

New Insights on Pathways toward Sustainability Certification

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Despite third-party certifications' popularity in the coffee industry, knowledge about how certification proliferation works on the ground is still scarce. We identify five main pathways toward certification: roaster-led, exporter-led, institution-led, cooperative-led and independent certification. We show that roaster-led strategies with a quality focus, as well as institutionally supported groups, account for a great share of certified coffee currently in the marketplace. Furthermore, the quality-driven focus of these programs, necessitating cluster-based roll-out strategies, is a positive contribution to the geographical integrity of sustainability programs and may amplify their impact.

Introduction

To date, third-party certifications are the most popular strategy to guarantee sustainability in the coffee industry. Yet, beyond anecdotal evidence, little is known about the drivers and determinants of certification. In addition to individual farm-level interest and motivation, other factors – such as pre-existing business relations, buyer interest, or location – may be determinants of certification success. In particular, the crucial role of external agents – roaster-led specialty coffee programs, in-country exporters, governments, coffee institutions and NGOs – has not yet been sufficiently examined. As the first link of farmers to export markets, they take on a central interface position between local supply and global demand. Understanding these processes is crucial to identify best practices and to determine necessary future steps to make certifications more inclusive. Furthermore, the link between quality improvements in the specialty coffee sector and advances in sustainability requires more academic attention. Our poster aims to fill this research gap using supply chain analysis as well as geographical meta-data to identify the main pathways toward coffee certification in Guatemala, Costa Rica and Colombia.

Methods

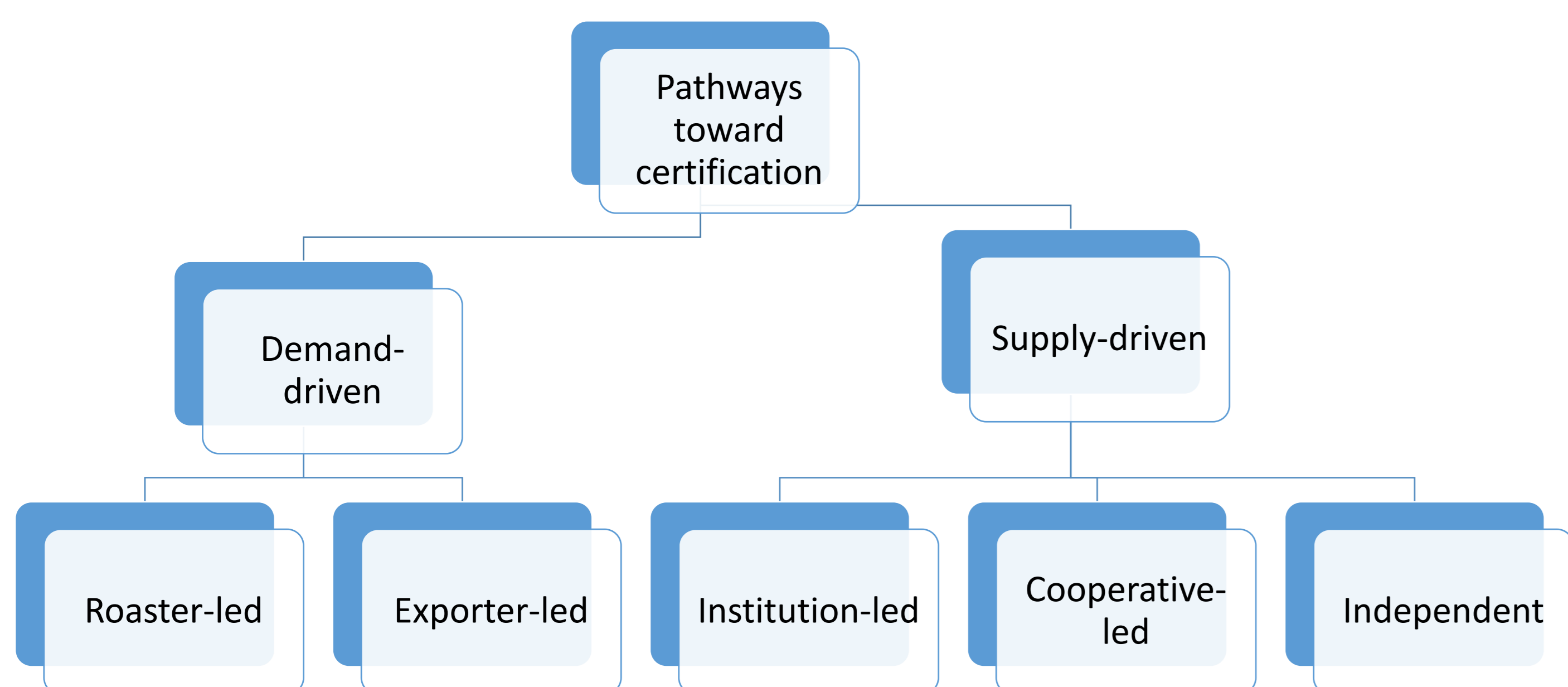
We conducted 19 anonymous semi-structured expert interviews of 45 to 60 minutes each with representatives of international roasters, multinational and regional traders, and local cooperatives, institutions and non-profit organizations in the three countries under analysis to identify clear and distinct pathways toward certification and gauge their respective importance.

