

Glass Barriers

Constraints to Women's Small-Scale Cross-Border Trade in Cambodia and Lao PDR

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Abstract

Trade facilitation projects often assume indirect benefits for small-scale, cross-border traders. Recent studies have shown the challenges faced in Africa by this population, especially women, but it remains unknown in Cambodia and the Lao People's Democratic Republic, despite large trade facilitation investments. This paper fills this gap, thanks to an innovative mix of original qualitative and quantitative data from various checkpoints on the borders with Thailand and Vietnam. The quantitative data, collected in 2014, consist of an exhaustive list of trade-related border crossings during two to three days and a survey of 158 randomly selected small-scale, cross-border traders and brokers. The paper combines qualitative data and statistical techniques to shed light on the structure of the small-scale, cross-border trade economy, traders' and brokers' profiles, the challenges they face, and potential solutions, with a

particular emphasis on gender. Key challenges pertain to taxation and poor infrastructures. Narrow roads, insufficient parking space, and restrictive border regulations on transportation means cause traffic jams and delays. These disproportionately affect women, who are more time constrained. Despite a rather moderate tax pressure, widespread informal payments erode traders' and brokers' willingness to comply with taxes. Women suffer from a higher tax rate and a tax schedule that deters them from upgrading to more profitable cross-border trade activities. Along with capital constraints, this finding may explain the lower share of women in small-scale, cross-border trade than among own-account workers and the self-employed, as evidenced by nationally representative data. The paper delineates policy implications and puts forward concrete steps.

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**Glass Barriers:
Constraints to Women's Small-Scale Cross-Border Trade
in Cambodia and Lao PDR¹**

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1. Introduction

Border checkpoints in developing countries often teem with traders transporting small quantities on foot or pushing carts alongside trucks that sport the insignia of formal companies. Those small-scale cross-border traders may eventually be superseded by large import-export firms. But during the process of development, their trade may be a valuable avenue for poverty alleviation and women's empowerment. This paper focuses on the latter in the context of small-scale cross-border trade in Cambodia and Lao People's Democratic Republic (Lao PDR). It draws on recent survey research undertaken by the World Bank, and draws conclusions about the key policy implications for facilitating the poverty-reducing impact of women's participation in small-scale cross-border trade.

Small-scale cross-border trade is thought to provide a number of benefits to developing countries. First, the literature emphasizes its importance as a means of employment and financial resources for poor smallholders and landless households, in particular in a country's geographical (and often socioeconomic) fringes. Second, cross-border trade plays an important role in reducing price differences and volatility, thus having a positive welfare impact on poor households beyond those directly involved in this activity (World Bank 2011). Third, trade offers a way for women to earn money outside the household, which may foster empowerment.

In this context, trade facilitation projects are traditionally built on the expectation that the automation, streamlining and simplification of procedures² will foster economic activity and eventually reduce poverty. Small-scale cross-border traders, including informal, female and other categories of potentially vulnerable traders, may benefit at the margins of such projects, e.g., from improvements in transparency. They carry small quantities and may fall under customs declaration thresholds. They are poorly educated and thus cannot cope with the administrative tasks demanded of formal firms, and their profit margins may be so thin that full compliance with customs duties and other border procedures would prevent them from trading at all (Lesser and Moisé-Leeman 2009). Trade policy in developing countries thus tends to focus on large, formal firms and firms that might consider going formal despite the fact that many traders are unlikely to formalize in the medium run.

In Cambodia and Lao PDR, the two countries on which this study shall focus, women tend to be overrepresented in unpaid family labor, while wage-earning jobs are mostly taken up by men (UNIFEM, WB, ADB, UNDP and DFID/UK 2004, World Bank 2012b). Since women's employment opportunities are often limited by cultural norms, restrictions on mobility for safety reasons and household responsibilities, the fact that trade is considered an acceptable occupation for women in the Mekong sub-region (ibid.) makes cross-border trade a valuable avenue for women's empowerment. Lao female traders, for instance, were found in an early study to often earn more than their husbands (Walker 1999), which may allow them to gain financial independence. It therefore does not come as a surprise that small-scale cross-border trade is largely carried out by women (World Bank 2011). Prior to this study, women were known to be dominate some subcategories of traders in the Mekong sub-region, e.g., fish traders across the Cambodian-Thai

² See World Bank (2012a) for Cambodia, and EMC (2012) and World Bank (2014a) for Lao PDR.

border (Kusakabe, et al. 2008) and long-distance traders between Lao PDR and Thailand (Walker 1999).

Yet women face particular challenges in small-scale cross-border trade. Besides the “crushing weight of family responsibilities” (UN Women, 2012), women are more likely to face capital constraints, market smaller quantities and have difficulties accessing information on market opportunities (World Bank 2012c). Women are also more likely to be illiterate, which restricts their access to, and knowledge of, trade policies and procedures (USAID 2012) and thus further limits business development. Women often have to hire brokers, which eats into their profit margins, or seek assistance from officials, who are predominantly male and not trained to work in gender-sensitive environments (World Bank 2012b). This may fuel extortion and even harassment, as shown in East Africa (World Bank 2011, UN Women 2012).

Whereas this study does not find women reporting the dramatic level of abuse highlighted in the East African context, women may face binding constraints in their activity as small-scale cross-border traders. These challenges may be “visible” and acknowledged by (at least some of) the actors in the border economy, e.g., discriminatory tariffs or gender-based violence. The barriers to small-scale cross-border trade that women face may also be “invisible,” i.e., not recognized by those actors as related to gender, or indirectly—through regulations, norms, infrastructure, etc., that adversely affect women—constraining women’s participation in cross-border trade.

The contribution of this study is thus to shed light on the obstacles, both visible and invisible (“glass barriers” to trade), that prevent women from making the most of small-scale cross-border trade for income generation and empowerment. To this end, we rely on an innovative mix of original qualitative and quantitative data to both voice the concerns of the actors in the border economy and econometrically detect constraints that they fail to perceive or would not express. Our combination of qualitative and quantitative data further allows us to infer the constraints faced by women who *selected out* of small-scale cross-border trade. Following the metaphor of Hausmann, Klinger and Wagner (2008), we shall strive to voice the concerns of both “camels” (women actually participating in cross-border trade—or the “Sahara desert”) and “hippopotami” (who would, but cannot, engage in this activity—are absent from the “Sahara”—and thus do not appear in our data).

Our study first documents that, in contrast to other parts of the world, female traders in the Mekong sub-region seldom report abuse and gender-based violence or discrimination; yet women are underrepresented in small-scale cross-border trade despite a potential for expansion and their dominance in trade and services away from border checkpoints. We next establish that poor infrastructure is a key challenge for traders, and acts as an “invisible” source of discrimination, women being more time constrained and thus disproportionately affected. Our findings further highlight that although they do not interpret it as gender-based discrimination, women are found to suffer from a higher tax rate and a tax schedule that deters them from upgrading to more profitable cross-border trade activities. This may explain along with capital constraints the lower share of women in small-scale cross-border trade than among own-account workers and the self-employed.

The structure of this paper is as follows. In the next section, we present the study design and methodology for data collection. In Section 3, we provide an overview of the border economy in

Cambodia and Lao PDR. Section 4 then investigates gender-related constraints to women's small-scale cross-border trade. Section 5 discusses the results and delineates policy implications.

2. Study design and methodology

The profiles of and challenges faced by the women and men who deal with border authorities for a living cannot be easily described, given the dearth of data on the topic in Cambodia and Lao PDR. Neither country holds a register of small-scale cross-border traders, as they usually operate only with the documents necessary to enter the neighboring country. Besides, informality often carries stigma, which means that they may be reluctant to acknowledge their line of business.

Given the lack of a list of small-scale cross-border traders and brokers, an innovative mix of survey strategies was implemented. The challenge to collect data on the population of interest was triple: (i) making sure that interviewees are indeed involved in small-scale cross-border trade; (ii) establishing a list of crossers to get an accurate picture of trade patterns and the population; and (iii) drawing a sample of crossers from that list to gather representative data.

The following approaches were implemented for data collection:

1. Preliminary observations were made in various checkpoints in Cambodia and Lao PDR, on the borders with Thailand and Vietnam—see Table 1. Preliminary observations were meant to: (i) select economically important, diverse and typical border checkpoints to include in the study; (ii) identify research questions for further investigation; and (iii) define the survey methodology and inform survey instruments.
2. In all checkpoints visited for preliminary observations, stakeholder interviews were carried out with border agency (customs, immigration, Camcontrol, etc.) staff and management, both small- and large-scale, formal and informal traders and brokers, transporters who do not act as brokers and various border users and local dwellers. Based on the preliminary observations and stakeholder interviews, three checkpoints were selected for further study: Bavet (Svay Rieng province, Cambodia), Poipet (Banteay Meanchey province, Cambodia) and Vangtao (Champasak province, Lao PDR), on the Cambodian-Vietnamese, Cambodian-Thai and Lao-Thai borders, respectively (Map 1).
3. In each of the selected checkpoints—Bavet, Poipet and Vangtao—more detailed qualitative data were gathered through focus group discussions (FGDs). They consisted of open questions about small-scale cross-border trade patterns and the people involved in them. FGDs are helpful to understand the overall picture of small-scale cross-border trade through traders' and brokers' experiences. Focus groups separated women and men to build trust and elicit truthful information about gender-specific issues. Representativeness was also aimed at when forming the groups. The information obtained was used to determine the data collection strategy and refine the questionnaire for the quantitative part of the study.

