Essay 2 - Sectoral shifts and inequality. How to relate macroeconomic events to inequality changes\textsuperscript{ii}

Abstract

This paper presents a way to explore how macroeconomic shifts may cause inequality changes. It is based on the backwardness observed in certain sectors in developing countries. It shows why highly dualistic economies tend to be more unequal than economies with flexible and integrated labour markets. Assuming that an inter-sectoral earnings gap exists, this methodology offers a lower bound estimate of the direct impact on inequality changes caused by macroeconomic changes that affects the relative competitiveness between the tradable and non-tradable sectors. The methodology aims to find the earnings gap change (in log units) taking place between two points in time, which is not dependent on the distribution of endowments, their returns (observed and unobserved) and on the sectoral employment shares. The decomposition methodology proves to be consistent under few assumptions (log normal distribution of earnings and inter-sectoral stochastic dominance) and was tested using observed and simulated data. We suggest a channel through which trade integration can affect labour income inequality in a context of capital-skill complementarity and imperfect mobility of workers supporting the findings by Devillanova et al. (2010). Since segmentation is the underlying disequalization condition, policies oriented to encourage labour mobility appear to be highly desirable in such economies to reduce inequality and fight poverty.

\textsuperscript{ii} This work won the "Best Paper Award" in the Arnoldshain Seminar XI conference on “Migration, Development, and Demographic Change – Problems, Consequences, Solutions”, June 25 – 28, 2013, University of Antwerp, Belgium. International Society for Comparative Economic Studies. ISCES.
2.1 Introduction

Boeke (1953) describes the simultaneous existence of both a traditional and a modern economic sector in a colonial economy. The traditional sector is labour intensive, with insufficient levels of capital stock and labour division; it takes place in rural areas mostly in the form of small-scale agricultural activities. In contrast to this, the modern sector is based on capital-intensive industries and large-scale agricultural activities oriented towards international markets. It is also argued that the large-scale agricultural modern sector mostly favours foreign enterprises without affecting rural labour incomes and living standards.

The descriptions made by Boeke during the last century seem to be also experienced by many developing countries in Latin America. Acemoglu et al. (2001) argue that the Spanish and Portuguese colonization strategy consisted of establishing a complex trade system of monopolies and trade restrictions in order to maximize the extraction of resources from the colonies. Unfortunately, extractive institutions continue to exist (to use the terminology of Acemoglu and Robinson) and are reflected nowadays in many political systems in the developing world. Robinson (2010) states that political systems tend to generate inegalitarian forces if political power is concentrated amongst narrow elites. As a matter of fact, developing countries are usually dominated by non-consolidated forms of democracy, thus allowing institutions to encourage or sustain an unequal distribution of incomes.57

Cornia (2012) argues that the desired inequality reduction in South America was achieved through macro policies favouring the labour-intensive tradable sector, as well as through changes in labour market policies and institutions. However, highly dualistic economies are usually characterized by the lack of such policies supporting the tradable sector and as a result, the dual structure of the economy appears to be a sort of equilibrium based on labour vulnerability and underemployment.58

The main purpose of this work is to consider the existence of a backward sector as a disequalizing condition. It raises the question how to define sectors in a consistent way. Because of the possibility to establish linkages with macroeconomic variables, this paper explores the backwardness of the tradable sector, encompassed by the agricultural, mining, and manufacture sectors. The tradable

57 Contrary to this, the natural conjecture is that democracy would imply income redistribution toward the relatively poor. In fact, Cornia (2012) suggests that during the last twenty years, many Latin American countries experienced a return to and consolidation of democracy, which possibly affected income inequality through the introduction of more progressive policies.

