Global Firms and Local Development

By Esteban Méndez and Diana Van Patten

Abstract

This chapter studies the effects of large firms on economic development, using evidence from one of the largest multinationals of the 20th Century: the United Fruit Company (UFCo). We first focus on Costa Rica, where the firm was given a large land concession between 1899 and 1984. Using historical records along with census data, we find that the UFCo had a positive and long-lasting impact on living standards in the regions where it operated. Moreover, satellite data shows that regions within the concession's boundary are more luminous at night—which is associated with higher income levels—than those outside the UFCo region even today. Historical accounts suggest that investments in local amenities carried out by the UFCo to attract workers are the main drivers behind its positive effects. The chapter then discusses the role of institutions and labor mobility in determining the UFCo's effect, and how it might differ in other Latin American countries.

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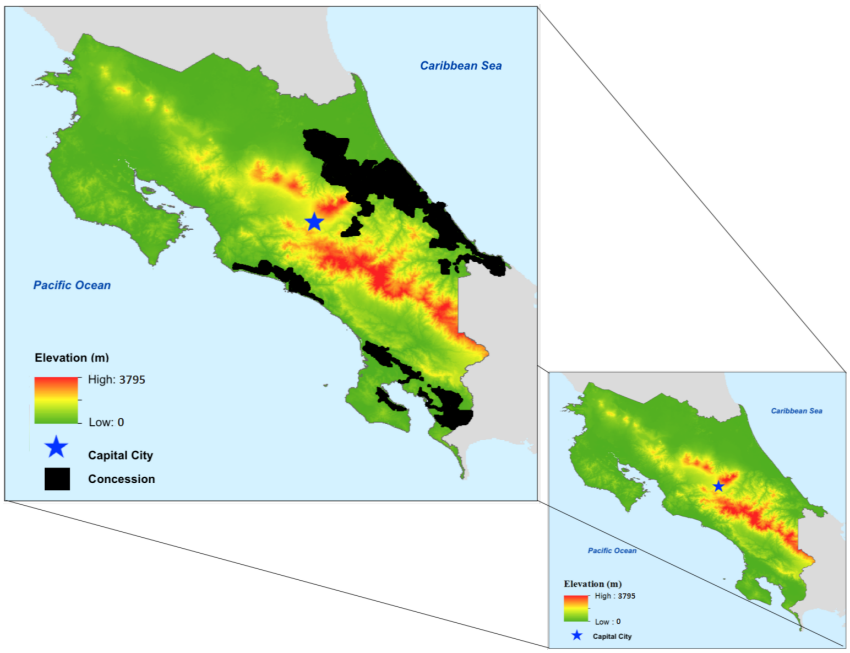
The United Fruit Company (UFCo) was one of the largest and most controversial multinational companies of the 20th Century. This infamous firm, hosted by the so-called "Banana Republics," built a profitable global business while operating and being the poster-child of neo-colonialism in over a dozen Latin American countries. There are many lessons that we can learn today from understanding this company's past.

In particular, contrasting the firm's strategy and impact between countries delivers insights that can guide current policy debates on multinationals, large-scale foreign investments, and local economic development. This chapter summarizes work by Méndez and Van Patten (2022), which focuses on the UFCo experience in Costa Rica, and discusses the experience of the UFCo in other countries relying on work by Bucheli (2005), and Bucheli and Kim (2012), among others.

An analysis of the UFCo's experience in Costa Rica is particularly insightful, given that, against all odds, the company had a positive and long-lasting impact on local living standards. In Costa Rica, this American firm was given a large land concession, equivalent to almost 9% of the national territory. Within this area, shown in Figure 1, the UFCo was virtually the only employer from 1899 to 1984. Moreover, concerned about the spread of diseases like malaria and yellow fever, the firm required most of its workers to live within company lands, thereby potentially gaining more control over them (Chomsky, 1996).

