

Lao PDR

Mapping the gender dimensions of trade

A preliminary exposition

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Currency unit = Lao Kip

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ABBREVIATIONS AND ACRONYMS

AFTA	ASEAN Free Trade Area
ASEAN	Association of Southeast Asian Nations
EBA	Everything But Arms
EMRIP	Enhancing Milled Rice Production Project
EU	European Union
FAO	Food and Agriculture Organization
GDG	Gender Development Group
GDP	Gross Domestic Product
GRB	Gender Responsive Budgeting
GRID	Gender Resource Information and Development Centre
ICT	Information Communications Technology
IFAD	International Fund for Agricultural Development
ILO	International Labor Organization
INGO	International Non-Governmental Organization
ITC	International Trade Centre
LDC	Least Developed Country
LECS	Lao Expenditure and Consumption Survey
LNCCI	Lao National Chamber of Commerce and Industry
LNTA	Lao National Tourism Administration
LWU	Lao Women's Union
MoIC	Ministry of Industry and Commerce
NCAW	National Committee for the Advancement of Women
NSEDP	National Socio-Economic Development Plan
NTFP	Non-Timber Forest Products
P2P	Power to the Poor
RCA	Revealed Comparative Advantage
SITC	Standard International Trade Classification
SNA	System of National Accounts
SNV	Netherlands Development Organization
UNDP	United Nations Development Program
UNECA	United Nations Economic Commission for Africa
UNIDO	United Nations Industrial Development Organization
UNIFEM	United Nations Development Fund for Women (now UN Women)
UNRISD	United Nations Research Institute for Social Development
VAT	Value Added Tax
WITS	World Integrated Trade Solution
WTO	World Trade Organization

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Summary

Over the past decade Lao PDR has opened up its economy and taken substantial steps towards greater international economic integration as part of efforts to boost export earnings and economic growth. The Lao Government has also made important commitments to gender equality in both its national socio-economic development planning and in a number of international agreements. Through mapping the gender dimensions of trade in Lao PDR, this report aims to draw out key inter-linkages between a more open trade policy and gender.

A methodological framework to map the gender dimensions of trade is introduced for researchers and then applied to Lao PDR. The analysis equips the policy maker with improved understanding on i) how export expansion in Lao PDR will impact upon men and women differently, and ii) the constraints that men and women face in accessing the benefits of a more open trade policy. This analysis is then used to inform the design of possible complementary policies and investments to alleviate these constraints and mitigate potential adverse impacts of increased trade flows on gender equality.

A sector overview of the Lao economy shows that mining and electric power already constitute half of national exports and this is likely to grow further as new power and mining projects come on-line. Direct employment opportunities in these sectors are however limited and also at present predominantly held by men. For growth in the Lao economy to be inclusive, trade expansion in the non-natural resource sectors ought to be a priority because of its greater employment potential. Agriculture remains the main source of employment for both men and women in the economy, while manufacturing and garments in particular are also a significant employer of women with scope for expansion.

An assessment of revealed comparative advantage in Lao points to a number of promising sectors with potential for and expansion in exports where women are currently employed in large numbers. Looking at the gender dynamics in these sectors suggests that fresh as well as processed vegetables and fruits, tea, and garments are likely to have the highest potential for female employment generation. Although the export potential of the rice sector is limited, its role as the predominant crop in the economy means that any export expansion in the sector would also have significant socio-economic benefits for women.

There are however a number of constraints to Lao productivity and competitiveness, preventing further expansion of these sectors. Addressing the constraints that both men and women face through complementary policies and investments will maximize the potential supply response of greater trade openness. The constraints include a wide range of interconnected factors such as limited access to skills, capital and services; weak infrastructure; restricted information on prices and marketing; cumbersome taxes and regulatory procedures; labor retention and lack of raw materials. While both men and women from poor and marginalized backgrounds suffer from deficits in such dimensions, gender interacts with other socio-economic inequalities to exacerbate women's disadvantage.

Key binding constraints and possible policy responses are outlined below:

- In agricultural work, productivity is impacted by inefficient production and processing skills. Extension services can be more relevant than formal education for improving productivity. Measures such as adopting participatory methods, focusing on tasks in which female farmers specialize and increasing the number of female agents could be put in place to increase women's access to these services.
- Financial inclusion programs could lessen the challenges faced by smallholder farmers in accessing credit which constrains them from adopting more modern farming methods.
- Access to export markets is hampered by limited market knowledge, barriers through cumbersome regulatory procedures, difficulties in complying to international standards and limited bargaining power in markets. Access to information can be enhanced through the promotion of communication technologies such as mobile phones and building up of ICT infrastructure. Strengthening of producer groups and support for women's inclusion and influence in farmer associations and trade unions can also assist. The introduction of modern, electronic customs clearance systems could go a long way to overcome some of the difficulties women tend to experience more prominently than men at the border.
- In the medium term, resources could be invested in making improvements to infrastructure that would assist in ensuring that goods and services of all kinds reach markets in a timely manner and costs are more competitive. In particular improvements to transport networks and physical infrastructure include electricity and water as well as ICT innovations could improve competitiveness. Such investments have the additional benefit of reducing the heavy housework burden that limits many women's involvement in income-generating activities.
- In manufacturing, the lack of adequate skills and technical knowledge is a key binding constraint. Curricula in formal education and vocational training might be designed so as to be more relevant to the technical knowledge required in key export sectors such as garments. Government and the private sector could also work together to strengthen linkages between skills training and access to the job market
- In the garments sector, firms report challenges in the retention of labor. Strengthened public-private partnerships to increase skills and productivity as well as interventions to improve management, working conditions and representation of workers could improve the existing situation.
- To improve access to raw materials in the handicrafts sector, government and the private sector should work to link the producers of raw materials with weaving firms.

Notwithstanding policies and investment to address constraints outlined above, in forthcoming years, export growth is likely to be predominantly driven through the natural resources sector and more particularly copper and electricity. These sectors typically employ a small labor force and this is predominantly male. To achieve widespread social and economic gains from expansion of the natural resource sectors, it is important to invest the revenues from the increased resource exploitation in line with the goals set out in the National Socio-Economic Development Plan (NSEDP). Public Financial Management systems need to be supported to that end while prudent fiscal policy will be important to effectively mitigate the potential negative macroeconomic effects of natural resource extraction.

In addition, resource based projects can be complemented with interventions to support alternative livelihood flows for those men and women who are disproportionately affected by resulting loss of forests, land and water in communities close to mining and hydropower projects. A number of existing mechanisms have been tried in Lao and internationally in this regard including (i) preferential provision of employment and ancillary services to affected communities; (ii) preferential rates, services and access to affected communities such as preferential utility rates; lower rates to use services offered by the project (training, medical services, communication networks) and preferential access to common resources such as fisheries and forests; (iii) Community Development Funds (CDFs) set aside by the company for investment directly benefiting affected communities; and (iv) establishing partnership agreements between developers and local communities.

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1. Introduction

Over the past decade Lao PDR has opened up its economy and taken substantial steps towards greater international economic integration. The country has reduced import tariffs under the framework agreement for the ASEAN Free Trade Area (AFTA). It has bilateral trade agreements with the United States and benefits from preferential access to the EU market under the ‘Everything but Arms’(EBA) initiative. Lao PDR is also in the final stages of the review process for accession to the WTO. Vietnam, Thailand and the People’s Republic of China are increasingly important trading partners. With an increasingly open and liberalized economy the structure of the Lao economy is changing rapidly.

Recent export performance in Lao has been strong and mostly driven by hydro-electricity and minerals, which constituted more than half of all exports in 2010 and are predicted to grow even more in the next few years. Increasing openness to trade will not on its own be sufficient to ensure that the benefits of growing exports are distributed to the poorest and most vulnerable in Lao PDR. This high concentration of exports in the natural resource-based sectors also carries some risks.

The Lao Government has made important commitments to gender equality in both its national socio-economic development planning and a number of international agreements. This commitment is evidenced by the well-established systems for women’s representation and gender-mainstreaming in Lao PDR government structures (see Box 1).

Box 1: Women’s representation and gender-mainstreaming in Lao PDR institutions

There are well-established systems for women’s representation and gender-mainstreaming in Lao PDR within the Party, the Government and the National Assembly. These platforms can be effectively used to support the promotion of a sound gender equitable trade agenda.

The Lao Women’s Union (LWU) is a central mass organization of the Lao People’s Revolutionary Party mandated to represent the interests of women from all ethnic groups. The LWU has extensive networks at all levels of the State’s administrative structure and thus serves as an important bridge between the Party—the Government—and the People for disseminating information on gender issues and mobilizing women’s participation in development and trade integration activities.

The Gender Development Group (GDG) is one of the most prominent non-governmental associations active in the area of gender and development. It operates as a network of INGOs and Lao organizations promoting the exchange of experiences on gender related initiatives in communities within the country. It also provides training, including supporting the government’s gender mainstreaming efforts, for example by working closely with the Ministry of Agriculture and Forestry on their gender strategy.

The Lao National Committee for the Advancement of Women (NCAW) is chaired by the Deputy Prime Minister and is responsible for formulating and implementing national policy for the advancement of women as well as mainstreaming gender in all sectors. Sub-Committees for the Advancement of Women (Sub-CAW) have been established throughout the country at central and provincial levels, creating a broad network of gender focal points within the public administration.

Women, though, continue to face a number of disadvantages which tend to be reinforced by other factors such as ethnicity and location. The Lao PDR has one of the highest maternal mortality rates in the world and the gender gap in schooling remains high, especially among non-Lao speaking girls and boys from remote rural areas. In the economy, women tend to be heavily concentrated in agriculture and few other sectors while men are more evenly distributed across sectors and occupations. The gender division of labor is even more evident in the distribution of unpaid housework.

These twin policy goals of trade-driven economic growth and gender equality cannot be viewed in isolation: trade matters for gender and gender matters for trade. As the structure of the Lao economy changes following trade liberalization, so too will the opportunities available to women. This process will inevitably continue as the effects of the current natural resources boom resonate throughout the economy. Similarly, women's economic empowerment has been strongly affected by regional economic integration, with the growth of labor-intensive manufacturing industries and increased cross-border investment and trade. It is highly likely that this process will continue as the trade regime is further liberalized.

Trade always has distributional impacts: the benefits and the risks of trade are experienced differently by different groups, with some gaining more than others. The effects of trade on a particular individual or group will depend on their position and role in the economy. Because gender is a key determinant of men's and women's access to economic resources, it is also an important determinant of trade-related distributional impacts.¹ Trade reforms can either enhance gender-equalizing trends or exacerbate existing gender gaps, depending on the way they are designed and implemented.

Gender inequities may also act as a constraint to trade expansion. Any factor that limits individuals (and households, firms and communities) from responding to economic opportunities will constrain the economy's ability to develop to its full potential. The different roles and responsibilities of men and women in the economy mean that those constraints may not necessarily be the same and as such it is important to consider gender issues when seeking to maximise the benefits from trade. In addition, gender disparities - in access to education, land, finance and other assets - are a significant constraint to the country's capacity to benefit from trade expansion. Gender inequality may limit the gains from trade, for example through its negative impact on the process of innovation in export-oriented manufacturing, or by undermining supply responses in agriculture. A gender wage gap and other inequities may also depress women's productivity acting as a drawback to growth (UNCTAD 2008).