58 See Klasen, Otter, and Villalobos Barría (2012) on Honduras over the last 20 years.
sector produces goods that could eventually be exported. The approach of this paper is based on the idea that rural areas are the natural space where backwardness may take place. Figure 2.1 shows the rural income distribution in Chile and Honduras, illustrating both a non-dualistic and a well-recognized dualistic economy, respectively. The Honduran case clearly shows that the tradable sector lags behind the non-tradable sector. In order words, at each percentile, it is possible to observe a positive earnings gap between the tradable and non-tradable sectors (first order stochastic dominance). Interestingly, the impact of the minimum wage appears to be less important in Honduras than in Chile. While in Chile, it contributes to back both distributions on its value, in Honduras, the minimum wage framework contributes to spread the distribution. According to the Honduran Secretary for Labour (SENAEH), the minimum daily wage in 2005 ranged between 61.26 and 97.77 Lempiras in the agricultural and financial sectors, respectively. This evidence raises the question regarding the role of the minimum wage as an equalization instrument.

Figure 2.1: Non-dualistic and dualistic economies, Chile and Honduras in the mid 2000s

The tradable and non-tradable linkages to macro-economic variables have been studied in the literature. Agosin (2007) shows that the real exchange rates (RERs) in Latin American countries have been unstable, exhibiting strong cyclical fluctuation, associated to financial capital flows. This has proven to nega-
tively affect the evolution of the tradable sector in terms of their volume (exports), diversification, and degree of integration of national economies. Ffrench-Davis (2011) argues that the highly cyclical evolution of RERs produces misaligned rates, affecting the volatility of the capital flows. Such volatility distorts investment decisions, promoting speculative and short-run investments, artificially displacing tradables (many produced by small- and medium-scale enterprises). Additionally, it discourages adding value to traditional exports, with regressive effects on employment and employment quality. Moreover, Damill and Frenkel (2012), using a panel OLS estimation with yearly data covering the period 1990-2010 for the 18 Latin American countries, find that depreciated real exchange rates (RERs) tend to significantly reduce unemployment (and also underemployment) with a time lag of two years.\footnote{Damill and Frenkel (2012) estimate an equation that is a variant of Okun’s law and takes into account the influence of the RER on the employment-output ratio. The estimations included fixed country-effects to control for the continually diverging levels in national poverty and unemployment rates that are caused by differences in the measurement and definitions as well as in the labour market structures. The estimations also included fixed time-effects controlling for the external shocks.}

Ffrench-Davis (2011) argues that profound adjustments in the exchange policy are required and states:

“Neoliberal views tend to state any exchange intervention involves going against the market, and that this is always defeated by that market. On the contrary, it is about an alternative approach, to achieve the real market forces – export producers and importers, and the producers of importable goods – who are the key players for productive development and equity, should prevail in determining the exchange rate. This is the market that must prevail, and not the market of short-term operators and rent seekers instead of innovation creators and greater productivity. To achieve this consistent and selective intervention by the economic authority is fundamental, and of course is not free of flaws.”

Besides the economic policy aspects, other macro forces are behind the dual equilibrium, such as in the case of Honduras. For instance, natural catastrophes, destroying the rural stock of capital, contribute to sustain low productivity levels in the traditional sector. Commodity prices may also affect the relative competitiveness of the tradable sector. It is possible that highly volatile commodity prices may discourage investment in the tradable sector increasing non-tradable competitiveness. Knight and Johnson (1997) find evidence on this for the tradable and non-tradable sectors in Australia. Trade policies can also change the relative competitiveness of the tradable sector. Trade frameworks that do not
take into account rural backwardness can also accelerate the expansion of import-related sectors and the non-tradable sector. Finally, exogenous capital shocks should be also considered; in particular, aid flows after catastrophes and remittances. These factors are relatively important for small economies. In the same way, Dutch Disease types of impacts are also expected in medium-sized economies due to highly competitive industries. For example, Ruehle and Kulkarni (2011) find that the Copper boom actually contracted the Chilean economy. As expected, such events would increase the gap showed in Figure 2.1 for the Honduran case, and consequences would be expected on the income inequality.

