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THE ROLE OF GOVERNANCE IN THE PERFORMANCE OF THE DOMESTIC COFFEE VALUE CHAINS IN HONDURAS, ECUADOR, TANZANIA, ANGOLA

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Abstract

Being part of cash crops, coffee is important for smallholder farmers in many producing countries because of its potential to create revenues. Nevertheless, coffee production can fluctuate in these countries and income inequality can be significant between actors of the value chains (VCs). In order to reach an image of the contribution to growth and inclusiveness of a VC, it is needed to study the organisational and institutional processes in which it is involved. The income and jobs created by the coffee activities and their distribution along the VC depend over the governance mechanisms which are largely shaped by the strategies of the actors inside the VC as well as the country's own context and the international environment. To establish some pathways between the mode of governance and the economic and inclusiveness performances, we propose a cross-cutting analysis across the four countries where the VCA4D coffee studies were performed between 2017 and 2022: Honduras, Ecuador, Tanzania and Angola. Our paper aims at highlighting how differently the actors are involved in the governance of the coffee VCs and how they benefit from the coffee VC activities in these four countries.

The main results show that the countries which have set a mode of governance shared between public and private actors (Honduras, Tanzania), including the participation of producers in the definition and implementation of a national coffee sector development strategy, are performing better than those who struggle to do so (Ecuador) or those who have shifted from a strong intervention of the State to a regulation totally delivered to the market forces (Angola).

Key words: Coffee value chains; Governance; Economic performance; Inclusiveness.

1. Introduction and objectives of the synthesis

Being produced by many countries in Latin America, Africa and Asia, coffee is a major cash crop that takes part in many debates by its implications on economic, social and environmental aspects. Coffee value chains relate a huge number of generally small coffee producers in these countries to consumers all over the world. Millions of coffee producers' livelihoods are associated with the consumers at the global level, the international agreements as well as the countries' own context and actors' strategies. We assume that the way the actors benefit from the coffee VC activities depends closely on how they are organised in the sector and their ability to influence the activities of other actors.

The governance of the coffee VC has been studied mostly for the global VCs. The relationship through the VC between the large coffee distributors operating globally and the small coffee producers being the majority in the growing areas, has been the topic of several articles. These studies mostly show the concentration and market power of the distribution sector and a share of income unfavorable to small producers setting the "coffee paradox" (falling producer prices and rising consumer prices) (Daviron and Ponte, 2005; Fitter and Kaplinski., 2009; Grabs and Ponte, 2019; Grabs and Carodenuto, 2021). A whole section of the literature also focuses on fair and ethical trade and other social and environmental voluntary standards as a mean to improve the upward transmission of prices along the global value chain and to alleviate the impacts of the low coffee price on coffee growers in the production areas, by differentiating the product on the market (Muradian et al., 2005; Bacon et al., 2005; Kilian and al., 2006; Galtier and Diaz Pedregal, 2010; Vagneron and Daviron, 2012; Galtier et al., 2013; Giuliani et al., 2017; Vicol et al., 2018; Estrella et al., 2022).

Based on an international review of methods and approaches, the VCA4D methodology establishes the following aspects to understand the forms of organisation and governance at the domestic scale:

(i) Stakeholders' (particularly farmers') strategies and services support: dependence of the agents to the VC activities: economic, access to inputs…; importance of the VC product(s) among farmers' crops; internal decision making (Who? How?).

(ii) Coordination: i) Horizontal coordination between the actors: agents involved in the VC, with their specialisation and size differentiation; associations of actors (function, number, volume of flows, internal relations, and competition); conditions for entry (« barriers »); organization and management of strategic functions and services (water, labour, stocks…). ii) Vertical coordination: regulatory background (permits, authorisations, terms of use...); certification and standard setting; public service and infrastructure provision; vocational training; public-private dialogue.

(iii) Policy framework and business environment: fiscal (taxes, subsidies…); financial (credit…); trade (liberalization, tariffs...); territorial (decentralisation…); regulatory background (permits, authorisations, terms of use...); certification and standard setting, public service and infrastructure provision; vocational training; public-private dialogue.

This paper concentrates on the part of the VCs that takes place inside the producing countries and contributes to the global VC. Usually, papers do not address the domestic strategies and the different national patterns of governance and their impact on the economic performance and the level of inclusiveness in the VCs at the national level. To understand how the forms of governance determine the performance of the domestic coffee VCs, we propose to analyse the four VCA4D cases, Honduras, Ecuador, Tanzania and Angola. Although the national VCs were all affected by the end of the International Coffee Agreement in 1989, it is worth comparing these four study cases as they show different long-term organizations and performances. This paper only covers the 4 domestic coffee VCs analysed in the context of the VCA4D project, and therefore does not focus on the best governance practices in other coffee producing countries. Thus, it looks at the local governance of VCs (in particular the organisation and coordination, and not the governance of externalities) and considers the distribution of income between the local actors of the VC. To also note that 3 out of these 4 countries weigh little on the world market, and that Honduras stands out for its rapid breakthrough, largely due to the reform of its governance (even though, it may be less performant in some aspects compared to other producing countries such as Colombia, Costa Rica or Guatemala).

The EU is very involved in the coffee VCs in these four countries as food and nutrition security is a focal sector for the cooperation between the EU Delegations (EUDs) and the partner countries. The VCA4D studies have been implemented to provide information and knowledge to the EUDs to support their coffee related initiatives in each country. In Honduras, the EUD supports projects with important components to favor small coffee producers in Western Honduras and is currently supporting a project for the competitive, inclusive, and sustainable development of coffee chain in the Departments of El Paraíso, Choluteca and Valle. It also supports the fight against the "roya" with a regional project in Central America. In Ecuador, following the example of the cocoa VC it is a priority for the Government to establish a competitive improvement plan for the coffee VC, to promote sustainable and inclusive production. The EU supports this initiative to reach a coherent long-term policy and revitalize the value chain to get a better positioning on the international market based on differentiation, and also the reactivation of the areas affected by the earthquake in 2016 particularly in the

province of Manabí. In Tanzania, the EU also promotes pro-poor, inclusive and sustainable growth providing support to the coffee VC through several projects with fair trade components in different parts of the country, and programmes and institutions for coffee research and technology. In Angola, the EU is implementing a programme for the development of the coffee sector which aims to increase production and productivity in the chain and promotion of agro-business, as well as a new private sector development programme with the objective of (i) enhancing the performance and growth of coffee VC; (ii) and improving the inclusive use of diversified financial services, including innovative financial instruments (for MSMEs, women, youth, and rural populations). Eventually, as coffee is a commodity of interest to the EU (that is the biggest global importer of green coffee and biggest member of the ICO), the performance of several VCs on this commodity in different countries might allow for lessons to be learned at a more general level.

In this paper, we attempt to answer the following topic questions:

- What are the factors driving the coffee production evolution in the four countries?
- How do the four coffee VCs behave in terms of governance?
- What are the economic and inclusiveness performances of the four VCs? How is income generated and distributed among the local coffee VC actors?
- What relationships come out from the cross-cutting approach to the governance and the economic and inclusiveness performance?

The paper is structured as follows. After the introductive elements mentioned above, in second part, we present the methodology of the paper as well as the limits observed when conducting cross-cutting analysis based on the VCA4D reports. In the third part, we contextualize the countries' situation giving general characteristics of the coffee VCs in the four countries, while the fourth part outlines the main governance issues. Part five presents the economic and inclusiveness performance. The discussions follow in part six giving some perspectives of the link between governance and contribution to inclusive growth, and the conclusions in part seven.

2. Methodology

The methodology of this paper relies on both qualitative and quantitative VCA4D studies' information by providing a descriptive appraisal of the organization of the respective VCs and the main elements of their governance as well as a comparative analysis of the economic performance and inclusiveness indicators assessed by the VCA4D methodology. The quantitative indicators presented in the comparative analysis have been computed using the economic software AFA (Agrifood Chain Analysis) files of the studies.

To address the precedent topic questions, we first look at the coffee VC evolution in the four countries and describe the context of each coffee VC. This qualitative appraisal is supposed to provide further insights in the interpretation of economic performance and the governance of the value chains.

Secondly, we explore the four coffee VCs in terms of the governance elements, in particular access to service support, coordination between actors and public policies.

In a third step, being aware of the methodological limits arising from the different characteristics of the studies, we conduct a comparative analysis by looking at the economic and inclusiveness performance of the four coffee VCs through quantitative indicators at micro and macro level (focusing mainly on profitability, distribution of VA and wages, employment, women labour, labour productivity).

Lastly, this paper tries to find some pathways from the different patterns of governance until the economic and inclusiveness performance of the coffee VC for each study case.

However, the comparative analysis implies some limits that should be considered when interpreting results. The comparison of studies is sometime hampered by the lack of some information in the countries or by the non-standardization of information or the way of computation, despite the presence of directive methodological document in support to the experts. It was quite complicated to obtain the same amount of information for Angola compared to the other three situations. In Tanzania, on a request of the EUD, experts have focused on a regional VC for some parts of the study, not necessarily representative of the national situation. The analysis was conducted in Mbeya and Songwe Regions that contribute to 20% of total national coffee production**.** Moreover, comparisons of the distribution of value added (VA) and incomes are hampered by the different structures of the VCs, by the multifunctionality of actors (integration of several activities) or the functional specialization of the actors throughout the VCs; and the different scopes given to the studies (for example the VC system did not include exporters in Ecuador). Another structural element which hinders the comparison is that, in Ecuador, a substantial part of the activity related to coffee in the country (processing, marketing) is associated to imported coffee from Asia. This “import sub-chain” including processing into instant coffee, creates income and jobs and must therefore be accounted in Ecuador but does not exist or is marginally present in other countries. Considering all these difficulties, we had to recalculate some indicators in order to be able to make the comparisons. These difficulties do not take away the interest of analysing the relationship between the characteristics of the modes of governance in these national VCs and their broad economic performance, in particular inclusive growth (creation and distribution of income among different types of actors). Indeed, the current trajectories and performances of these VCs are very different and highlight the relevance of the exercise of comparison and understanding.

3. General characteristics of the coffee value chains in the four countries

The main information used in this part of the synthesis comes from the functional analysis of the coffee VCs in the four reports.

3.1. Evolution of coffee production in the four countries

The evolution of the long-term coffee production in each of the four countries is presented in the figure 1.

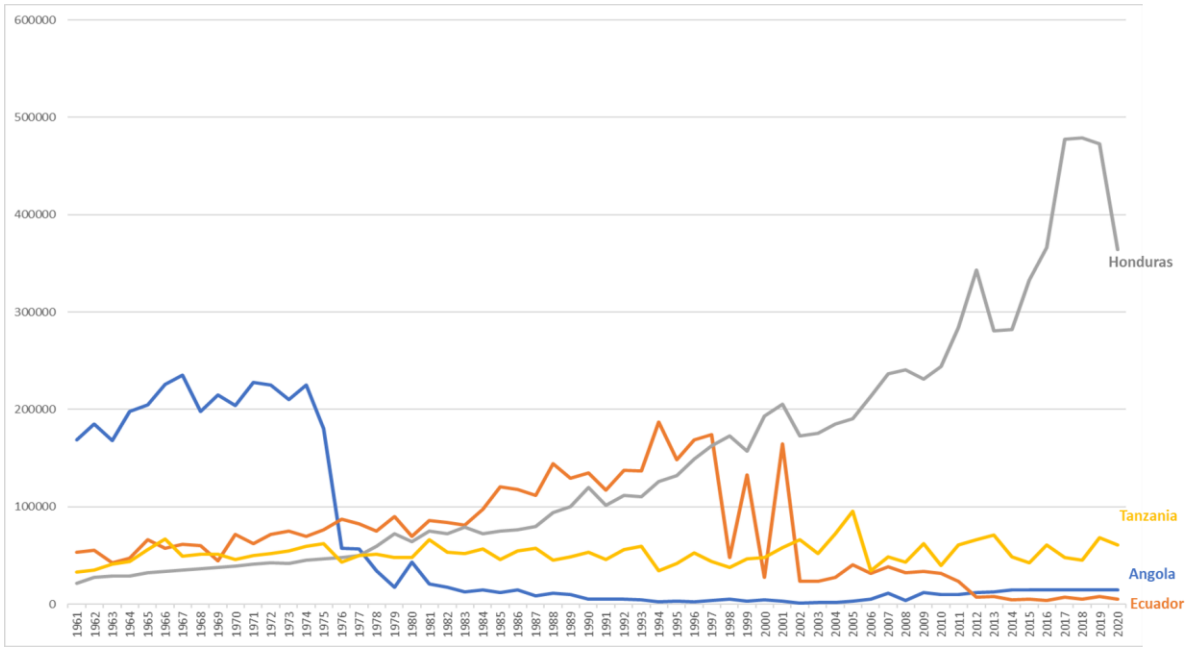


Figure 1. Evolution of coffee production in the 4 countries 1960-2020
Source: FAOSTAT.