To better understand the interaction between gender and trade policy, this paper presents a gender mapping exercise for export development in Lao PDR and in this regard presents simple recommendations on how to undertake this type of exercise. The paper is split in two parts: the first sketches out a simple methodological framework that can be used by researchers to do an initial mapping of the inter-relationships between export promotion/trade policy and gender. It presents step by step recommendations on how such an analysis could be undertaken, based on the limited gender disaggregated information that is typically available.

¹ Other important factors affecting people's exposure to economic benefits and risks are location, ethno-linguistic affiliation, poverty levels, etc. These often intersect with each other and with gender. This paper focuses on the gender dimensions of trade, but refers to other dimensions when possible.

The second part of the paper is aimed primarily at policy makers. It uses the framework to provide a diagnostic which examines i) sectors in Lao with potential for export expansion that could benefit women ii) gender-based constraints in these sectors which limit their expansion through trade; and, iii) potential impacts for women, both positive and negative, from an increase in Lao's natural resource exports. This analysis provides the basis for formulating ideas on complementary policies and interventions to (i) address constraints to trade which women often disproportionately suffer from and to (ii) mitigate the potential adverse impacts of export promotion on gender equality.

The paper is exploratory in nature and the first analysis of this kind undertaken in Lao PDR. The analysis uses the existing information that is available, but also makes recommendations for improvements in data and areas for further re-

search that would yield a more in-depth understanding of the interrelationships between gender and trade.

The remainder of the paper is structured as follows. Section 2 introduces the analytical framework; section 3 presents some basic statistics to highlight those sectors in Lao with potential for export expansion that could benefit women; section 4 provides a trade performance assessment and a more in depth gender analysis of potentially key strategic sectors for trade promotion; section 5 analyses key binding constraints facing specific sectors and their gender dimensions and makes recommendations on policies to address the constraints ; section 6 analyses questions concerning natural resource based exports and section 7 concludes by summarizing policy options, identifying gaps in knowledge and suggesting ways forward.

2. Analytical framework for trade and gender mapping

To map the relationships between gender and trade requires looking at the economy of a country as a gendered structure. Box 2 shows in more detail how men and women typically have unequal roles in an economy as producers, workers, traders, household managers, tax payers and

consumers of public services. To tease out the relationships between gender and trade requires where possible that the researcher interrogates how these varying roles in an economy interact with policies aimed at promoting exports.

² The main drawbacks of elasticity indicators is that they do not imply a causal relationship between numerator and denominator, and abstract from a range of other factors that may influence change in the numerator and/or denominator.

Box 2: The economy as a gendered structure: unequal roles played by women in an economy

Women as producers and workers

Women tend to be clustered in fewer jobs and occupations than men. Although, of course, there is variation across regions and countries, available data reveals in most cases that women tend to be concentrated in fewer sectors (such as: food production in agriculture, textiles and garments, and domestic as well as other social services) than men, who tend to be more evenly distributed across a larger range of occupations and productive activities (See Annex 1.1).

Women are also more likely than men to be found in precarious forms of work. A recent ILO report on women's employment trends (ILO 2010) shows for instance that, in all regions of the world, women constitute a larger share of contributing family workers. This gender difference is particularly marked in South Asia where unpaid family work accounts for 51 percent of women's employment compared with 14 percent of men's. In Southeast Asia the corresponding figures are 35 percent for women and 10 percent for men. A 'contributing family worker' is in the most vulnerable form of employment as her status implies no independent access to income.

Women face many demands on their time related to their domestic responsibilities. Importantly, viewing the economy through a gender lens involves also counting not only productive but also reproductive activities. Activities such as food preparation, water and fuel collection, housework and child care contribute to the productivity of the labor force and maintain the daily well-being of the population. Responsibility for these activities falls disproportionately on women's shoulders. For example, a recent UNRISD study (Budlender 2008) shows that, in India, women spend on average 354 minutes every day doing housework and childcare while men spend only 36 minutes on it. In Tanzania, the corresponding figures are 270 minutes for women and 54 minutes for men. The burden of unpaid work is particularly heavy for rural women in remote areas, mostly because of poor physical infrastructure. This is likely to undermine the capacity of these women to contribute to paid productive activities and increases the probability that they will be involved in informal low-return forms of employment. In Tanzania, for example, time spent fetching water and fuel appears to be a significant constraint on women's participation in off-farm self-employment (World Bank 2007). Information on the time spent on providing unpaid services for the nurture of family and neighbors can be gleaned from Time Use Surveys, which are carried out in a growing number of developing countries (see Annex 1.2).

Women face greater disadvantage than men in responding to new economic incentives not only because they are more time constrained but also because their access to productive resources is restricted. A large body of empirical evidence from many different countries shows

that female farmers are just as efficient as their male counterparts but they have less land and use fewer inputs, so they produce less (FAO 2010). With regard to credit, because women tend to receive only very small loans, they often remain trapped in low value activities, which may help them in meeting their practical needs but do not contribute towards widening their opportunities. In Sri Lanka, for example, average returns to capital were found to be zero among female-owned enterprises but greater than 9 percent a month for male-owned enterprises (cited in Quisumbing and Pandolfelli 2008). With regard to education, women and girls' limited access to skills, including in cutting-edge technical fields, limits their upward mobility for employment opportunities related to trade.

Women as traders

Female traders tend to have weak bargaining power. Women in many countries have to deal with cultural biases on what are considered appropriate modes of transportation for them (many women travel on foot and carry head loads, and their control over simple transportation advances such as draft animals, bicycles and carts is limited). Their time constraints prevent them from travelling regularly and long distances to reach the markets that offer best prices and fairer conditions. Furthermore, they often face harassment by market or trade officials. As a result, they tend to be paid too little for what they sell and pay too much for what they buy.

Women as household managers

Time and resources within households are not distributed equally between women and men, girls and boys. Women are not only producers, workers and traders, but also play an important economic role as household managers and purchasers of food and other goods for their families. Any economic shock resulting in changes in the relative price of necessities is therefore likely to have a different impact on female and male household members.

Women as tax payers and users of public services

Because of their different economic roles and responsibilities, women and men are also likely to be affected differently by fiscal reforms. A change in income tax, for instance, would impact more directly on men as they usually earn more and own more wealth. A VAT on basic consumption goods may impact more directly on women in their responsibility as primary household caregivers.

The framework presented in Table 1 is a simple, systematic, step by step approach to gender mapping for export promotion that looks at the economy through the lens of a gendered structure. It serves as a useful outline for conducting a simple diagnostic to identify those sectors where export promotion is likely to benefit (or not) women and then further examining the gender-based constraints in these sectors which limit their expansion through trade and any potential adverse impacts of export promotion.

A first step in drawing the gender picture of an economy might involve mapping in which sectors (such as different types of agriculture, manufacturing or services) women and men work, and their employment status (such as self-employed, wage employee or contributing family worker).

Trade leads to some sectors expanding and some other sectors contracting. It is important to know if the expanding/contracting sectors are female-intensive and hence whether gains/losses in employment from trade are likely to be disproportionately female/male. In the researcher's analysis, they would therefore seek to answer to some of the following questions:

- *In which economic sectors do women and men work?*
- *What is the difference between female employment patterns and male patterns?*
- *What is the proportion of female and male workers in sectors with potential for export expansion?*
- *What is the proportion of female and male workers in sectors which will be exposed to import competition?*

Table 1: A step by step approach to gender mapping for export promotion

FIRST STEP

Collect data on:

- how many of the products currently exported in high volumes are female intensive;
- how many new emerging products are female intensive; and,
- how many of the exports that survive employ female workers or are likely to be produced by female-owned enterprises.

Calculate aggregate indicators such as:

- trade elasticity of gender inequality in income; and,
 - trade elasticity of gender inequality in unpaid labor time.
-

SECOND STEP

Use available analyses of export quality and sophistication (such as PRODY, EXPY and similar) to guide choice of sectors for which in-depth gender analysis is needed.

THIRD STEP

Carry out gender value chain analysis of specific products to make women's contributions fully visible and to identify key binding constraints.

This initial gender employment mapping of the composition, quality and sustainability of exports could be complemented by calculating trade elasticities of gender equality as indicators of broad patterns: for example, the trade elasticity of gender equality in income or the trade elasticity of gender gap in unpaid labor time. In these indicators, the denominator measures changes in exports over time whereas the numerator measures changes in the gender wage gap and changes in the ratio of time spent by males in unpaid domestic work to the time spent by females, respectively. These measures have serious methodological limitations but are relatively simple to calculate and could provide at least some initial guidance as to whether trade expansion (and a particular trajectory in export composition) has been helpful for women's empowerment.² Unfortunately the existing Lao PDR data does not allow for these calculations: sex-disaggregated information on wages appears to be available only for a few selected firms in the formal sector, and time use data have started to be collected only recently (and hence do not cover a sufficiently long time period). As more sex-disaggregated information on wages becomes available and the years available for time use data grows, these elasticities will provide useful further insight.

Moving beyond understanding at the aggregate level, trade performance assessments can be a useful tool for the researcher for mapping out potential winners and losers from trade promotion, which can help to guide the researcher on those sectors and product groups where further in-depth gender analysis is needed. An understanding of the roles that men and women play within the economy and the specific sector can help to draw out in more detail the likely differential impacts on men and women of export promotion in a particular sector.

- *Are opportunities in the sector for upward mobility equally available to male and female workers/producers?*
- *Is access to training in this sector gender-differentiated?*
- *Do working conditions in the sector vary by gender (i.e. enforcement of labor rights weaker for female workers)?*
- *How easily can workers/producers move from one sector to another?*

A third step in a trade and gender mapping exercise involves gaining a more in depth understanding of the key constraints facing a specific sector (and of the different economic actors within it) which prevent resources from being allocated between different groups of women and men in ways that enhance overall productivity and well-being. The key binding constraints facing a specific sector are often gender intensified. These constraints may include a wide range of interconnected factors such as limited access to skills, capital and services; weak infrastructure; restricted information on prices and marketing; and cumbersome taxes and regulatory procedures. While both men and women from poor and marginalized backgrounds suffer from deficits in such dimensions, gender interacts with other socio-economic inequalities to exacerbate women's disadvantage. Policies may worsen gender-intensified inequalities, for instance by the manner in which agricultural extension or land tenure reforms are designed and implemented, or when the state fails to legislate against discrimination in labor markets. At the same time, key public actors can do a great deal to institute rules, norms and behavior which can help to offset and even transform long standing inequalities.

² The main drawbacks of elasticity indicators is that they do not imply a causal relationship between numerator and denominator, and abstract from a range of other factors that may influence change in the numerator and/or denominator.

One of the best approaches to identify binding constraints and bottlenecks to trade expansion is to carry out gender-aware value chain analyses of particular products and sectors.