If even today large multinational companies raise concerns about excess market

Figure 1: Costa Rica and the UFCo's Land Concession



Notes: The UFCo's land concession appears in black in this map of Costa Rica. Elevation is shown in the background. The concession area represents 8.92% of the national territory, and predominantly consists of flatlands near coastal areas.

power and workers' exploitation in developed and developing countries, it is fitting to say that the case of the UFCo in Costa Rica in the early 20th Century had many ingredients in a recipe for disaster. In fact, multiple studies have documented the negative effects of colonial and historical institutions in settings that share multiple characteristics with this one, across different contexts.[1] The next section, however, discusses how the UFCo increased local living standards, leaving behind a healthier

[1]These studies include the slave trade (Nunn, 2008), the *mita* system in Peru (Dell, 2010), forced coffee cultivation in Puerto Rico (Bobonis and Morrow, 2013), forced rubber cultivation in what is today the Democratic Republic of Congo (Lowes and Montero, 2021), or the Dutch Cultivation System (Dell and Olken, 2020). These studies consistently find that companies tend to underprovide public goods within their concessions, and that exposure to these regimes can lead to persistent negative effects on living standards—an exception being Dell and Olken (2020), who find that villages forced to grow sugar cane have better long-run outcomes as a result of sugar factories and industrial structures promoting economic activity.

and more educated labor force.[2]

1 A SURPRISING RESULT

The history of the UFCo and banana plantations in Costa Rica dates back to the construction of a railroad from the capital city to the Caribbean Coast in 1884. What happened? In exchange for completing a railroad that connected the capital city with one of the main ports in the country, the Costa Rican government gave Minor C. Keith—an American contractor—a large concession of undeveloped land, which was virtually unpopulated at the time.[3] While constructing the railroad, Keith realized that bananas that were planted along the railroad tracks to feed construction workers grew marvelously and, after completing the railroad, he experimented with exporting bananas planted in the country (Bucheli, 2005). The experiment was successful, and the UFCo was founded in 1899. The American company eventually operated in many countries in Latin America, including Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Nicaragua, and Panama (May and Lasso, 1958).

The UFCo left Costa Rica in 1984. Méndez and Van Patten (2022) show that it had a positive and long-lasting impact on the regions where it operated. Using hand-collected historical records, along with detailed census data, and relying on a plausibly exogenous land assignment, they implement a geographic regression discontinuity de-

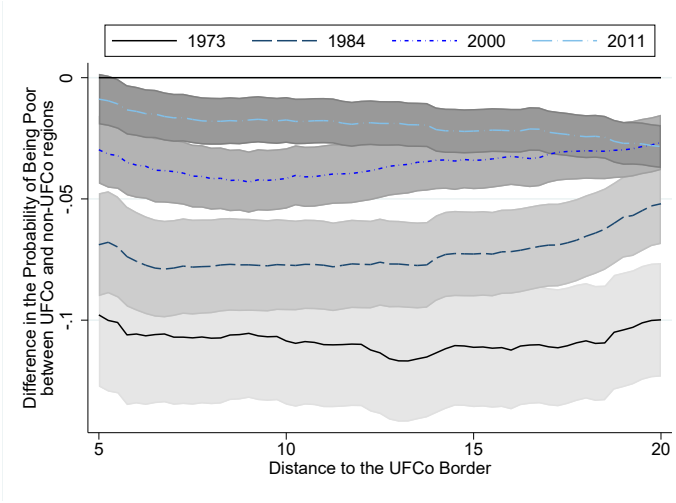
[2]In this sense, our work also contributes to the literature on the consequences of firms exercising market power, and how this interacts with workers' outside options. We document how local monopsony power affects a firm's incentive to invest in local amenities, and consider a compensation that does not focus only on wages as in Gutiérrez and Philippon (2017) and Autor et al. (2020). Further, we study long-run outcomes and how persistent the effects of such an arrangement can be.

[3]This was the case for most Costa Rican rural areas at the time, as the expansion of the agricultural frontier outside of the Central Valley began in the late 19th century (León Sáenz, 2012).

sign which shows that households living within former UFCo areas have had better economic outcomes; like housing, sanitary conditions, education, and consumption; than other households living in comparable locations in the country.