Honduras: steady growth of coffee production

Since the early 1960s, Honduras has been engaged with a very sustained increase in coffee production, with a notable acceleration from the 1990s. It became the 5th largest producer in the rank of coffee production in 2018. With 364,000 t of green coffee in 2020, the production weighted 4.7% of the world production. As seen further, this value chain represents 39% of the country's agricultural exports and approximately 30% of the agricultural GDP.

This expansion is based on a strong increase in planted areas (+68% over the last 20 years) and yields (+37% over the same period). It has been accompanied by substantial changes in the governance of the sector, through an in-depth reform of coffee institutions, the introduction of a public-private governance mode and more recently the adoption of a national coffee strategy.

Ecuador: growth with fluctuations and drop of the production

Ecuadorian coffee production during the period 1960-2020 has gone through three clearly differentiated periods:

1960-1994 with strong growth in production, a period in which the country reached more than 400,000 ha in coffee and reached its maximum production in 1994 with 186,000 t. During this period, the VC benefited from the quota system of the International Coffee Agreements (until the 1989 breakdown of the 1983 ICA) and the good prices of coffee beans.

1995-2001 with strong annual fluctuations of the production, which are explained by the price fluctuations, climatic changes and the outbreak of pests that affected the crops.

2002-2020 decline in production (5300 t in 2020 and less than 40,000 ha cultivated). This drastic drop is explained by: (i) the continuous fall in international coffee prices, (ii) the rust and coffee berry borer diseases, (iii) the adoption of varieties not tested for the country's agro-ecological conditions, (iv) the lack of research and technical assistance which is reflected in very low productivity levels, (vi) the dollarization of the economy in the year 2000 and the

increased cost of labour and (vi) the lack of credit, especially for the harvest and post-harvest periods. A gradual abandonment of coffee growing happened over the course, the old coffee plantations were not renewed, and the producers did not continue with the maintenance and fertilization of the crops. This situation led the producers to direct their activities towards more profitable crops such as cocoa, corn and cattle raising.

Tanzania: continuous production

Before the liberalization in 1994, the coffee sector was characterized by the high presence of the state in milling and grading stage of coffee. Cooperatives were considered as a support mechanism to farmers providing the payment irrespective of the world prices of coffee in international markets. Thanks to the guaranteed producer prices, coffee producers were not affected by price fluctuations although their share in the final export price was low. However, the country did not have a clear policy to guarantee the development of the sector before liberalization.

After liberalization, the control of the coffee sector by the state started to reduce and Private Coffee Buyers (PCB) became important actors in the coffee market Most of the coffee is traded at the auction which is dominated by private companies. Coffee production in Tanzania fluctuates moderately and follows a sort of stability within a certain production level range: from 53,000 metric tons in 2003 to 68,000 and 60,000 metric tons in 2019 and 2020 respectively. The latest decrease in 2020 was observed as a result of rising input prices in Tanzania together with the auction system which is dominated by private companies that have the flexibility to purchase coffee at lower cost than in Tanzania. Coffee represents only 3.5% of Tanzania's total export but it provides revenues and better conditions to many smallholders. The quantity of high-quality coffee significantly reduced during the post-liberalization period (from 16% in the 1970s to 3% in the 1990s) (Baffes, 2003) due to the increased prices of agricultural inputs.

Recently, a greater variability of production has been observed: in the north, coffee production has been quite stagnant while in the south there has been a slight increase in production, due to the Tanzanian Coffee Research Institute (TaCRI)-led coffee renovation programs in response to the coffee rust and berry diseases.

Angola: growth, drop and stagnation of coffee production

Coffee in Angola has a long history dating back to the Portuguese colonization (first plantations of Robusta in 1830, mainly in large estates). In the years following the Second World War, the growth of coffee consumption in the world led a strong increase in the production and the export of Robusta from Angola which was mixed with Arabica. The support of the colonial state allowed the country to become the world's fourth largest exporter in the period 1972-1975 (230,000 t) before the country's independence. After this period, during 1975-2002 the country faced a long civil war and continuous political instability. As a result, the commercial circuits fell apart and support of the State declined. Production fell below 50,000 tons in less than 3 years, and exports fell for a long time to less than 10,000 tons in 1990. The situation has improved very slightly since the mid-2000s and recently there has been an important recovery because of the peace process that have taken more than 20 years. Production has increased by 34% between 2019 and 2020 thanks to the recent emergence of large commercial farms.

After examining the trajectory of the four VCs over the last sixty years, we now focus on the last twenty years (Table 1) to understand the trend over the very long term and to put into perspective the place of these coffee-producing countries at the international level. The two Latin American countries are in totally opposite situations: a strong dynamism of production

that does not fail and a very good 7th place in the world for Honduras; and a continued fall in production for Ecuador relegated to 45th place in the world even though the harvest in 2021 was better than that of 2020. The production of domestic coffee represents only a part of the coffee circulating in the VC in Ecuador because imports of coffee for the production of instant coffee (to export) are not taken into account. In any case, domestic production, especially in volume[1], is an insufficient indicator and other economic indicators will further enrich the comparison. Tanzania and Angola have intermediate levels of production compared to Honduras and Angola; they have both recently increased their volumes of coffee production.

Table 1: Production of green coffee – Zoom on the last decades

	2000	2010	2020	Evolution 2000-2020	Evolution 2010-2020	Global rank 2020
Honduras	193.309	244.335	364.552	+89%	+49%	7
Ecuador	27.606	31.347	5.280	-81%	-83%	45
Tanzania	47.800	40.000	60.651	+27%	+52%	16
Angola	4.260	9.951	14.855	+249%	+49%	34

Source: FAOSTAT

3.2. Surface area, number of coffee producers and labour productivity

According to the area of coffee (hectares), Tanzania and Honduras have the largest coffee cultivated area compared to Angola and Ecuador (Figure 3). Nevertheless, Honduras is the only one among four that is an important player in the international market (but far behind the major players, Brazil, Vietnam, and Colombia, with respectively 3.7, 1.8 and 0.8 million tons of green coffee in 2020).

Honduras is also the country with the highest number of coffee producers among the four countries, and has the highest number of tons produced per hectare (Figure 2). It is followed by Ecuador with 37,000 producers and Angola with 26,000. The production per producer in these two countries is 0.36 tons on average. In Tanzania, national production is dominated by around 450,000 small farmers.

HONDURAS

326.000 t of green coffee on 225.000 ha (2015-2016)

97.000 growers

Yield: 1.45 t/ha

3.36 t/grower

Average suface: 2.3 ha/grower

ECUADOR

13.200 t on 38.500 ha (2018-2019)

37.000 growers

Yield: 0.34 t/ha

0.36 t/grower

Average surface: 1.04 ha/grower

TANZANIA

42.000 t (2017-2018) on 275.000 ha

450.000 small farmers (1% organic certified in one district*) + 110 large estates

Yield: 0.15 t/ha

0.09 t/grower

Average surface: 0.6 ha/grower

Study in Arabica region

ANGOLA

9.200 t of dry coffee (2018-2019) on 44000 ha

26.000 growers

Yield: 0.21 t/ha

0.37 t/ grower

Average surface: 1.7 ha/grower

*At national level, 10% of the production is differentiated. In the region studied, only 1% of the production was organic certified.

Figure 2. Production, number of growers and production per grower in Honduras, Ecuador, Tanzania and Angola.
Source: VCA4D Studies.

[1] Indeed, depending on the share of conventional/unconventional coffee in each country, the quality levels of the products and the targeted markets, the evolution of this curve in value could be significantly different.

Concerning the labour productivity (tonne of coffee per FTE job), it is the highest in Honduras (3.9t) followed by Angola (2.23t), Ecuador (1.43t) and Tanzania (1.17t). If we compare the two Latin American countries, the Honduran coffee VC is highly productive and characterised by low labour wage and relatively high mechanised operations compared to the Ecuadorian VC (Ruben et al, 2018). In Ecuador, the coffee VC structure seems to be highly dependent on the instant coffee industry. Increasing costs of production due to dollarisation hinders the use of labour and inputs. The situation is similar in Tanzania where the use of inputs in the coffee production has drastically decreased in the post-liberalisation period. Family farms, being the main producers of the Tanzanian coffee, can hardly provide the sufficient labour required for the coffee cultivation as the priority is for food crops. As for Angola, the VC hires a lot of rural labour at very low wages for coffee production.

3.3. Differentiated coffee and certification

In Honduras, important initiatives have been carried out over the last 20 years for the improvement of quality with the aim of reducing the gap between domestic cost and international prices for conventional coffee: improvement and systematization of wet pulping, the establishment of a geographical Indication (GI) and a PDO, development of organic production, organization of auctions for very high-quality cup coffee (Cup of Excellence), and others.

In Ecuador, differentiated coffee represents 10% of national production of beans in 2020: organic coffee, cup of excellence coffee and Protected Designation of Origin (PDO) coffee of Galapagos whose production is destined for export markets. Production in the cup of excellence is carried out by producer-entrepreneurs that uses modern technological equipment in the production and who has a great control over the market, as they sale their production directly to international buyers. To guarantee high-quality cup of excellence coffee, a set of services has been established in recent years, such as: quality laboratories with infrastructure, machinery and high-end equipment and certified Q Graders tasters. Certified producers of other differentiated coffee (organic and PDO) don't have a great control over the VC, as they use intermediaries to sale in the international market.

In Tanzania, organic coffee export represents 10-12% of the total exported coffee. Certified coffee production is more developed in the Kilimanjaro region (North) than in the southern highlands. Farmers seem to be less interested by the organic production system as it requires more efforts in terms of management and practices and the premium received for certified coffee is not high enough to compensate this extra work.

In Angola, the production of specialty coffee is incipient. Recently, with the support of the EU, an initiative has been carried out to improve the quality and the certification process of coffee as well as the contribution of coffee to the local economy.

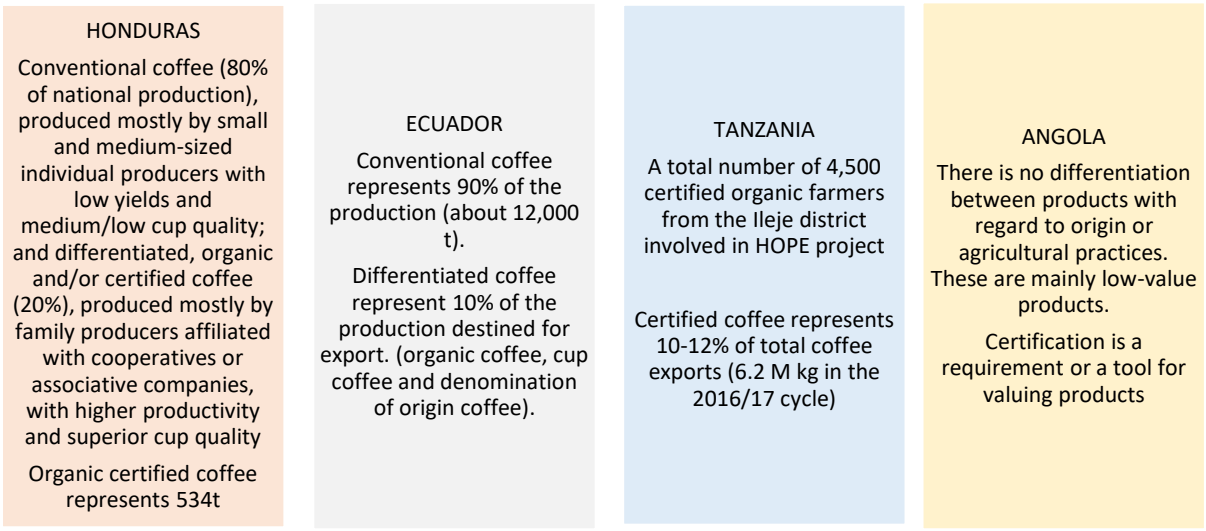


Figure 3. Organic, conventional and certification coffees in Honduras, Ecuador, Tanzania and Angola.
Source: VCA4D Studies.