This paper will explore a methodology for isolating the impact on inequality changes produced directly by changes in the relative competitiveness of the tradable sector (instrumented as the earnings gap across quantiles between the tradable and non-tradable sectors). However, one should emphasize that this method is likely to underestimate the complete impact of macro conditions on the labour earnings distribution. In particular, one can well imagine that the macro conditions that caused a favourable shift towards the non-tradable sector not only shifted the entire earnings distribution to the right but also affected different portions of the distribution differently by changing relevant prices in the labour market.

This paper is broken down as follows: Section 2.2 reveals a theoretical model supporting the linkage between macroeconomic events and inequality changes, while Section 2.3 presents an illustration using simulated data. Section 2.4 offers a description of the proposed methodology. An application using real and simulated data is presented in Section 2.5, while Section 2.6 concludes this study.

2.2 Tradable and non-tradable sectors in the rural economy

Consider the rural economy consisting of two sectors: the tradable sector and the non-tradable sector. The tradable sector consists of agriculture, manufacture and mining. The non-tradable sector comprises all other economic activities. In this "classical" model, the tradable sector has an "unlimited" labour supply at the subsistence wage $S$ available because there is an excess supply of unskilled labour, such that real earnings remain unchanged over time.

The non-tradable sector (or at least a significant portion of it) develops more sophisticated activities, which require a higher level of skills; this consequently does not often appeal to individuals in the subsistence sector since, according to
Lewis (1954), these will be forced to abandon / relinquish the carefree / easy-going way of life of the subsistence sector. The non-tradable sector on average requires higher skills than the tradable sector so that the non-tradable sector has to pay a higher wage $W$ which is typically higher than the subsistence wage $S$. Moreover, this model assumes inter-sectoral imperfect mobility; this means that only a few workers of the tradable sector may quit their work and compete for a job in the non-tradable sector. For this reason, we observe a positive-sloped labour supply in the non-tradable sector. If the non-tradable sector increases the proportion of workers, it has to pay progressively higher wages over the labour supply line. Figure 2.2 shows the main features of the model.

In this model, the wage gap and the underlying underemployment are considered a function of the relative competitiveness of the tradable sector. Regarding this issue, Lewis (1954) argues:

“Owners of plantations have no interest in seeking knowledge of new techniques or new seeds conveyed to the peasants, and if they are influential in the government, they will not be found using their influence to expand the facilities for agricultural extension.”

Besides the possibility that plantation owners behave as Lewis states, the context of low profit levels, high depreciation rates, overvaluation of the real exchange rate and volatile international commodity prices can contribute to explain why developing countries evolve in such a dual equilibrium. In the context of an extremely unskilled labour force, the optimal profit strategy can be focused on exploiting cheap labour without an interest in increasing labour productivity levels in the tradable sector. Higher commodity prices or improved rural education may be seen as an upward shift in the marginal product of the tradable labour curve. High levels of inter-sectoral mobility can contribute to reach in the rural economy the famous “turning point” (see Lewis, 1954). This would induce a positive sloped labour supply in the tradable sector. So that increasing productivities in the non tradable sector, may translate into declining shares of labour in the tradable sector with less underemployment. From here onward, the classical assumption of unlimited labour supply ceases to hold. As a consequence of this, the wage gap will decrease. In the same way, low levels of inter-sectoral mobility determine that productivity improvements in the non-tradable sector will produce an increase in the wage gap.

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60 Lewis (1954, p. 150) makes reference to the rural sector in contrast to the urban or modern sector.
This is only possible because workers in the tradable sector are unable to abandon this sector and represent an "unlimited" labour supply at the subsistence wage. The underlying force here is the inter-sectoral immobility encouraged by dualistic educational systems.

In summary, the concept behind this model is that there is underemployment in the tradable sector, and labour-market segmentation restricts the access to the predominantly modern non-tradable sector. Consequently, a wage gap between both sectors emerges, depending on relative labour demand conditions and levels of productivity. In the tradable sector, given adverse international market conditions – such as depressed commodity prices and overvalued exchange rates – it may not pay to increase productivity in this sector and wages will stagnate. In contrast, the same conditions will increase relative wages and revenues in the non-tradable sector of investments, which are also favoured by the external environment.