For instance, households within UFCo areas were 33% less likely to be poor in 1973, with only 59% of this income gap closing over the following four decades. Figure 2 shows how this result holds even when conducting the analysis along UFCo's entire border and at different distances from the boundary. It also showcases the convergence across regions over time.

Figure 2: Differences in the Probability of Being Poor Across Time

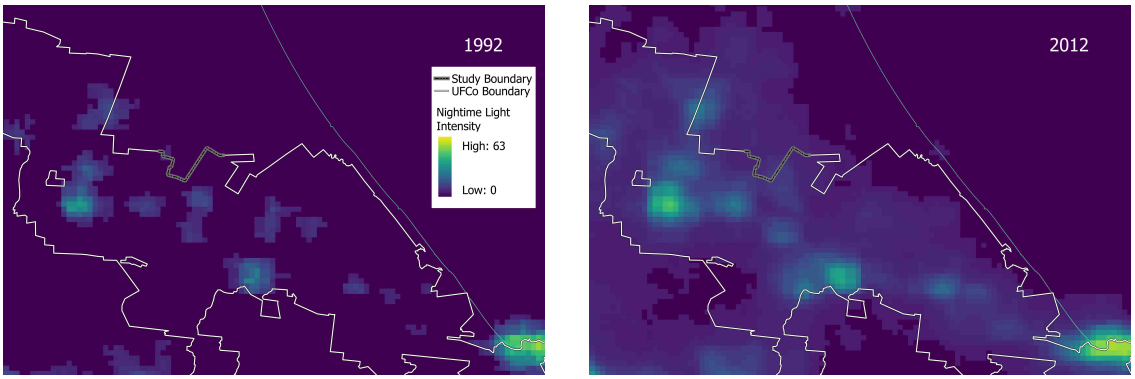


Notes: The figure shows the difference in the probability of being poor between households within the UFCo and their counterparts on the other side of the concession's boundary, and how this difference evolved between 1973 and 2011.

Moreover, satellite data shows that regions within the concession's boundary are more luminous at night—which is associated with higher income levels—than those outside the UFCo region, even today. For instance, Figure 3 shows the satellite image near the study boundary in 1992 and 2012, and suggests higher luminosity in areas

inside the former UFCo area. In fact, nighttime light intensity is 21% higher in the former UFCo, which implies that output in the former UFCo areas is about 6.37% higher (Henderson et al., 2012).

Figure 3: Nighttime Lights and the Study Boundary



Notes: The figure shows the UFCo's concession's boundary and how satellite nighttime lights data shows a much higher luminosity inside the former UFCo, both in 1992 and 2012.

This result stands in stark contrast with the narrative in other Latin American countries where the UFCo operated, such as Colombia, where it has been documented that armed forces prevented workers from forming unions and leaving the plantations on several occasions. Today, these Colombian areas, which include Santa Marta and Ciénaga, are among the poorest in the country. Further historical details on the Colombian case are discussed by Bucheli (2005).

Gabriel García Márquez's masterpiece *One Hundred Years of Solitude* takes place in a fictional town named Macondo, which hosted an American banana company meant to represent the UFCo in Latin America (García-Marquez, 1967). In the book, after the company left the region, the inhabitants of Macondo had mixed opinions about how this firm impacted their town. Márquez relates how some people remembered company

times with nostalgia, while others complained about the company's negative impact on the region. This fictional episode depicts the varied sentiments that people across countries in Latin America have about the company, and if true, begs the question: Why would the company's effect differ so vastly across regions? Why was the firm's impact positive in Costa Rica, and why should we expect it to be negative in regions like Colombia? The next section studies the mechanism behind the company's effect and proposes an answer to these questions.

