Do inward looking trade policies affect poverty and income inequality? Evidence from Indonesia's recent wave of rising protectionism☆

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ABSTRACT

Unlike previous studies which often focus on trade liberalisation, this paper examines the impact of protectionism in the form of import tariffs and mineral export taxes on rural and urban poverty and income inequality for the first time. Using a dynamic computable general equilibrium model on Indonesia, mineral export taxes were found to adversely affect urban and rural poverty but income inequality hardly changed as the decline in income in the higher income group is not significantly different to the decline in low income groups. However, if smelters for mineral ore are developed, then there is not only a fall in poverty, more so for the rural than urban, but there is some decline in income inequality. On the other hand, although the current imposed import tariffs do not affect poverty or income inequality, any further increases from the current low average MFN applied rates, will see a rise in rural and urban poverty and income inequality. By and large, any small improvements in the trade balance brought upon by the mineral tax and import tariffs are more than outweighed by the substantial decline in real household consumption expenditure due to falls in employment and wages, thereby leading to a fall in GDP growth.

1. Introduction

While the macroeconomic and sectoral effects of trade reforms and trade liberalisation have long generated research interest, the analysis of the impacts of these trade scenarios on the welfare of the people is however relatively recent. To date, the literature on the potential of trade liberalisation to reduce poverty has grown substantially with divided views (McCulloch et al., 2001; Thirlwall and Pacheco-Lopez, 2008; Winters et al., 2004). More recently, some studies have gone on to also include the impact on income inequality (Acharya et al., 2012; Liyanaarachchi et al., 2016, Santos-Paulino, 2012; Zhou et al., 2011). But according to Anderson et al., (2011), the need for undertaking poverty and inequality analysis remains strong, notwithstanding the contributions of trade policy reforms. In fact, income inequality remains a global concern (OECD, 2015) and the worsening trend of it in developing countries is worrisome as noted by Alvaredo and Gasparini (2015).

This paper however considers the impacts of rising protectionism instead of trade liberalisation (as is often considered by previous studies) on poverty and income inequality. By doing so, it contributes to the existing literature in the following ways. First, the analysis on

protectionism (as opposed to trade liberalisation) will provide a direct view as to whether poverty and income inequality will necessarily worsen if countries were to take on inward looking trade policies. To date, although Chauvin and Ramos (2012) is one of the few studies to examine the welfare impacts of a rise in protectionism in four Latin American countries, their national welfare impact is an aggregate measure that does not consider poverty incidence or income distributional impacts. In addition, their use of a multiregional model circumvents detailed analysis on the impacts on various industries or regional rural/urban effects, both of which this paper does.

The second contribution of this paper is that it is reflective of Indonesia's recent spate of trade strategies involving import tariffs and an export tax on minerals, which makes this a realistic case study. Also, Indonesia is a lower middle income country and the impacts may be different compared to the high income and upper middle income economies examined by Chauvin and Ramos (2012). Although the present goals of these trade strategies of the Indonesian government is not to address poverty or income inequality, it is nevertheless important to examine if the consequences of these policies have any adverse effects on the welfare of its citizens. Considering the current trade protectionism measures has future implications as the re-

introduction of trade protectionist measures remain a policy option for the Indonesian government given its past historical record.

Third, although export taxes have been previously examined (see Anderson and Strutt (2015), Bussiere et al. (2010), Piermartini (2004), Soelleder (2013), Waschik and Fraser (2007)), none of these studies explicitly focussed on the impact on poverty or income distribution. To our knowledge, only Warr (2001, 2002) has examined an export tax on coconuts for the Philippines, and on rice for Thailand, to conclude that export taxes harm the poor in both rural and urban areas. Our study however focuses on mineral exports and is the first comparative analysis on the distributional impacts on poverty and income inequality arising from import tariffs and an export mineral tax.

Fourth, our study extends well beyond Indonesia to contribute to wider policy debates elsewhere given that import tariffs have seen a rise after the 2008/09 financial crisis (Bussiere et al., 2010) and with current economic conditions and the unstable financial markets, this trend may not abate anytime soon. Export taxes in particular remain an important policy instrument for many other developing countries, especially for large exporters of primary products, such as several mineral rich African countries and agricultural economies in South Asia and South East Asia.

For the case study on Indonesia, the empirical tool used is the computable general equilibrium (CGE) model as Arrow (2005) argues that, '….in all cases where the repercussions of proposed policies are widespread, there is no real alternative to CGE.' The major advantage of the CGE approach is its ability to incorporate interactions and consider the impacts on a range of macroeconomic variables that are important in an economy-wide analysis (Rege, 2003). In fact, Amiti and Cameron (2012) lament that the theoretical predictions of trade models such as the Hecksher-Olin and Stolper-Samuelson are in practice difficult to use to establish links between tariffs and wages because of confounding macroeconomic shocks. But such interrelated shocks and impacts make the CGE model all the more amenable as an appropriate analytical tool. There are several variations in the literature on the type of CGE models used to examine trade liberalisation on poverty and income inequality. For instance, Acharya et al. (2012) applies the CGE model to the Social Accounting Matrix (SAM); Liyanaarachchi et al. (2016) uses the 'top down' approach where a separately developed microsimulation model is used to feed changes predicted by a CGE model; Savard (2003) developed the 'top down bottom up' approach which is similar to the top down approach with the addition of the bi-directional link between the CGE and micro-simulation models. The problem with the microsimulation model in these studies is however, the choice of the functional form assumed/ used for the poverty and income distribution models (Boccanfuso et al., 2008).