In this model, we assume workers’ heterogeneity (allowing correlation between mobility costs and skills) causing an insufficient mobility of workers between tradable and non-tradable sectors (inducing a positive sloped non-tradable labour supply) and capital-skill complementarity. Therefore, different equilibrium wages across sectors determine the observed wage gap between sectors.
Note that this formulation is compatible with the model by Devillanova et al. (2010) which also relies on the complementarity between the two types of labour. The prediction of this formulation is that an economy suffering a sectoral shift against the backward sector will increase the inequality between and within sectors.

2.3 An illustration using simulated distributions

Consider the rural labour income distribution as the combination of the distributions in the tradable and non-tradable sectors. Given the first-order stochastic dominance of the non-tradable log-earnings distribution over the tradable distribution, the aggregated rural distribution will be more unequal if both distributions separate each other keeping their respective shapes and sizes unchanged. The earnings gap described above comes from different skill price-endowments in each sector expressed as different “efficiency wages” (see Mirrlees, 1975 and Basu, 1984).

The key issue in this methodology is to decompose a distributional change of rural earnings into two determinants. On the one hand, a “within-sector” determinant (WS), that is a determinant of inequality changes, which is not directly correlated with returns to the tradable and non-tradable sectors, and on the other hand, a “between-sector” determinant (BS), which captures inequality changes due to variations in the relative returns to the sectors (given a fixed structure of endowments, returns and sectoral employment shares).

To illustrate the fundamentals of this methodology, consider that the graphs in Figure 2.3 were obtained based on the generation of two normal random distributions, assuming sectoral sizes and distributional moments observed in Honduras in 2005. They represent the tradable and non-tradable sectors of the rural economy.

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61 Klasen, Otter, and Villalobos Barría (2012) show evidence on this for Honduras.
62 This determinant would reflect inequality changes that may arise from changes in the shapes and sizes of both earnings density functions.
63 The “between-sector” determinant captures inequality changes resulting from the horizontal shift of one or both wage density functions, keeping the shapes of their density function constant.
64 Based on the Honduran specification, the simulation assumes that the tradable sector accounts for the 72% of the employment in rural areas. Urban and rural areas account for 51.6% and 48.4% of the employment respectively. All parameters for the simulated distribution were estimated based on EPHPM 2005.
The top-right graph shows the same distributions depicted in the top-left graph with the only difference that the whole tradable distribution is horizontally “displaced” to the left in one log unit, thus inducing an “artificial” earnings gap between sectors. It is additionally assumed that the $WS$ determinant does not exist (implying that the shapes and sizes of both density distributions remain unchanged). The bottom panels show the rural distributions obtained by merging the random distributions directly above.

![Distribution Graphs](image.png)

*Figure 2.3: Inter-sectoral earnings-gap and inequality in rural areas*

It is possible to see that the bottom-left distribution is more equal than its counterpart on the right. In order to estimate effects at the country level, a single urban log-earnings distribution is considered. It was generated also based on the distributional moments observed in the Honduran labour market in 2005.

Table 2.1 shows the (minimum) contribution to inequality changes as a result of an exogenous change in the earnings gap of one log-unit between the tradable and non-tradable sectors. Given a structure of endowments and their returns, an exogenous change favouring backwardness of the tradable sector yields to higher levels of labour earnings inequality and vice versa.
Table 2.1: The macroeconomic (between sectors) earnings-gap effect on labour income inequality changes (Gini Index) due to a one unit log earnings-gap shift

<table>
<thead>
<tr>
<th>Area</th>
<th>Gini coefficient in t</th>
<th>Gini coefficient in t’</th>
<th>Gini change (t-t’)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Sd.</td>
<td>Mean</td>
</tr>
<tr>
<td>Rural</td>
<td>62.40</td>
<td>0.0029</td>
<td>68.20</td>
</tr>
<tr>
<td>Country</td>
<td>60.29</td>
<td>0.0019</td>
<td>65.28</td>
</tr>
</tbody>
</table>

Note: Each distribution consists of 100,000 observations.
Source: Authors’ calculations based on 100 Gini simulations of distributions randomly generated.