A global value chain analysis focus on: the way goods move from producers to processors, traders, and finally to consumers; the exchange of payment, credit, and capital among actors; price signals, pricing behavior, and value addition; and the dissemination of technology and the flow of information across the chain. A gender perspective can shed further light on where women and men are in the various nodes of the chain and on the power imbalances which may characterize relations between them. A gender focus in value chain analysis means also giving visibility to those areas of women's work (such as home-based and/or unpaid work) that tend to be overlooked in many development interventions. These activities are generally important in explaining how production and distribution processes actually take place and indicate critical links at which change should happen in order to bring about upgrading of the specific chain. Researchers would be looking for answers to questions such as:

- *Do women and men have equal access and control over resources such as land, credit and inputs?*
- *How much time do women and men spend on activities such as cooking, cleaning, child care, fetching water and fuel? Does this vary depending on location, age, family circumstances or ethnicity?*

The identification of binding constraints can serve to offer the policy maker some initial pointers to complementary policies that may be required to exploit the opportunities offered by trade liberalization for both men and women. The different roles and responsibilities of men and women in the economy mean that those constraints may not necessarily be the same and

they will often vary from sector to sector. Complementary interventions aimed at addressing constraints to trade expansion may therefore need to factor in gender differences.

In addition to analyzing the key constraints that prevent men and women in an economy from fully benefitting from export promotion; it is also important to understand any potential adverse impacts that trade promotion might have on poverty reduction more generally and gender equality. This is particularly important in the context of resource-rich economies like Lao PDR. There is a large body of literature on the 'Natural Resource Curse' (see for a survey of the literature Frankel 2010) which has shown that natural resource wealth does not necessarily confer inclusive economic development and indeed can in some cases hinder development. To achieve widespread social and economic gains, it is important that the revenues from the increased resource exploitation are invested in infrastructure, education and health care in ways that pay particular attention to the gender, ethnic and geographical dimensions of disadvantage. Benefits sharing mechanisms may be required to ensure that the benefits of resource revenues are shared with affected communities.

3. Gender characteristics of the Lao economy: sector overview

This section presents a broad brush picture of the gender structure of the Lao economy through some basic statistics on the different sectors of the economy. Aggregate sectoral statistics can offer an immediate and effective snapshot of the gendered structure of production and trade of Lao PDR and hence constitute a useful starting point for more in-depth analyses. The information presented here offers an initial indication of those sectors in Lao with may have potential for export expansion that could benefit women.

Agriculture is the main source of employment, particularly for women. Outside of agriculture women tend to be clustered in garments and in a few services. Table 2 shows that, in Lao PDR, agriculture gives employment to a very large share of the labor force (78 percent of the total female labor force and 76 percent of the total male labor force respectively) but represents only about

34 percent of GDP, suggesting low productivity levels in this sector. The proportion of women in agriculture is slightly larger than the proportion of men and the only sector in the economy with a higher female intensity is manufacturing. More disaggregated data at the sub-sectoral level show, however, that women working in manufacturing are clustered in the garments sector while other manufacturing is dominated by men.

Copper and electricity constitute about 45 percent of total exports (and are predicted to grow further) but their contribution to the overall labor force is limited. Table 3 links data on key exports with information on the gender composition of the labor force. Power and mining are both capital-intensive sectors and their contribution to the overall labor force, for both male and female workers, is minimal (making up 0.6% and 0.2% of their respective work-forces). Low levels

Table 2: Gender patterns of employment by sector

Sector	GDP (%)	Male labor (%)	Female labor (%)	Female intensity*
Agriculture	34.4	76.0	78.0	50.4
Mining	11.5	0.4	0.2	35.7
Electricity, Water & Construction	7.5	0.2	0.0	16.9
Manufacturing	8.2	5.5	6.2	52.9
Services	38.5	17.9	15.5	46.2
Total	100.0	100.0	100.0	-

*percentage of the labor force in the specific sector which is female

Source: LECS 4 for labor data, World Bank for GDP data

of female employment are found also in wood production which constitutes about 18 percent of total exports. The female intensity of the labor force in these sectors is low; but their limited direct employment potential would suggest that a more balanced gender employment in these sectors would have a small overall impact on equality of employment in the wider economy. Of potentially more significance in gender terms is how the additional revenues generated from investments in the mining and power sectors are utilized.

The garment sector is the most export-oriented sector in the economy (100 percent of what is produced is exported) and is also the most female intensive one. Thus, further expansion of garments would have gender-equalizing effects. However, as can be seen from Table 3 garments employ only about 2 percent of the total female labor force, so the gender impact of this sector's growth is likely to be positive but modest, at least in the short term.

The high proportion of workers implicated in the agricultural sector means that to generate wider benefits, trade related interventions ought to give attention to improving women's productivity and equitable access to opportunities in agriculture. Table 3 shows that most agricultural goods are at present produced for domestic consumption — for example, only 14 percent of vegetables and fruit production is exported and their current overall contribution to total exports is also low. Table 2 and 3 show that women's participation in such production is quite high, in both relative and absolute terms.

This type of analysis considers the existing sector structure of the Lao economy, but a more open trade policy would be expected to lead to a shift in the sector composition of the economy and exports. As such, this type of analysis is usefully complemented by a more detailed analysis of trade competitiveness which may point to possible changing dynamics in overall export composition.

Table 3: Gender patterns of trade

Key Export	% of total exports	Export intensity	Female Intensity	% of total female labor
Copper (a)	37	90	Low	-
Wood and wood products (a)	18	82	Low	-
Garments (b)	14	100	Very High	2
Electricity(a)	8	66	Low	-
Coffee and tea(c)	2	89	Medium High	-
Rice, maize and other grains(c)	2	4	Medium High	78
Vegetables and fruit (c)	1	14	Medium High	-
Total	81	-	-	-

Sources: (a) Estimated output (World Bank); (b) Estimated output (Association of Lao Garments Industries); (c) FAO statistics; (d) WITS, World Bank

4. Gender dimensions of export competitiveness

Trade policy efforts should be directed not only towards strengthening the export potential of existing export sectors, but also towards enabling participation in new ones. The Government of Lao PDR recognizes the need to diversify exports and is committed to targeting the non-resource sectors to ensure that trade and growth are inclusive and pro-poor (this is outlined for example in the 7th NSEDP as well as in the National Export Strategy, and will be further elaborated in the upcoming Lao PDR Trade and Integration Strategy³). Gender equality principles could be integrated into the export diversification strategy in two interconnected ways: (a) by identifying clearly, and in detail, in which sectors women work (and on what employment terms), and tackling the constraints in those sectors that are likely to mute supply responses and (b) by identifying potential adverse impacts of trade promotion, (for example the impacts on the most vulnerable following changes in the environment emanating from hydropower development) and putting measures in place to manage the impacts on the communities affected.

An analysis of export quality and sophistication (such as PRODY, EXPY and similar) can

serve as a useful guide for pointing to sectors with potential for trade expansion and those that may diminish. Record and Nghardsaysone (2010) calculate the revealed comparative advantage⁴ (RCA) for Lao PDR's major exports and, based on this, classify products into four main categories: classics (those which have demonstrated an RCA consistently over the long run); disappearances (those which previously demonstrated an RCA, but no longer do so); emerging champions (those which previously did not demonstrate an RCA, but now do); and marginals (those which have never demonstrated an RCA).

This study focuses on 'Classics' and 'Emerging champions' in order to highlight sectors where export promotion could create opportunities for increased female employment or value addition. In further studies, it would also be of value to consider the 'Disappearances' and 'Marginals' which are currently female intensive so that complementary policies (e.g. retraining, labor market policies, social safety nets) can be designed to ease the adjustment costs that would be associated with female workers in Lao moving from import-competing to export-expanding sectors.

Table 4: List of products (classics and emerging champions) from Record and Nghardsaysone (2010)

ID (SITC)	Product Name T	Technology category	Prody	Path
CLASSICS				
2483	Wood of non-coniferous species, sawn	Resource Based	3,667	110
2472	Sawlogs and veneer logs, of non coniferous	Resource Based	2,287	96
711	Coffee, whether or not roasted	Primary Products	1,936	85
2922	Shellac, seed lac, stick lac, resins	Primary Products	987	96
2924	Plants, seeds, fruit used in perfume	Primary Products	3,622	105
2923	Vegetable matter	Primary Products	2,334	123
<i>Average</i>			2,472	102

³ The Ministry of Industry and Commerce is currently preparing the Lao Trade and Integration Strategy, as an update to the 2006 Lao PDR Diagnostic Trade Integration Study.

⁴ The revealed comparative advantage is a measure of the relative export performance by a country for a specific export product, defined as a country's share of world exports in the given product, divided by the country's share of total world exports.

EMERGING CHAMPIONS

6821	Copper and copper alloys, refined	Resource Based	4,900	105
3510	Electric current	High Tech	8,874	151
8451	Jerseys, pullovers, twinsets, cardigans	Low Tech	4,464	119
8423	Trousers, breeches etc. of textile fabrics	Low Tech	4,789	122
8462	Under garments, knitted of cotton	Low Tech	4,975	113
8441	Shirts, men's, of textile fabrics	Low Tech	4,936	124
8459	Other outer garments & clothing, knitted	Low Tech	6,020	118
8439	Other outer garments of textile fabrics	Low Tech	5,408	125
8463	Undergarments, knitted, of synthetic fabrics	Low Tech	6,207	131
9710	Gold, non-monetary	Resource Based	5,716	106
2320	Natural rubber latex; natural rubber	Primary Products	1,169	56
8510	Footwear	Low Tech	7,765	149
2482	Wood of coniferous species, sawn, planks	Resource Based	11,578	133
440	Maize (corn), unmilled	Primary Products	6,430	114
6344	Wood-based panels, n.e.s.	Resource Based	7,848	138
8429	Other outer garments of textile fabrics	Low Tech	5,624	132
3222	Other coal, whether/not pulverized	Primary Products	12,166	97
2732	Gypsum, plasters, limestone flux	Primary Products	5,721	135
8993	Candles, matches, pyrophoric alloys	Low Tech	8,437	153
459	Buckwheat, millet, canary seed, grain	Primary Products	5,009	94
2876	Tin ores and concentrates	Resource Based	1,685	47
548	Vegetable products, roots & tubers	High Value PP	4,789	108
8431	Coats and jackets of textile fabrics	Low Tech	6,511	146
545	Other fresh or chilled vegetables	High Value PP	5,477	122
8434	Skirts, women's, of textile fabrics	Low Tech	5,544	137
8424	Jackets, blazers of textile fabrics	Low Tech	7,794	145
2221	Groundnuts (peanuts), green, whether	Primary Products	2,739	101
6341	Wood sawn lengthwise, sliced/peeled,	Resource Based	5,237	136
8421	Overcoats and other coats, men's	Low Tech	6,423	143
2225	Sesame seeds	Primary Products	1,179	93
11	Animals of the bovine species	Primary Products	4,391	128
8433	Dresses, women's, of textile fabrics	Low Tech	5,790	141
6359	Manufactured articles of wood, n.e.s	Resource Based	9,089	159
8435	Blouses of textile fabrics	Low Tech	5,783	132
2929	Other materials of vegetable origin	High Value PP	5,977	121
421	Rice in the husk or husked	Primary Products	4,101	97
	<i>Average</i>		<i>5,849</i>	<i>121</i>

Average

MARGINALS

6672	Diamonds, unworked. cut/otherwise work.	Resource Based 2	5,607	79
6822	Copper and copper alloys, worked	Resource Based 2	9,728	158
422	Rice semi-milled or wholly milled,	Primary Products	4,455	99
8219	Other furniture and parts	Low Tech 2	10,855	168
6353	Builders' carpentry and joinery	Resource Based 1	13,115	152
565	Vegetables, prepared or preserved, n.	Resource Based 1	8,482	145
2613	Raw silk (not thrown)	Primary Products	2,861	47
1222	Cigarettes	Resource Based 1	12,204	142

	589	Fruit otherwise prepared or preserved	Resource Based 1	9,337	136
	2875	Zinc ores and concentrates	Resource Based 2	5,171	119
<i>Average</i>				8,181	125
DISAPPEARANCES					
	2471	Sawlogs and veneer logs, of conifero	Resource Based 1	8,841	139
	2882	Other non-ferrous base metal waste	Resource Based 2	6,030	129
<i>Average</i>				7,435	134

Source: Record and Nghardsaysone (2010)

The following paragraphs examine gender characteristics of specific sectors. Having grouped exports from Table 4 into two main blocs: agricultural goods and labor-intensive manufactures, the task is then to single out, within each of these blocs, those sectors that appear most promising in terms of providing opportunities for meeting gender, broader equality and poverty reduction goals in support of the Government's 7th NSEDP.

