working arrangements?

3. Is there a quota for women, youth or people with disabilities? Are the payments to workers made...
on a "daily basis" or a "piece/task rate basis"?

4. What are the procurement procedures for:
   a. Materials
   b. Skilled labour - carpenter, stone mason, plastering, engineers
   c. Semi-skilled labour - supervisors
   d. Equipment/Vehicle hire

5. What types of daily records are the project required to keep?

6. What are the overall challenges in implementing the project?
   a. Financial records
   b. Design of works and supervision
   c. Human resource capacities
   d. Reporting
   e. Political – community and government
   f. Regulatory – consistency of regulations

7. How is quality controlled and certified? Does quality control involve independent certification of the engineering works? Does quality control involve employment monitoring?

8. Is there a formal complaints procedure and process for the padat karya programme? If not, should one be established?

9. What provisions are there for Occupational Safety and Health (OSH)? If workers are injured, what compensation mechanism are available?

10. What are the staffing strengths at different levels to plan, implement and supervise/monitor projects? Can existing staff manage an increase in the number of PK packages per year? If so, please estimate how many?

Post implementation

1. For the project completion report, is data included on:
   a. Budget realization
   b. Number of packages provided
   c. Number of locations reached
   d. Number of jobs created
   e. Number of work days created
   f. Wage rate
   g. No. of women, youth, people with disabilities included
   h. Number of people trained
   i. Formal engineering certification of completed works

2. How are the assets that were created through the PKInfra investment maintained? Is the asset handed-over to an authority that is responsible for maintaining the asset? If so, how is the asset maintained? (frequency, budget allocation, contracting)

3. Could more jobs be created within the padat karya programme for the same budget? If so, how?

4. Is there any independent project evaluations conducted? If so what, which variables is data collected on?

5. Are the names and skills of the workers that are involved with the Padat Karya recorded and entered into the DisNakers "employment service centre" database?
# Nias-RACBP: Questionnaire to local school

We would like to invite you to participate in the monitoring and evaluation activities of the Nias-RACBP. We are interested to learn about this school and how it is influenced by the transport network. We hope that this will help us to understand more about how transport costs, traffic volumes and transport safety and comfort are related to social services. This information will help us to understand how the Nias-RACBP project addresses the rural transport infrastructure needs of people on Nias Islands.

## Context: Nias-RACBP is investing in route XX, which provides access for village X

1. How many students are enrolled in this school?  
   Number of students enrolled:

2. Do students from village XX go to this school?  
   a) Yes  
   b) No

3. Approximately how many students from village XX go to this school?  
   Approximate no. of students from village XX:

## We are interested to know how school attendance is affected by route conditions

4. In your experience, does the condition of route XX affect school attendance of students? If yes, please explain.

5. In your experience, does the condition of route XX affect teacher absenteeism? If yes, please explain.

6. In your experience, does the condition of route XX affect this school in other ways? If yes, please explain.

7. From your experience, what are the key problems associated with road quality and education?

## We would like to further consider the issue of student and teacher absenteeism

We would like to request that your school shares the monthly recap data on school attendance between November 2010 and March 2011 with us.

We would like to look at the issue of student and teacher absenteeism before the works are undertaken, while the works were being undertaken and after the works are finished.
---

**Annex IV : Rural access study - Questionnaires for key informants from local business**

<table>
<thead>
<tr>
<th><strong>Nias-RACBP: Questionnaire to local business</strong></th>
</tr>
</thead>
</table>

We would like to invite you to participate in the monitoring and evaluation activities of the Nias-RACBP. We are interested to learn about your shop and entrepreneurial activities and how they are influenced by the transport network. We hope that this will help us to understand more about how transport costs, traffic volumes and transport safety and comfort are related to the economy. This information will help us to understand how the Nias-RACBP project addresses the rural transport infrastructure needs of people on Nias Islands.