Here, the impact is easily to observe because the simulation explicitly holds returns to endowments, endowments and sectoral employment shares constant (shapes unchanged). However, in the real economy, everything changes. Macroeconomic conditions contribute to change returns, and these changes affect the path of endowment accumulation. In highly dualistic economies, a shift towards non-tradables and the adverse shift from tradables might have worsened the employment conditions of poorly paid agricultural workers more than better paid workers in the tradable sector. In that sense, our analysis probably represents a lower bound of the impact of macroeconomic conditions on inequality changes.

2.4 The methodology

Based on this decomposition idea, a methodology for decomposing the distributional change in a structural macroeconomic $BS$ effect (earnings gap effect) and in a $WS$ effect is presented, as a result of changes in endowments, returns and employment shares by sectors (including those caused indirectly by macroeconomic changes, see below). More formally, we propose an Oaxaca-Blinder type of decomposition, which can be illustrated as follows:

$$\Delta D = D(WS’, BS’) - D(WD, BS)$$

(1)

... where the second period is denoted by “‘”. The distributional change may be decomposed sequentially as follows:

$$\Delta D = [D(WS’, BS’) - D(W’D, BS)] + [D(WS’, BS) - D(WD, BS)]$$

(2)
Equation (2) indicates that the distributional change may be decomposed in an earnings gap effect (between sectors) in \( t' \) and a within sectors effect as in \( t \). In order to perform the decomposition, we need to isolate the labour earnings gap change between sectors maintaining the shapes and weights of the earnings density functions constant. In other words, we need to find the maximal horizontal shift of the tradable earnings density function in \( t' \) which is consistent with the observed rural labour income density function in \( t \). More precisely, while holding the position of the non-tradable labour income density function unchanged as in \( t' \) we need to find and isolate the horizontal shift of the tradable labour earnings density function (from \( t' \) to \( t \)) which combined then with the change in the shape and the weights of both sectoral earnings density functions from \( t' \) to \( t \) consistently simulate the whole rural distribution in \( t \).

\[
g = \min \{ |g(q)|, \bar{W}^{S'} \}
\]

... where \( g \) stands for quantile and \( g(q) \) is a function indicating the earnings gap change as a function of the quantile and \( \bar{W}^{S'} \) represents fixed endowments, returns and employment shares in both sectors in \( t' \). If the earnings gap change is positive, then the minimum earnings gap change will disequalize the distribution of rural labour incomes; however, if the gap change is negative, then the minimum gap change will equalize the distribution. Even when the solution of the above minimization problem may yield closed-form first-order and second-order conditions, in the case of non-monotonic earnings gap change functions, we rely in a non-parametric technique to find the solution. By calculating and constructing sectoral Pen’s parades, it is possible to derive a growth incidence curve of the between-sector earnings gap \( g(q) \). Each Pen’s parade is estimated for the tradable and non-tradable labour earnings distributions in \( t \) and \( t' \). Once \( g \) in the equation (3) is derived (in the simulation above \( g \) equals the unity), we shift the tradable distribution by adding \( g \) to the entire distribution of earnings in the tradable sector in \( t' \). Thus, we simulate \( D(WS', BS) \) in (2), which is the simulated rural distribution with returns, endowments and employment shares as in \( t' \) and the earnings gap as in \( t \). As we already know \( (WD, BS) \), which is the observed rural distribution in \( t \), and \( D(WS', BS') \), which is the observed rural distribution in \( t' \), it is possible to estimate equation (2), and decompose labour inequality changes as mentioned.