Table 1: Checkpoints Visited for Preliminary Observations and Stakeholder Interviews

Cambodia		Lao PDR	
Border with Thailand	- Poipet international checkpoint	- Vangtao International checkpoint	
	- Small, bilateral checkpoints in Poipet	- Paktaphan	
	- Malai		
Border with Vietnam	- Daung International Port		
	- Bavet International checkpoint	- Dansavanh International checkpoint ³	
	- Small, bilateral checkpoints in Bavet	- Small bilateral checkpoint near Dansavanh	
- Srmo checkpoint			

Note: Checkpoints selected for IDIs and FGDs are in bold.

Map 1: Checkpoints Selected for Focus Group Discussions and In-Depth Interviews



Source: Map data © 2015 Google. Text and lines in red added by the authors.

4. A two-stage quantitative data collection approach was adopted. First, a sampling frame was established—at the border gate proper⁴—to get a clear and accurate picture of small-scale cross-border trade patterns. Randomly sampling households in villages near the checkpoints was ruled out based on qualitative information, as some traders travel long distances. Moreover, self-reports of involvement in small-scale cross-border trade may be biased, as informality can be sensitive. Therefore, we decided to draw an exhaustive list of all crossers corresponding to our definition of small-scale cross-border trade—see Section 3—during 2-3 days. Basic information about the crosser, her role in the crossing and the shipment were recorded in a sampling frame used to randomly sample respondents for in-depth interviews. Based on our qualitative data, we define our population of interest as follows: Brokers or traders who *deal with authorities themselves* and are involved in *small-scale* trade, i.e., in the trade of goods that cross the border in man-powered vehicles or vehicles with fewer than four wheels. The rationale for this definition is made explicit in Section 3.
5. The second stage consisted of in-depth interviews (IDIs), which were first piloted in all shortlisted checkpoints. Sample sizes are 55 for Bavet, 55 for Poipet and 48 for Vangtao. Respondents for IDIs were selected through stratified random sampling.⁵ Since the

³ The study was piloted in Dansavanh but this checkpoint was not retained eventually because all small-scale cross-border traders and brokers there are Vietnamese and reside in Vietnam. This raised difficulties in terms of logistics and legitimacy since the counterparts for this study are the Cambodian and Lao governments. Moreover, Vietnamese crossers were reluctant to cooperate with the survey team, presumably because many of them are brokers although brokers should be Lao nationals or permanent residents (Financial ministry of the Lao PDR 2005).

⁴ Border checkpoints are the natural place to conduct surveys of informal traders: All goods traded across the border, wherever they are produced, bought or sold, must cross the border at some point. Qualitative data indeed made it clear that a negligible share of informal trade is carried out outside checkpoints as goods that must then be carried on foot, which inflates transportation costs. There are however informal routes *within* checkpoint zones, small by-roads that are less thoroughly monitored by border officials. Our sampling design captures those routes.

⁵ The variables used for stratification, carried out at the checkpoint level, include the role of the crosser in the shipment (i.e., trader and broker), gender and nationality. Sampling weights were computed based on the stratum-specific probability of being sampled.

sampling frame is an exhaustive list of shipment crossings, the sample was meant to be representative of small-scale cross-border trade crossings rather than crossers.⁶ The IDIs contain detailed information on both crossers (demographics, education, past experiences as a trader/broker, perception of challenges, etc.) and crossings (goods transported, purchase value, selling price, etc.).

3. Overview of the Border Economy

Definition of the population of interest

Small-scale cross-border trade (SSCBT) is an elusive concept. Different definitions have been used in the literature,⁷ different rules apply depending on the country,⁸ the value and quantity of goods traded per crossing may vary from one checkpoint to the next and SSCBT hides a variety of actors. Subsequently, we need develop an alternative, unified definition of SSCBT.

Based on field observations and stakeholder interviews, the population of interest shall be defined along the following criteria in this study:

- **People who deal with authorities.** These comprise: (i) traders who do not hire brokers and thus pay taxes and fees and interact with border authorities in general themselves; and (ii) brokers who do that on behalf of traders.⁹ Transporters who do not act as brokers and traders who do not interact with authorities are not included in the population of interest. This criterion is meant to capture those who are the most knowledgeable about border-crossing processes and most directly affected by border conditions. In what follows, the population of interest shall be referred to as “traders and brokers” or “SSCBTers.”
- **People involved in “small-scale” trade**—as traders or brokers—i.e., in the trade of goods¹⁰ that cross the border in man-powered vehicles or vehicles with fewer than four wheels. All the checkpoints selected for this study indeed have clear (informal) rules to

⁶ For instance, the “share of crossers who have ever experienced a confiscation” should strictly speaking be stated as the “share of crossings carried out by a crosser who has ever experienced a confiscation.” The sampling design thus allows a direct interpretation of a phenomenon in terms of economic importance in small-scale cross-border trade.

⁷ UN Women (2012) considers that “all revenue-generating cross-border commercial activities with a daily transaction value of less than 100 U.S. dollars (USD) per trader” qualifies as “small-scale” and that traders are “informal” if they are not registered and pay no income taxes, although they might pay export or import taxes, and pass through official border crossings with appropriate travel documentation. World Bank (2011) defines informal trade as “unorganized small-scale trade which does not appear in the customs record.” It may however be “official” in the sense that “traders go through official border posts, pay a crossing fee to the immigration office, and if processed appropriately pay a duty on imports” (ibid.).

⁸ In the Mekong sub-region, if traders are not registered, their informal status disqualifies them from a full customs declaration using the ASEAN Customs Declaration Document (ACDD). Typically, these unregistered traders will instead use a modified form, called “Customs Declaration Form for Retailed Declarants” (or “Customs Regime Form 44”) in Lao PDR. In Cambodia, small import transactions with a value equal to or greater than USD 100 are required to pay excise tax and duty, make a verbal customs declaration and fill out a simplified customs form.

⁹ Brokers and traders who are exempted from taxes and fees but would interact with authorities if controlled are part of our study population.

¹⁰ Preliminary observations and stakeholder interviews revealed that the trade of services (hairdressers, housekeeping, etc.) constitutes a very marginal activity at the studied checkpoints. We therefore exclude such traders from the population of interest.

distinguish between “small” and “large” trade based on the type of vehicle used. Trucks are always considered as large, carts or motorbikes as small.¹¹ This criterion also implicitly captures informality, as most small trade is informal.

Structure of the Small-Scale Cross-Border Trade population

This definition reflects a striking feature of border economies in the Mekong sub-region: the structural divide between “absentee” traders, own-account traders and transporters-brokers, and the differences in this structure across checkpoints. An arrangement between a trader and broker can also assume one of several contractual forms.¹² Qualitative evidence highlights a watershed in the SSCBT population between traders and transporters-brokers on the one hand and “absentee” traders on the other. The latter may trade small quantities but do not interact with authorities (and are therefore not considered small-scale *cross-border* traders).¹³

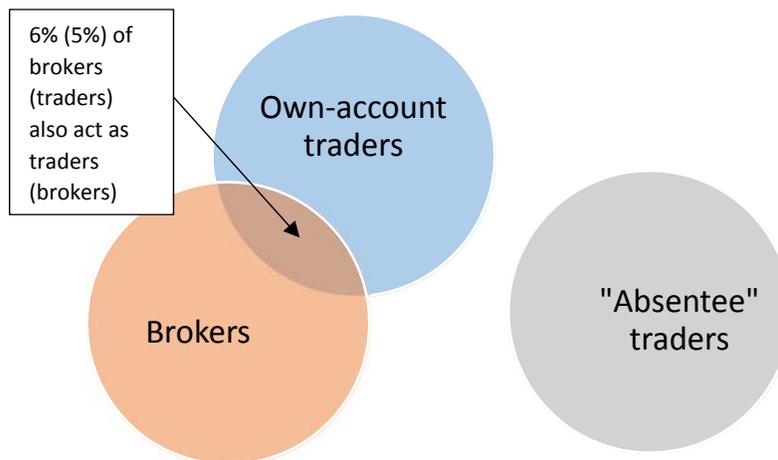
Traders rarely engage in brokering, i.e., dealing with authorities on behalf of other traders, and never work only as transporters, while brokers rarely trade on their own accounts but are often hired as transporters, i.e., carrying goods across the border but not dealing with authorities. There is no overlap between “absentee” traders and either cross-border traders or brokers. Figure 1 illustrates this with a simple Venn diagram. In 6% of cases brokers also trade on their own accounts. No trader who deals with authorities and was thus eligible for sampling was found to ever hire brokers. This implies that the traders who hire own-account traders as occasional brokers are “absentee” traders who never cross the border.