**Context:** Nias-RACBP is investing in route XX, which provides access for village X

1. What services or products does your business sell?

2. What are the main products or services that you source from your suppliers?

3. Do you use route XX to deliver your service/product to community members?
   a) Yes
   b) No

4. If yes to 3, what mode of transport do you use to travel on route XX?
   a) Foot
   b) Bicycle
   c) Motorbike
   d) Becak
   e) Public vehicle
   f) Private vehicle
   g) Other:

5. If yes to 3, how does the condition of route XX affect the frequency or comfort of your travel?

6. Do community members use route XX to access your service/product?
   a) Yes
   b) No

7. If yes to 6, in your view how does the condition of route XX affect the frequency or comfort of community members’ travel?

8. Please explain whether the supplier usually comes to village to sell you products or if you usually go to the supplier’s distribution point to buy products.

### Supplier usually comes to village

7. What mode of transport does the supplier use to come to the village?
   a) Foot
   b) Bicycle
   c) Motorbike
   d) Becak
   e) Public vehicle
   f) Private vehicle
   g) Other:

8. How does the condition of route XX affect the frequency or comfort of the suppliers’ visit?

9. How frequently does the supplier come to the village?

### You usually go to the supplier

10. What mode of transport do you use buy supplies for your shop?
    a) Foot
    b) Bicycle
    c) Motorbike
    d) Becak
    e) Public vehicle
    f) Private vehicle
    g) Other:

11. How does the condition of route XX affect the frequency or comfort of your trip to the supplier?

12. How frequently does the supplier come to the village?

13. **How much does it cost to transport commodity X to your village?**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Price of product:</th>
<th>Price of transporting the product:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bag of cement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crate of coca-cola</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex V : Rural access study - Questionnaires for key informants with village head (kapaladesa)

**Nias-RACBP: Questionnaire to village head (kapaladesa)**

We would like to invite you to participate in the monitoring and evaluation activities of the Nias-RACBP. We are interested to learn about the village that you live in and its travel patterns and transport constraints. We hope that this will help us to understand more about **transport costs, traffic volumes and transport safety and comfort**. This information will help us to understand how the Nias-RACBP project is addressing rural transport infrastructure needs on Nias Islands.

**Context:** Nias-RACBP is investing in route XX, which provides access for village X

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What types of transport do people use within your village?</td>
<td></td>
</tr>
<tr>
<td>2. What are the key problems with the transport network in your village?</td>
<td></td>
</tr>
<tr>
<td>3. What are the major rural transport safety issues in your village for pedestrians and vehicles?</td>
<td>Pedestrians:</td>
</tr>
<tr>
<td></td>
<td>Vehicles:</td>
</tr>
<tr>
<td>4. How many motorbikes are owned in the village?</td>
<td>Number of motorbikes:</td>
</tr>
<tr>
<td>5. Is your village serviced by public transport? If yes, please describe.</td>
<td></td>
</tr>
<tr>
<td>6. Nias-RACBP is investing in route XXX. Is this route passable by motorbike year-round? If not, how often is the road impassable?</td>
<td></td>
</tr>
<tr>
<td>7. Does traders from outside your village come to the village?</td>
<td></td>
</tr>
<tr>
<td>Fish trader</td>
<td>a) Yes</td>
</tr>
<tr>
<td>Rubber trader</td>
<td>a) Yes</td>
</tr>
<tr>
<td>Rice trader</td>
<td>a) Yes</td>
</tr>
<tr>
<td>Cocoa trader</td>
<td>a) Yes</td>
</tr>
<tr>
<td>a) Yes</td>
<td>b) No</td>
</tr>
<tr>
<td>b) No</td>
<td></td>
</tr>
<tr>
<td>8. If yes to 7, how often the traders come? (weekly, monthly, etc)</td>
<td></td>
</tr>
<tr>
<td>Fish trader</td>
<td></td>
</tr>
<tr>
<td>Rubber trader</td>
<td></td>
</tr>
<tr>
<td>Rice trader</td>
<td></td>
</tr>
<tr>
<td>Cocoa trader</td>
<td></td>
</tr>
<tr>
<td>9. If yes to 7, what route and what transport mode do the traders use?</td>
<td></td>
</tr>
<tr>
<td>Fish trader</td>
<td></td>
</tr>
<tr>
<td>Rubber trader</td>
<td></td>
</tr>
<tr>
<td>Rice trader</td>
<td></td>
</tr>
<tr>
<td>Cocoa trader</td>
<td></td>
</tr>
<tr>
<td>10. How much does it cost to transport commodity X to your village?</td>
<td></td>
</tr>
<tr>
<td>Bag of cement</td>
<td>Price of product:</td>
</tr>
<tr>
<td>Crate of coca-cola</td>
<td>Price of transporting the product:</td>
</tr>
<tr>
<td></td>
<td>Price of product:</td>
</tr>
<tr>
<td></td>
<td>Price of transporting the product:</td>
</tr>
</tbody>
</table>
**Annex VI: Rural access study - Questionnaires for key informants from clinics**