3.4. Types of coffee and markets

Coffee production is divided into two main groups as seen previously: conventional coffee and differentiated coffee, for which the Arabica and Robusta species are mainly used according to agroecological conditions and actors/country strategies. The conventional international prices of the Arabica and the Robusta species are determined by the New York Stock Exchange and by the London Stock Exchange respectively. The international prices of the differentiated coffee by certification, cup quality or origin are established outside the stock exchange, according to the agreements between the buyer and seller. In Honduras, coffee production uses 100% of the Arabica species, while in Angola the Robusta species are widespread. In Ecuador and Tanzania, there is a mix of both varieties, but the Robusta remains the most common.

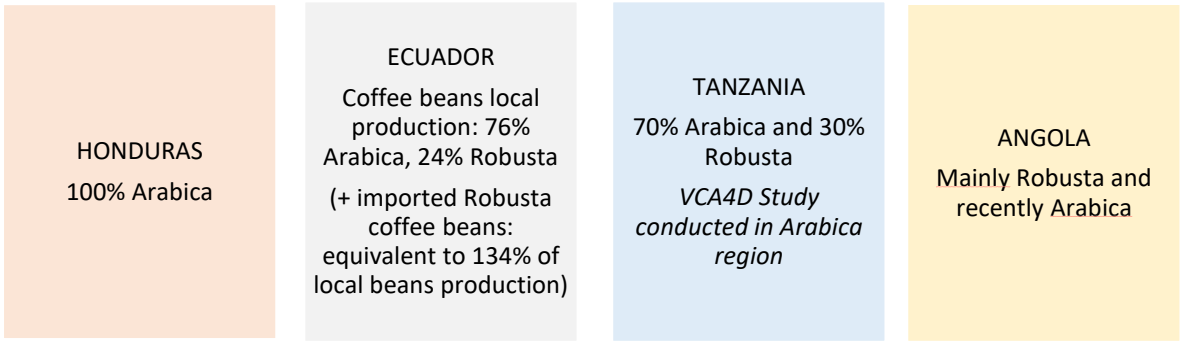


Figure 4. Coffee species in Honduras, Ecuador, Tanzania and Angola.
Source: VCA4D Studies.

The performance of the VC within the countries differs according to marketing channels, the share of conventional and differentiated coffee as well as the share of coffee oriented towards export or domestic market (Table 2).

Ecuador is the country with the largest share of domestic-oriented coffee, accounting for almost half of the country's conventional coffee marketed in the country. As a result, and despite a low production of differentiated coffee compared to other countries, differentiated coffee accounts for nearly a fifth of its exports, much more than Honduras.

Table 2: Percentage of disposable coffee for consumption in the four countries according to marketing channels

% Coffee	Conventionnel Export market	Conventionnel Domestic market	Differentiated (mainly export)	Share of differentiated coffee in total coffee export
Honduras	75%	6%	19%	7%
Ecuador	51%	45%	4%[2]	20%
Tanzania	80%	10%	10%	11%
Angola	90%	10%	0%	0%

To summarise, the local context of each coffee VC helps us to better understand why VCs functions differently and how the VC is associated to the national economy. As previously mentioned, in Ecuador the economy has been under dollarisation, and the oil industry has a very strong impact on the national economy compared to the coffee sector which remains small. In Honduras coffee is one of the most important sectors and has been growing drawing a parallel between the development of the Coffee National Strategy and its strong dynamism in the Economy. As for Tanzania, the Coffee Industry Development Strategy (2011-2021) which was developed by the National Government in collaboration with the Coffee Industry Stakeholders under the leadership of the Tanzanian Coffee Board (TCB) helped the VC to gain importance and created synergies between the stakeholders. In Angola, coffee production was at the highest level in the 1970s with 230,000 t/year. Coffee sector has restarted to get noticed and discussed since 2002 after the post-independence internal conflicts have gone. These four diverse contexts underscore different functional analysis results as a result of the different considerations of the coffee production in the country.

The four countries show different performances. Regarding the production, Honduras had a steady growth, in Ecuador there were numerous fluctuations and drop, in Tanzania it was continuous and in Angola it fell and stagnated. Production is linked to the area cultivated and harvested. Differentiated coffee plays an important role, especially in Honduras and Ecuador because it is destined for export and marketed at higher prices. Arabica is prevalent in Honduras, Ecuador and Tanzania, while in Angola it is Robusta.

4. Governance of the coffee value chains in the four countries

The four VCs studied show marked differences in terms of governance to which we come back here. These differences are based on the one hand, on diverging production dynamics, which respond as much to country choices over the long term as to public coffee policies adopted in response to the rupture in 1989 of the International Coffee Agreement which marked the liberalization of the coffee VCs. On the other hand, the differences also come from the strategy of producers and their access to support services, in particular from their strategy of intensification or participation in the establishment of differentiated coffee sub-chains. Finally, the horizontal and vertical coordination mechanisms between the actors of the VCs are a key

[2] Differentiated coffee represents 10% of coffee beans primary production in Ecuador. This ratio is reducing to 4% including imported coffee for instant coffee industry.

element of governance because they largely determine the balance of power between them and influence the creation and distribution of the value added.

The suspension of the economic clauses of the Agreement has been occurring in different contexts in the four VCs studied. While the colonial structure of large coffee plantations had already collapsed in Angola after independence, Honduras had already largely begun the technification of its production by adopting technological packages from the Green Revolution, Ecuador had already established its soluble coffee industry and started its production of washed coffee (particularly in the south of the country) and Tanzania had been showing stability in its production. With the end of the international quota mechanism of the ICA and the destabilization of the international market, the four VCs are experiencing a weakening of their cooperatives and the strengthening of private actors, even if these phenomena affect the Honduran sector less.

4.1. States' response to new market conditions

The response of the States to the new market conditions therefore differs significantly from one country to another. Honduras operates a profound transformation of its coffee institution, the Honduran Coffee Institute (IHCAFE), into a private figure of public interest in 2000, which marks the establishment of a shared governance for the definition and implementation of a national coffee sector development strategy. This transformation is accompanied by the creation of a financing mechanism for producers, the National Coffee Fund, funded by the collection of an export tax.

In Ecuador, an apparently similar transformation was carried out with the creation of the National Coffee Council (COFENAC) in 1995, through the initiative of exporters. This new structure is governed by private law, of social and public interest, and is also financed by a tax on coffee exports. Episodes of severe droughts and especially the adoption of the dollar as the national currency in 2000 marked a halt to the growth of production and then the beginning of its collapse, while the soluble coffee industry began to obtain massive supplies from Vietnam. The fall in exports, followed by the adoption of a new Constitution in 2008 which removes the possibility of a specific destination for taxes collected by the State, deprives COFENAC of its sources of funding. This mode of governance was definitively abandoned in 2015, with the dissolution of COFENAC and the management of the VC by the Ministry of Agriculture. The definition of a competitiveness strategy is currently being formulated, without the coffee growing reactivation program having been evaluated.

In Tanzania and Angola, the collectivist modes of organization of agriculture in general and coffee growing in particular do not withstand the new conditions of the international coffee market. The liberalization of the coffee VCs began in the 1990s, but the State has continued to regulate the marketing circuits through licensing mechanisms allocated to private actors with the establishment of regional coffee exchanges in Tanzania and the setting of producer prices by the State in Angola. Only the Tanzanian VC had a development strategy for the period 2011-2021.

4.2. Producer access to support services

There are major differences from one VC to another concerning the development of support services for producers and the access of producers to these services.

In Honduras, the existence of technical assistance mechanisms from the State, and sometimes from producer organizations, allows the delivery of training and extension services to a large part of the producers. This access is facilitated by membership of one of the four major producer organizations. Access to inputs (seedling, fertilizers and phytosanitary products) is provided by the private stores and by the coffee institution through the National Coffee Fund, but the limited effectiveness reduces the effective use of this financing mechanism. A large network of industrial, cooperative or private processing units allows the widespread production of washed coffee. Price information circulates correctly. Under these conditions, a significant part of the producers succeeded in intensifying their production, even if difficulties remain for the very small producers. In addition, approximately 15% of the coffee growers produce differentiated coffee: certified coffee (mostly organic or fair trade), coffee with a geographical indication or denomination of origin, or high cup quality coffee.

In Ecuador, the disintegration of public coffee policies has made research and technical assistance services ineffective, to the point of depriving producers of technical reference systems adapted to the different agro-ecological situations of coffee-growing areas, which cover the Amazon, the foothills of the Cordilleras and coastal regions. Apart from information on prices, producers therefore only have very limited technical information, provided mainly by international cooperation projects and input stores. Wet pulping was initially promoted by these projects in the south of the country where associative structures were equipped with processing units; but its practice remained partial. Finally, recourse to credit is limited; it involves savings and credit unions more than banking institutions. However, the differentiated coffee sub-chains, essentially certified organic and fair-trade coffee, as well as the two denominations of origin and high cup quality coffee, are being developed at the initiative of producers with the support of provincial governments within the framework of decentralization.

In the region of Tanzania where the study was conducted, producers face severe limitations in their access to inputs, technical assistance and processing facilities due to the lack of investment in processing units. Only producers linked to exporters have partial access to these services. At local level, producers, especially young ones, benefit from subsidies from local authorities for the purchase of seedlings. The production of certified organic and fair-trade coffee remains limited.

In Angola, producers' access to support services (technical assistance, information, credit) is very limited. Lack of processing units and weak transport infrastructure are strong limitations. Only a small group of medium-sized producers are successfully investing in the production of quality arabica coffee, its processing and export.

4.3. Coordination between actors and social capital

In terms of coordination and social capital, four major producer organizations and the exporters’ association participate in decisions concerning the VC in Honduras. However, the informality of the membership of the producers to which they formally belong generates problems of representativeness, in particular for very small producers. The level of vertical integration is low; it essentially concerns processing and export. The dominant position of exporters is nuanced by co-management within coffee institutions.

Ecuador is characterized by a weak organization of producers, except for the sub-chains of certified coffee and denomination of origin. Soluble coffee industry players and exporters have a strong organization that reinforces their dominant weight in the VC.

In Tanzania, producers are associated in cooperatives, which play important role in the regulation of coffee marketing to traders. However, these cooperatives are weakened to the

benefit of traders and exporters (Mhando and al., 2013). The latter occupy a dominant position in the sector, including at the level of the regional coffee stock exchange, the operation of which they distort. They are also at the origin of vertical integration with other private actors.

In Angola, cooperatives are inactive and act as the executive arm of INCA. The State continues to play a central role in the governance of the sector. Exporters are the dominant economic actors, placing small producers in a weak position.

In terms of regulation and power relations, the four VCs therefore present contrasting situations, even if the exporters still occupy a position of power (Figure 5).