¹¹ Private cars, tractors, pick-up trucks or minivans are in a “grey zone”: They cannot transport goods across the border without going through the formal channel or with a fee that SSCBTers would seldom accept to pay, preferring other (smaller) means of transportation.

¹² Transporters-brokers are mostly (93% of crossings) remunerated on the basis of how much they have to transport, which is determined either in kilograms or by the number of items; the rest are paid a lump sum. Different contractual arrangements are available and were observed in the field: Brokers may keep whatever they can save on taxes and fees (brokers are remunerated in this manner for 91% of crossings) or give back all savings to the trader (8%); they may be responsible for the goods in case of confiscation (76%) or not (15%), or share the responsibility (10%) according to idiosyncratic agreements, e.g., depending on whether forbidden goods are concealed in the shipment.

¹³ Whereas eliciting information from “absentee” traders would yield interesting information about trade patterns, the determinants of informality and the choice of hiring a broker, qualitative information and pilot experience made it clear that they could not be contacted through their brokers. Brokers themselves often deal with intermediaries, typically cart owners in Poipet, who do not deal with authorities and do not handle the goods at any time but rent carts to several brokers and are contacted by traders.

Figure 1: SSCBT Is Divided in Three Distinct Activities despite Some Overlap between Brokers and Traders



Qualitative evidence hints at the importance of overall traffic as an explanatory factor for a predominance of brokers at a checkpoint. Busier checkpoints can indeed lead to delays and traders incur significant losses as a consequence, which fuels demand for specialized transporters—brokers who know how to get heavy carts across the border faster, where to stop for dealing with authorities and how to minimize taxes and fees. The volume of trade, both by large and small, formal and informal firms, is much larger in Poipet than in the other two checkpoints. Therefore, middlemen specialized in getting large quantities of goods through a congested checkpoint are much needed in Poipet and most SSCBTers there are brokers—see Figure 2. Conversely, brokers are almost absent in Bavet and preliminary observations, FGDs and stakeholder interviews brought evidence of no such activity in Vangtao.

Being a broker is a second best relative to the trader option: Besides being more physically demanding, brokering implies interacting with border authorities, negotiating taxes and sometimes smuggling illegal or high-tax goods. Depending on the contractual arrangement, brokers may be responsible for confiscated goods. As shown by our qualitative data, brokers would become traders, had they a better access to capital and knowledge of local demand and supply.¹⁴

Their lack of knowledge of the local market is partly explained by their higher probability of being migrant workers from other provinces, which also means that they are more vulnerable to changes in the local legal environment.¹⁵ In the checkpoints visited, SSCBTers were always Cambodian and Lao on the border with Thailand whereas at least a significant minority of SSCBTers was Vietnamese at checkpoints on the border with Vietnam, but still mostly coming

¹⁴ They explain that they do not trade for lack of capital (92%), are afraid they might get cheated or their goods might be confiscated (5%), or they “don’t know how to” (9%).

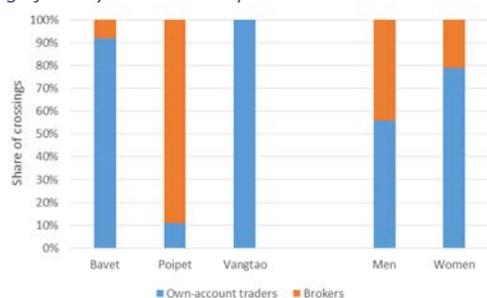
¹⁵ In Poipet, fees for the necessary “immigration card” increased dramatically for non-local residents of Banteay Meanchey province six months prior to the study. The process had also become stricter as birth and registration certificates were required. The regulatory change was too recent to assess whether it was generating informal arrangements or whether transporters-brokers just accepted the hike. We expect little room for negotiation as the card is issued by the Thai police and the relationship between Cambodian border users and Thai officials is notoriously poor. Moreover, the interviewees never mentioned this as an issue unless we specifically asked about travel documents.

from border regions. However, while only 5% of Vangtao traders were born and live in different places and none of them was born in a different province, 19% of SSCBTers in Bavet and 86% in Poipet were born in a different province than the one they currently live in.

Gender composition of the Small-Scale Cross-Border Trade population

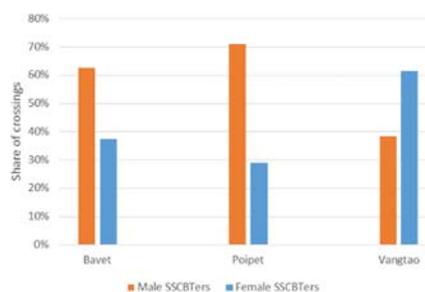
Checkpoints differ widely in their shares of female SSCBTers. Those differences partly reflect the structure of the SSCBT population. Women are indeed underrepresented among brokers. Figure 2 shows that 79% of female SSCBTers are own-account traders, as against only 56% of their male counterparts.¹⁶ Among brokers' crossings only 25% are carried out by women, as against 50% of own-account traders'. Figure 3 shows that 41% of crossings are performed by female SSCBTers, and that this share varies by checkpoint. It is higher in Vangtao, where 60% of crossings are done by women, and lower in Bavet (37%) and Poipet (29%). Reasonable assumptions¹⁷ about sampling suggest that 68% of the SSCBT population is female in Vangtao, 41% in Bavet and 32% in Poipet. The discrepancy between the shares of women in crossings and in the population of crossers is an indication of a lower crossing frequency among female SSCBTers.

Figure 2: The Composition of SSCBT by Activity Differs Significantly Across Checkpoints and Gender



Source: Authors' calculations.

Figure 3: Share of Female SSCBTers



Source: Authors' calculations.

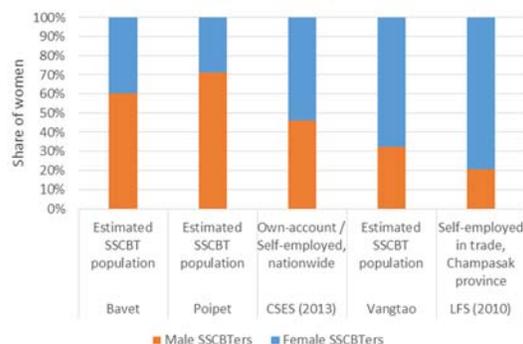
The share of women among small-scale cross-border traders and brokers is lower than among own-account workers and the self-employed in the country as a whole. The nationally representative 2013 Cambodia Socio-Economic Survey (CSES) shows that in Cambodia 54% of the own-account or self-employed workers are women (National Institute of Statistics, Ministry of Planning, Kingdom of Cambodia 2014). This coarse comparison suggests that the proportion of women in SSCBT is lower than we would expect from looking at jobs in the same broad category. Similarly, Lao PDR's 2010 Labor Force Survey (LFS) allows us to compare gender composition in

¹⁶ The IDI sample was designed so as to ensure that at least half the respondents were women. The purpose was to maximize our ability to detect statistically differences between women and men despite a small sample size. Sampling weights are thus used systematically in the results presented in this paper.

¹⁷ (i) Crossers who cannot be uniquely identified (e.g., because of a missing phone number) are different crossers. This is reasonable given that qualitative and quantitative evidence suggest most SSCBTers cross daily. (ii) The SSCBTers active during the survey period are similar to the general SSCBT population. Qualitative information and pilots suggest that most SSCBTers are active year round. Seasonal crossers are not captured by the study design. Sampling was carried out and IDIs fielded in early September 2014 in Cambodia and early November 2014 in Lao PDR. (iii) No trade occurs outside sampling hours, which were set to avoid missing any crosser. We found that little or no trade occurs outside official opening times. (iv) No trade occurs outside the official checkpoint (i.e., "round the gate"), which is supported by qualitative evidence.

SSCBT with that among the self-employed in wholesale and retail (but not necessarily small-scale cross-border) trade in the same province. We find as well that the share of women is lower among Vangtao traders—see Figure 4.¹⁸

Figure 4: The Share of Women in SSCBT Is Lower than in Comparable Job Categories



Source: Authors' calculations.