2 FRUITFUL INVESTMENTS

Historical data collected from primary sources suggests that investments in local amenities carried out by the UFCo—hospitals, schools, roads—are the main drivers behind its positive effects in Costa Rica. For instance, investments per student and per patient in UFCo-operated Costa Rican schools and hospitals were significantly larger than in local schools and hospitals run by the government, and sometimes even twice as large.

Why were these investments in local amenities higher than in the rest of the country? While the company might have invested in hospitals to have healthier workers, it is less clear why it would incur in other investments such as schooling, especially given its reputation. Evidence from archival company annual reports suggests that these investments were induced by the need to attract and maintain a sizable workforce, given the initially high levels of worker turnover that it faced. High turnover was a result of the workers' main outside option: coffee. Unlike bananas, coffee is a seasonal crop, and workers could earn relatively high wages during the coffee harvesting season. That is, worker turnover was the result of high competition in the labor market. For instance,

a 1922 UFCo Annual Report contains a section highlighting the constant overturn of labor and describes that "[the workers'] migratory habits do not permit them to remain on one plantation from year to year, but *as soon as they become physically efficient and acquire a little money they either return to their homes or migrate elsewhere and must be replaced by new laborers* [emphasis added]."(UFCo, 1924, p. 45).

As a solution to retain workers, the UFCo increased its investments in local amenities beyond medical measures. A 1925 UFCo Annual Report pointed out that "an endeavor should be made to stabilize the population.... We must not only build and maintain attractive and comfortable camps, but we must also provide measures for taking care of the families of married men, by furnishing them with *garden facilities, schools and some forms of entertainment. In other words, we must take an interest in our people if we may hope to retain their services indefinitely* [emphasis added]" (UFCo, 1923, pp. 74-75).

Evidence of these investments emerging from competition goes beyond company reports. Empirically, there is a causal relationship between UFCo's effect in a location and the degree of competition for labor faced by the company in that area. Namely, among UFCo landholdings, those closest to areas where agricultural workers could earn high wages while the company was operating have a lower incidence of poverty even three decades after the UFCo left the region. This difference in economic outcomes can be attributed to higher UFCo investments to retain workers in these locations.

3 INSTITUTIONS AND LABOR MOBILITY

The UFCo faced high labor market competition in Costa Rica, which induced high investments in local amenities. Alternatively, the company could have tried to somehow lower local outside options via measures *outside* the labor market. For instance, work by Acemoglu and Wolitzky (2011) on labor coercion discusses how an alternative way to retain workers is to reduce their mobility. Several reasons prevented this from happening in our setting, but might have allowed this to occur in other Latin American countries.

On the one hand, throughout the 20th century, Costa Rica consolidated strong democratic institutions, which possibly played a role in protecting workers' rights. Bucheli and Kim (2012) conduct a comparison of political institutions between countries in Central America, and discuss how political stability in Costa Rica might have played an important role. Moreover, Costa Rican politics featured higher political competition than other Central American countries, like Guatemala; this competition may have led to an effort by particular political groups to enlarge their winning coalition by protecting UFCo workers (Bucheli and Kim, 2012). On the other hand, some coffee producers were part of the Costa Rican elite, and these producers required workers during the coffee harvesting season, which aligned their incentives with those of workers in terms of incentivizing high mobility.

The latter stands in stark contrast with the reality in other Latin American countries where the UFCo operated, like Colombia, where Bucheli (2005) describes the situation as a "business-friendly government."[4] For instance, in this country, armed

[4]To clarify, Bucheli (2005) does not use the term "business friendly" as a positive attribute. The term suggests that the government was open to cooperating with the UFCo, potentially leading to

forces prevented workers from forming unions and leaving the plantations in locations like Santa Marta and Ciénaga (Bucheli, 2005); two areas that are among the poorest in the country today. Far from contradicting the positive effects that we documented in Costa Rica, the Colombian case aligns with what the labor mobility mechanism would predict, given that, in Colombia, the company did not have an incentive to invest in local amenities to attract workers, given the local labor market dynamics and low labor mobility.