4.1. Agriculture

Agricultural production and agro-processing for exports clearly are the activities with highest potential for socio-economic impact. More than 70 percent of the population still lives in rural areas and agriculture is key for Lao women's livelihoods, even more than for Lao men's (78 percent of the total female labor force is in the agricultural sector compared with 76 percent of men as shown in section 3). Most rural women are largely engaged in subsistence or semi-subsistence farming and are unpaid family workers. Three main farming systems prevail in Lao PDR: dry-land rice cultivation using shifting cultivation techniques in the northern and eastern mountain upland regions bordering China and Vietnam; paddy rice cultivation along the Mekong river valley bordering Thailand; and horticulture crops in the southern inland plateau areas. Women participate in all these systems but in varying degrees, and with different roles and responsibilities, depending on the socio-economic context.

Rice is the main crop: it is mostly used for household consumption and local trade, but is also

exported. Lao women are involved in its production and do most of the weeding and hand milling —their labor inputs tend to be higher in poor villages practicing upland rice cultivation than in prosperous lowland villages where irrigated rice prevails. As for other grains, vegetables and fruit, it seems both women and men plant, apply fertilizer, irrigate and harvest. Land preparation tends to be done by men while weeding is largely women's responsibility (FAO National Gender Profile of Agricultural Households 2010). Reflecting patterns found in many other parts of the world, men seem to mostly control motorized equipment and dominate cash crops while women contribute significant but less visible labor inputs to production (World Bank, IFAD, FAO 2009).

Women have primary responsibility for household food security and spend considerable time gathering non-timber forest products (NTFPs) such as mushrooms, wild berries, fruits, nuts and medicinal plants especially in the North and during agricultural lean seasons. Women also tend to small livestock such as pigs, poultry and goats for both household own consumption and income generation; men are mostly responsible for larger livestock such as cattle and buffalos.

Gender patterns in agricultural tasks and roles differ by ethnic group and geographical location and, significantly, have been changing as a result of increased commercialization and associated greater investment in cash crops in recent years. A tentative ranking, informed by selected anecdotal evidence from various Lao sources as well as by knowledge of global patterns in gender and export performance, suggests the fol-

lowing as the most promising products from the point of view of women's employment generation and economic empowerment: vegetables, rice, coffee and tea. The following paragraphs explain why and point to key aspects that would need to be further investigated in order to facilitate the design of appropriate policy measures.

4.1.1. Vegetables

Women are involved in vegetable production in most parts of the world and Lao PDR is no exception. Vegetables are considered 'female crops' in most regions of the world (but the specific gender intensity of their production may vary, and is not static). Women in the Lao PDR are active in the cultivation of cabbage, lettuce, potatoes, tomatoes, ginger and fruit, which traditionally they grow on small plots mainly for home consumption, with some sale in local markets. In recent years, however, production for export has been increasing with growing cross-border investments, contract farming arrangements and trade (Trade Development Facility Champasak Agribusiness Study 2009). Evidence suggests, for example, that export of cabbage has been growing and that women are involved in the cabbage supply chain not just as producers but also as cross-border traders. As for processed vegetables and fruit, it is reported that female workers constitute about 80 percent of the total labor force in the two existing firms exporting fruit jams and pickled vegetables (UNDP 2006).

The sector of fresh, as well as processed, vegetables and fruits has high female employment creation potential. An assessment carried out by the International Trade Centre (ITC2005) ranked the sector of fresh, as well as processed, vegetables and fruits very high for its female employment creation potential as well as for environmental sustainability, relative to other crops. One further aspect to note, though, is that vegetable production takes place mostly in the relatively richer areas of the South and hence may be of less benefit to remote female farmers belonging to ethnic minorities in the North.⁵ Vegetable products have

high income values and greater scope for diversification compared to other agricultural commodities. Even minor processing of vegetables, or the development of fresh and chilled supply chains, appears to result in significant additional value added (Record and Nghardsaysone 2010). Globally, high-value agriculture is the fastest growing of all traded agricultural exports. High-value agriculture can include a wide range of products such as vegetables, fruits, shrimps, nuts as well as non-food goods such as cut flowers.⁶

In principle, rural women could be involved in the production of high-value agricultural goods at any node of the value chain, either as farmers or as wage workers, or as intermediaries processing or selling products. In practice, women seem to have been able to benefit from this growth more as hired labor on the field or in packaging plants—the snow pea sector in Kenya and fresh fruit in Mexico provide examples of this (Fontana 2009).

In addition to vegetable and fruit export expansion, some studies (for example UNDP 2006) note the gender equality potential of export of non timber forest products (NTFPs), including creating positive incentives at local-community and central-policy levels to protect biodiversity and forest cover. In particular, wild fruits and herbal ingredients used in traditional medicine, for which demand from China appears to be strong, are promising. NTFPs are harvested mainly by women and girls in the poorest area of Lao PDR and provide income that women control. However, there may be environmental sustainability risks as well as limited scope for women's skills enhancement related to these activities. Positive outcomes would crucially depend on whether policies to support enhancement of women's traditional roles as 'forest protectors', and to involve them in higher value segments of the NTFPs chain, can be put in place.

⁵ Perhaps with the exception of Luang Prabang, although this is a small island of opportunities is mostly related to the tourism industry.

⁶ Food products make a stronger contribution to poverty reduction than luxury non-food products and expansion of these latter carries risks for food security and the environment.

4.1.2. Rice

Rice has a long tradition of production and consumption in Lao PDR and women are significantly involved in it, although the extent of their engagement varies by region. Evidence suggests, for instance, that female labor inputs tend to be higher in poor villages practicing upland rice cultivation than in lowland villages dominated by paddy rice. In Southeast Asia, more in general, women are reported to constitute up to 90 percent of the labor force in rice. In Cambodia and Vietnam, female farmers also seem to be increasingly taking on male tasks (FAO 2005). Paris et al. (2009) report that, in Vietnam, as a consequence of male migration, wives have assumed additional responsibilities such as land preparation, pesticide application, and marketing—effectively transforming themselves from unpaid family laborers into family farm managers.

Lao PDR has great diversity of rice varieties most of which are glutinous and hence consumed largely locally. According to UNIDO (2002), though, the aromatic varieties are likely to have good export prospects. An ITC assessment (ITC2005) notes that the export potential of rice production in Lao PDR is low, but gives it the second highest score in terms of socio-economic impact, in particular considering its potential for employment creation and poverty reduction.

4.1.3. Coffee and Tea

Coffee production in Lao PDR is more established than tea production but is still a relatively young activity. The ITC assessment (ITC 2005) ranks tea higher than coffee in terms of both employment creation and environmental sustainability. Tea is grown mostly in the Northern parts and undertaken mostly on an organic basis. It consists of a mix of wild forest tea areas and cultivated areas. Many communities of different ethnicities are involved in the sector. Anecdotal evidence suggests that many of the tea pickers, especially of the wild forest variety, are women. The high quality of tea means that, in principle, producing it could generate higher sale prices.

4.2. Manufacturing

The manufacturing sector as a whole accounts for about 8.2 percent of the Lao GDP and provides formal employment to about 8 percent of the total labor force. Major manufacturing sub-sectors are food and beverages, garments and wood processing. The coverage and quality of data for manufacturing activities is slightly higher than for agriculture, thus allowing a better tracking of gender-based employment dynamics in these sectors. As in many other parts of the world, the labor force employed in the Lao PDR garments industry is overwhelmingly female. Some studies (for example UNDP 2006) point also to the handicraft exports for their poverty reduction impact, including on women from ethnic minorities

4.2.1. Garments

The sector with the strongest potential for trade-related female employment generation is garments. The garments sector is the most female-intensive sector in the Lao PDR economy, although it is still currently of modest size in relative terms. Working conditions vary. The garments sector employs around 28,000 workers (or about 1 percent of the total labor force). About 80 percent of the labor force in the garment industry is constituted by women between the age of 16 and 25 who are mostly hired as unskilled and semi-skilled workers performing activities such as cutting, sewing, packing and ironing. Employers or managers in this sector are rarely women and the few female-owned enterprises tend to be of smaller size and have more restricted access to financial resources than male-owned ones. Average wages in the garments industry are lower than in other industries where male workers predominate. Working conditions vary depending on a number of factors. Initial findings from a recent study (World Bank, forthcoming) provide a diverse picture with some workers complaining of strict rules and supervisor harassment in some larger export-oriented factories while others reporting a greater satisfaction with working in smaller, Lao-owned operations because of 'softer' family-style management even when wages, benefits and physical working conditions are less attractive.

The sector has continued to grow despite expectations to the contrary, but some producers struggle to meet buyers' demand. Garment exports in 2010 have been rising. While the absolute level of exports has grown over time, the sector's share of total exports has declined from around 31 percent in the early 2000s to just above 10 percent, due to the recent boom in natural resources exports. The sector however appears overall to be stable and has continued to grow after 2005 despite expectations of a decline following the expiration of the Agreement on Textiles and Clothing.

4.2.2. Handicrafts

The handicrafts sector has significant potential to increase the income of rural households, including minority households who have otherwise limited economic options. The major products of Lao's handicraft industry are silk and cotton textiles which are mostly woven by women, including women from minority ethnic groups living in remote areas. Handicraft production provide a good source of supplementary income, especially during periods of low labor demand in agriculture and, because much of it can be carried out at home, women find it easy to reconcile it with their domestic responsibilities. For these reasons, handicraft production tends to be ranked very high in various assessments (for example in ITC 2005) for its poverty reduction and female employment generation potential. A few (often foreign) companies are very successful in exporting high value products, combining traditional weaving techniques with western designs (and female weavers in these companies tend to enjoy a number of social security benefits).