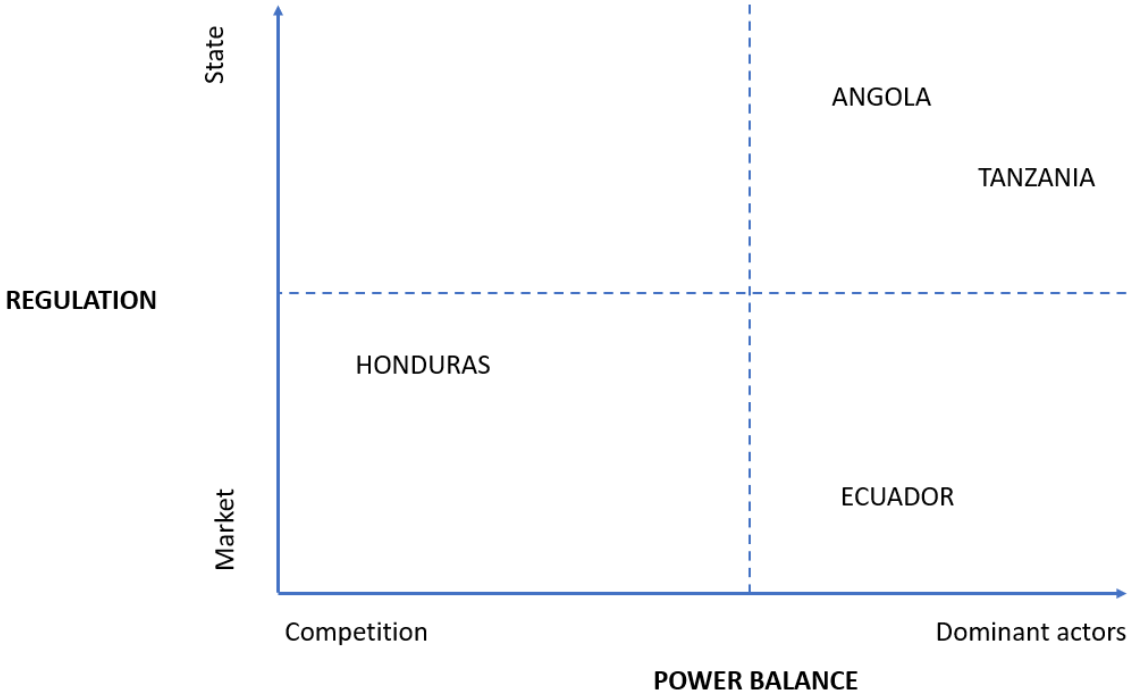


Figure 5. Regulation and power relations in the four domestic coffee value chains based on the VCA4D studies
Source: Authors of the paper

5. Economic performance of the coffee value chains in the four countries

The economic indicators presented in this section were computed using the AFA files of the studies. These indicators help the experts to answer to the first and second framing questions of the VCA4D methodology: What is contribution of the VC to economic growth? Is this economic growth inclusive? In this section we will attempt to have a look at the economic indicators of the 4 coffee VCs (see Annexes Table 1, 2 and 3), considering that the limits of the availability of the information may prevent some comparisons.

5.1. Micro levels indicators

At micro level, the economic indicators demonstrate whether the VC activities are profitable and sustainable for the entities involved (table 3).

Farm gate prices

The price paid to producers follows closely the fluctuations of international coffee prices. However, there is a hierarchy in prices according to the countries, with Ecuador systematically above the prices paid in other countries, and Angola often below. The farm gate prices are generally more remunerative for Ecuadorian producers than for Honduran ones. The interpretation comparing the other countries must be moderate because the prices relate to different types of coffee.

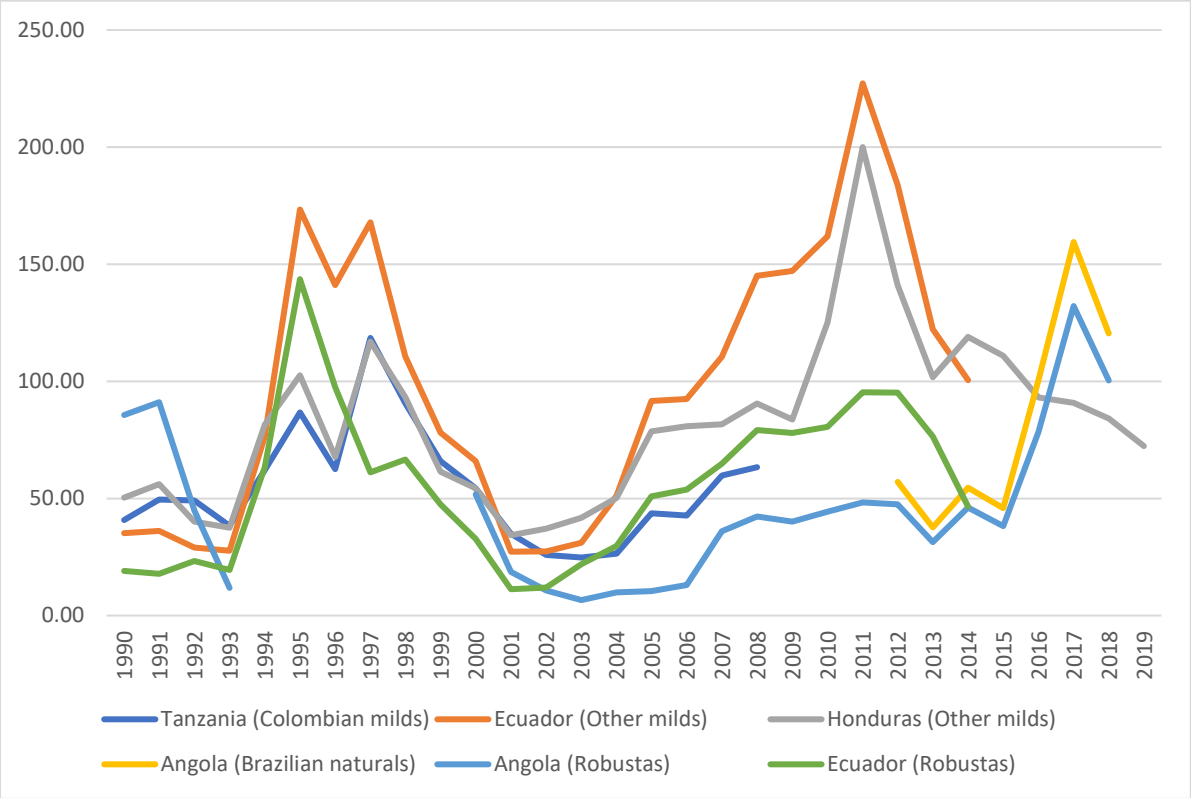


Figure 6. Prices paid to growers in exporting countries In US cents/lb
Source: International coffee organization.

Annual income

The share of the annual income of the coffee producer in minimum wage is estimated at 100% in the Tanzanian case meaning that the coffee farmers obtain the minimum wage from the coffee VC activities. This may be due to the level of the minimum wage that is the lowest in Tanzania among the 4 countries analysed. The annual income of Honduran and Ecuadorian coffee producers represents 22% and 11% of the minimum wage respectively. Angola is the country where the share of the annual income of the coffee producers in the minimum wage is extremely low (0.6%). This should be partly explained by the low yield obtained in the old plantations but also by the ineffective producer cooperatives which don't facilitate the access to price information.

Comparing annual income per ha, we see that the Tanzanian coffee VC offers the highest income despite the lowest yield per ha due to a limited use of inputs and a low part of hired labour. At production level, in Tanzania, a lot of family work is involved, while the medium and large Honduran producers work almost exclusively with waged labour. The coffee VC in Honduras is characterised by the higher use of inputs and hired labour compared to Ecuador.

This might be one of the reasons why the annual income per ha is lower in Honduras than in Ecuador. The annual income per ha is the lowest in Angola but it should be reminded that there is a large difference between the average harvested area in the small family farms and the commercial farms. The fact that there may overestimation regarding the size of large-scale commercial plantations may have increased the average area used in our computation.

Return on turnover

The ratio of Return on turnover compares the operating profit to the value of production. This ratio is the highest in Ecuador as a result of better price for the producers despite of the high cost of production explained by the increase in the cost of labour (linked to dollarization).

INDICATORS	Honduras	Ecuador	Tanzania	Angola
Net operating profit (NOP) by producers (annual income €)	876	524	480	4.6
NOP / ha	380	503	800	2.70
Return on turnover (operating profit/production)	43%	65%	44%	40%
Benchmarks for farmers' net income (minimum wage in €)	4000	4864	480	732
Percentage of producers' annual income of the minimum wage	22%	11%	100%	0.6%

Table 3. Microlevel indicators of Honduras, Ecuador, Tanzania and Angola.
Source: VCA4D Studies.

5.2. Meso and macro-level indicators

The meso and macro-level indicators help to assess the VC impact in the national economy.

Value of the production and value added

Regarding the value of production, obviously Honduras has the biggest coffee production value (€ 1 billion) among the 4 countries (see Annex 2). Compared to the other 3 countries, the coffee VC weight a lot in the Honduran national economy (total VA of the coffee VC representing 4% of GDP and 30% of agricultural GDP) and public policies are supportive to the development of the coffee VC. Likewise, the direct and total VA are the highest in Honduras. The contribution of the total coffee VA to GDP is the lowest in the case of Angola as a result of the decline in state support and interruption of the trade channels affected by political disruption for many years in the past.

Rate of integration in the national economy

The rate of integration in the national economy, measuring the capacity of national suppliers instead of importers to provide goods and services useful to the activities of the VC, is high in all coffee VC cases. The fact that the Honduran coffee VC is well-connected to the other sectors of the national economy also leads to a higher driving effect ratio. Comparing the indirect VA to direct VA, this ratio measures to what extent domestic business is involved in support of the VC activities. The ratio is the highest in the Honduran coffee VC (41%) and the

lowest in Ecuador (1.21%). In other words, in Honduras, for each € 1 of direct VA, € 0.41 of indirect VA is generated. Thus, the Honduran coffee VC's demand for the intermediate goods and services in domestic economy instead of in the international market is higher compared to the other 3 coffee VCs.

Value chain balance of trade

As for the value chain balance of trade, all the 4 coffee VCs contribute positively to the balance of trade since the production is mainly exported and the VCs don't need many imports of intermediate goods and services. However, for Angola, the value chain balance of trade is negative because the value of coffee imported by coffee traders for Angolan consumers is higher than the exports of domestic coffee for foreigner consumers.

	Honduras	Ecuador	Tanzania	Angola
	27 HNL (2017)	1.11USD (2019)	2 500 TZS (2017)	500 KWZ (2019)
Value of final VC production	30 billion HNL 1 billion €	294 million $ 265 million €	76 billion TZS 30 million €	4.5 billion KWZ 9 million €
Direct VA	17 billion HNL 629 million €	247 million $ 222 million €	47 billion TZS 19 million €	3.5 billion KWZ 7 million €
Total VA	24 billion HNL 889 million €	250 million $ 225 million €	53 billion TZS 21.2 million €	3.8 billion KWZ 7.6 million €
Total VA in percentage of the GDP	4%	0.23	0.05% of national GDP 0.7% of regional GDP Songwe and Mbeya Regions	0.008
VC agricultural actors' Value Added in percentage of the agriculture sector GDP	30%	2.60%	NA	0.073%
Rate of integration into the Economy (total VA/VC production)	81.40%	85%	71%	86%
Balance of trade of the VC	$36.4 million (32.7 EUR)	746 million EUR	63,134 million TZS (25253 EUR)	2.300 million de kwanzas (€ 4,6 million)
DCR	0.7	0.4	0.15	0.48

Table 4. Meso and macro level indicators of Honduras, Ecuador, Tanzania and Angola.

Note: Exchange rate 1 euro: (i) Honduras= 27 HNL (2017); (ii) Ecuador= 1.11USD (2019 (2017); Tanzania= 2 500 TZS (2017); Angola= 500 KWZ (2019)

Source: VCA4D Studies.

5.3. Value added distribution in the value chain

The VC activities create VA, and thus income for the actors[3]. From a general point of view, in Tanzania (for the reference period 2017-2018), the small coffee producers get the highest share from the VA (42% of the direct VA) (Figure 7) among all the direct VC actors. The share

[3] Components of the VA: net operating profits (income for the VC actors), wages (income for the workers), financial charges (income for the financial institutions), taxes (income for the government), rent (income for the capital owners), depreciation (expenses on capital renovation).

of the Tanzanian coffee processors seems to be quite low compared to the farmers. The reason is that some processing activities are already embodied at farm level and don't appear as separate processing activities. In Angola (2018-2019), the distribution of income for coffee producers seems to be the worst among the 4 coffee VCs because the Angolan coffee producers generate 29% of the direct VA (Annex 1, Table 2) but receive only 3% of it. The waged workers get the biggest part of the direct VA. In Ecuador (2018-2019), the share of the instant coffee (soluble) industry is very high (43% of the direct VA). The coffee farmers receive 28% of the income, 20% of this corresponding to the income of high quality coffee (excellence) farmers. In Honduras (2015-2016), the share of the direct VA among actors is the most balanced. 29% of the income goes to the coffee farmers. Small conventional coffee producers receive almost the same share (7%) as certified medium-large producers (8%).

Workers' shares in the direct VA are quite close in Ecuador and Honduras (16% and 15% respectively). Nevertheless, the Ecuadorian VC hires less workers but at the highest wage while Honduran coffee VC hires more workers but at relatively lower wages. There does not exist a large difference across the four coffee VCs regarding the share of depreciation.