**Nias-RACBP: Questionnaire to local clinic**

We would like to invite you to participate in the monitoring and evaluation activities of the Nias-RACBP. We are interested to learn about the services that this clinic provides to village XX and how these services are influenced by the transport network. We hope that this will help us to understand more about transport costs, traffic volumes and transport safety and comfort. This information will help us to understand how the Nias-RACBP project addresses the rural transport infrastructure needs of people on Nias Islands.

**Context: Nias-RACBP is investing in route XX, which provides access for village X**

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 1. Do clients from village XX come to this clinic?                       | a) Yes  
|                                                                        | b) No                                                                 |
| 2. Approximately how many people from village XX visit this clinic in 1 month? | Approximate no. of people in one month:                                  |
| 3. Does the condition of route XX affect when people from village XX can make visits to this clinic? If yes, please explain. |                                                                       |
| 4. Do people from this clinic travel to village XX to provide health services? | a) Yes  
|                                                                        | b) No                                                                 |
| 5. **If yes to 4**, how often do people from this clinic go to village XX to provide health services? | a) Weekly  
|                                                                        | b) Monthly  
|                                                                        | c) Bimonthly  
|                                                                        | d) Quarterly  
|                                                                        | e) Biannually  
|                                                                        | f) Annually                                                                 |
| 6. **If yes to 4**, does the condition of route XX affect when you can visit village XX? If yes, please explain. |                                                                       |
| 7. **If yes to 4**, approximately how long does it take you to travel from your clinic to village XX? | Hours:  
|                                                                        | Minutes:                                                                 |
| 8. **If yes to 4**, what mode of transport do you use to travel to village XX? | a) Foot  
|                                                                        | b) Bicycle  
|                                                                        | c) Motorbike  
|                                                                        | d) Becak  
|                                                                        | e) Public vehicle  
|                                                                        | f) Private vehicle  
|                                                                        | g) Other:                                                                 |
| 9. In your experience, how does the condition of route XX affect this clinic and health care access? |                                                                       |
| 10. From your experience, what are the key problems associated with road quality and health care? |                                                                       |
Hello. You have been selected to participate in monitoring and evaluation activities of the Nias-RACBP. Now we are collecting baseline information that will help us to understand:

- To what degree could the project’s investment in rural transport infrastructure reduce transport costs for men and women;
- How the project’s investment in rural transport infrastructure could increase transport safety and comfort for men and women.

This information will provide information to help us to understand how the project addresses the rural transport infrastructure needs of people on Nias Islands.