4.3. Services – Tourism

The tourism industry has the potential to support the social inclusion of women, especially from ethnic minorities, but measures need to be put in place to ensure that their incorporation happens on terms that enhance their skills and status. Handicraft production is related to tourism expansion and tourism generally can also offer women job opportunities, both in the formal hospitality industry and in informal related services. Available evidence suggests many women in Lao PDR are currently employed by hotels and guesthouses, food service providers, and by tour companies. Women are under-represented in

management positions though. Transport and repair activities are almost exclusively male operated while it is common for women to be involved in more informal services such as operating food and drink stands. In addition to more standard forms of tourism, the development of ecotourism and 'village' tourism has the potential to bring resources to rural areas but the gender division of labor and responsibilities in local communities often means that women and men do not share the benefits (or burdens) of local tourism equally. Local men are more likely to secure new income-generating and leadership roles, while local women are often engaged in lower-paid and lower-status activities such as providing meals and participating in cultural entertainment (Adams 2008). Some initiatives (such as home-stays) may increase their workload with little compensation because this additional labor is considered a 'natural' extension of women's domestic responsibilities (LNTA 2006). The Lao National Tourism Association received significant support for undertaking a Gender Assessment and Strategic Action Plan of the Tourism Sector (2006-2008) from SNV and LWU/GRID. However, it is yet unclear how successful implementation of the strategy has been in addressing gender concerns (World Bank Gender profile, forthcoming). The industry has considerable potential to support the social inclusion of women, especially from ethnic minorities, but a number of measures need to be put in place to ensure that their incorporation into the sector happens on terms that enhance their skills and status and do not reinforce negative perceptions around their roles.

In sum, this section has provided some more specific analysis of export sectors with potential for female employment generation. Some of the sectors reviewed are traditionally 'female sectors' (such as garments, vegetable production or handicrafts) and some jobs in these sectors can be more easily reconciled with women's domestic responsibilities (such as home-based weaving or other home-based production). While support to these sectors is an important first step towards ensuring that the immediate practical needs of many vulnerable women are met, in the long run policy may need to focus on more transformative strategies that widen labor market opportunities for women and do not reinforce traditional gender roles and stereotypes, whether in the market or at home.

5. Gender dimensions of binding constraints

The key binding constraints facing a specific sector are often gender intensified. A third step in a trade and gender mapping exercise involves gaining a more in depth understanding of the key constraints facing a specific sector (and of the different economic actors within it) which prevent resources from being allocated between different groups of women and men in ways that enhance overall productivity and well-being. These constraints may include a wide range of interconnected factors such as limited access to skills, capital and services; weak infrastructure; restricted information on prices and marketing; and cumbersome taxes and regulatory procedures. While both men and women from poor and marginalized backgrounds suffer from deficits in such dimensions, gender interacts with other socio-economic inequalities to exacerbate women's disadvantage. Policies may worsen gender-intensified inequalities, for instance by the manner in which agricultural extension or land tenure reforms are designed and implemented, or when the state fails to legislate against discrimination in labor markets. At the same time, key public actors can do a great deal to institute rules, norms and behavior which can help to offset and even transform long standing inequalities.

5.1. Key constraints in agriculture

One of the best approaches to identify binding constraints and bottlenecks to trade expansion is to carry out gender-aware value chain analyses of particular products and sectors. An illustration of this is provided in Figure 1 which draws on a recent gender assessment of the EM-RIP (Enhancing Milled Rice Production) project (SNV 2010) to sketch women's contributions in the rice value chain. This analysis provides useful insight into constraints in the agriculture sector more generally.

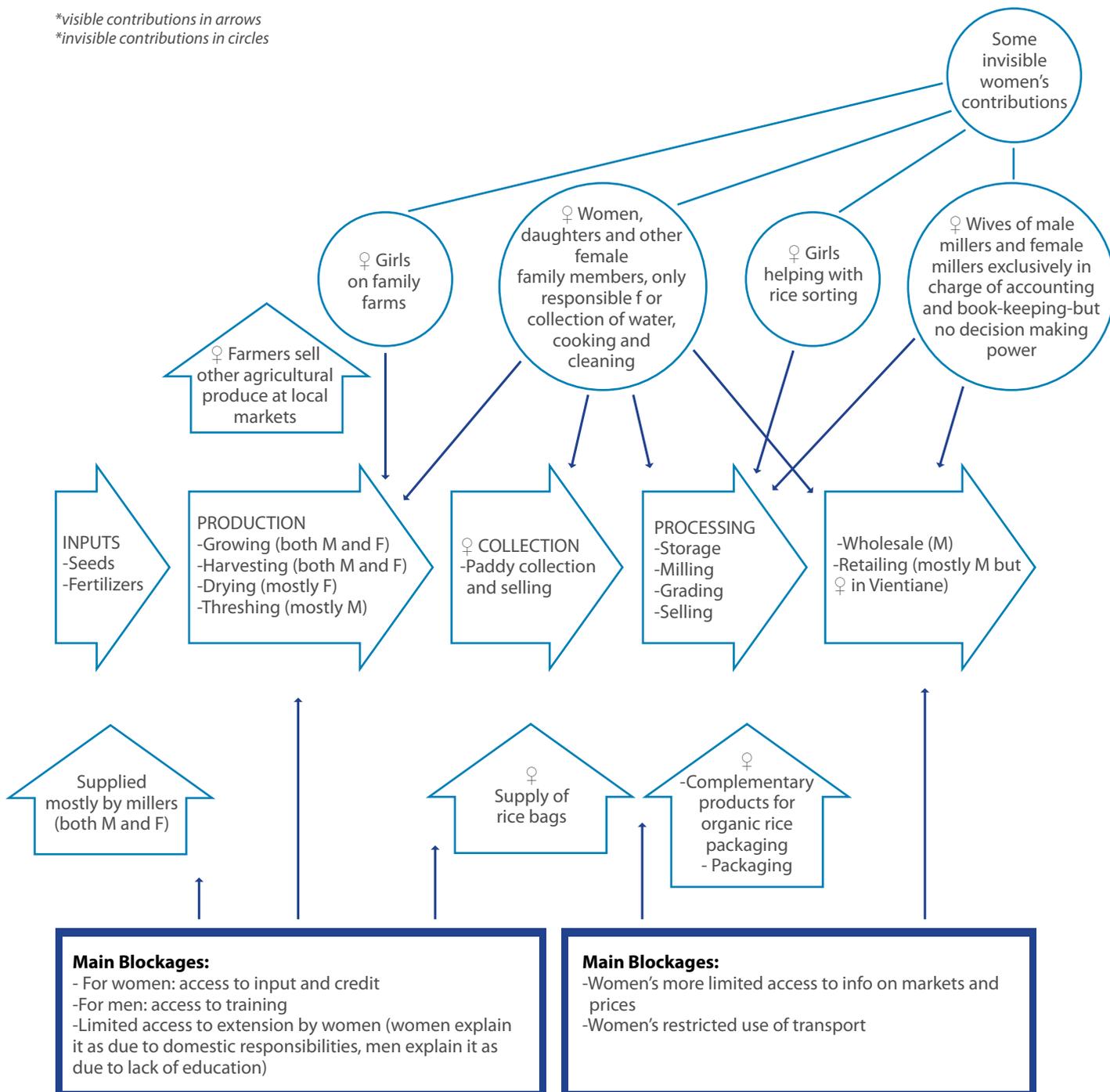
The way in which rice farmers and millers contribute to the value chain reflects specific gender roles. The mapping shows that both women and men participate in the chain as farmers (the

'production' arrow) and as millers (the 'processing' arrow). However the manner in which farmers contribute to production processes and the way millers manage processing activities reflects specific gender roles. For example, while some farming activities are jointly undertaken, male farmers tend to be in charge of land preparation and female farmers do most of the drying. Female farmers do also take care of other agriculture produce that can be grown near rice fields and take it to local markets for sale. More male farmers than female farmers take part in extension services. Female farmers attribute their limited participation to their domestic responsibilities (while men explain women's lack of participation in terms of their low education levels). Women are about 50 percent of the millers: they do most of the accounting and tend to rely on other female family members for support with housework, while male millers rely heavily on their wives for book-keeping as well as housework. Women are involved in activities complementary to rice production such as making bags and other products for packaging rice (the red arrows), but are mostly excluded from any activity that involves transport, networking and marketing (the blue arrows), which remain the domain of men. In addition to more visible transactions that take place through markets (the arrows), there are also important invisible contributions (the red circles) by girls and other female family members.

The analysis highlights the specific constraints faced in Enhanced Rice Production along the value chain (i.e. production, processing) that affect men and women. Although this analysis was undertaken particularly in the context of rice production, many of these constraints cut across different agricultural product markets. In production, the main blockages seem to be: (i) access to inputs and credit and (ii) limited access to extension and training; while in processing, the key blockages are: (i) limited access to info on markets and prices and (ii) restricted use of transport. Each of these constraints will be considered in turn.

Figure 1: Visible and invisible women’s contributions in the rice value chain

*visible contributions in arrows
 *invisible contributions in circles



Source: Framework adapted from Mayoux and Mackie, 2008, *Making the Strongest Links*, ILO. Information on gender division of labor in Lao rice production and milling from SNV Gender assessment of EMRIP, November 2010.

5.1.1. *Limited access to extension and training*

Relevant and quality extension services are limited for women farmers in many Asian countries, including in Lao PDR. In Vietnam, for example, women make up only 25 percent and 10 percent of participants in training programmes on animal husbandry and on crop cultivation, respectively (Kabeer 2003). In Cambodia, women appear to be only 10 percent of extension beneficiaries (Asian Development Bank 2008). Similar biases exist in Lao PDR (as highlighted in recent reviews by the Lao Ministry of Agriculture). Research and extension services tend to focus on the tasks in which males specialize. Also, access to extension services often requires travelling to district centres, taking several hours away from the family, and extension personnel are overwhelmingly male, raising cultural difficulties in engaging in face-to-face communication with women farmers.

Extension skills are vital for learning about modern farming methods throughout the value chain. In production, new skills are required in order to yield the benefits of modern production methods such as high yielding crop varieties and fertilizer application. The development of higher value-added vegetable exports for example might depend upon meeting international food safety and phytosanitary standards. Without the extension services to provide the necessary marketing and processing skills, access to export markets is unlikely to be realized.

Participatory extension services that use illustrated instructions rather than lots of written material—so to be more accessible to illiterate farmers could widen access to modern farming methods. More female trainers and extension agents could serve to improve the balance of the tasks which extension services tackle and also help to alleviate cultural difficulties. Infrastructure improvements in transport networks and electricity can also ease access to extension through lowering journey times to district centres and lightening the high domestic burden of work that women disproportionately undertake.

Extension services are likely to be a more important determinant of labor productivity in

agricultural activities than formal education, but basic levels of education and literacy still impact upon access to extension. Gender gaps persist at all levels of education and are especially severe in poorer rural districts and amongst non-Lao Tai ethnic groups. Women living in poor villages in remote areas have much lower literacy rates and Lao language proficiency than men (World Bank Gender Profile, forthcoming). In the long-term, policies to ensure universal access to basic education will be vital for equipping all citizens with the basic skills and literacy required to more easily engage with extension workers, traders and any others outside their village. Policies to build standards of basic literacy amongst women could include incentives for male, and especially female teachers, to work and remain in rural schools; building new schools and improving physical access to them, paying particular attention to suitable locations and means of transportation which are women-friendly; and gender training to teachers, including on issues related to sexual harassment.

5.1.2. *Access to input and credits*

A more modernized form of rice-based farming, characterized by mechanization, high yielding varieties, more intensive use of fertilizers and supplementary irrigation schemes, is being adopted in some parts of the country. This type of modernized farming typically requires access to credit, as up-front investments are needed to purchase fertilizer, high yielding varieties and any motorized equipment for which the financial benefits will be not realized until crops are harvested. At present, as stated in the last chapter, it is predominantly men that control motorized equipment and dominate cash crops while women contribute significant but less visible labor inputs to production (World Bank, IFAD, FAO 2009).