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65 As we can see, there is no path dependence arising in this methodology. As \( \Delta D \) is observed, the decomposition only requires an estimation of \( D(WS', BS) \). The BS effect can be easily calculated estimating the first term in equation (9).
2.5 An application using observed and simulated data

The application using observed data is taken from Klasen et al. (2012). Figure 2.4 shows three growth incidence curves of the earnings gap or gap($q$) observed in Honduras during the periods 1991-1999, 1999-2005 and 2005-2007. In this set up, $g = \min \{|g(q)|, WS'\}$ is equal to 0.14, 0.43 and -0.14 log units for the three periods respectively.

The simulated data is based on the distributional moments observed in Honduras in 1999 and 2005. Assuming that is $g$ is equal to 0.43, $D(WS', BS)$ is simulated. Table 2.2 shows the contribution of the $BS$ determinant to the inequality change using simulated data.

As expected, the contribution to inequality changes of increasing conditional gaps being consistent with the observed inequality changes in Honduras over time.66 Between 1991 and 1999, results show that the exogenous macroeconomic shift between the tradable and non-tradable sectors explains a minimum of 7.5 percent of the observed disequalization at the country level.

![Figure 2.4: Honduran growth incidence curves of the inter-sectoral earnings-gap in rural areas](image)

66 See Klasen et al. (2012).
Table 2.2: The macroeconomic (between sectors) earnings-gap effect on labour income inequality changes (Gini Index), simulated data

<table>
<thead>
<tr>
<th>Year</th>
<th>Observed distributions</th>
<th>Displaced distributions</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Country</td>
<td>Rural</td>
</tr>
<tr>
<td>1999</td>
<td>56.73</td>
<td>56.54</td>
<td>-</td>
</tr>
<tr>
<td>2005</td>
<td>62.40</td>
<td>60.29</td>
<td>61.95</td>
</tr>
</tbody>
</table>

Note: The BS determinant or \([D(W_1, BS') - D(W_1, BS)]\) is obtained by comparing the observed distribution in 2005 and the displaced distribution (g=0.43).

Source: Authors’ calculations based on simulated data.

The contribution tends to be higher in the later periods contributing up to almost 40% of the disequalization between 1999 and 2005.\(^{67}\) Results based on simulated data are surprisingly similar to those based on real data. This means that the procedure can rely on the assumption that log-monthly earnings are well-behaved, and it can therefore be used to isolate the contribution to inequality changes caused by the BS determinant.

Now, Table 2.3 shows the contribution of the BS determinant to the inequality change using the observed data in the Honduran economy. Appended in this table are the contributions depicted in Table 2.2.

Table 2.3: The macroeconomic (between sectors) earnings-gap effect on labour income inequality changes (Gini Index), observed and simulated data

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage change – Rural distribution</th>
<th>Percentage change – country-level distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observed gap</td>
<td>Simulated gap</td>
</tr>
<tr>
<td>1991-1999</td>
<td>3.06</td>
<td>-</td>
</tr>
<tr>
<td>1999-2005</td>
<td>7.66</td>
<td>7.96</td>
</tr>
<tr>
<td>2005-2007</td>
<td>-12.38</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on data from EPHPM I, EPHPM II and random data.

A growing economy incapable to reduce poverty

This paper provides interesting insights to the question why the Honduran economy was incapable to reduce poverty during the first part of the 2000s (see Figure 2.5). The poverty headcount ratio increased more than six percentage points

\(^{67}\) Note that the effects are larger at the country level than in rural areas as the rural income distribution is at the bottom of the overall country distribution and a widening of it has a larger proportionate effect on the overall country distribution.
from 1998 to 2005 while the GDP grew in real terms on average almost 4 percent per year.\footnote{If we consider only the period 2000-2005, poverty rose by 2 percent while the economy grew on average five percent per year.}

The low correlation between poverty reduction and GDP growth can be explained by the inequality dynamics during this period of time. According to Klasen et al. (2012), the Honduran Gini coefficient of the household per-capita income rose from 0.55 to almost 0.61 between 1999 and 2005. The authors argue that the income disequalization during the period 1999-2005 was a rural phenomenon and can be mainly explained by declining labour earnings in the tradable sector (mainly agriculture) and the upsurge of the non-tradable sector.\footnote{The divergent trend was more pronounced at the bottom of both distributions.}