### 1. General information – to be completed by interviewer prior to interview

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Nias-RACBP works site (Project number)</td>
</tr>
<tr>
<td>1.2</td>
<td>Date of interview</td>
</tr>
<tr>
<td>1.3</td>
<td>Traffic count site</td>
</tr>
<tr>
<td>1.4</td>
<td>Name of interviewer</td>
</tr>
<tr>
<td>1.5</td>
<td>Location- district</td>
</tr>
<tr>
<td></td>
<td>a) Nias</td>
</tr>
<tr>
<td></td>
<td>b) Nias Selatan</td>
</tr>
<tr>
<td></td>
<td>c) Nias Barat</td>
</tr>
<tr>
<td></td>
<td>d) Nias Utara</td>
</tr>
<tr>
<td></td>
<td>e) Gunung Sitoli</td>
</tr>
<tr>
<td></td>
<td>f) Other: ___________</td>
</tr>
<tr>
<td>1.6</td>
<td>Location – sub-district</td>
</tr>
<tr>
<td>1.7</td>
<td>Gender of interviewee</td>
</tr>
<tr>
<td></td>
<td>a) Male</td>
</tr>
<tr>
<td></td>
<td>b) Female</td>
</tr>
<tr>
<td>Mode of transport</td>
<td>a) Foot</td>
</tr>
<tr>
<td></td>
<td>b) Bicycle</td>
</tr>
<tr>
<td></td>
<td>c) Motorbike</td>
</tr>
<tr>
<td></td>
<td>d) Becak</td>
</tr>
<tr>
<td></td>
<td>e) L-300, people truck</td>
</tr>
<tr>
<td></td>
<td>f) Private car</td>
</tr>
<tr>
<td></td>
<td>g) Tractor</td>
</tr>
<tr>
<td></td>
<td>h) Other</td>
</tr>
<tr>
<td>1.8</td>
<td>Name of interviewee</td>
</tr>
<tr>
<td>1.9</td>
<td>Interviewee year of birth</td>
</tr>
<tr>
<td></td>
<td><em>If the interviewee is under 18 years, cease interview.</em></td>
</tr>
<tr>
<td>1.10</td>
<td>Have you completed this interview before?</td>
</tr>
<tr>
<td></td>
<td>a) Yes (cease interview)</td>
</tr>
<tr>
<td></td>
<td>b) No</td>
</tr>
<tr>
<td>1.11</td>
<td>What village do you live in? (Dusun)</td>
</tr>
</tbody>
</table>

### 2. Transport

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>2.1</td>
<td>What are the main modes of transport that you use on this route?</td>
</tr>
<tr>
<td></td>
<td>(Record all answers)</td>
</tr>
<tr>
<td></td>
<td>a) Foot</td>
</tr>
<tr>
<td></td>
<td>b) Bicycle</td>
</tr>
<tr>
<td></td>
<td>c) Motorbike</td>
</tr>
<tr>
<td></td>
<td>d) Becak</td>
</tr>
<tr>
<td></td>
<td>e) Public vehicle</td>
</tr>
<tr>
<td></td>
<td>f) Private vehicle</td>
</tr>
<tr>
<td></td>
<td>g) Other:</td>
</tr>
<tr>
<td>2.2</td>
<td>What are the main reasons you use this route?</td>
</tr>
<tr>
<td></td>
<td>To go to the ...</td>
</tr>
<tr>
<td></td>
<td>a) Local shop</td>
</tr>
<tr>
<td></td>
<td>b) Village market</td>
</tr>
<tr>
<td></td>
<td>c) Sub-district market</td>
</tr>
<tr>
<td></td>
<td>d) District market</td>
</tr>
<tr>
<td></td>
<td>e) Rubber market</td>
</tr>
<tr>
<td></td>
<td>f) Kamat’s office</td>
</tr>
<tr>
<td></td>
<td>g) Paddy / crops</td>
</tr>
<tr>
<td></td>
<td>h) Fishing area</td>
</tr>
<tr>
<td></td>
<td>i) Friend / relative</td>
</tr>
<tr>
<td></td>
<td>j) Other:</td>
</tr>
</tbody>
</table>
2.3 What is the main reason you are travelling today?