Regarding government income (taxes), although the share is low for the four VCs (no more than 3% of the VA), the taxes share are three times higher in Honduras than in Ecuador and Tanzania, the situation of Angola being in the middle. For Honduras, this is very consistent with the buoyant context favourable to the VC in the country and in return the high contribution of the VC to economic growth. This situation may be relevant of the pattern of the shared public-private governance of the VC in this country and the high level of public support to the VC.

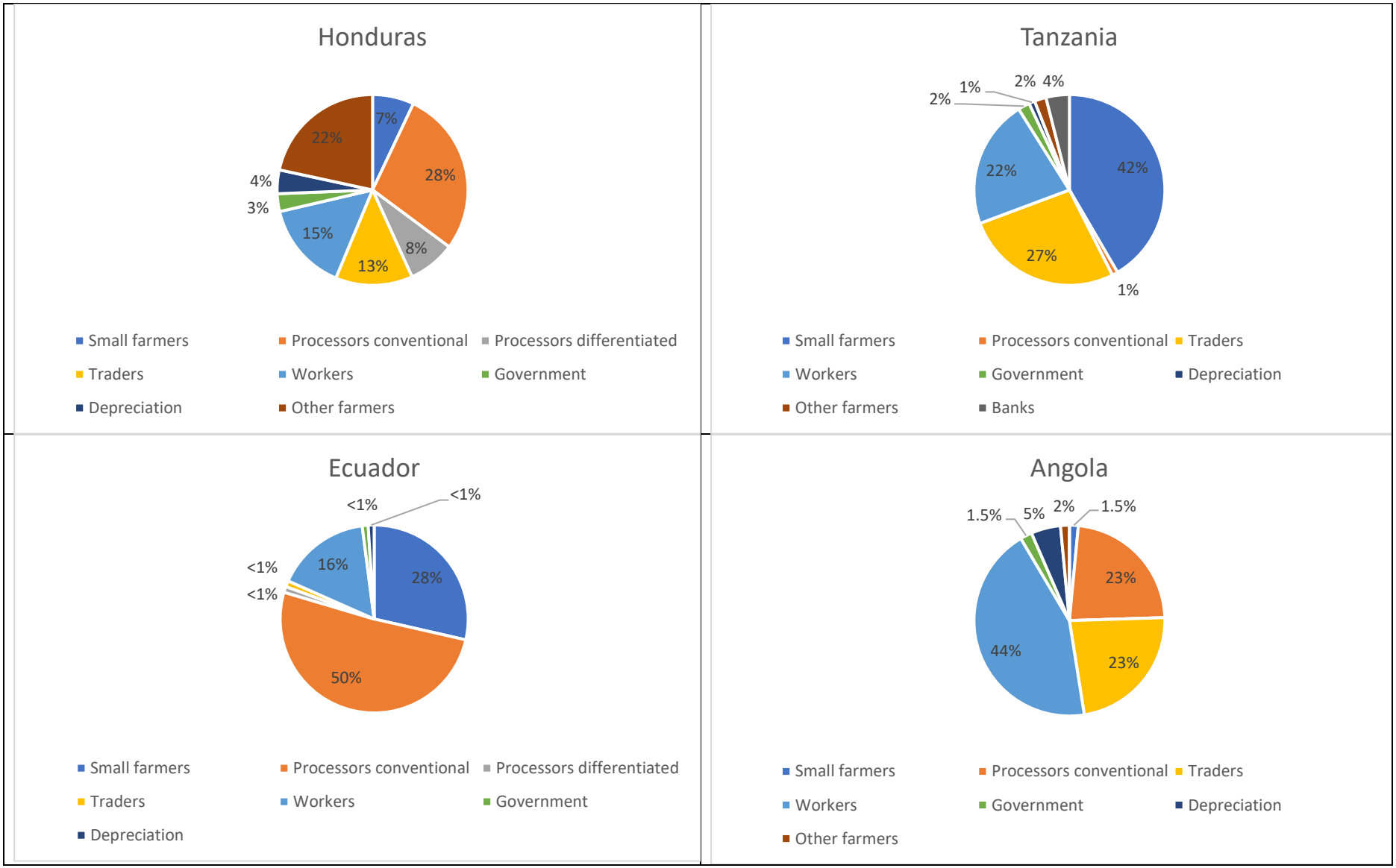


Figure 7. Distribution of income (direct VA) in the four coffee VCs. Source: VCA4D studies.

5.4. Income distribution and inclusiveness

In this section, we will focus mainly on the distribution of the net operating profits, wages and employment attempting to demonstrate whether the coffee VCs in the 4 countries allow the actors to take advantage of the VC operations in an inclusive way.

Distribution of the net operating profits

Net operating profit (NOP) is one of the components of the direct VA and represent the income going to the VC actors (farmers, processors, traders). The share of the NOP in the direct VA is the lowest in Angola (49%) and the highest in Ecuador (84%). This means that a great part of the VA created by the Ecuadorian coffee VC is returned as incomes to the VC actors, the remainder (16%) being distributed to other actors (workers, government, banks, etc.). In Honduras and Tanzania, the VC actors receive respectively 78% and 71% of the direct VA (Annexes, Table 3).

In Ecuador, a great part (88%) of the profits is received by both the conventional coffee processors (63%) and the differentiated coffee cup of excellence producers (25%). In opposition, the instant coffee industry (café soluble) receives alone 55% of the profits. The share of the other actors (differentiated coffee processors, traders) is minimal.

In Honduras, the profits are mainly shared between the processors and the medium and large farmers. The processors and traders of the differentiated coffee get relatively lower shares of the profits compared to those of the conventional coffee (Figure 8). The coffee farmers get 37% of the profits and 9% of it goes to the small farmers.

In Tanzania, profits are shared between the coffee producers (61%) and the traders (38%). The very low share of the processors in the profit distribution is explained by the fact that most of the processing activities are included in the farms' activities as services.

As for Angola, the profits are mainly shared between the processors (47%) and traders (47%). The coffee farmers receive only 6% of the profits created by the VC operations.

To summarize, the distribution of the net operating profits among the VC actors indicates a striking result for the Angolan coffee VC. Even though the coffee farmers contribute to one third of the VA generation and are the main source of wages for rural labour, they only receive 6% of the total profits created by the VC operations. This appears to be a result of the VC governance, where the State alliance with a reduced group of large producers, also involved in processing and trade, places small producers in a position of extreme weakness. The distribution of the net operating profits also brings out the dominance of the instant coffee industry in the coffee VC in Ecuador as it gets alone 55% of the total profits.

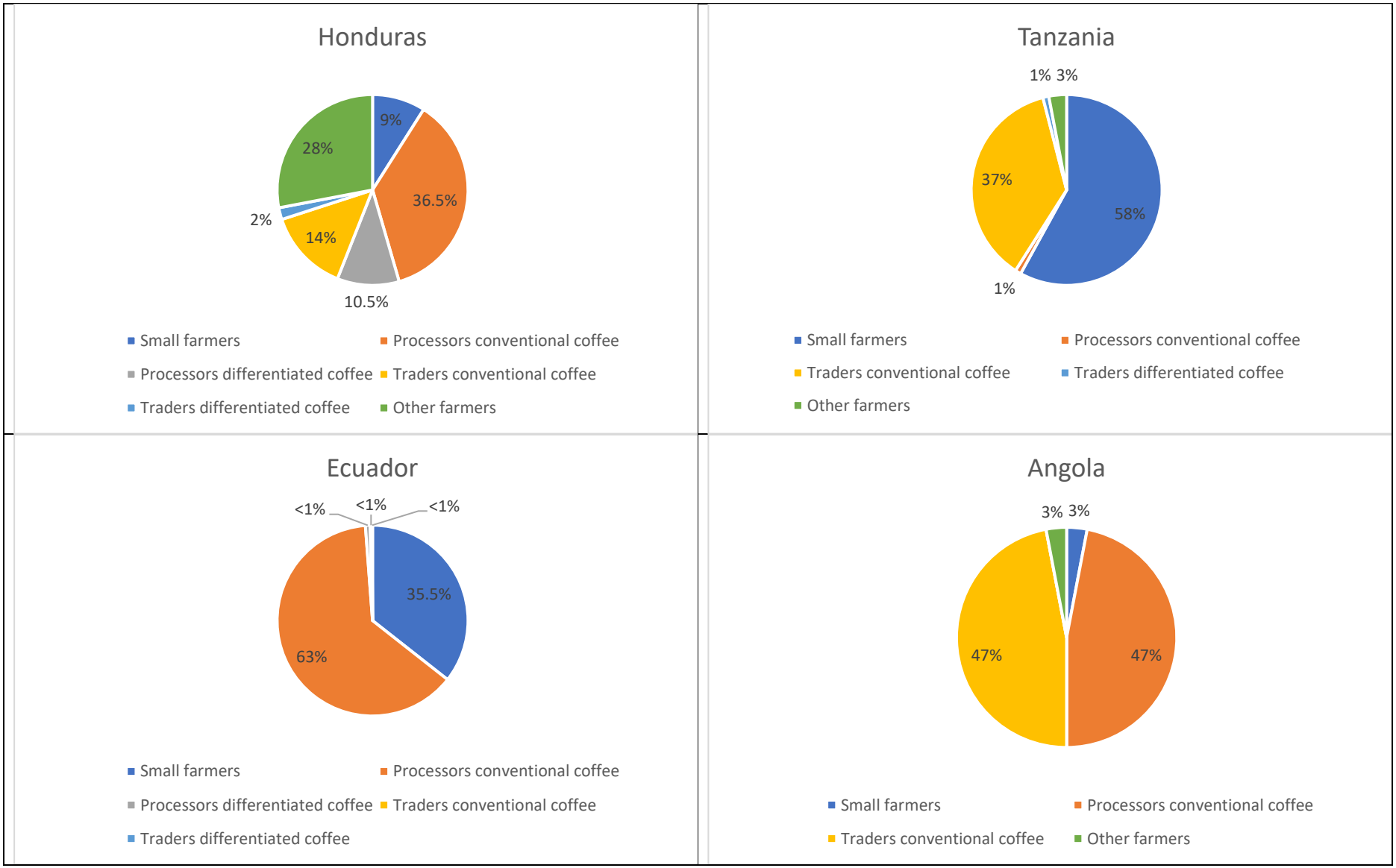
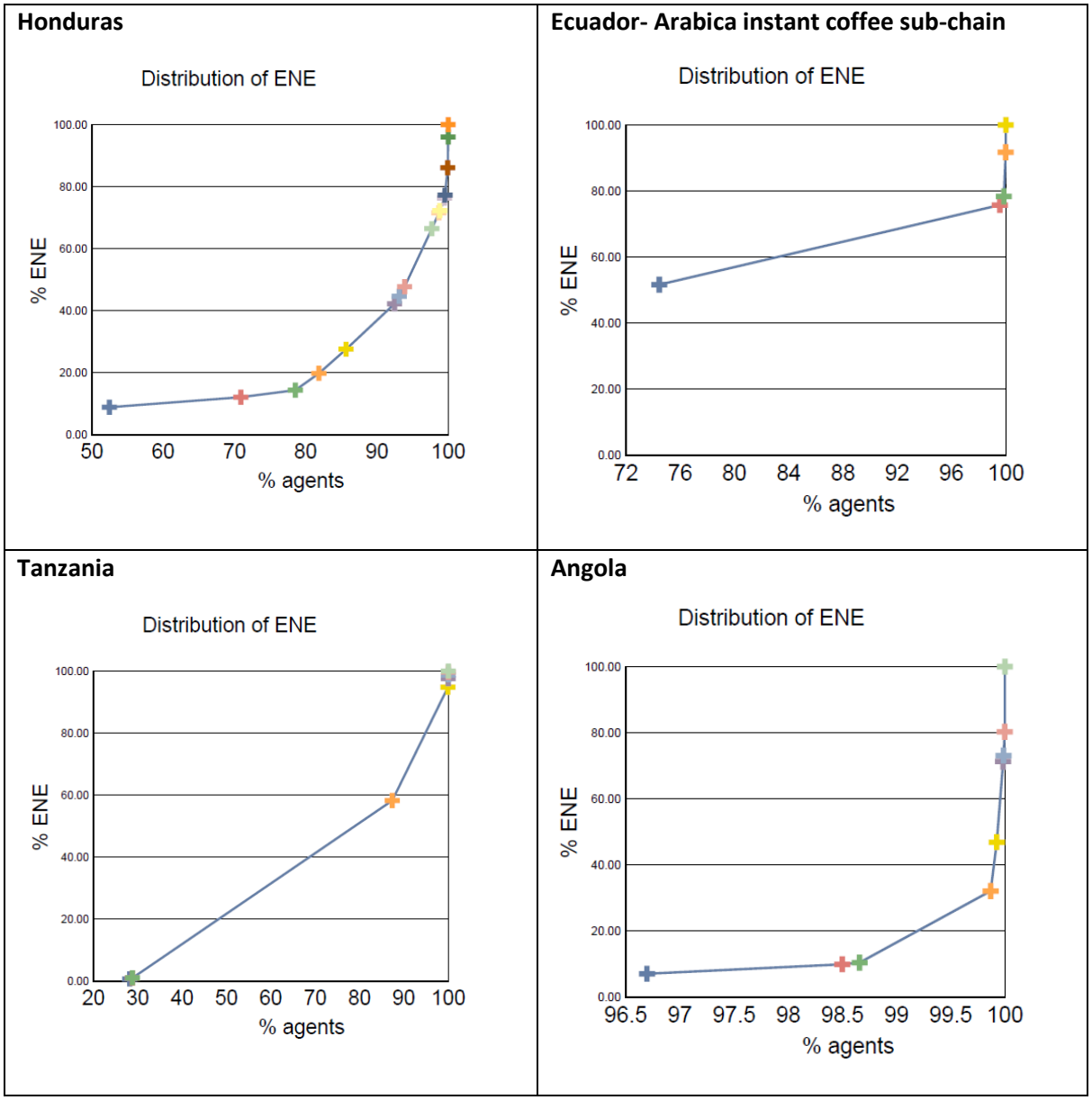


Figure 8. Net Operating Profit Distribution in the 4 Coffee Value Chains. Source: VCA4D studies.