Contrary to previous studies, e.g., World Bank (2011) and UN Women (2011) in East Africa, there are no reports of sexual harassment in the Cambodian and Lao checkpoints surveyed. Great care was taken to elicit truthful answers about such a sensitive topic as gender-based verbal and physical abuse. Female interviewers were recruited to carry out IDIs and moderate FGDs. All interviewers were trained to ask gender-sensitive survey questions in a non-judgmental manner, minimize report bias and write down comments for field supervisors when they suspected reticence. We find no report of sexual harassment in the IDIs, which is consistent with FGDs and stakeholder interviews. SSCBTers do mention issues that only affect women because of their gender, in particular authorities' insistent questions "in the purpose of flirting" and gender-specific insults, either discriminatory or with sexual innuendos.¹⁹ The relatively safe situation of female SSCBTers at Cambodian and Lao checkpoints is reassuring. Nevertheless, the lower share of women in SSCBT than in other trade-related self-employment remains a puzzle and may hint at constraints preventing women from entering SSCBT. The object of Section 4 is to shed light on the constraints that women face in this activity.

Self-selection and economic potential

Stark differences can be noticed within the population of interest in terms of income from SSCBT. As can be seen from Figure 5, SSCBT income is much higher in Bavet; it is lowest in Poipet.²⁰

Mean income from SSCBT is always higher for women but median income is often lower than for men.²¹ The difference between mean SSCBT income by gender is statistically significant only in Vangtao. The Lao checkpoint is also the only one where median SSCBT income is larger for women

¹⁸ The LFS and IDIs were fielded four years apart. But, if anything, we would expect female participation in expanding activities, such as own-account trading, to have increased in recent years.

¹⁹ The frequency of such reports is not statistically significantly different between female and male interviewers.

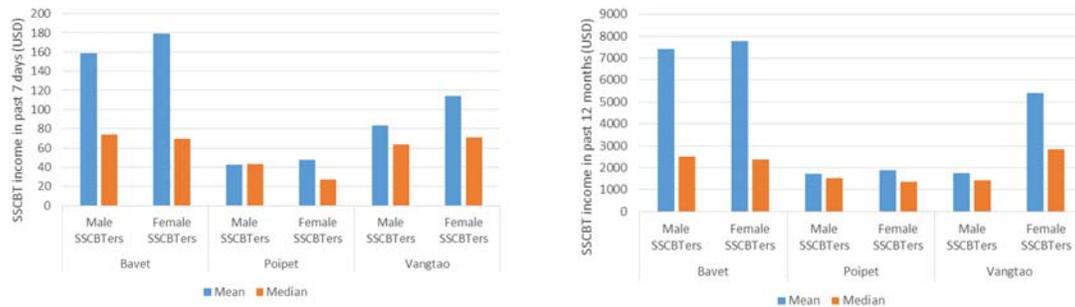
²⁰ This holds true whether we look at SSCBT income in the past 7 days, which is arguably a more accurate but perhaps dispersed measure, and in the past 12 months, which is potentially more subject to measurement error.

²¹ Conversely, we find that gross profit as a share of the total purchase value of the shipment is at the same level for male and female traders. Differences in total income are thus not due to a higher profit rate for male traders.

than for men. The absence of significance and reversal of patterns between mean and median incomes in the Cambodian case come from the higher dispersion of female SSCBT incomes. Income is more unequal for women than for men in Vangtao as well.

The higher dispersion of female SSCBT income may hint at untapped economic opportunities. To the extent that moderate income inequality signals a potential for upward mobility, SSCBT may be a worthwhile avenue for income generation, in particular for women. The coefficient of variation of SSCBT income is highest for women in Bavet, where it is twice as large as for men.

Figure 5: SSCBT Income Varies Widely by Checkpoint and Gender



Source: Authors' calculations.

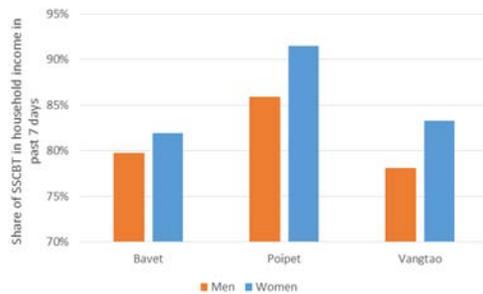
Note: The figure presents per capita SSCBT income in U.S. dollars corrected for purchasing power parity (WDI, 2011); the reference category is Cambodia.

Looking at household-level socioeconomic status provides further suggestive evidence of a higher earnings potential for women in SSCBT. It is also consistent with positive selection of women into this activity. We proxy for socioeconomic status by asset ownership. Detailed information about 20 assets was gathered in the IDIs and a wealth score computed thanks to principal component analysis (results not reported). We find that traders' households are significantly wealthier than brokers' and female SSCBTers are significantly wealthier. This may be the upshot of positive selection of women into SSCBT based on unobserved characteristics, e.g., knowledge of the market, entrepreneurial qualities, etc., which in turn may be evidence of particular challenges that women have to cope with, leading to the exclusion of more vulnerable "hippos" from the "Sahara." The analysis also suggests that being a trader is a preferable or more sought-after activity and confirms that SSCBT can be a valuable source of revenue for women. Male and female SSCBTers also differ in the role that SSCBT income plays in their households. Although noisy estimates often bereave this finding of statistical significance, household income is always more reliant on SSCBT earnings in female than in male SSCBTers' households—see Figure 6. This highlights the importance of SSCBT for female-headed households, which are typically more financially vulnerable, and the fact that female traders are often the primary breadwinners in their households, so that trade may be instrumental in empowering women.

Participation in small-scale cross-border trade is further associated with a higher household socioeconomic status for women but not for men. Nonwage income data are missing from some of the nationally representative data that we could have used for comparisons. We can however rely on a subset of the IDI assets that are also present in the 2002-03 and 2007-08 Lao Expenditure and Consumption Surveys (LECS). Figure 7 compares asset ownership in Champasak-province households for respondents in the same age group as the IDI respondents in Vangtao. The comparison suggests that the level of asset ownership that we would expect for men in

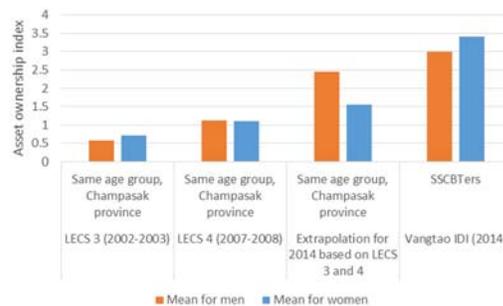
Champasak in 2014 is slightly lower than what we observe for male traders in the IDI data. However, asset ownership is much higher among female traders in Vangtao. This may be evidence either of positive selection on household wealth of women into SSCBT or of a higher earnings potential, which translates into asset ownership, for women as small-scale cross-border traders. Data limitations do not allow a finer comparison and endogeneity precludes a causal interpretation. However, under both interpretations, the comparison suggests that SSCBT is a valuable avenue for income generation for women.

Figure 6: Female SSCBTers' Households Rely More Heavily on SSCBT Income than Male SSCBTers'



Source: Authors' calculations.

Figure 7: Wealth Comparison Using Nationally Representative Data



Source: Authors' calculations.

Note: The asset index is the sum for 7 assets of dummies equal to 1 if the household owns at least one such asset and zero otherwise. The extrapolation for 2014 based on LECS data assumes that the annual rate of growth in the index is the same between 2002-03 and 2007-08 as between 2007-08 and 2014.

4. Gender-Related Constraints to Women's Small-Scale Cross-Border Trade

Both the literature and our data suggest that small-scale cross-border trade offers a potential for income generation and the empowerment of women. Selection is however likely, which combined with the lower share of women in SSCBT than in comparable activities in Cambodia and Lao PDR hints at binding constraints affecting women more than men. This section investigates such gender-related constraints to women's small-scale cross-border trade.

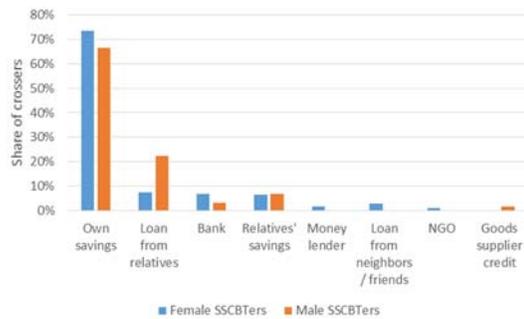
Capital constraints

One of the reasons most often singled out by the literature as a determinant of women's entrepreneurship and of female entrepreneurs' revenues is women's limited access to capital. We find no significant difference in startup capital between male and female traders in our data.²² Figure 8 however shows that startup capital comes from a wider variety of sources for female than male traders, and Figure 9 presents a similar picture for how traders finance their daily activities. Since men and women have similar levels of startup capital, this diversification of finance sources by women may hint at capital constraints: It may be possible but more difficult for women to take a loan from relatives, hence a need to look for alternative lenders.