In a second step, we constructed a database of certificate holders of four prominent labels in the coffee sector (Fairtrade Labeling International, Fair Trade USA, Rainforest Alliance and UTZ Certified) in the three countries based on the certification organizations' online maps. To this, we added size information (number of farmers and/or certified coffee hectares, as available), altitude, information about multiple certification, and coded the certificate holder's most probable pathway to certification.

In a third step, we tested our hypotheses on determinants of certification. We compared certification distribution with regional production information to identify whether certified producers are over- or underrepresented in certain regions. The importance of size is examined using a Lorenz curve analysis of certified products by holding size. The relevance of quality characteristics is tested by using the proxy of altitude, which correlates with greater quality.

Results

The expert interviews yielded five alternative, and in some cases complementary, pathways toward certification that are schematized in the following chart.



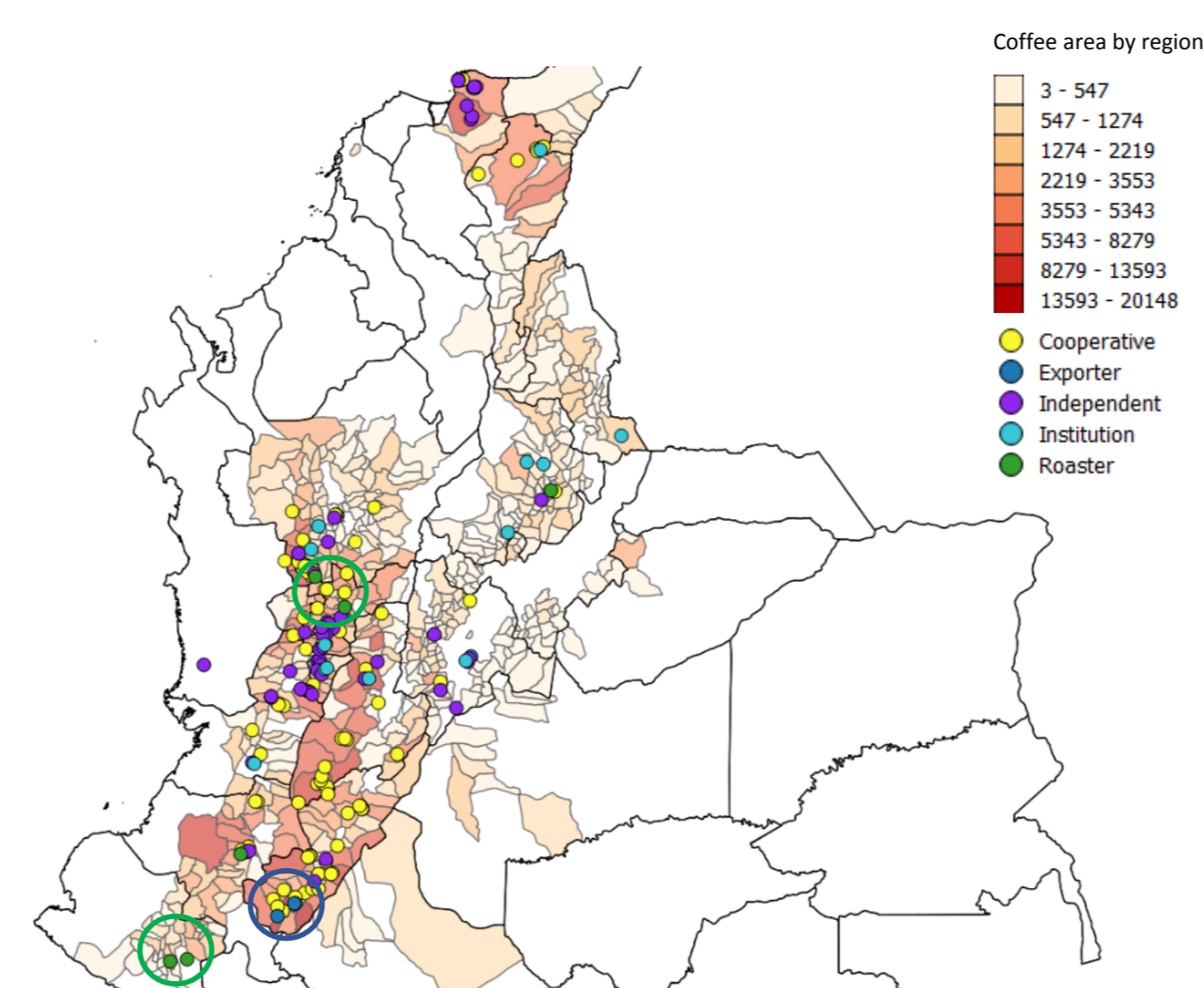
They can be differentiated – in their stylized form – according to the following characteristics:

	Roaster-led	Exporter-led	Institution-led	Cooperative-led	Independent
Goals and implementation					
Primary motivation	Risk management	Higher market share	Rural development	Better prices	Better prices
Selection criteria	Quality (geographical cluster)	Readiness Vicinity/Access Reliability	Political interests Local impetus Readiness	Local motivation De facto practices Visionary leader	Personal conviction De facto practices
Strategy	Mass roll-out	Selective integration	Stakeholder collaboration	Group-level roll-out	Isolated improvements
Assistance/support	Implementation and audits	Audits	Implementation and audits	Reliance on third-party (NGO)	None
Relationship	Long-term	Variable	Long-term	Variable	Variable
Outcomes					
Geographical integrity	Yes	No	Yes	Sometimes	No
Additionality	Yes	No	Medium	Medium	Medium
Guaranteed market	Yes (conditional on quality)	Sometimes	Sometimes	Mostly no	Mostly no
Threats for farmers	Captive supply chain	Loss of roaster demand	Change of political strategy	Loss of leadership No market	No market Cost increases

The following maps show their distribution in the three analyzed countries:

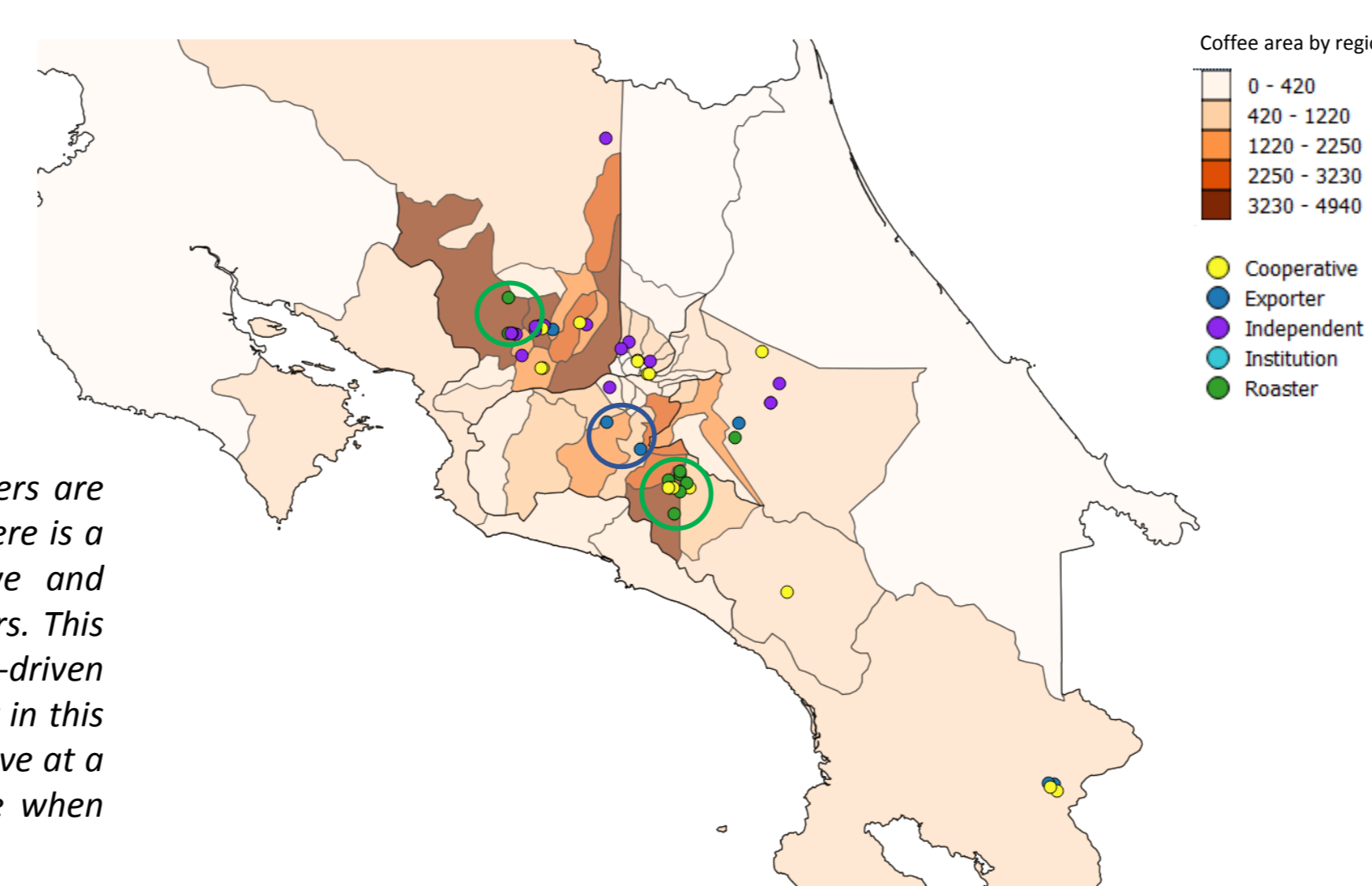
Colombia:

The coffee belt of Caldas, Risaralda and Quindío seem to be overrepresented compared to its production volume. Roaster- and exporter-led certification tend to cluster in select areas, while independent certifications are scattered across the country. Green circles highlight the roaster-identified focus areas, while exporter-led groups are gathered in blue circles.



Costa Rica:

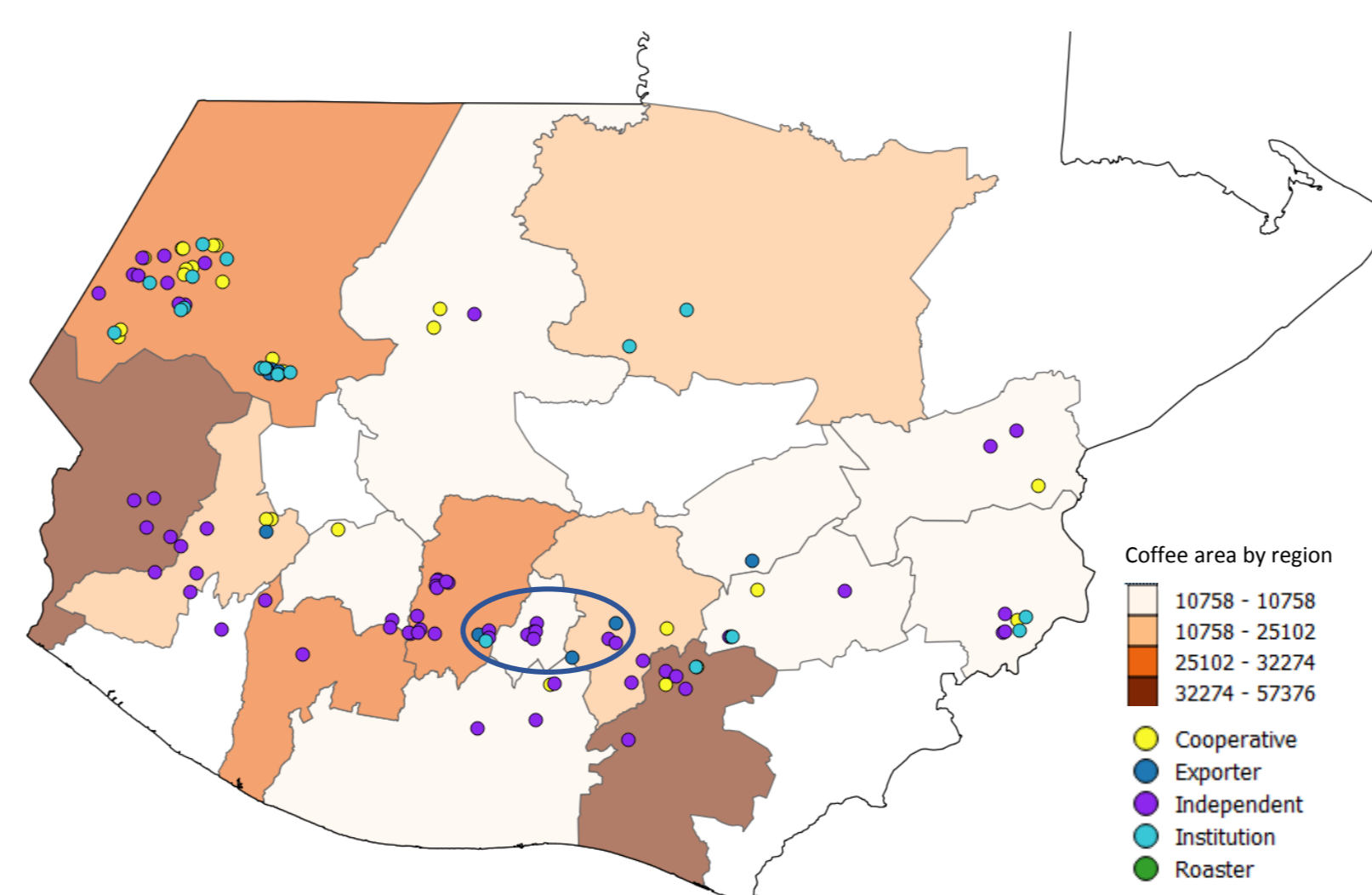
Though the majority of farmers are organized in cooperatives, there is a balance between cooperative and independent certificate holders. This may be because the