Gini Index

The Gini index can also represent the income inequality between the actors. This index measures the dispersion of the profits within the VC. A Gini coefficient of 0 expresses perfect equality, where all values are the same, while a Gini coefficient of 1 (or 100%) expresses maximal inequality among values.

Even though the scope of the 4 coffee VCs is not comparable (Ecuador having different sub-chains and Tanzania having a regional study), the Tanzanian and Ecuadorian Arabica coffee sub-chain that is used by the instant coffee industry seem to be more egalitarian as coffee producers can get nearly 50% of the profits generated (Figure 9). In Angola, the distribution of the income is the most unfair. As stated in the previous parts, the coffee farmers in Angola are disadvantaged in the share of the profits receiving only 6% from the total profits. As for Honduras, Gini index is quite high (less egalitarian) pointing out a certain level of unfair relationships between the VC actors. The reason is that small producers represent nearly 56% of the actors in the VC but they hardly get 10% of the profits generated.



ENE: Net Operating Profit

Figure 9: Gini Index in the Four Coffee Value Chains

Distribution of wages

Wages are one of the components of the direct VA and generate income for the workers. The share of the wages in the direct VA is the lowest in Ecuador (15%) and the highest in Angola (44%). In Ecuador, the dollarization of the economy resulted in an increase of the cost of labour and a reduction of the coffee area, so that the activity switched to a mostly familiar activity, which explains this lower share to workers. On the other hand, in Angola, the coffee VC activities benefits mostly the waged labour. However, the jobs that the Angolan coffee VC creates are essentially inside farms with informal employment relationships. Wages constitute 22% and 16% of the VA in Tanzania and Honduras.

In Ecuador, wages are mainly generated by the differentiated coffee producers (60.5%), in particular by the specialty cup quality coffee of excellence producers, and the instant coffee industry (31%) (Figure 10). In Honduras, the medium-large conventional farms create the largest part of the wages (50%) followed by the conventional coffee processors (15%). In

Tanzania, small conventional farms are the main contributors to the wage creation (73%) followed by the conventional coffee exporters (13%). In Angola, the shelling industry is the main source of wage income (35%) followed by the traditional family farms (33%) and the other commercial farms (24%). Wages in the Angola coffee VC are the largest component of the direct VA and farmers are the important contributors (57% of the total wages). However, the average wages paid by farmers are notably lower than those paid by processors and traders.

Overall, the distribution of the wages by the actors of the VC shows that in all cases coffee farms are the main contributors to the wages. In Ecuador and Angola, the instant coffee industry and shelling industry can also be considered as important actors as they provide employment and distribute a great part of the wages.

Employment and Women Labour

In terms of Full Time Equivalent (FTE) waged jobs generated by the coffee VC, Honduras comes in the first place (around 82,000 jobs) followed by Tanzania (10,000 jobs), Ecuador (9,200 jobs) and Angola (4,100 jobs).

Women are reported to be involved in 36% of the jobs in the coffee VC in Ecuador. As for Honduras, women are less visible in the participation in the coffee VC activities, mainly due to the difficulties they face regarding the access to land and services. In Tanzania, women constitute the largest part of the labour during production. They work either on their household farmland or as labourers on other farms and estates. However, coffee is mainly considered a man crop which prevents women from getting involved in the other phases of the VC. Similarly, in Angola, coffee cultivation is perceived by women as a “male” crop, and women are more involved in the cultivation of food crops. The presence of Angolan women in the coffee VC is limited to the production phase including harvesting.

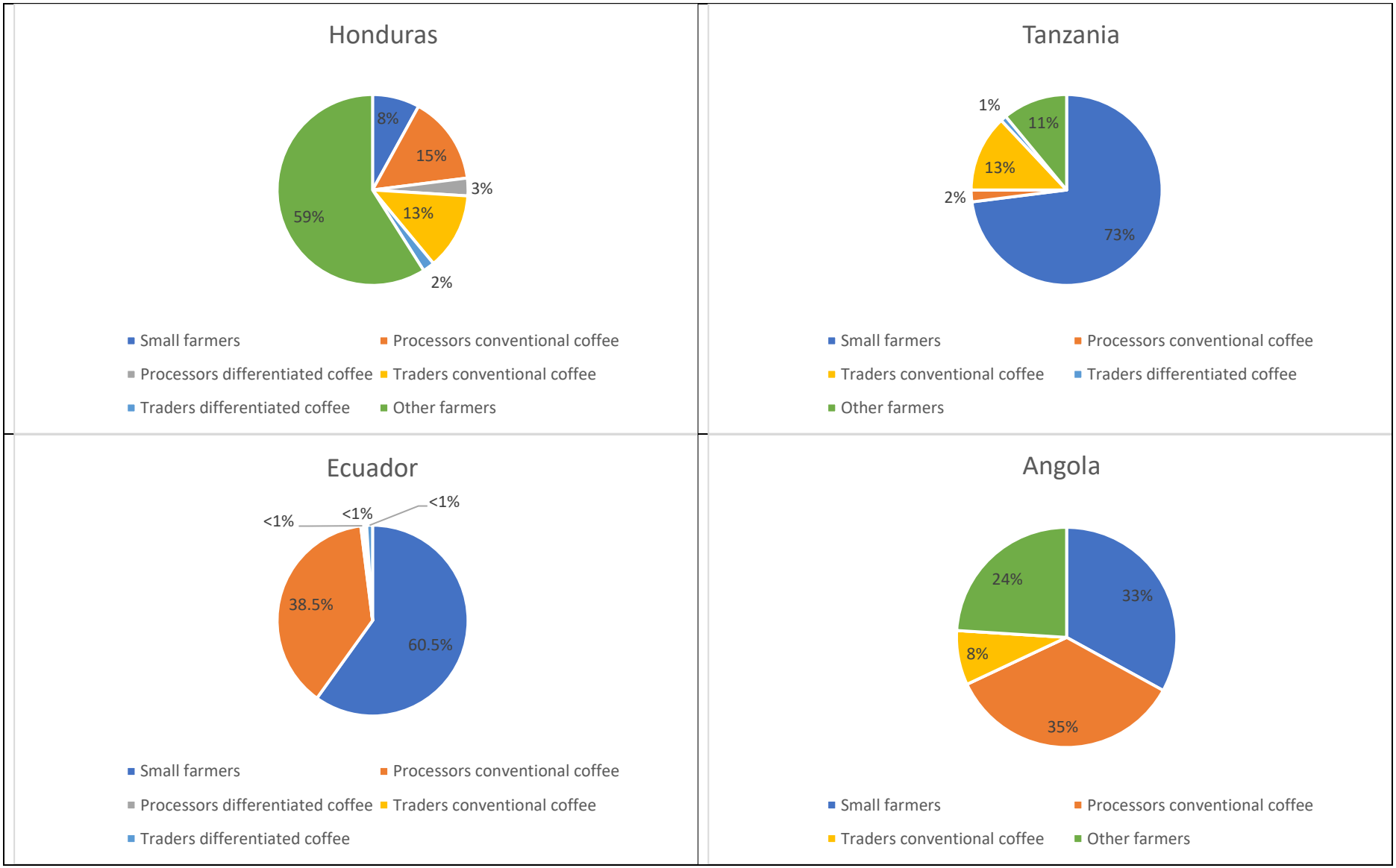


Figure 10: Distribution of wages by the VC actors. Source: VCA4D studies

6. Discussions

Why to deepen/enhance the relationship between the governance and economic performance?

Given that coffee is essentially an export product and that world market conditions are the same for all countries since the end of the ICO Agreement, the reasons for the very different trends identified in the countries both in terms of the evolution of production but also of economic performance are to be found in the situation of the VC within each country (competitiveness, governance, public policies, etc.) or more generally in economic and political events in countries (dollarization, civil war, etc.).

Even the curves (Figure 1 and Table 1) do not show any significant "deregulation effect", the liberalization of the coffee VCs on a global scale, put in place with the end of the international agreement on coffee at the end of the 1980s, seems to have had different effect on the trajectories of production in the countries. For Honduras and Angola, the trajectories followed were already engaged due to internal factors. On the contrary, Ecuador and Tanzania entered a period of greater instability in the level of production after the end of the ICO Agreement and the entry of coffee into the Commodity Exchanges in 1989. This deregulation of the coffee market has affected cooperative structures, has given rise to modes of adaptation which have been more or less successful depending on the country and has forced countries to make strategic choices for the future (renovation of plantations, intensification, development of specialty coffees…). The capacity of the actors of these national coffee value chains to develop governance structures and a shared vision of the future in order to adapt to the market deregulation has been decisive in these trajectories.

However, each country is not homogeneous and there may be differences in governance and economic impact depending on the sub-chains. It is often on the marketing channels that the dominant positions of some players are expressed. These are differentiated on the basis of the type of product (conventional versus special, grain versus soluble for Ecuador) and the methods of pricing (NYC and London stock exchanges for conventional coffee; contractual for specialty coffees, for Tanzania, an auction system, distorted by the dominant position of 4 coffee multinationals). There is a dominant position of exporters (plus the 3 soluble coffee companies in Ecuador), from which differentiated coffee escapes (see Section 4).

What do the intersection of governance and economic performances tell us about the four coffee value chains?

The model of Honduras with a stated public policy (in-depth reform of coffee institutions, financial mechanisms to support these institutions, recent adoption of a national coffee strategy, renovation of coffee areas), the strong role also of producer organizations (even if not all producers recognize themselves in them) and the private sector (intermediaries, major exporters) and the establishment of a mode of public-private governance, show that the coffee sector is piloted in this country where the VC performs economically. This performance is based on medium-sized farms (more than 3t per year against less than 1t for the other countries) with high yields (1.44 t per ha against less than 0.5 t for the other countries (see Figure 2). These farms are fully involved in coffee production since the time they devote to it is around 50% (compared to 15-20% in other countries) and some of them have been able to diversify into differentiated coffee. This dynamism causes that the coffee VC contributes to 4% of the national GDP (in comparison to less than 1% for the 3 other countries) and 30% of the

agricultural GDP (much more than the 3 other countries), hence the interest of political actors at the national level and throughout the territory where coffee represents a significant part of the crops.