²² Controlling for age and the year the trader started their activity does not alter the picture.

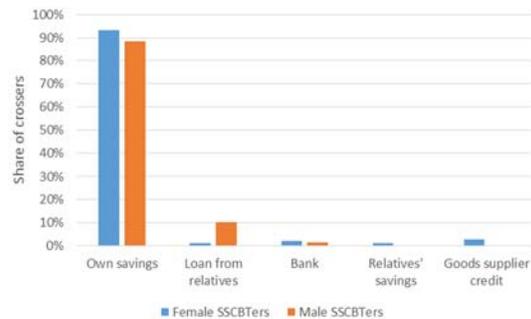
Glass Barriers

Figure 8: Women Have to Knock on More Doors than Men to Mobilize a Similar Level of Startup Capital



Source: Authors' calculations.

Figure 9: Female Traders' Financing Capital Comes from a Wider Variety of Sources



Source: Authors' calculations.

Time constraints

Both SSCBTers and other stakeholders, and both female and male interviewees primarily attributed the prevalence of men among brokers to physical strength. Time endowment may however be a crucial determinant of women's selection into own-account trading rather than brokering. Since women are usually expected to take care of the household and accomplish more chores than men, women are often found to be more time-constrained, which may in turn affect their activity choices.

In

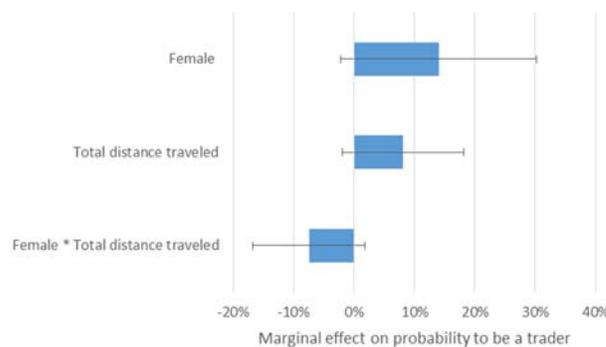
Further evidence of more severe time constraints for women can be gathered from the data. First, stakeholder interviews provide some qualitative evidence that women are overrepresented among the few small-scale "absentee" traders. A common story put forward by interviewees is that mothers cannot afford to leave their homes for extended periods of time, especially as controls and negotiations with border officials make the length of a trip across the border difficult to predict. Second, female SSCBTers are less likely to negotiate taxes and fees at the border—see Figure 11—which is consistent with women's incentive to minimize the time they spend at the border. Third, our quantitative data provide us with unique information on individual crossings, the payment schedule for taxes and transportation costs.

Figure 10, time endowment is proxied by the total distance traveled by the SSCBTer in her activity, i.e., the distance between the place where the goods are purchased or received and that where the trader sells them (usually, her place of residence) or where the broker stops taking care of them. We see that being a trader is positively correlated with the total distance traveled. The intuition behind this is that brokers usually take care of the goods just for dealing with border authorities.²³ Interestingly, distance enters the regression *negatively* when interacted with the female indicator variable. Although the coefficients on total distance and the interaction just miss the 10% significance cutoff, this ties in with the idea that time endowment—and thus distance and transportation—are more of a concern for women.

²³ A second rationale is that own-account traders make most of a comparative advantage in connecting sellers and buyers in remote villages, where they often sell goods directly to final consumers.

Further evidence of more severe time constraints for women can be gathered from the data. First, stakeholder interviews provide some qualitative evidence that women are overrepresented among the few small-scale “absentee” traders. A common story put forward by interviewees is that mothers cannot afford to leave their homes for extended periods of time, especially as controls and negotiations with border officials make the length of a trip across the border difficult to predict. Second, female SSCBTers are less likely to negotiate taxes and fees at the border—see Figure 11—which is consistent with women’s incentive to minimize the time they spend at the border. Third, our quantitative data provide us with unique information on individual crossings, the payment schedule for taxes and transportation costs.

Figure 10: Time Constraints as Proxied by Distance Partly Explain SSCBT Activity Choice



Source: Authors’ calculations.

Note: The figure displays coefficients from an OLS regression. Country and checkpoints are controlled for. Whiskers represent 95% confidence intervals. “Total distance traveled” refers to the distance between where the goods were purchased (received from the trader) and where they were sold (delivered) by the trader (broker).

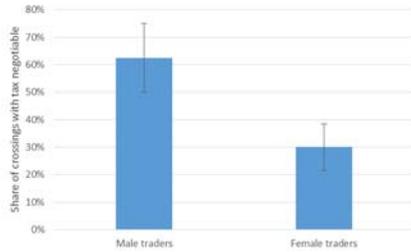
Goods may be taxed per unit (e.g., by the number of packs or boxes), by “visual assessment” of the quantity and value of the goods, through a “fixed” fee per vehicle whatever the quantity transported, or through a lump sum paid on a daily, weekly or monthly basis. As can be seen from Figure 12, most crossings are reported to give rise to a per-unit or “visual assessment” tax. The data however show that women are significantly more likely to be charged a lump sum per period of time or a fixed amount per vehicle—see Figure 12. One rationale for this gender gap could be that they are more time-constrained.²⁴ The number of different goods that one carries across the border indeed prolongs customs clearance, as officers are supposed to browse through and count the goods to calculate duties. Another interpretation may be that women have a weaker bargaining power and cannot make customs officers go through all goods—as they should—to calculate the correct taxes. The difference is significant for Poipet and Vangtao; interestingly, the difference goes in the opposite direction in Bavet, although it is not statistically significant. Distances are shorter in Bavet and SSCBTers are allowed to cross the Vietnamese border by motorbike, which is forbidden on the Thai side. This may reduce the importance of time constraints for women in Bavet.

Figure 11: Female Traders Are Less Likely to Report Negotiable Taxes and Fees

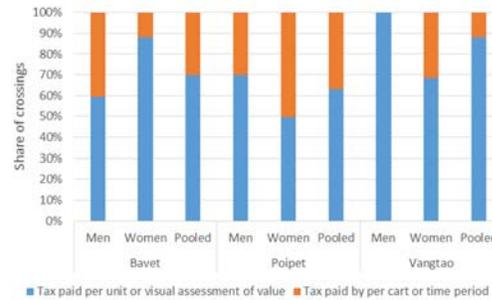
Figure 12: Most Shipments Are Taxed on the Basis of Unit or Value

²⁴ Women are also found to be more risk-averse than men in our data.

Glass Barriers



Source: Authors' calculations.
Note: Whiskers represent 95% confidence intervals.



Source: Authors' calculations.

Some of the main challenges to SSCBT put forward by traders and brokers themselves resonate with female SSCBTers' more binding time constraints.²⁵

SSCBTers complain about the high level of taxes and fees²⁶ more than about anything else, and next about the uncertainty in taxes and fees, interactions with border officials and transportation or the length of the crossing process. Unsurprisingly, reducing taxes is SSCBTers' main recommendation to improve border crossings, followed by suggestions to improve roads and transportation infrastructures—see Figure 13.²⁷ Only in Vangtao does “Reduce taxes” come third, after “Better roads” and “A parking lot.”²⁸ The recommendations are supported by qualitative evidence. There is a visible rift in Vangtao between traders who have a pick-up truck and can load goods onto it immediately after the physical border—see Map 4—and the others who share minivans and tuktuks, parked downhill at the entrance of the checkpoint zone. Road quality is also a major concern in Poipet and Vangtao but field observations suggest the recommendation pertains primarily to breadth (in order to avoid traffic jams).

Figure 13: SSCBTers' Recommendations to Improve Small-Scale Cross-Border Trade Conditions

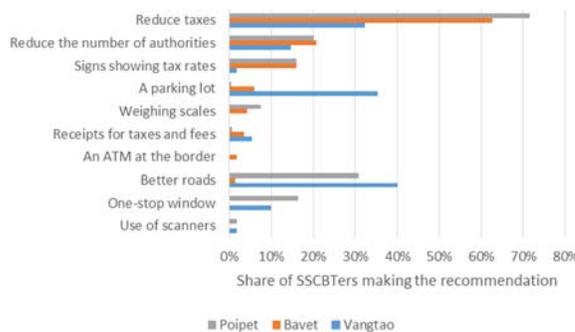
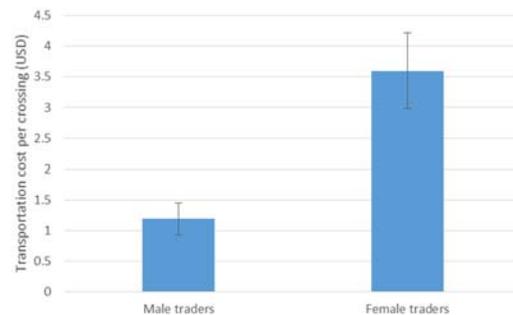


Figure 14: Female SSCBTers Spend More per Crossing on Transportation Costs



²⁵ Focus group discussions were implemented to give participants an opportunity to voice their concerns and formulate suggestions for improvement. This qualitative material was then used to inform the in-depth interview questionnaire.