Our approach is broadly similar to that of Acharya et al. (2012) where the SAM is integrated into the CGE model. But the integrated multi-household method used in this study has a strong methodological advantage of internal model consistency (Balasko and Tourinho, 2014; Warr and Yusuf, 2014). In addition, all previous studies relied on static CGE models and the use of a dynamic CGE model in this study is an improvement as Anderson et al. (2011) warns that absence of dynamics in CGE models could provide very misleading results. Unlike the static model which provides impacts on broadly-categorised 'short-run' and 'long-run' based on time periods not clearly specified, the dynamic model provides the impacts for every year after the simulation shock, thus enabling one to examine the changes in magnitude over time with a clear specification of the length of time period needed for analysis.

The poverty and inequality analyses undertaken in this study considers rural and urban regions separately, which is another aspect often not considered in previous trade-poverty CGE analyses. Examining the urban/rural aspect is important for two reasons. While Taplov (2007) finds regionally disparate trade effects on poverty and inequality, Anderson et al. (2011) explains that trade strategies can result in a mixture of winners and losers within rural and urban regions. Thus careful consideration must be given to its impacts using disaggregated household data in both regions. Second, regional analysis such as the urban/rural divide is important as it is in line with the concept of inclusive growth in the development literature (see Commission on Growth and Development (2008)) which emphasises the need to ensure that benefits and opportunities are shared widely across the populations for balanced and sustainable growth. The relevance of this issue for Indonesia in particular has been highlighted by the World Bank (2014) concern that growth in Indonesia may not be inclusive even if Indonesia manages to avoid a prolonged growth slowdown.

The rest of this paper is organised as follows. The next section reviews the literature on trade protectionism, poverty, and income inequality followed by the situation in Indonesia on these issues. Section four sets out the framework underlying the CGE model while section five explains the results obtained. The last section concludes.

2. Literature review on the impact of trade protectionism on poverty and income inequality

Protectionism, at its root, is a political tool used by the government to enact policies that interfere in the market economy. Import tariffs are one prevalent form of protectionism where a tax on imports is levied such that foreign goods cost more than they otherwise would. Other measures include quotas, surcharges, quantitative restrictions, licensing and mixing arrangements affecting imports, rules of origin, custom valuation, variable levies, technical barriers, safeguard actions, and anti-dumping actions. Export restrictions are also another common practice as seen during the 2007–2008 global food crisis when Thailand, Vietnam, Bolivia, Russia, Brazil, India, Egypt, and Indonesia implemented export taxes and restrictions on agricultural and food commodities such as cereals and rice.

Several justifications for protectionism have been identified in the literature. By implementing an import tariff (or an export subsidy), a country can decrease (increase) its demand for imports (exports) and this could lead to an improvement in its terms of trade. Some countries may use tariffs to raise revenue, especially if they have limited capacity to rely on domestic taxation. On the other hand, developing countries such as Papua New Guinea have used export taxes and subsidies to stabilize domestic prices for their producers exporting cocoa, coffee, copra and palm oil (Piermartini, 2004). Others argue that domestic industries need to be protected and higher value processing industries need to be nurtured domestically. This was the case with the export tax on palm oil by Malaysia to support the development of the biodiesel industry; Indonesia on lumber for its domestic wood processing industry in 1994; and Pakistan in 1988 on raw cotton to stimulate its yarn cotton industry. Export taxes are popular as they are not subject to Article XI of the GATT 1994 which states that, "No prohibitions or restrictions other than duties, taxes or other charges … shall be instituted or maintained …".

Although governments do not typically levy export taxes to improve the welfare of the nation (Santis, 2000), an export tax can however redistribute income from domestic producers of the taxed commodity to domestic consumers who enjoy lower prices (Warr, 2001). On the other hand, import tariffs may raise the relative domestic price to consumers and encourage inefficient domestic producers who may be unable to lower costs to continue production, and hence consumers end up paying more. This leads to a redistribution of wealth from consumers to producers of the protected industry. And since the poor spend a larger proportion of their income on necessary goods, import taxes which are similar to consumption taxes, may be regressive when imposed on the lower income bracket. While Rodriguez and Rodrik (2000) maintain that imposing tariffs do not increase welfare, they however admit that results in the empirical literature are not robust when subjected to a variety of tests.