Government could work with the private sector, development partners and civil society to look at innovative ways of providing financial services to women and the rural poor more generally. The United Nations Capital Development Fund is supporting the government in the program 'Making Access to Finance more Inclusive for Poor People'. This type of initiative may fa-

facilitate access to credit enabling women to make the necessary investments required for more modernized farming methods which can enhance productivity. Establishing land titles is another potential mechanism for developing rural credit markets as land provides potential collateral to set against loans.

5.1.3. Access to information and markets

Smallholders in general and women in particular, are likely to be in a weak position in negotiating terms and prices with powerful buyers because of limited experience and low levels of literacy. There are no systematic export promotion support services available in the Lao PDR for producers, and little or no market information is provided in newspapers, on the radio or television (World Bank Gender profile, forthcoming). Problems of compliance to international food safety and phytosanitary standards are also significant. As a result, prices in the market are mostly controlled by 'middlemen'. For example, a major constraint to the expansion of exports of NTFPs is identified in the fact that local collectors have weak knowledge of markets and prices and hence either fail to get their products to markets or sell their products at much lower prices to middlemen than directly to buyers. Many coffee smallholders participate in contract arrangements with local traders and processors and often sell their crop in advance and hence receive significantly lower prices. Women's especially weak bargaining position in the sale and purchase of goods and services is strongly correlated with their disadvantage in education and in access to transport discussed in earlier sections. Traditional customs limiting women's mobility can further restrict their access to markets. Women are also more likely to market smaller quantities than men. They may face barriers to membership in rural organizations and cooperatives, which may further inhibit a channel to facilitate market access (Doss 2001).

In recent years, communication technologies have proved very effective in bringing product market information to both women and men. Women are benefiting more because of their lesser mobility and literacy. By facilitating better

access to information, ICT services have the potential to play an important role in transforming markets and making them sites of cooperation in which otherwise disadvantaged producers and users of goods and services can interact without the intervention of large powerful intermediaries. Mobile phones for example, are increasingly used in many remote rural areas by women farmers to learn market prices for inputs and crops (e.g. the Grameen Village Phone in Bangladesh and similar such initiatives in Cameroon, the Philippines, Rwanda and Uganda). In Senegal the Grand Coast Fishing Operators Union, an organization of women who market fish, set up a website to promote their produce, monitor export markets and negotiate prices with overseas buyers before they arrive in the country (Hafkin and Taggart 2001, quoted in World Bank, IFAD and FAO 2009).

Measures to facilitate women's access to markets could also include institutional strengthening of women's groups and support for women's inclusion and influence in farmer associations and trade unions. In the coffee market, a number of recent initiatives in Lao have been aimed at promoting producers' associations with the aim of improving technologies, helping in obtaining organic certifications and negotiating better prices with buyers (Trade Development Facility Champasak Agribusiness Study 2009). Another promising opportunity is found in the tea sector offered by the Lao Forest Tea Initiative. This is a project that seeks to achieve both environmental and social sustainability through protecting the biodiversity of upland areas and building on the indigenous knowledge of cultivation practices. Its activities include: supporting on-farm trials of improved organic tea cultivation models ensuring women share control over resources and access to income produced; facilitating the establishment of organic certified tea production groups that include women and ethnic minority participation in decision making roles; and supporting women's groups to engage in cooperative tea cultivation (including through training in basic organizational, financial and business skills).

The introduction of modern, electronic customs clearance systems could also go a long way to overcome some of the difficulties wom-

en tend to experience more prominently than men at the border. Typically, border agencies are staffed by men and do not have a culture of working in gender sensitive ways to assist female traders (Dejene 2001). In addition, women's lower levels of knowledge about border processes can at times fuel extortion (UNECA 2010).

5.1.4. Restricted use of transport and access to infrastructure

Women bear a disproportionate share of the burden of non-productive work, which can be eased with infrastructure improvements. Table 5 and Table 6 report data on women's and men's daily hours of work respectively, distinguishing by

SNA and non-SNA work as well as by three types of location: urban, rural with roads and rural without roads.⁷ Depending on the setting, women spend on average between 2.3 and 2.5 hours on non-SNA work compared to men who on average spend between 0.4 and 0.6 hours on the same. There are still many villages in Lao PDR with limited access to roads and poor availability of basic infrastructure generally. It is therefore not surprising to find that activities such as water and fuel collection take women longer in these areas than in urban areas. Both women and men appear to spend less time in income-generating activities in rural villages without roads relative to other locations, suggesting limited overall opportunities for paid work for both genders in these areas.

Table 5: Total work burden, adult females (hours in a day)

	Urban	Rural with roads	Rural without roads
Total SNA work	4.4	3.9	3.5
Of which water and fuel collection	0.1	0.5	0.6
Non-SNA work	2.3	2.5	2.5
Total	6.8	6.9	6.7

Source: LECS 4

Table 6: Total work burden, adult males (hours in a day)

	Urban	Rural with roads	Rural without roads
Total SNA work	5.1	4.7	3.8
Of which water and fuel collection	0.1	0.2	0.2
Non-SNA work	0.4	0.4	0.6
Total	5.7	5.3	4.6

Source: LECS 4

⁷The UN System of National Accounts (SNA) recognizes as productive work the following categories: employment for establishments; primary production activities not for establishments such as agriculture, animal husbandry, fishing, forestry, fetching of water and collection of fuel wood; services for income and other production of goods not for establishments such as food processing, trade, business and other services. Water and fuel collection has been added only since 1993 but it is still often not included in measures of GDP in practice. It was included into SNA activities in the calculations reported in table 3 and table 4. Subsistence agriculture is of course also considered as part of SNA work. Food preparation, household maintenance, management and shopping for own household; care for children, the sick, the elderly and disabled; community services and help to other households are still considered 'non-productive' activities, and hence are not recorded. Only some countries record these activities but as separate 'satellite accounts'. It is these activities that most gender-aware literature calls non-SNA work or extended-SNA work. Following these categorisations what is reported in table 3 and table 4 as non-SNA work includes what is described in the LECS questionnaire as: household cooking, washing and care of persons.

More widespread and regular electricity provision has the benefit of significantly reducing the heavy domestic labor burden that constrains many women's capacity to engage in income generating activities. Surveys of newly-electrified rural households in Lao PDR (World Bank Gender Profile, forthcoming) show that grid electricity has reduced time spent on cumbersome domestic chores performed by female household members by facilitating the use of refrigerators and water pumping for vegetable gardens, for instance. Access to electricity has also led to better educational outcomes, improved community services, and more security, particularly for women and girls. Project such as the Power to the Poor (P2P) pilot programme (World Bank 2009), providing the poorest households with interest-free loan for electricity grid connections, are promising initiatives in this area.

Women tend to predominate among producers and traders who use public transport and hence they feel the implications of weak infrastructure more acutely. Restricted transport service availability in rural areas often means that women going to markets or to work in agro-processing must wait for tuk-tuks at dawn and return after dusk, putting them at risk for assault. Also, the high cost of providing transport in areas with low population density often translates in high tariffs that poor women cannot afford. As a result of their limited mobility, female farmers have limited knowledge of market prices and hence bargaining power, and therefore sell their produce to middlemen who take a large share of the profit. In addition to the trade dimension, a good road system has of course other positive impacts, which are likely to be more intensified for women: it can help young girls to get safely to school and can reduce maternal mortality by making access to obstetrical care faster. Improved paths to water points or fuel-wood locations can save women's and girls' hardship.

In sum, infrastructure services, especially in rural areas can address a number of gender-specific needs, thus having a multiplier effect on female productivity. This in turn could further enhance trade competitiveness in the long term.

5.2. Key constraints in manufacturing

5.2.1. Skills and technical knowledge

As in agriculture, lack of adequate skills and technical knowledge appears to be one of the major constraints to export competitiveness in Lao PDR in manufacturing, and has a strong gender dimension. Girls and young women are under-represented in vocational and technical education. Training seems to reinforce/reflect gender based occupational segregation as boys and girls are channeled into different subjects. At the diploma level, 84 percent of female students are enrolled in agriculture, business, hospitality and tailoring. Electronics is the second most popular subject area for all students, representing 28 percent of all trainees, but only 4 percent of female students. Females constitute 96 percent of the students in hospitality programs. Women are also under-represented among vocational teachers and trainers.

Policies for promoting greater gender equality in access to skills could involve a combination of measures that address both the content of education and training, as well as more practical problems that girls more often than boys face in accessing schools and training services. Measures could include: better design of curricula so as to be more relevant to the technical knowledge required in key export-oriented sectors like textiles production; and support to firms to undertake on-the-job training for female employees as well as gender training for managers.

5.2.2. Infrastructure

Limited transport networks and, more generally, weak physical infrastructure including provision of electricity and water, are identified by many as an important constraint to improved competitiveness in the Lao PDR. Firm productivity can be significantly affected by irregular electricity and water provision and poor transport networks. Complex and cumbersome customs procedures, along with poor infrastructure at the borders can often further increase transaction costs and lengthen delays to the clearance of imports, exports and transit goods.

Upgrading infrastructure is a long-term program and is expensive. It will require mobilizing resources from the private sector and as such it will be important to have in place conditions conducive for investment.

5.2.3. Attraction and retention of labor

Some garments producers report not being able to meet demand from buyers and identify labor shortages, and difficulties in attracting and retaining workers as their main binding constraint (World Bank Investment Climate Assessment 2011). Reasons for the existing shortage appear to be migration challenges for young rural women, difficult working and living condi-

tions in garments factories, the negative social status associated with being a garments worker and higher relative wages for other unskilled jobs in Thailand.

New research on labor practices, labor productivity and firm performance is currently being undertaken by the World Bank through a series of firm surveys and focus group discussions with garments workers. Initial insights suggest much scope exists for targeted investments and strengthened public-private partnerships to increase skills and productivity as well as for interventions to improve management, working conditions and representation of workers (Box 3 provides further details)

Box 3: Survey of labor practices and conditions in the Lao garments sector

- Garments factory workers are mostly young women from rural areas seeking a better life and opportunities for themselves and their families. Factory work, although difficult and demanding, is considered less arduous and offers more opportunities for earning income than the alternative of working on family farms.
- Learning about big city life, making new friends and earning income motivates young women to continue working in the factories as long as they can. However, they often find it difficult to adapt to the long-hours and demands of industrial work and they struggle to cover the rising cost of living in urban areas, build savings and send remittances to their families in rural areas.
- Most women have limited information on working and living conditions before they are recruited. As a result they are often quite overwhelmed by transition into industrial labor and urban environments. Furthermore, they appear to gain only limited understanding of their contractual rights and obligations—even after recruitment—placing them at a distinct disadvantage for claiming benefits, negotiating improved working conditions, or reporting unfair labor practices. Many workers complain of long hours with too much compulsory and poorly paid overtime. Even in relatively 'good' factories, there are complaints of insufficient drinking water, poor air quality and hot working conditions, poor sanitation facilities, as well as controlling and sometimes abusive behavior by supervisors.
- While Lao Labor Law establishes basic standards such as minimum wages, restrictions on overtime, entitlements such as maternity and sick leave, these appear to be only weakly enforced and there is very limited opportunity for third party arbitration or dispute resolution. Labor standards established under contracts with foreign buyers or international trading regimes seem to create stronger inducements for compliance. These systems of voluntary certification and periodic auditing do not appear to be sufficient however to counter some of the unfair labor practices reported by workers.
- Lack of collective bargaining or effective representation through existing mass organizations means workers have limited effective negotiating power vis-a-vis their employers. As a result, when individuals are dissatisfied, they simply quit their job.