4 LEARNING FROM THE PAST

The mechanism outlined above suggests that the relationship between competition for workers and investments was crucial in determining the firm's effect. To learn from the history of the company and use it to inform other contexts, it is useful to think about how results would change under different scenarios. What would have happened if workers' outside options would have been worse? How does the result depend on the government's actions? Méndez and Van Patten (2022) build a structural model based on the UFCo's setting and estimated on historical data, which is useful to answer these and other questions, and to derive important policy recommendations. Two lessons are particularly noteworthy.

First, from the point of view of the company's strategy, the model is useful to understand why providing local amenities was more efficient in attracting workers than just increasing wages. With no public goods (hospitals, schools, churches) in the region, the company would have had to pay extremely high wages for workers to be willing

more labor coercion.

to permanently move in with their families, especially given that during the coffee harvesting season—coffee being the main outside option for agricultural workers—the company was facing very strong competition in the labor market. Thus, undertaking the investments, given the firm's long horizon, was a profit-maximizing strategy. In fact, we leverage newly digitized special reports that, between 1946 and 1956, include detailed breakdowns of UFCo's expenditures in amenities (LaBarge, 1959). We find that expenditures in medical care, education, and total amenities are positively correlated with world coffee prices (with correlations of 0.88, 0.93, and 0.91, respectively). Interestingly, we document that the correlation between coffee prices and expenditures in amenities *as a share of total worker compensation* is 0.87. This aligns with the idea that it is competition for workers with coffee producers that explains why UFCo provides schooling and amenities rather than only higher wages (Méndez and Van Patten, 2022).

Second, the model shows that the company's effect on living standards depends crucially on workers' outside options, which were relatively high for Costa Rican workers. In fact, the UFCo would have *decreased* well-being if workers' outside options were reduced by one half. The intuition behind this result is that as workers' outside options decrease, the company has fewer incentives to invest in local amenities. To illustrate, in the extreme case of immobile workers, the company could potentially not pay for the labor input or invest at all, thereby *negatively* affecting worker's welfare. This resembles the Colombian case, where workers were coerced by armed forces and therefore faced low outside options that might have led to the UFCo having a negative long-lasting impact on the region. In other words, conditional on some people living

within the UFCo region, in the hypothetical case of extreme labor coercion, the company would face a perfectly inelastic labor supply—a case of pure monopsony. However, as we allow workers to be more mobile across regions in the model, the labor supply that the company faces becomes every time more elastic, and if workers were perfectly mobile across regions, the company would be competing against all other firms in the country, close to perfect competition.

Circling back to the disagreement among characters in One Hundred Years of Solitude, could individuals on both sides of the argument be somehow correct? Could the UFCo act vastly different across regions? It is possible; the results outlined above suggest that—despite the company's many wrongdoings—its effect over the local population might have differed across countries, and depended on the institutional constraints within which this multinational company operated. In particular, better results should be expected in regions with worker empowerment and high labor market competition.

5 CONCLUSION

Understanding the implications of large-scale foreign investments is particularly relevant today. In the last 20 years, foreign private investors have acquired more than 64 million acres of land in over 80 countries of Africa, Central and Southeast Asia, Eastern Europe, and Latin America via leases (of up to 99 years) or purchases of farmland for agricultural investment (Cotula et al. 2009, Cotula and Vermeulen 2009). Consequently, a better understanding of the effect of such projects is a matter of first-order

importance.

Further, in an era in which large multinational corporations are abundant in both the developed and the developing world, this valuable piece of history can be deeply informative. The history of the UFCo illustrates the creativity of markets, and how even in potentially distorted environments, markets can still deliver remarkably good outcomes with long-lasting persistent effects, while highlighting the importance of worker empowerment and outside options in shaping the ultimate effect of these large global firms.

Finally, we want to point out that this setting opens several interesting avenues of future research. For instance, after studying the effect of exposure to the UFCo on living standards, we plan on exploring the long-run effect of the company on attitudes towards trade, political views and civic engagement (Méndez and Van Patten, 2021a,b).

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