Thus, the Honduran path of growth during the early 2000s did not meet the basic pro-poor growth conditions enounced by Klasen (2009) which appear to be very important beyond the specific country context. First, growth did not predominantly take place in neither agriculture nor rural areas where 80% of the poor population actually lives. Secondly, potential workers were not able to diversify into nonfarm sectors or to move to more dynamic regions. Finally, there

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.5.png}
\caption{Honduran GDP growth rates and the poverty headcount ratio}
\end{figure}
2.6 Conclusions

This paper presents a way to explore how macroeconomic shifts cause inequality changes. It is based on the backwardness observed in the agricultural sector in rural areas. Assuming that an inter-sectoral labour earnings gap exists, this methodology allows to control over the direct impact on inequality changes caused by macroeconomic changes that affect the relative competitiveness between the tradable and non-tradable sectors. The methodology aims to find the labour income gap change (in log units) taking place between two points in time, which is not dependent on the distribution of endowments of the employed population by sectors (observed and unobserved characteristics) and their returns.

First, this paper shows why highly dualistic economies tend to be more unequal than economies with flexible and integrated labour markets. Second, the methodology allows for quantifying the role of direct macroeconomic events on inequality changes. The application here presented shows that almost 40% of the disequalization experienced by the Honduran economy may find their primary cause in macro-conditions (though it does not consider how it affects microeconomic conditions). Klasen et al. (2012) argue that the Mitch Hurricane, declining commodity prices and the appreciation of the RER are the main macroeconomic forces behind the labour income disequalization between 1999 and 2005. Simulated data confirms the results in Klasen et al. (2012).

The decomposition methodologies support the conclusions by Devillanova et al. (2010) suggesting a channel through which trade integration can affect the labour earnings inequality in a context of capital-skill complementarity and imperfect mobility of workers. The story that follows is that a shift towards the non-tradable sector increases the skill intensity and skill premium in this sector (observed and unobserved ability). This evolution regarding skill intensity and skill premium is backed up by our results regarding the impact of unobservables on inequality in a rural economy characterized by duality. At the same time, relative earnings for less-educated workers also increase in the dynamic sector.
compared to those in the tradable sector (due to the imperfect mobility). Consequently, skilled and unskilled workers now perform better in the non-tradable sector (relative to those in the tradable sector). In the same manner, the labour income distribution becomes more unequal due to the evolution of the intersectoral earnings gap taking place across the whole ability distribution.

Policies oriented towards eliminating the systematic backwardness appear to be highly desirable in such economies. Improvement in the relative competitiveness of the small-scale agricultural activities is consistent with increased rural employment, a reduction in rural underemployment, increasing labour earnings in the tradable sector, a reduction in the earnings gap and consequently, declining inequality levels. As usual, poverty levels are higher in rural areas and amongst those related to agricultural activities. To fight backwardness is thus very similar to reducing poverty and decreasing inequality.

Finally, using fiscal and monetary policy to support the depressed tradable sector appears to be consistent with a rational development strategy in such countries. Among the set of policies that may be used to achieve this goal, it is possible to mention the depreciation of the nominal exchange rate, the attainment of asymmetric trade agreements that recognize the backwardness (fair trade), allowing the imposition of import tariffs and/or export incentives when such backwardness is observed, and the improvement of the rural infrastructure. However, in the long run, it is more important to eliminate the sources of labour immobility across sectors. Immobility forces usually find their explanation in insufficient and outdated educational systems. Therefore, international development assistance should focus principally on improving the coverage and quality of education and infrastructure mainly in rural areas reducing the worker's heterogeneity. Additionally, to guarantee minimum prices for the production of the backward sector may also be considered in such economies, since poverty and inequality are extraordinarily sensitive to the developments in the traditional sector.