²⁶ This pattern is common in surveys about business constraints.

²⁷ It is important to note that many recommendations are put forward by a relatively small percentage of SSCBTers. The upshot is that there might be no easy fixes to improve small-scale cross-border activities and efforts in several directions should be combined.

²⁸ This finding jars with the much higher taxes found in Vangtao (Figure 15). We see this as a further illustration of the discrepancy between actual and perceived challenges. People often lack a point of comparison, which makes barriers—discrimination, poor institutions, corruption, etc.—“invisible.”

Source: Authors' calculations.

Source: Authors' calculations.

Note: Traders only. Whiskers represent 95% confidence intervals.

Calling for a “Reduction in the number of authorities” and “One-stop windows” reflects both transportation issues and informal taxation that is not justified as duties. Checkpoint zones often cover a large—see Maps 2 through 4—crowded area that SSCBTers must cross in several directions to pay taxes and obtain the necessary documents, e.g., a day ticket to cross the border. This is particularly strenuous as SSCBTers often lack a motor vehicle because of the cost (gas and/or additional fees) or because of regulations. Motorbikes are indeed forbidden to cross the Thai border with goods, and on the Vietnamese border one must dismount and walk across the wide no-man’s land—see Map 2.

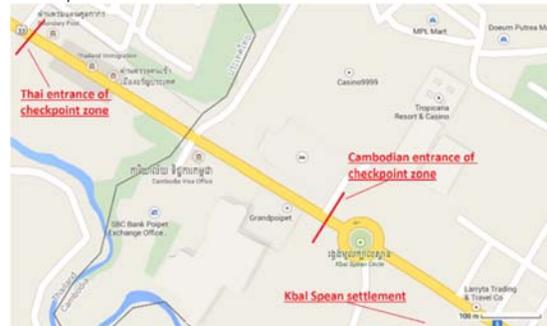
A number of recommendations can be subsumed under the enhancement of SSCBTers’ knowledge of the laws and regulations applicable and of their bargaining power, which in turn would help reduce the time wasted to negotiations. Such recommendations include signs showing tax rates—displayed in none of the checkpoints visited—weighing scales and receipts for taxes and fees. Female traders and brokers are expected to benefit the most from a faster, simpler and more predictable border clearance.

Map 2: Spatial Organization of Bavet International Checkpoint



Source: Map data © 2015 Google.
Note: Text and lines in red added by the authors.

Map 3: Spatial Organization of Poipet International Checkpoint



Source: Map data © 2015 Google.
Note: Text and lines in red added by the authors.

Map 4: Spatial Organization of Vangtao International Checkpoint



Source: Map data © 2015 Google.
Note: Text and lines in red added by the authors.

Female SSCBTers’ aversion to long border crossings is also obvious from transaction-level data on transportation costs. Higher needs for transportation services, e.g., hiring help to pull carts or a

motorbike to transport a shipment faster, take pride of place among the challenges specific to women that SSCBTers put forward. Figure 14 shows that on average female traders spend more than twice as much as men per crossing on transportation costs, which eats into their business margins.²⁹ Another option for time-constrained women is to transport smaller quantities. Despite these costly fixes, delays are apparently more frequent for women and customers are reported to avoid entrusting female brokers with their goods.

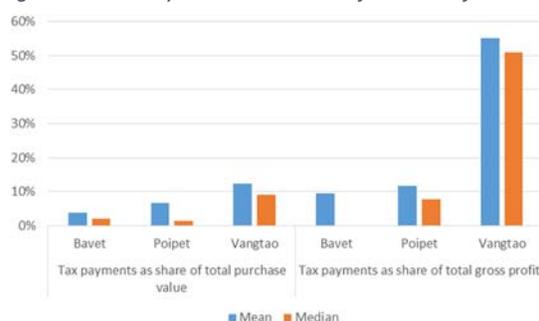
Discriminatory treatment

The constraints identified in the first two parts of this section may affect women disproportionately but cannot be directly blamed on interactions between border crossers and officials. The actors in the border economy seldom acknowledge taxation practices as harming particularly female SSCBTers. Econometric analysis however reveals that women pay higher taxes and are more likely to be controlled although they do not bend the rules more often than men, and that they face a tax wedge that prevents them from upgrading to more profitable SSCBT activities.

First, the IDI data contain unique information on shipment values, taxes and fees that allow us to shed light on the tax burden faced by female SSCBTers relative to men.³⁰

Contrary to the complaints voiced by traders and brokers, the tax burden on SSCBT is relatively light, except in Vangtao. Tax rates remain moderate when compared with the value of the goods (not reported) but most of Lao traders' profits vanish in taxes and fees levied by border officials when looking at tax payments as a proportion of total gross profits (total sale *minus* purchase price)—see Figure 15. The marked difference in Lao PDR between the two tax rate definitions shows that profit margins are very thin in Vangtao.

Figure 15: Tax Payments as a Share of Gross Profits Are High in Vangtao



Source: Authors' calculations.

Tax rates are higher for female than male traders. This holds true whether we look at tax payments as a share of total purchase price or total profit—see Figure 16. It also holds true whether we consider averages, medians or—as in Figure 17—the whole distribution. Higher tax

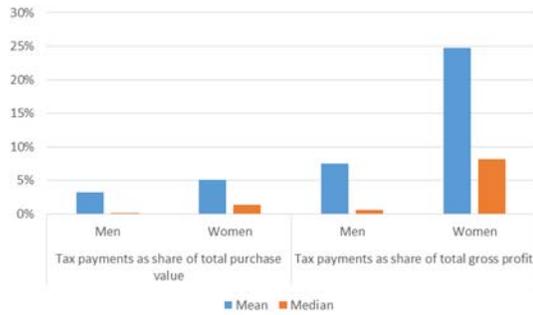
²⁹ It is important to note that the crossing-specific cost data collected in the IDIs were extremely detailed. Transportation costs are thus distinct from fees imposed on vehicles, duties determined based on the number of carts, or bribes related to transportation.

³⁰ Since brokers are not always able to put a figure on the value of the shipments they are taking care of, results about the tax burden are based on traders' answers.

rates on female traders cannot be explained by goods quality or scale economies that male traders would avail themselves of as male and female traders enjoy similar gross profit rates. One proximate cause of the higher tax rates that female traders are charged may be their significantly lower probability to report negotiable taxes and fees—see Figure 11.

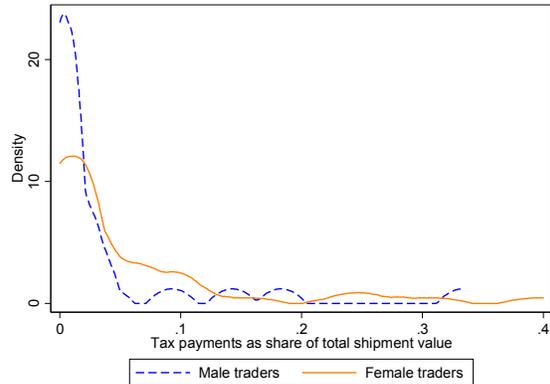
Second, female traders are significantly more likely to be controlled by quarantine in Vangtao, which hints at deliberate targeting. The difference remains significant when one controls for perishable food products—see the regression results displayed in Figure 18—which are more often traded by women. Quite strikingly, men are not statistically significantly more likely to go through quarantine when they deal in perishable foods. It must be noted that given the small sample size and endogeneity in the regression, we cannot be positive that Figure 18 provides evidence of discrimination. It is possible that quarantine officers “target” female traders for tax payments and controls because women are 29% more likely (keeping activity and checkpoint constant) to deal in perishable foods. This practice nevertheless hurts female traders as they are more concentrated in terms of types of goods. Traders dealing in perishable goods are also more vulnerable to delays and confiscation—a common practice at Cambodian and Lao checkpoints—as market days are often fixed and the goods must be sold fresh.

Figure 16: Female Traders Face Higher Tax Rates than Their Male Counterparts



Source: Authors’ calculations.

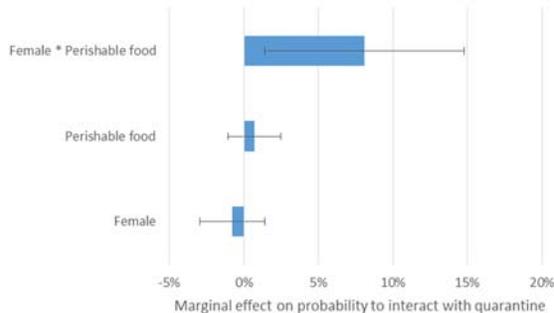
Figure 17: Tax Rates Faced by Female Traders Are Higher, Almost at Every Level



Source: Authors’ calculations.