The VA directed to public finances is low (3%) but much more important than the 3 other countries, allowing expenses from the State in favor of the VC. The indirect effects in other sectors of the national economy are also important, the driving effect ratio being at 41%, the highest of the 4 countries. These good results of the VC in Honduras should not hide difficulties: weak coordination between institutions, difficulties in accessing credit, roads to be improved, etc. Moreover, Honduras is the country that is the least inclusive of vulnerable populations since a fairly small part of the direct VA is distributed to small producers and workers. Producers of less than 2ha represent only 23% of the production in Honduras (compared to 46% in Ecuador, 54% in Angola and 90% in Tanzania). In addition, these small producers, as in other countries, are victims of the fluctuations in the international price of coffee and of the trend towards a distribution of income in global VCs that is increasingly favorable to multinational coffee packaging and distribution companies. The Gini index of the Honduran coffee VC also shows sign of less equalitarian income distribution for small producers as they can only receive 10% of the profits of the VC.

Coffee is struggling to rise to the rank of priority sector in Ecuador. Public policies are less committed or lack efficiency: the State has tried to reactivate production with a recent project which ended in 2021 with very few results (see evolution of production above). The competitiveness plan which would act as a strategic document for the sector has not yet seen the light of day. The productivity levels are low, because research and technical assistance are missing. Credit also is missing, especially for harvest and post-harvest activities. The associative movement is not as powerful as in Honduras, at least for conventional coffee (it accounts for only 18% of the producer workforce), Producer organizations (POs) are small and not very active. The territorial approach is embryonic. A structure similar to IHCAFE in Honduras was set up, but the COFENAC was lacking public financing sources and finally has been abandoned after the dollarization and constitutional changes. It seems that the most powerful actors are private operators of a certain size: intermediaries, exporters, and instant coffee companies. Although participating in ANECAFE, they do not seem to have really developed actions in the interest of small producers: contract-farming, technical support, etc.

Since the State and the cooperatives are not the strong actors in the VC, support services for producers are underdeveloped: access to inputs, research, technical assistance, credit, etc. Thus, despite a rebound in 2021, production is losing ground in this country. Ecuador, unlike Honduras, is currently a small coffee producer, ranking only 45th at the world level. A large part of the activity of the coffee VC is based on the importation of coffee from Asian countries, so the contribution of processing to economic growth is much greater in this country than in the others, but overall, the value added is low than in the 1990s. Moreover, the driving effect ratio stands at a low level (less than 2%) meaning few indirect effects within the national economy. Weakly supported by the Government, associations and the private sector, the producers have become demobilized, mainly since the change to dollar has increased the costs of production, in particular that of the labour. Nevertheless, according to the Gini index, Ecuador (at least the sub-chain instant coffee) is one of the more egalitarian/ equalitarian country. There are also still some islands of prosperity with specialty coffee which represent around 10% of production, such as coffee from Galapagos Islands. The country has the potential to make coffee a spearhead in the fight against poverty: the rate of return for producers is high despite the cost of labour (65% against 40% in other countries), probably due to the low rate of imported consumables; the share of small producers in the creation of the value added is high. But there is a risk that the country favors the processing of imported raw material, supported by the exemption from import taxes.

In Angola, despite the omnipresence of the State in the sector which has not really stopped since the period before liberalization (State companies, coffee prices set by the INCA, licenses and subsidies, etc.), the VC is not piloted. The State abandoned the VC and more broadly large parts of the agricultural economy during the long civil war which lasted more than 25 years, and since 2002 a national strategy is also struggling to be put in place in a context of a lack of impulse and coordination. Institutional problems are numerous in Angola: failure of the INCA, weak consultation between the State and NGOs, etc. It seems that in recent years a private sector of medium and large sized farms is developing and that the level of production which bottomed out at less than 10,000 t in 2010 could recover, also under the effect of the very recent creation of an investment and export promotion agency (AIPEX). Despite the recent impetus from part of the private sector, the problems to be overcome are quite gigantic and penalize the development of the coffee VC in a country which was the 4th world producer in the early 1970s before Independence: poor access to credit, technical support, information and land, poor condition of transport infrastructure, need for the improvement of agronomic practices, storage capacities and access to land.

In addition, there are strong inequalities, and despite a reference price for coffee, set by the INCA (a structure with public/private status), which is supposed to leave 1/3 of the coffee margins to producers, producers are extremely disadvantaged in the sharing of value added to the advantage of traders since they only recover 3% of the distribution of the value added. Their annual coffee income is less than 1% of the minimum annual income in the country. The annual coffee income per ha is the lowest compared to the 3 other countries (less than 3 €). Small producers survive thanks to state subsidies. Another negative point for Angola, the situation of women in the VC is particularly bad (risk of exclusion, work overload, heavy work…), while it is average in Tanzania and rather good in Latin America. However, a large share of the income distributed is wages (44%) and the VC creates a large number of jobs, which makes the VC more inclusive from this point of view. At the macro-economic level, as in Ecuador, the rate of integration into the national economy is high, certainly due to the country's oil wealth, but the driving effect ratio is low, even if the country does not import a lot of goods and services, the activities do not generate heavy purchases within the national economy.

Finally, Tanzania has maintained its level of production for 60 years at around 50,000 t, which weighs positively in its balance of trade (3.5% of exports), the liberalization of the sector does not seem to have had any effect on the variation of this level of production. Its conventional coffee is extremely competitive, and the country reaches the honorable 16th place at the international level, the producers are little attracted by the diversification towards certified coffee (coffee “Kilimanjaro” aside) but organic coffee exports represents 10-12% of the total exported coffee. There is a sectoral development policy in the country through the Coffee Industry Development Strategy (2011-2021) with renovation programs, and the government has a market regulator role (existence of a Tanzanian Coffee Board, support for the creation of cooperatives, 'auction…). Regional and local authorities also play a role. The cooperative movement developed since the Independence with rather positive effects, but these associations weakened with liberalisation for the benefit of traders and exporters (Mhando and al., 2013) and the producers lack input and technical support. Currently, the large private companies (multinational companies, exporters, private buyers) that appeared on the market dominate the industry and set prices.

However, this situation seems that this is not unfavorable to small producers (the average size of farms is the smallest of the 4 countries) who are the vast majority in this country (they represent 90% of national production) and to the labor force. The net operating profit per hectare of small producers is the highest of the 4 countries, the share of the (small) producers in the creation/distribution of income is the highest with 42% (traders are also important players from this point of view), the Gini index shows as in Ecuador a relatively equalitarian share of the incomes between direct actors of the VC. Its job creation is significant (0.71 jobs

per ton against less than 0.45 in the other three countries), the rate of integration into the national economy is high as for the other 3 countries, whereas Tanzania is not an oil-producing country. Tanzania therefore ranks as an intermediate country in terms of economic performance, with public/private governance that should find ways to scale up.

What are the lessons learned in accordance with the literature?

Collective action is rather weak in the countries studied (multi-actor's platforms, producer organizations and cooperatives, etc.), except in Honduras, where there were professional organizations (including four large producer organizations) that participated in decisions concerning coffee VC. Producer organizations are very underdeveloped (Ecuador), have declined (cooperatives in Tanzania) or are ineffective (Angola) for conventional VCs. Then unfair balance of power enforces between VC actors, often to the advantage of private operators (mostly exporters, large traders and processing industry) and to the detriment of producers, in particular small producers. Similarly, partnership and management structures like coffee institutes, coffee council or coffee authority, bringing together private and public actors including producer organizations (POs), with guaranteed sources of funding and a co-steering objective within a real coffee sector development policy, only exist in Honduras.

In general, the role of cooperatives, often set up with the support of States, declined with the liberalization of the VC after the end of the 1980s. This fall was accompanied by a weak participation of producers in governance structures in several countries and to price negotiation which accentuated the drop in farm gate prices and resulted in a weak incentive for producers to invest labor and capital in coffee production. Clay et al. (2018) showed this 20-year spiral of low productivity and production stagnation in Tanzania but this situation was the case for many coffee producing countries, and in particular Ecuador and Angola even if for these two countries other reasons are to be invoked unrelated to the liberalization of the sector (dollarization, civil war…). Clay et al. (2018) show that this situation of extremely low farm gate prices can also be accompanied by an over-development of productive capacities and a withdrawal of large producers (attracted by high profits) to the benefit of small producers, who seek to get out of poverty but who remain there. Producers should therefore participate more in price negotiations via POs and a floor price that considers their production costs should be adopted and protect them (which is not the case in Angola although the mechanism exists). POs also play a key role in the dynamics of certification (see below), by assuming the choice of certifications according to strategic commercial orientations related to the quality and quantity of coffee, as well as their promotion to small producers (Faure et al., 2012, example from Costa Rica).

The creation of a public-private structure that includes producers and which is able to rebalance the power relationship resulting from the liberalization, therefore, appears to be a performance condition for the VC. The case of Honduras shows that this mode of governance can have very positive effects, at least on the dynamics of production, to a lesser degree on the economic results. Coe (2006) studied in a large number of coffee exporting countries how commodity market liberalization and the privatization of market regulatory institutions since the 1990s have affected the political influence of farmers in directing policy and how farmer participation in the coffee authority affects market outcomes for farmers. Using the producer share of the world price for coffee, the paper tests whether the farmer share of the world price is higher in countries where farmer groups participate in the country's coffee authority. The results indicate that producer participation in the coffee authority has a positive impact in arabica-producing countries.

Despite the variability of coffee prices, there is a significant resilience of producers to keep coffee in their production systems because it fulfills several functions (Sibelet and Montzieux, 2012, example of the Kenya): it provides cash income, employment, food security and access

to bank credit through the cooperative, which often allows households to pay for inputs and school fees. Coffee is often one crop among others in producer systems, even if it can reach 50% of areas as in Honduras and must remain so given the variability of prices. Ecuador is the country that has seen the number of producers decrease the most over the period 2000-2020 and therefore production because the problems (lack of research, technical assistance, credit, access to inputs and information) far outweighed the advantages of diversifying systems with this product.

One of the paths taken by the countries at the end of the international agreement which marks the liberalization of the sector, was regulation by the market. This liberalization has coincided with the emergence of a number of voluntary regulatory systems, which are starting to compete between them (Muradian and al., 2005). There is controversy over the contribution of sustainability standards (Including Geographical Indications) to higher social and economic impact: net profit, household income, reduction of livelihood vulnerability, better opportunities for producer upgrading, poverty alleviation. Some authors show significant impacts (as Bacon et al., 2005, example of Nicaragua); the majority are more doubtful or show limited impacts (for example, Muradian et al., 2005; Galtier and Diaz Pedregal, 2010; Galtier et al., 2013; Vicol et al., 2018; Estrella et al., 2022).

If we look the case of Honduras, as discussed earlier a significant part of the coffee production is under different voluntary sustainability standards; a major goal of these standards being to improve the livelihoods of smallholder farmers. Nevertheless, according to Estrella et al. (2022), smallholder coffee producers are not obtaining a higher economic impact from different certifications. Among the pathways developed in the paper, only the price premium (and not farm productivity, production costs, and access to credit) was statistically significant for the three certifications assessed (Fair Trade, UTZ, 4C), displaying higher prices and improving farm performance and ultimately the economic conditions of farmers. In line with their economic conditions, these producers have a probability between 56% and 58% of living under the national poverty line according to the Poverty Probability Index (PPI), concluding that certifications do not always improve the livelihood of coffee producers.

Nevertheless, it appears in our results that there is the same hierarchy between the level of development of these certification schemes and the dynamics of production, Honduras being the most advanced country in the field and the one whose economic performance of VC is the best, with Angola at the opposite and intermediate situations for Tanzania and Ecuador, both in terms of development of standards and economic performance. This does not necessarily mean that the development of these sub-chains with standards improves the performance of the VC but rather the modes of governance in force can facilitate the development of these differentiated productions and this can act in return on the modes of governance. Indeed Muradian et al. (2005) show, like many others, that in several countries a common code of minimum good practices will not necessarily improve farmers' ability to reap economic benefits but would improve the environmental and social performance of the sector. Nevertheless, according to the authors, the advantages of some of the voluntary regulatory schemes applied to the coffee sector may have an effect on the governance structure of the chain and their implications for farmers' upgrading. The ability to participate in a voluntary regulatory system may work as a ''reputation'' tool for farmers, facilitating stronger coordination along the chain between roasters/traders and growers that may improve coffee quality and farmers' skills, and shortening the length of the chain with the assistance of public and private institutions.

In any case, these differentiated sub-chains are in the minority in the countries studied and therefore have a limited impact on the performance of the national VCs. The context of changing governance structures, corporate concentration, oversupply, interchangeable commodity grade beans, and low farm gate prices characterizing the crisis in conventional coffee markets (Bacon et al., 2005) remains the one experienced by the vast majority of conventional producers throughout the world. Improving the economic performance of the

whole VC and the inclusion of small producers in the countries requires the development of other forms of governance than the market.