Source: World Bank (2012) *Labor Practices and Productivity in the Lao Garments Export Sector*, forthcoming.

5.2.4. Access to raw materials

As with other sectors, exports of handicrafts suffer from capacity constraints due to lack of skilled personnel and limited access to capital, but this sector also faces a shortage of domestically produced raw materials (in particular silk yarn and cocoons). The Department of Trade Promotion and Product Development, in collaboration with the World Bank, is currently supporting an innovative project providing support and technical training to silk farmers in rural areas as well as facilitating sustainable partnerships between them and lead weaving firms. This represents a valuable model for strengthening market linkages in an equitable manner that could be replicated and extended to other sectors and actors in the future.

5.3. Summary

Table 7 below summarizes the key constraints facing a specific sector which prevent resources from being allocated between different groups of women and men in ways that enhance overall productivity and well-being and outlines potential interventions to address these constraints. Some interventions, such as the introduction of participatory extension services that use illustrated instructions are largely policy based and may therefore be easier to implement in the near-term than other which require investment in fixed capital like electronic customs clearance.

Table 7: Addressing constraints to trade expansion

Sector	Constraint	Potential complementary interventions	Implementation requirements
Agriculture	Access to inputs and credit	Financial inclusion programs to increase access to finance	Requires long-term program
	Access to extension services	Participatory extension services using illustrated instructions	Largely policy based
		Infrastructure improvements in transport networks and electricity which can ease access to extension	Investment in infrastructure required
	Access to information on markets	Institutional strengthening of women's groups and support for women's inclusion and influence in farmer associations and trade unions.	Largely policy based
		Facilitate access to communication technologies	Policy and infrastructure
Garments	Labor attraction and retention	Strengthened public-private partnerships to increase skills and productivity as well as interventions to improve management, working conditions and representation of workers	Largely policy-based
Handicrafts	Lack of raw materials	Support and technical training to silk farmers in rural areas; facilitating sustainable partnerships between them and lead weaving firms	Policy-based

Manufacturing	Technical Skills	Better design of curricula so as to be more relevant to the technical knowledge required in key export-oriented sectors	Policy-based
		Support to firms to undertake on-the-job training for female employees	Policy-based
Cross-cutting	Difficulties experienced at the border.	The introduction of modern, electronic customs clearance systems	Requires infrastructure investment
		Incentives for teachers to work and remain in rural schools	Policy-based but may require significant budgetary resources
	Basic skills and literacy	Building new schools and improving physical access to them	Requires infrastructure investment
		Improvements to road network	Requires infrastructure investment
	Limited transport networks	Providing the poorest households with interest-free loan for electricity grid connections	Policy-based
	Electricity provision	Investment in electricity transmission network	Requires infrastructure investment

6. Gender and resource exports

Mineral extraction and hydropower generation in Lao PDR have sharply increased. In the last four years, the natural resource sector (including mining, quarrying and energy) has become the largest export sector in the economy, as well as the fastest growing. The contribution of mining and hydro resources to GDP is projected to increase from nearly zero in 2000 to more than 25 percent in 2020. Mining and hydro revenues constitute now about 20 percent of total revenues, and are expected to reach more than 5 percent of GDP a year by 2020 (World Bank Lao PDR Development Report 2010). The expansion of these sectors is largely externally oriented: with some 90 percent of copper extraction and 70 percent

of electricity generation currently exported. Current evaluations of this performance all share the view that, while there are considerable benefits to rapid growth in hydropower and mining, there are also significant risks. Both positive and negative impacts related to natural resources expansion have gender dimensions and the impacts of the expansion will depend upon the complementary policies put in place.

In the absence of complementary interventions, loss of land, water and forests are evidently going to be experienced most severely by communities living close to a project. The new mining and hydropower projects in Lao PDR

are set up in remote areas with ethnically diverse populations who are poorer than average, have lower literacy, depend on natural resources for their survival, suffer from high incidence of stunting and child malnutrition and have limited access to health and other services. There is thus a risk of increased poverty and food insecurity for these groups if appropriate mitigation measures are not taken.

Without mitigation measures women in the affected communities are also likely to bear disproportionately the burden of these negative shocks as they own less property than men and rely heavily on common resources as their main source of livelihood. They usually have the main responsibility for the collection of water, wild berries and plants, fish and other wildlife which constitute the bulk of their family's diet. They do not have any other means to ensure the provision of necessary protein and micronutrients for their children.

Growth in natural resource exports also brings with it the risk of Dutch Disease. Dutch Disease refers to the phenomenon of increased resource-based export earnings negatively impacting upon manufacturing or other tradable sectors, where direct employment opportunities for both men and women are greater. On average, resource-rich countries have a tradable sector (manufacturing and agriculture) that is 15 percentage points lower than other countries (Brahmbhatt, M et al. 2010). Macroeconomic impacts of a boom in commodity exports include appreciation in the real exchange rate making exports less competitive and potential overheating of the economy following rapid expansion of spending by the private and/or public sectors. Fiscal policy is the key mechanism for managing the macroeconomic challenges that a fast rise in resource based export earnings brings. The 2010 World Bank Lao PDR Development Report gives detailed guidance of how fiscal policy can be used to mitigate the macroeconomic risks brought by the commodity boom.

Notwithstanding these risks, managed effectively there is considerable opportunity for women and vulnerable groups to benefit through the national budget from the additional revenues that the resource expansion brings through investment of the resources gener-

ated in social services, such as education and health care, and infrastructure improvements, such as improved roads. As with the national budget as a whole, participation of women in decisions regarding the use of additional government revenues will be key to ensure that poverty reduction and gender equity objectives are met. Revenues from hydropower and mining ought to be spent on poverty reduction and public investment in ways that closely reflect the priorities set up by the government in its development program under the 7th NSEDP. The additional resources should also be channeled towards addressing the constraints identified in the non-resources sectors as it is these sectors where employment opportunities for both men and women will be greatest. Building effective PFM institutions will also help to ensure that increased resources are channeled and spent in line with policy priorities.

A number of innovative benefit sharing approaches have also been adopted in Lao PDR to ensure that those local communities directly affected by mining and hydropower projects are able to share the benefits of natural resource-based projects. Because women are mostly users of communal goods, but rarely owners of individual assets, standard mitigation measures which focus only on compensation for lost stock and neglect disruptions to livelihood flows, tend to exclude them. This underscores the crucial importance of complementing more conventional compensation-based approaches with other measures to support new and sustainable sources of income. A number of different types of benefit sharing mechanisms have been used in Lao and internationally and are considered in turn (from Gibson and Carlsson Rex 2010).

6.1. Employment and ancillary services

The direct employment generation of mining and hydro activities is small and so is the extent to which jobs created in these sectors are likely to contribute to poverty reduction (Fenton and Lindelow 2010). Currently, only about 0.5 percent of the total Lao labor force is employed in mining and energy (data from LECS 4) and women constitute an even smaller fraction of the workers in these sectors.

Nevertheless, projects often offer preferential employment to residents of affected villages and project-related employment results in cash income and skills development for local residents. Two international mining companies operating in Lao PDR, Lang Xang Minerals Ltd at Sepon and PhuBia Mining Ltd offer preferential employment to residents of affected villages and adopt progressive employment policies and report that, in 2008, women represented 18 percent and 27 percent of their workforces respectively. However a marked gender-based vertical segregation remains, in that women are over-represented in administrative positions and under-represented in operational departments (World Bank Gender profile forthcoming)⁸.

Employment can also be provided through ancillary services: those services provided to a project that are not directly related to the primary business of the project. These services could include transportation and provision of goods (consumables or construction materials), security services, waste collection and disposal, or construction of camp sites or other facilities. To enhance the spread of local benefits, project managers should engage local service providers and procure goods from local suppliers. A good example in Lao PDR is provided by PhuBia Mining's 'Locally Grown Produce Initiative' promoted since 2008 in villages affected by the Phu Kham Copper-Gold and Gold Heap Leach operations. This initiative, which involves a market garden scheme where villagers grow vegetables to sell to the mine, seems to have been particularly successful in engaging and providing benefit to women, who constitute 95 percent of the members participating in the procurement scheme.

6.2. Preferential rates, services and access

Affected communities can be offered preferential rates, services or access to mitigate social impacts and share project benefits. Examples include offering preferential electricity rates to local residents, allowing residents lower rates to use services offered by the project (training, medical services, communication networks). Such ser-

vices can help to address many of the constraints women face in benefitting from trade promotion outlined in the previous section: such as skills, access to information and electricity. In some cases, affected communities can be provided with preferential access to common resources. An example of this mechanism being used in Lao PDR is the Nam Theun 2 Hydropower Project, which provides resettled villagers with largely exclusive access to reservoir fisheries for 10 years, and exclusive rights to forest resources for 70 years. The collective forestry association is intended to provide resettlers with dividends from timber production, as well as exclusive access to forest areas for gathering of non-timber forest products or other purposes.

6.3. Community development funds

Community Development Funds (CDFs) are funds set aside by the company for investment directly benefiting affected communities. In addition to direct funding benefits, community members often participate (to varying degrees) in determining how funds will be spent. Best practice implementation of a community development fund can be challenging, in particular as different parties involved in the participatory planning approach often have different views and competing priorities for how the money should be spent. For example, a project may want the funds used in the affected villages, while government authorities may have other priorities. How such funds affect gender equality will clearly depend upon the administration of the funds, pointing to the need for gender concerns to be factored into the planning approach.

CDFs are becoming increasingly common in Lao PDR. Most companies are now including CDF in the planning of their projects, pre-emptively responding to WREA's Decree on Environment and Social Impact Assessment, which once approved will legislate the requirement for such funds. Both Sepon and PhuBia mining programs implement a community development program through a trust fund-type scheme.

⁸ Alongside large-scale mining, a significant number of people in Lao PDR (UNIDO estimate) are involved in small-scale artisanal mining, much of which is a seasonal supplement to subsistence livelihoods in rural areas. Evidence suggests that women are the vast majority of artisanal miners. They often have limited knowledge of the associated health, safety and environmental risks (e.g. level of mercury exposure) and would greatly benefit from targeted health and safety campaigns combined with the introduction of accessible technology and protective equipment.

6.4. Public-private partnerships

“Establishing partnership agreements between developers and local communities is probably the most innovative form of monetary benefit sharing,” according to Egre (2007). He points to seven hydroelectric projects as examples (four in China, two in Canada, and one in Ecuador) to illustrate his point. Such public-private ventures ensure local cooperation, and participation throughout the entire progress (including a percentage of the economic rent and management input for ecological management). However, even more so than other benefit sharing schemes; partnerships are extremely new and in need of evaluation at some point in the future. Again the impact of such partnerships on gender equality will depend upon how gender concerns are factored into specific agreements.