Note: The figure displays univariate kernel density estimations of tax rates for male and female traders. The Epanechnikov kernel is used.

Figure 18: Women Dealing in Perishable Foods Are More Likely to Interact with Quarantine



Source: Authors’ calculations.

Note: The figure displays coefficients from an OLS regression. Country and checkpoints are controlled for. Whiskers represent 95% confidence intervals.

Higher taxes for female SSCBTers and a higher probability of being controlled would be justified if, for some reason (including a low-trust equilibrium between border authorities and female crossers), women were more likely to bend the rules. SSCBTers indeed report being sometimes involved in illegal practices. These practices include hiding high-value goods under low-value ones, taking a small by-road to avoid officers and transporting brand clothes and shoes, exports that are carefully monitored in Cambodia to protect the garment industry.

The IDI data contain information on whether in the 12 months preceding the survey the respondent had ever “omitted to declare goods or underreported their quantity or value on purpose in order to avoid taxes.”³¹ We find that about one-tenth of SSCBTers admit to deliberate tax evasion in the past year but stakeholder interviews revealed that SSCBTers are reluctant to confess tax evasion. Their answers on this topic are therefore likely to be biased downwards. We decided to include in the IDI survey additional questions to take into account SSCBTers’ reticence and adjust estimates of the incidence of tax evasion accordingly. The methodology implemented relies on Kraay & Murrell (2013). SSCBTers’ direct answers to the binary question about tax evasion in the past 12 months are contrasted with the reticence-adjusted estimates. We leave the presentation of the methodology and results to Appendix B. The main finding is that although rates of tax evasion are sensibly higher when taking reticence into account, they are neither significantly nor qualitatively different between men and women. This suggests that female SSCBTers’ higher tax burden is not clearly due to female traders and brokers indulging more than men in illegal practices.

Third, women suffer from a wedge in the tax schedule applied to them at the border. Tax exemption or preferential treatment is granted by the law for local cross-border trade. For instance, in Cambodia “consumption within the border area” and “personal consumption” by travelers are both subsumed under the “imported non-commercial goods” category (Ministry of Economy and Finance of the Kingdom of Cambodia 2005). Such rules are enforced by secondary customs checkpoints or patrols along major roads. In Lao PDR, a physical checkpoint is visible 15 km off Vangtao on the road to Pakse; a similar structure stands 8 km before Dansavanh. Subsequently, a large share of crossings is reported to imply no interaction with or taxation from border authorities, and women and men appear equally likely not to pay any taxes.

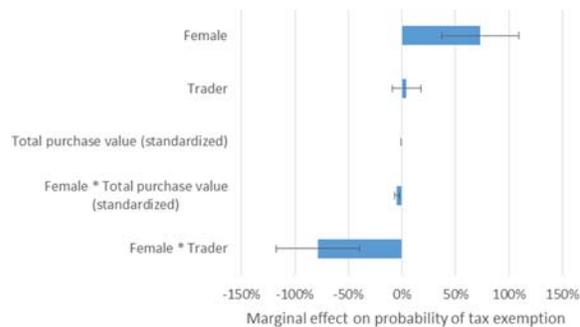
Gender differences nevertheless arise when one takes activity (trader vs. broker) into account. As can be seen from the regression coefficients displayed in Figure 19, female *brokers* enjoy a preferential treatment relative to their male counterparts, whereas the effect of being a woman is statistically indistinguishable from 0 for traders. This may be evidence of positive discrimination in favor of female brokers and negative discrimination against women when they trade on their own accounts. Although such a nonlinear tax schedule seems to protect more vulnerable female SSCBTers, it may create a tax wedge that deters female brokers from engaging in trading and women in general from entering SSCBT.³²

³¹ Some goods, e.g., alcohol, are subject to declaration in some checkpoints and simply forbidden to cross the border in others. A common practice for traders who want to minimize taxes is to hide high-duty goods under low-duty ones. This is particularly effective under the “visual assessment” method, which remains usually superficial.

³² The gender gap in tax exemption is not due to differences in shipment values, since Figure 19 controls for that.

Figure 19 further shows that the probability of not paying taxes decreases with the total purchase value of the shipment—but only for women. Total purchase value enters the regression significantly only when interacted with the “Female” indicator variable, reducing the probability of tax exemption by 5% for a one-standard-deviation increase. This pattern, which is tantamount to progressive taxation, reflects legal dispositions, circumvents the thorny issue of taxing shipments small enough to be mistaken for personal consumption and is favorable to more vulnerable SSCBTers. However, it applies only to women. Male SSCBTers face similar tax rates whatever the quantity or value of what they transport, whereas female SSCBTers pay higher taxes, the larger their shipments. Now, total shipment purchase value does not differ significantly between male and female traders. Subsequently, the tax exemption pattern favors vulnerable female SSCBTers but discourages business development for women.

Figure 19: Female Brokers Are More Likely to Benefit from Tax Exemption, Not Female Traders



Source: Authors' calculations.

Note: The figure displays coefficients from an OLS regression. Country and checkpoints are controlled for. Whiskers represent 95% confidence intervals. “Total purchase value” is standardized by checkpoint. The reference category is male brokers.

5. Discussion and Policy Implications

Based on a mix of qualitative and quantitative data, we have highlighted major constraints that compress female SSCBTers' profits and that are likely to deter other women from engaging in small-scale cross-border trade. Some are visible to the actors in the border economy, while others, invisible, work as “glass barriers” to female cross-border trade and entrepreneurship. The main barriers are: (i) capital constraints, (ii) time constraints and (iii) a higher tax burden and gender-biased tax wedge. We consider that (ii) and (iii) are—at least partly—due to border checkpoint infrastructures and interactions with border officials, and thus ought to be tackled by border authorities.

SSCBTers' most frequent complaints pertain to the high number and volatility of taxes and fees. Traders and brokers are usually unaware of the legality, tariff rate and purpose of levied taxes. We also realized during field observations that virtually all border agencies tax traders and brokers, sometimes in blatant violation of their mandates, and SSCBTers have to travel back and forth within checkpoint zones to make payments. Women are likely to be particularly harmed by informal taxation as negotiations and multiple payments take time. An obvious implication is to streamline taxation at border checkpoints and ensure that only legal taxes are levied. Signs displaying tax levy rules and the tariffs applicable should be posted at each checkpoint and kept

up to date.³³ The display of tariffs could be complemented by the equipment of checkpoints with weighing scales, a recommendation some SSCBTers put forward. They would indeed avoid time-consuming negotiations and help reinforce SSCBTers' bargaining power. Finally, one-stop windows should help reduce border clearance time.

Women's time constraints also resonate with another major hurdle in trading goods across the border: transportation. SSCBTers' top concerns include narrow roads that cause traffic jams and delays, the lack of public transportation and parking lots, and restrictions on the types of vehicles allowed across the border with goods. The first way to tackle the issue of transportation consists of investing in transportation infrastructure. Checkpoint roads tend to be narrow and different categories of border users and vehicles have to shoulder their way across the border. The most crowded of the checkpoints visited is undoubtedly Poipet, where large trucks, private cars, SSCBTers' carts and tourists on foot all go through the same gate. Infrastructures could also include parking lots that would enable better-off SSCBTers to invest in larger vehicles, or a bus service to the border proper. Women's time constraints and high transportation costs may also be effectively tackled by relieving them of some of their household duties, for instance through a better provision of child care—the cost of which could be shared through a female traders' association.³⁴

Border-crossing rules need to be altered to facilitate SSCBT. In Vangtao, SSCBTers refrain from using pick-up trucks because of the fees attached to crossing the border with goods in four-wheeled vehicles. Reducing those fees might be an alternative to enlarging the existing parking lot. On the border with Thailand, motorbikes are not allowed to cross with goods, which bereaves SSCBTers of a cost-effective transportation option and means that only man-powered carts are available. On the border with Vietnam riding a motorbike with goods is forbidden in the checkpoint zone, which forces them to push the heavy shipment for long distances.

Our findings that women are subject to higher tax rates, more often controlled by quarantine and incur much larger transportation costs are evidence of "glass barriers" to female cross-border trade—either hidden yet real discrimination or challenges that affect women disproportionately. This is part of the explanation for the relatively low share of women in SSCBT compared with similar jobs in Cambodia and Lao PDR. Such practices are not justified by a higher propensity to evade taxes since women appear no different from men in that respect, even after adjusting reports for differential reticence. Equal taxation should thus be aimed at. A potential solution would be to introduce an exogenous control probability so as to minimize the correlation between controls for a type of product and women's share of crossings in that line of business. Exogenous controls would moreover be more transparent while still allowing customs to flexibly target high-

³³ Whereas SSCBTers in FGDs complained about the level of taxes, they were seldom inclined to reject negotiability, probably out of fear that the application of tariffs set in stone would be detrimental to them. But if the average tax rate were to remain unchanged, predictable tariffs would improve SSCBTers' welfare, especially for brokers, who are found in the data to be more risk-averse. Moreover, we saw that women are less attached to negotiations since they do not have time for them.