Honduras can appear as a model of governance in our synthesis (sectoral policy, shared governance, effective POs, and participation of producers in decision-making). However, even in this country, which is the one that behaves best in terms of the economic performance of the VC (production growth, yields, and labor productivity, value added per hectare and per job, contribution to GDP), the global coffee production is under constant economic pressure, social unrest, and climate challenges (Estrella et al, 2022). This largely affects the living conditions of thousands of smallholder coffee producers as the weakest actors in the coffee VC and exacerbates the level of poverty and inequality that they face, confirming our indicators of inclusion (distribution of VA and NOPs, Gini index).

7. Conclusion

The end of the international coffee agreement, which marked the liberalization of the global value chain at the end of the 1980s, had different impacts on the national trajectories of domestic VCs, which were forced to revisit their modes of governance. Some transitions had already begun in some countries, minimizing the impact of liberalization, while others had to be put in place, with more or less success. Thus, over the last 50 years, just looking at the extremes, Honduras has climbed from 15th to 7th place in the world ranking of producing countries, while Angola has tumbled from 4th to 34th place. The international market conditions and the internal organizations that the countries have put in place were not the only factors to influence the trajectory of the production in the countries, since other contextual factors weighed on the coffee CV: dollarization in Ecuador, the civil war in Angola, the dependence on oil imports for Honduras and Tanzania. Ecuador and to a lesser extent Tanzania are the countries which seem to have been most marked by the liberalization/deregulation of the VC.

The modes of governance that characterize these 4 coffee economies are significantly different. The governance pattern is a balanced public-private partnership on the Honduran side, in the sense that the POs are heard, guided by a genuine sectoral policy. This shared joint supervision is reflected in good macroeconomic indicators (contribution to GDP, level of operating income, job creation, etc.). In Honduras, coffee is a major commodity for farms, for the national economy, for public finance and for the trade balance. But if the VC is efficient from an economic point of view, the economic growth is not very inclusive, and this would imply finding ways to better share the income from coffee. On the other hand, the VC seems deregulated in Angola, with very little control of the State and professional organizations on its future, the VC seems completely delivered to the forces of the market. As a result, production has dropped enormously, even if there has been a tremor of recovery in recent years, which is more due to the recent establishment of commercial farms than to family farming, and the share of income that goes to small producers is dramatically low. It is not certain that these new actors wish to get involved in a role of regulation/governance of the VC alongside the State like their counterparts in Honduras. The VC seems to be looking for itself in Ecuador with several failures in the establishment of governance instruments (multi-stakeholder platform, sectoral financing, national strategy, etc.), which results in a downward trend in production, economic results in halftone, the abandonment of coffee by many producers despite a fairly balanced income sharing. The success of the VC cacao in Ecuador should inspire the coffee VC. In Tanzania, the cooperative movement is weak but there is a sectoral strategy of the State and voluntary local authorities, which year after year regulate the VC

despite the weight of private operators in the governance. Since producers also process coffee, several micro-economic indicators show a very favorable VC for small producers.

Private governance that has been developed alongside more institutional modes in countries (certification, labels, etc.) concerns a minority of producers (up to 20% of producers in Honduras) and its effectiveness in improving the standard of living of these producers has yet to be demonstrated. Tanzania has played very little of the certification card outside the Kilimanjaro region.

Even if the paper is interested in governance inside the country's borders, it is difficult to ignore the strong privatization of the global VCs to which these national parts are linked, and the "coffee paradox" suffered by the national actors at the end of the chain (fall in the coffee farmgate price and rise in the price of coffee packaged for consumption). Countries without institutional governance have declined (Angola, Ecuador) and can hardly prevent the transmission of lower international prices to farm gate prices. Honduras has not been more successful in protecting small producers, but the VC is prosperous and there is room for improving the distribution of income. Tanzania has a less impressive trajectory than Honduras but combines several assets for a balanced development of its VC in the future.

Finally, our reflection focused by choice on the link between modes of governance and economic performance in the broad sense (including local inclusiveness). It is appropriate to open here, in the conclusion, on the environmental performance of these VCs that we have not explored in the countries, and yet the methodology and the VCA4D studies would give us the means to do so. There is also a very strong link between modes of governance and the sustainability of coffee VCs (Jha et al., 2011) which could be analyzed in other publications.

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Annexes

Table 1: Profitability indicators

Framing Question 1: What is the contribution of the VC to economic growth?		INDICATORS	RESULTS			
			Honduras	Ecuador	Tanzania	Angola
CQ1.1	How profitable and sustainable are the VC activities for the entities involved?	Net operating profit (NOP) by producers (annual income €)	876	524	480	4.6
		Average surface (ha) per producer	2.3	1.04	0.6	1.7
		NOP / ha	380	503	800	2.70
		Return on turnover (operating profit/production)	43%	65%	44%	40%
		Benchmarks for farmers' net income (minimum wage in €)	4000	4864	480	732
		Percentage of producers' annual income of the minimum wage	22%	11%	100%	0.6%

Table 2: Meso and macro level indicators

Framing Question 1: What is the contribution of the VC to economic growth?		INDICATORS	RESULTS				
				Honduras	Ecuador	Tanzania	Angola
			Exchange rate: 1 Euro =	27 HNL (2017)	1.11USD (2019)	2 500 TZS (2017)	500 KWZ (2019)
CQ1.2	What is the contribution of the VC to the GDP?	Value of final VC production		30 billion HNL 1 billion €	294 million $ 265 million €	76 billion TZS 30 million €	4.5 billion KWZ 9 million €
		Direct VA		17 billion HNL 629 million €	247 million $ 222 million €	47 billion TZS 19 million €	3.5 billion KWZ 7 million €
		Total VA		24 billion HNL 889 million €	250 million $ 225 million €	53 billion TZS 21.2 million €	3.8 billion KWZ 7.6 million €
		Direct VA creation per stage (%)	Small farmers	7.5%	41.3% (30% taza, 1%organico&dif robusta)	59% (58% conv, 1% organic)	15.5
			Other farmers	30% (20% conv,10%certfified)	0%	5%	13.5%
			Processors conventional	34%	58% (50% industry soluble)	2%	41%
			Processors differentiated	9.5%	0.7%	0%	0%
			Traders conventional	17% (10% exporter)	<1%	33%	30%
			Traders differentiated	2%	<!%	2%	0%

Framing Question 1: What is the contribution of the VC to economic growth?		INDICATORS	RESULTS				
				Honduras	Ecuador	Tanzania	Angola
CQ1.2	What is the contribution of the VC to the GDP?	Direct VA and components (% revenues of the actors from the direct VA)	Small farmers	7% (small conv)	28% (taza 20%, 1%other differentiated)	42% (1% differe.)	1.5%
			Other farmers	21.5% (8%diffe. farmers)	0%	2%	1.5%
			Processors conventional	28.5%	50% (43%soluble, dif pro <1%)	1%	23%
			Processors differentiated	8%	<1%	0%	0%
			Traders	13% (1.5% differ.)	<1%	27% (26%conv. exp, 1%dif.ex)	23% (14%retail, 7% exp)
			Workers	15%	16%	22%	44%
			Government	3%	<1%	2%	2%
			Banks	0%	0%	4%	0%
			Depreciation	4%	<1%	1%	5%
			Capital owner	0%	0%	0%	0%

Framing Question 1: What is the contribution of the VC to economic growth?		INDICATORS	RESULTS			
			Honduras	Ecuador	Tanzania	Angola
CQ1.2	What is the contribution of the VC to the GDP?	Driving effect ratio (Indirect VA/Direct VA)	41%	1.21%	13%	8.5%
		Cost/Value of production (%)	55%	35%	55%	60%
		Total VA in percentage of the GDP	4%	0.23	0.05% of national GDP 0.7% of regional GDP Songwe and Mbeya Regions	0.008
		Rate of integration into the Economy (total VA/VC production)	81.40%	85%	71%	86%

Framing Question 1: What is the contribution of the VC to economic growth?		INDICATORS	RESULTS			
			Honduras	Ecuador	Tanzania	Angola
CQ1.3	What is the contribution of the VC to the agriculture sector GDP?	VC agricultural actors' Value Added in percentage of the agriculture sector GDP	30%	2.60%	NA	0.073%
CQ1.4	What is the contribution of the VC to the public finances?	Receipts of the government (taxes, etc.)	20 million €	1.5 million	688 thousand (443 thousand AFA file)	120 thousand
		Outlays of the government (subsidies, etc.)	1.5 billion HNL (56 million €)	No subsidies	No subsidies	54 000 €
		Public Funds Balance	With only direct taxes: negative of around 35 million € With total taxes (directe+indirect) : positive	Positive of 1.5 million €	Positive of around 500 thousand €	Positive of 66 thousand €
CQ1.5	What is the contribution of the VC to the balance of trade?	VC exports	802 millions EUR	80.1 mill (72.1 EUR)	72054 million TZS (28816 EUR)	
		VC total imports (goods and services)	56 million EUR	$43.7 mill (39.3 EUR)	8920 TZ (3568 EUR)	
		Balance of trade of the VC (VC exports – VC total imports)	746 million EUR	$36.4 mill (32.7 EUR)	63,134 million TZS (25253 EUR)	2.300 million de kwanzas (€ 4,6 million)

Table 3: Inclusiveness indicators

Framing Question 2: Is this economic growth inclusive? *(To be completed with Social Analysis results)*		**INDICATORS**	**RESULTS**				
				Honduras	Ecuador	Tanzania	Angola
CQ2.1	How is income distributed across actors of the VC?	**Total farm income (% of direct VA)**		30% (7%small, 8%differen)	77%	41.5% (excluding estates)	3%
		Wages and salaries (% of direct VA)		16%	16%	22%	44%
		Wages and salaries (distribution per actor)	Small farmers	8%	60.5% (all at dif farms)	73% (71%small conv)	33% (EFT farmers)
			Other farmers	59% (50% in med-big conv)	0%	11% (8%med conv)	24% (22%ECT farmers)
			Processors conventional	15%	38.5% (31% in soluble industry)	2%	35% (20%desc aque)
			Processors certified	3%	0.5%	0%	0%
			Traders conventional	13% (10%interme)	0.5%	13% (exporter)	8% (≈4% exporter)
			Traders certified	2% (big part of inter.)	<1%	1%	0%
		Total income accruing to small farmers and waged workers		22.7% of direct VA	44%	63%	45.9%

Framing Question 2: Is this economic growth inclusive? *(To be completed with Social Analysis results)*		**INDICATORS**	**RESULTS**				
				Honduras	Ecuador	Tanzania	Angola
CQ2.2	What is the impact of the governance systems on income distribution?	**Net operating profit (NOP) distribution among actors**	Small farmers	9%	35.5% (25% taza.producers, %other dif.prod)	58% (1%orga.)	3%
			Other farmers	28% (14% conv big farm)	0%	3% (2.7% by estate)	3%
			Processors conventional	36.5% (18%dry processor)	63% (55% soluble industry)	1%	47% (20%roasting industry)
			Processors certified	10.5%	0.8%	0%	0%
			Traders conventional	14% (8%exporter)	0.3%	37% (by exporter)	47% (30% retail,15%exporter)
			Traders certified	2% (1% exp)	<1%	1%	0%
		Share of farm gate price in the final price (%)		For Corquin&El Paraiso Conv: 21%-37% Dif: 47%-40%	Cereza robusta convencional: 42% Bola arábiga convencional: 69% Pergamino orgánico: 66% Diferenciado = 100%	For PSM:71% For organic:63%	16%

Framing Question 2: Is this economic growth inclusive? *(To be completed with Social Analysis results)*		**INDICATORS**	**RESULTS**			
			Honduras	Ecuador	Tanzania	Angola
CQ2.3	How is employment distributed across the VC?	**Number of waged jobs (Full time equivalent FTE)**	82 701 FTE	9 200 FTE	10 200 FTE	4110 FTE
		Number of FTE jobs per t (EFT jobs/volume of production)	0.25	0.69	0.85	0.44
		Labour productivity (production/EFT jobs)	3.9 t	1.43 t	1.17 t	2.23 t
		Employment of women	No info	36% of FTE jobs	No info	<1% of all labour