supply-driven pathways tend to be stronger in this country, and cooperatives arrive at a negative cost-benefit balance when certifying independently.



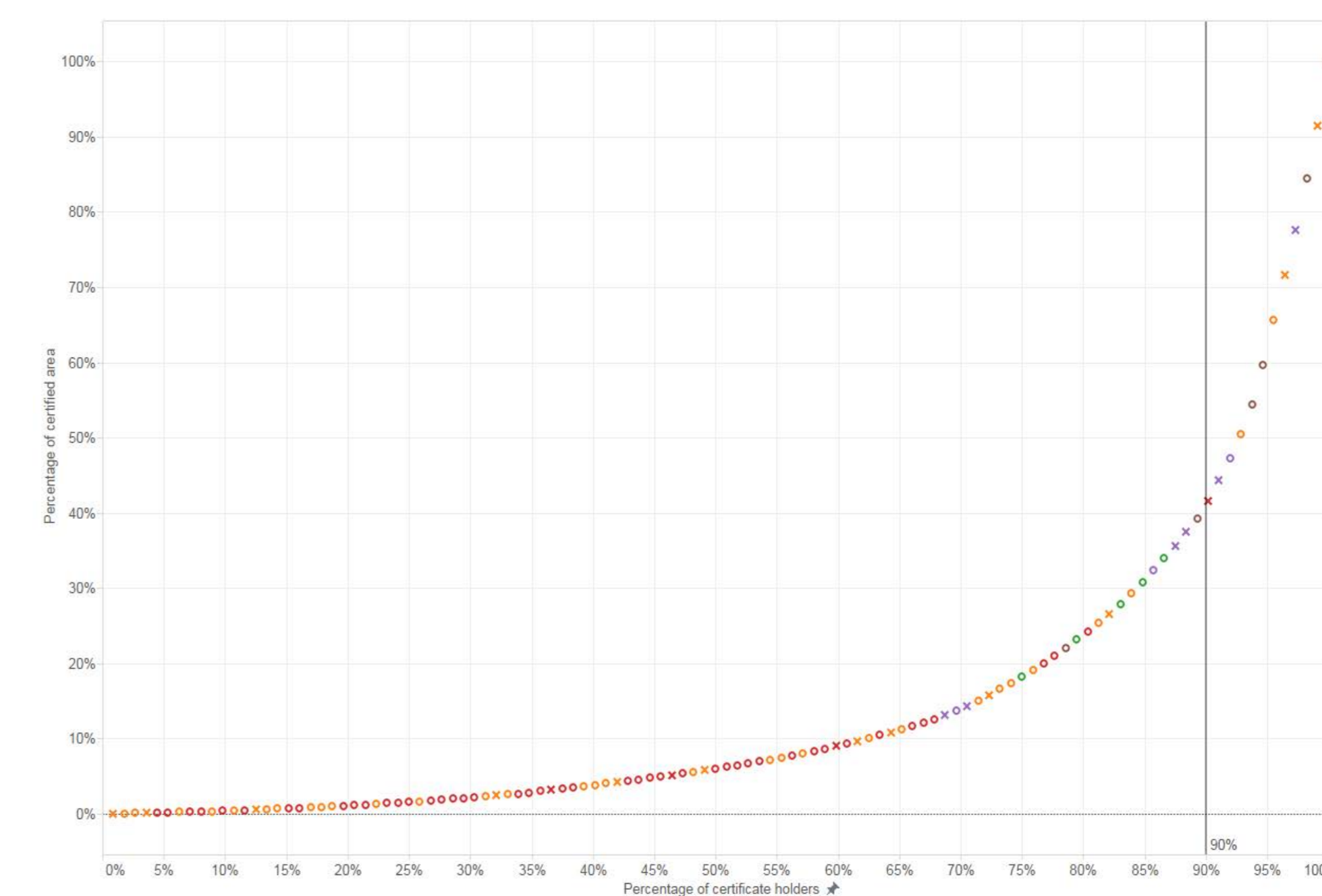
Guatemala:

Mirroring the structure of its coffee sector, Guatemala has more independent estates that are certified than cooperatives. There are no explicit roaster-led certified groups, as roasters tend to partner with exporters.

Institutional support is apparent in certified groups in Colombia and Guatemala, but not in Costa Rica.



To understand where most certified volume comes from, we used detailed certified area data from two of the leading schemes (Rainforest Alliance and UTZ). Lorenz curve analyses such as the one below on Colombia show that current supply of certified coffee – as approximated by the certified coffee area under production – is highly skewed by a small number of certificate holders with very large areas. In Guatemala, the top 10% certificate holders contribute 35% of total area; in Costa Rica, they contribute 47%, and in Colombia even 58% of total certified coffee area.



In Colombia, where the FNC has been extraordinarily proactive in promoting certification and collaborating with supply chain stakeholders, institution-led and roaster-led pathways have contributed the most to certified coffee area. In Costa Rica, institutional support has been less vigorous, and hence 75% of certified coffee area is attributable to roaster- and exporter-led initiatives.

When comparing the average altitude between pathway categories to approximate the importance of coffee quality for certification, it is apparent that means are significantly different between independent and externally influenced certifications. In particular, roaster-led initiatives clearly focus on a narrow ideal band of altitude, having the smallest variance around the mean, while self-selected certified farms have a broader distribution of altitudes with a lower mean.

Pathway	Mean altitude	Minimum altitude	Maximum altitude
Cooperative	1340 m	19 m	3651 m
Independent	1346 m	42 m	3703 m
Exporter	1521 m	724 m	2356 m
Institution	1555 m	144 m	2953 m
Roaster	1643 m	1073 m	2534 m

Conclusion

Inclusion in a certified supply chain has the potential to make a sizeable difference for the income and environmental resilience of a coffee farm. Depending on a farm's certification pathway – led by roasters, exporters, coffee institutions or pursued independently –, it will have to qualify for different selection characteristics. In general, when examining the current distribution of certifications in Costa Rica, Guatemala and Colombia, one can conclude that the incentive structure rewards either large, advanced, already sustainable farms due to their reliability and the low implementation costs, or farms located in select geographical areas well-known for particular flavor profiles. In all three countries we found a strong concentration of certified area and producers in large, externally driven groups, while smaller players likely struggle to achieve positive cost-benefit outcomes of certification. Harnessing the organizational and financial prowess of external actors can help small producers in geographically contiguous areas achieve certification. Yet, this strategy seems limited to producers located in high altitudes with better quality characteristics.