**To go to the ...**

- a) Local shop
- b) Village market
- c) Sub-district market
- d) District market
- e) Rubber market
- f) Local school
- g) Local clinic
- h) Kamat’s office
- i) Paddy / crops
- j) Fishing area
- k) Friend / relative
- l) Other:

2.4 Please explain the route that you are using to go from your origin to your destination.

From ................. Using route ..............
To ................. Using route ..............

2.5 What mode of transport do you use to travel to .... ?

<table>
<thead>
<tr>
<th>Destination</th>
<th>Transport mode</th>
<th>Transport cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>a) Local shop</td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>b) Village market</td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>c) Sub-district market</td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>d) District market</td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>e) Rubber market</td>
<td></td>
</tr>
<tr>
<td>vi</td>
<td>f) Local school</td>
<td></td>
</tr>
<tr>
<td>vii</td>
<td>g) Local clinic</td>
<td></td>
</tr>
<tr>
<td>viii</td>
<td>h) Kamat’s office</td>
<td></td>
</tr>
<tr>
<td>ix</td>
<td>i) Paddy / crops</td>
<td></td>
</tr>
<tr>
<td>x</td>
<td>j) Fishing area</td>
<td></td>
</tr>
</tbody>
</table>

2.6 On average, how much money do you spend on transport in ....
One week: _____________________
One month: _____________________

2.7 Does the amount that you spend on transport vary seasonally?

a) Yes | b) No

2.8 Do you sell Rubber? Rice? Cocoa?

- a) Yes | b) No
- a) Yes | b) No
- a) Yes | b) No

2.11 If yes to 2.8, 2.9, 2.10, how often do you go to market to sell your produce?

- a) Weekly | b) Monthly | c) Bimonthly | d) Quarterly | e) Biannually | f) Annually

3. Increased transport safety and comfort for men and women

3.1 Is this route passable for pedestrians at all times?

a) Yes | b) No

3.2 Is this route passable for motorbikes at all times?

a) Yes | b) No

3.3 Is the route passable when it is raining?

a) Yes | b) No

3.4 If no to 3.1, 3.2 or 3.3, how frequently is the route not passable?

- a) Weekly | b) Monthly | c) Bimonthly | d) Quarterly | e) Biannually | f) Annually

3.5 If no to 3.1, 3.2 or 3.3, what

a) Cut off by rain | f) Road becomes slippery
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| is the main reason why the route becomes impassible?                    | b) Cut off by floods  
c) Cut off by river  
d) Lack of maintenance  
e) Road becomes muddy  
g) Earthquake  
h) Political conflict  
i) other: __________________ |
| 3.6 If no to 3.1, 3.2 or 3.3, for how many hours or days is the route normally impassable? | Days: __________________  
Hours: __________________                               |
| 3.8 Does the cost of transport increase on when this route becomes impassible? | a) Yes  
b) No                                   |
| 3.9 If yes to 3.8, please explain how the cost of transport increases when the route becomes impassible. | Cost of transport under normal conditions:  
Cost of transport when the route is impassible: |
### Annex VIII: Rural access study - Traffic Count Form

<table>
<thead>
<tr>
<th>Type of traffic</th>
<th>Traffic count</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pedestrian</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult (16 and over)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children (under 15)</td>
<td>Wearing school uniform</td>
<td>Not wearing school uniform</td>
</tr>
<tr>
<td><strong>Two wheels</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorbike</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Becak</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Public transport</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L-300, minivan, people truck</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Private transport</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pick-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tractor</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL TRAFFIC COUNT</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

*Note: Traffic is to be counted from 6:00 am to 6:00 pm for 7 days. Traffic is to be counted in both directions from a specific location determined by Nias-RACBP. 1 person works from 6:00 to 14:00; 1 person works from 10:00 to 18:00; 1 person works a split shift from 6.00 to 10.00 and 14.00 to 18.00.*