³⁴ No small-scale traders' associations exist in Cambodian and Lao checkpoints, but in open discussions about ways to foster small-scale cross-border trade during FGDs, SSCBTers agreed associations might have a positive impact on their activities. They would however not list them among their recommendations as they were reluctant to suggest solutions they had never tried out. Associations have been proven effective in defending female traders' rights, improving information about prices, providing training and ensuring smooth relationships with border officials in East Africa.

duty goods. They would put an end to what seems to be statistical discrimination: targeting women because women tend to trade specific types of goods.³⁵

Training border officials to identify gender-biased challenges and sources of discrimination could also go a long way towards improving women's access to cross-border trade. Women are strikingly underrepresented among officials, in particular in Cambodia, and do not have representatives to voice their concerns. Regular trade facilitation audits, with a specific focus on small-scale trade and gender issues, could be readily implemented and help improve female traders' lot before female officials are recruited and trained.

A Charter for Cross-Border Traders and Brokers reminding all parties in small-scale cross-border trade—authorities on both sides of the border, small-scale cross-border traders and brokers, and transporters—of their rights and duties could be instrumental in improving border crossing conditions. The Charter, the exact contents of which should be discussed with stakeholders, would list the authorities allowed to operate at border checkpoints, which authorities are allowed to collect taxes and fees and which are not. The Charter would also state rules of conduct, including no discrimination in tax rates by gender and no verbal or physical violence. Its main benefits would be to enhance the bargaining power of the most vulnerable categories of border users and raise the low level of knowledge of cross-border trade rules and regulations that characterizes SSCBTers. The conception of the Charter could benefit from experience from the World Bank's initiative currently piloted at the Mwami/Mchinji crossing between Malawi and Zambia (World Bank 2014b). As in southern Africa, the Charter would be displayed at strategic locations, translated in local languages and disseminated to stakeholder groups.

Finally, the existing tax schedule creates a disincentive effect for women and such a tax wedge should be smoothed. Women enjoy a preferential treatment when working as brokers, a less remunerative and more physically demanding activity. Such discounts may be justified as small-scale cross-border brokering is considered a less suitable activity for women and customers are reportedly reluctant to rely on their services. On the other hand, the combination of discounts for female brokers and higher tax rates on female than male traders is tantamount to double jeopardy for female traders: Their margins are reduced and female brokers who would be willing to upgrade to own-account trading or non-traders who would like to enter SSCBT—"hippos" tempted to settle in the "Sahara"—face a deterring tax wedge that hinders their ambitions.

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³⁵ We nevertheless acknowledge that this fairer approach would come at a cost for border authorities if they need to assess the type of goods first and then randomly decide whether to control further the contents of a shipment. One way around this issue would be to apply the same control probability to all shipments and vary penalties instead.

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Appendix

A. Random-Response procedure included in the IDI survey

5.8 In the last 12 months, have you ever omitted to declare goods or underreported their quantity or value on purpose in order to avoid taxes? <input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No <input type="checkbox"/> 997 Doesn't know <input type="checkbox"/> 998 Refuses to answer

Please read out the following script,³⁶ making sure the interviewee understands the procedure:

Enumerator: Please make sure the card deck is well shuffled (do it a minimum of 5 times before the interview).

I am going to read out a set of questions that describes acts or behaviors that people have expressed. Unlike other questions where you would just respond with a “yes” or “no,” this set has a slight variation to it. Before you answer each question, you will pick a card from this deck. There are 50% of black (spades/clubs) and 50% of red (hearts/diamonds) cards, randomly mixed. Based on which color you pick, I will give you an instruction to provide the appropriate response. Are you ready? I will now read the first question. Please pick a card from the deck, and if it’s a red card, just say YES regardless of whether you have done this or not. If it’s black, please just answer the question. Please do not let me see the card **and do not put it back into the deck**. This is very important.

		1 Yes	0 No
5.9	Have you ever lied to protect yourself?	<input type="checkbox"/>	<input type="checkbox"/>
5.10	Have you ever deliberately spoken ill of a member of your family or a friend?	<input type="checkbox"/>	<input type="checkbox"/>
5.11	Have you ever deliberately tried to cheat another person?	<input type="checkbox"/>	<input type="checkbox"/>
5.12	Have you ever broken a promise?	<input type="checkbox"/>	<input type="checkbox"/>
5.13	Have you ever taken something that is not yours without permission and kept it?	<input type="checkbox"/>	<input type="checkbox"/>
5.14	Have you ever bought, sold, bartered or been given something that you knew was stolen?	<input type="checkbox"/>	<input type="checkbox"/>
5.15	Have you ever mistreated someone because they did not share your opinions or values?	<input type="checkbox"/>	<input type="checkbox"/>
5.16	Have you ever been nice to a person only because you thought it would bring you some benefit? ³⁷	<input type="checkbox"/>	<input type="checkbox"/>
5.17	If you received some extra money that your family did not know about, would you ever hide it from them and spend it on your own enjoyment?	<input type="checkbox"/>	<input type="checkbox"/>
5.18	Have you ever insulted your parents, relatives or other elders?	<input type="checkbox"/>	<input type="checkbox"/>
5.19	Have you ever bribed a policeman because you did something wrong on the road?	<input type="checkbox"/>	<input type="checkbox"/>
5.20	Have you ever damaged somebody’s property to hurt them?	<input type="checkbox"/>	<input type="checkbox"/>
5.21	Have you ever stolen money from a member of your household?	<input type="checkbox"/>	<input type="checkbox"/>

Please mix in front of the respondent the cards s/he has picked with the rest of the deck. Do not look at the cards.

B. Adjusting Answers to Sensitive Questions

Answers to survey questions about sensitive topics, e.g., corruption or illegal activities, are notoriously unreliable because respondents put little faith in guarantees of survey data anonymity or want to avoid negative judgments from enumerators.

³⁶ Adapted from Kraay and Murrell (2013).

³⁷ This question was not exploited in the reticence adjustment procedure because of a very high proportion of “Yes,” suggesting a different rate of guilt.

Kraay & Murrell (2013) have designed a new methodology that uses randomization but does not assume that reticence decreases—contrary to Warner (1965), for instance. Besides the “conventional question” (CQ), i.e., a sensitive question (set in binary terms) that the respondent is asked to answer directly, their approach includes a set of “random-response questions” (RRQs), for each of which the respondent privately tosses a coin (we used playing cards instead). She is instructed to answer “Yes” whatever the true answer to the sensitive question if the coin comes up heads and to answer the question otherwise. The RRQs are also sensitive—a crucial assumption is that the proportion of respondents who have done the sensitive action, which Kraay and Murrell call the “rate of guilt,” is the same across the CQ and RRQs—and far from assuming that randomization elicits more truthful answers, the known probability of a “Yes” is used to estimate the incidence of reticence in the sample thanks to the generalized method of moments (GMM). Reticence-adjusted rates of tax evasion are presented in Table 2.

The RRQs included in the IDI questionnaire are presented in Appendix A. Some of the questions come from Kraay & Murrell’s battery, which was used in Cambodia among other developing countries to estimate the share of the population who had been in a situation where a bribe was expected in the past year. The others were developed based on preliminary observations and qualitative interviews of SSCBTers. They were then fielded along with the other sections of the survey during pilots in all three checkpoints.

Table 2: Reticence Estimation and Adjustment of Answers to Sensitive Questions Following Kraay & Murrell’s (2013) Methodology

	Pooled	Bavet	Poipet	Vangtao	Men	Women	Brokers	Traders
Guilt	.189***	.121*	.183*	.270**	.165**	.221***	.202*	.109**
Reticence	.796***	.712***	.779***	1.02***	.749***	.871***	.708***	.756***
Probability reticent person answers question reticently	.476***	.596***	.439***	.361***	.508***	.432***	.540***	.508***
Effective reticent	.379***	.424***	.342***	.369***	.381***	.376***	.382***	.384***
Number of observations	157	55	54	48	65	91	45	63
Naïve guilt rate estimated directly from survey responses	.117***	.070**	0.120*	.170***	.102**	.138***	.125*	.113***

Source: Authors’ calculations. The Stata code for estimating these parameters was graciously shared with us by Peter Murrell.

* $p < .1$ ** $p < .05$ *** $p < .01$