7. Conclusions

The gender-trade mapping exercise undertaken points to a number of sectors in the Lao economy where there is clear potential for women to benefit directly from a more open trade policy if constraints can be addressed. In agriculture, the minor processing of vegetables (which are largely cultivated by females), or the development of fresh and chilled supply chains, would likely lead to significant additional value creation. The development of more modern rice-farming practices for rice exports and increased exports of coffee and tea also have considerable potential for employment creation and poverty reduction for women. In manufacturing, the sector with the strongest potential for trade-related female employment generation is garments, although employment is still currently of modest size in relative terms. The handicrafts sector has significant potential to increase the income of rural households, including minority households who have otherwise limited economic options.

In order that both men and women can increasingly improve their incomes through trade in these labor intensive, non-natural resource sectors, stakeholders should work together to put in place complementary interventions to

address existing constraints which limit their expansion through trade.

In the short-term, the government can work on a number of policy areas that would make it easier for women to access export markets, including:

- ▶ Strengthening of women’s groups and support for women’s inclusion and influence in farmer associations and trade unions can be effective measures for facilitating women’s access to markets.
- ▶ Government can work with partners to look at ways of making extension services better tailored to female farmers’ needs, for example by adopting participatory methods, by focusing on tasks in which female farmers specialize, by increasing the number of female agents, and by using illustrated instructions rather than written material, which is easier for people with weak reading skills to understand.
- ▶ Promotion of communication technologies such as mobile phones can play an important role in supporting disadvantaged producers and users of goods and services in market negotiations without the intervention of powerful intermediaries. Women are likely to benefit more from ICT services because of their lower literacy and mobility.

In the medium term, government, both as an investor and also through mobilizing investment of the private sector and development partners can make infrastructural investments.

- ▶ Better provision of transport networks and physical infrastructure including electricity and water as well as women-friendly ICT innovations are key to ensuring that goods and services providers reach markets in a timely manner, and have the additional benefit of reducing the heavy housework burden that limits many women’s involvement in income-generating activities.
- ▶ Customs automation can significantly contribute to overcoming the difficulties women tend to experience in border procedures and save further their time.

The private sector also has a vital role in addressing constraints that limit expansion of trade.

- ▶ In agriculture, the financial sector has a clear role to play in facilitating access to financial services to address the constraints that farmers face in accessing the credit often necessary for modernization of farming methods.
- ▶ Companies may also be able to leverage some of their advantages in coming up with innovative approaches to make extension services better tailored to female farmers' needs.
- ▶ In the manufacturing sector, the private sector would be best placed to advise on current skills gaps. Companies could take a more active role in advising on curricula for formal education and vocational training.
- ▶ The private sector, government and existing labor organizations could work in tandem to put plans in place to improve working conditions and representation of workers in the garments sector.
- ▶ The existing work being done by the Department of Trade Promotion and Product Development, in collaboration with the World Bank to support technical training of silk farmers in rural areas and strengthen linkages with lead weaving firms could serve as a useful model for the private sector as a means of ensuring better access to locally-sourced raw materials for handicraft production.

The gender-trade mapping has also highlighted that mining and hydropower exports constitute a significant and growing proportion of exports and GDP bringing with it a number of potential risks and benefits that will depend upon the complementary policies and benefit sharing mechanisms put in place. The capital-intensive nature of these sectors means that opportunities for direct employment for men or women will be limited. There is also a risk that without prudent fiscal policies in place that growth in these sectors could negatively impact non-natural resource sectors through Dutch Disease effects.

Increased trade flows in these sectors also however bring with them significant revenues both to government and the private sector. The impact of increased trade flows on gender equal-

ity will therefore largely depend upon how increased resources are managed and how the benefits of increased revenues are shared.

On the government side:

- ▶ Fiscal policy will be key to mitigating the potential negative macroeconomic effects of natural resource extraction.
- ▶ With the support from development partners government should seek to drive forward its agenda to strengthen PFM systems to ensure that additional resources are aligned to the goals of the 7th NSEDP. Some of the increased revenues could be channeled to investing in infrastructure improvements aimed at addressing constraints in the non-natural resources sectors.

For the private sector:

- ▶ Prospective mining and hydro companies should work with government to ensure all new natural resource projects meet the standards set out in WREA's Decree on Environment and Social Impact Assessment.
- ▶ Women's involvement should be sought at every stage of projects supporting alternative income-generating activities, from design to implementation.
- ▶ Benefits sharing mechanisms such as ancillary employment services, preferential rates, services and access, community development funds and public private partnerships offer women affected by resource-based projects opportunities for new livelihood flows.

All the findings are preliminary and point to the need for the DPs to work with the Lao PDR government in the development of sounder evidence and more in-depth studies of specific sectors. In particular efforts should focus on:

- ▶ Conducting gender-focused value chain studies of particular products and sectors to examine with precision where women and men are in the various segment of the chain, identify ways to overcome power imbalances that may character-

ize relations between them, and give full visibility to those areas of women's work often overlooked in development interventions. The rice milling and silk projects currently being implemented with the support of SNV in some parts of Lao PDR could constitute a good model for similar analyses and interventions in other sectors and regions.

- ▶ Collecting sex-disaggregated statistics at a highly disaggregated level, in a timely manner and at regular intervals (without an understanding of trends and changes over time, an accurate assessment of gender-differentiated impacts is impossible).
- ▶ Collecting more information on rural sectors in particular, focusing more specifically on how different family members allocate time and resources to various crops and other sources of livelihoods, and on their status and bargaining power within the family farm. The new 2011 Agricultural Census by the Ministry of Agriculture and Forestry is an important step in this direction. This effort could be further strengthened by promoting more regular monitoring of key sex-disaggregated indicators on an annual basis.

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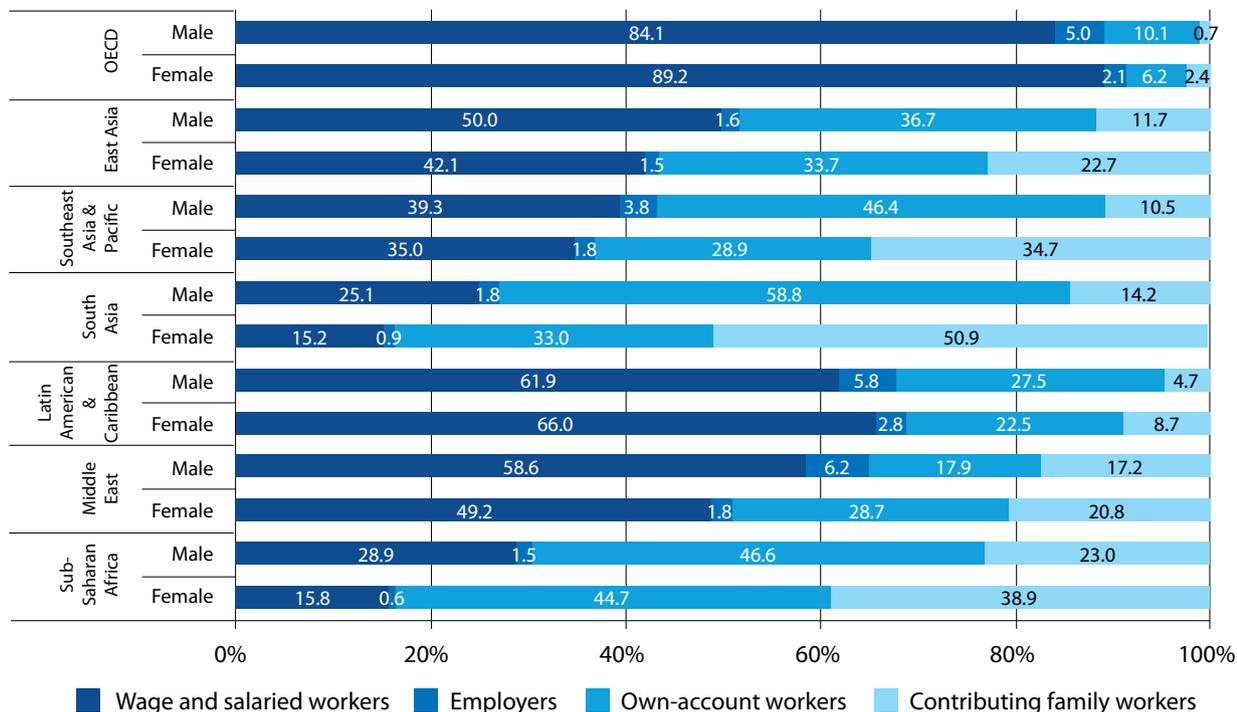
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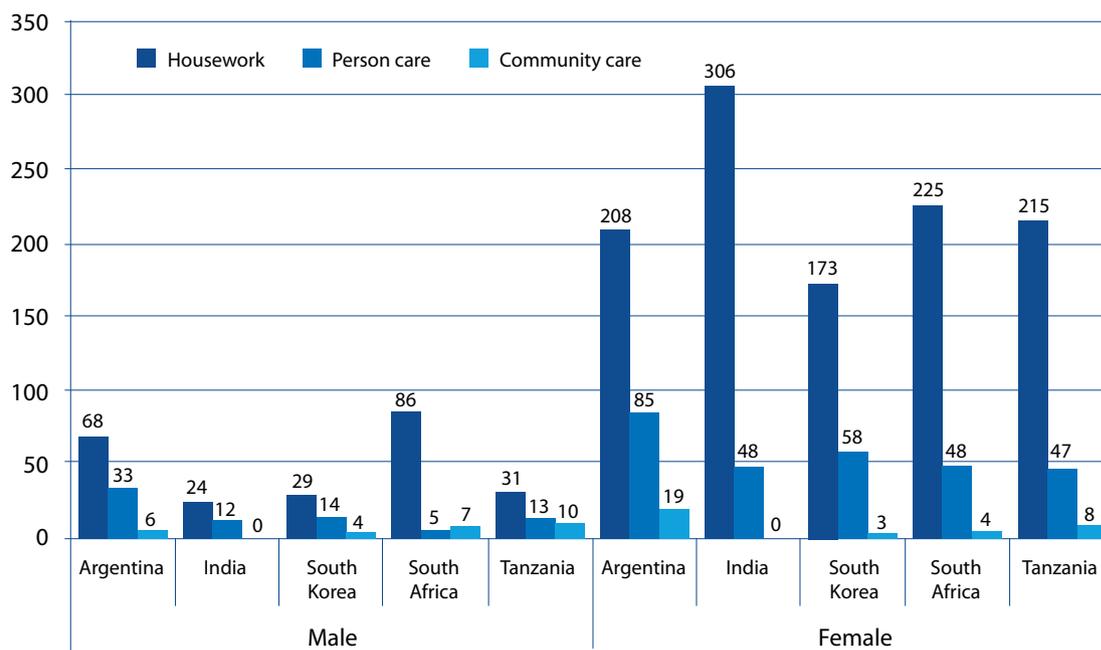
Annex 1: International male and female employment statistics

Figure 2: International distribution of total employment by status, by sex, 2009



Source: ILO, Trends Econometric Models, November 2009

Figure 3: Average minutes spent per day on unpaid care work by sex, selected countries



Source: Budlender, Debbie, *The statistical evidence on care and non-care work across six countries*, Geneva, UNRISD 2008



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