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**Article — Published Version**

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The Economic History Review

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*Suggested Citation:* Witzel de Souza, Bruno Gabriel (2023) : "The same contract that is suitable for your Excellency": Immigration and emulation in the adoption of sharecropping-cum-debt arrangements in Brazil (1835-80), The Economic History Review, ISSN 1468-0289, Wiley, Hoboken, NJ, Vol. 77, Iss. 2, pp. 612-643,  
<https://doi.org/10.1111/ehr.13282>

This Version is available at:

<https://hdl.handle.net/10419/290363>

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# ‘The same contract that is suitable for your Excellency’: Immigration and emulation in the adoption of sharecropping-*cum*-debt arrangements in Brazil (1835–80)

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## Abstract

This paper studies the history of contractual choice in coffee plantations of São Paulo, Brazil. It focuses on the consolidation of non-captive labour markets in the early phases of the transition from slavery in the country, particularly in the 1840s–50s. Vis-à-vis the alternatives of fixed rents and fixed payments per time worked or piece rates, the paper examines the rationale for the adoption of sharecropping arrangements with European bonded labourers. New archival evidence suggests that sharecropping had no obvious productivity advantage over alternative labour–rental arrangements in this period, and that the adoption of sharecropping arrangements resulted from the positional advantage of its first proposers, who influenced later choices of contractual design. A credit-labour tie-up long outlived the original sharecropping arrangements, in turn allowing for the immigration of poor and credit-constrained Europeans, paving the way to insert Brazil into the circuits of mass migration without promoting institutional reforms to attract non-bonded immigrants.

## KEYWORDS

Brazil, coffee, fixed rents, immigration, piece rates, plantations, São Paulo, sharecropping, slavery, wage system

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The pervasiveness of labour tying and of sharecropping contracts in agriculture has long intrigued economists and historians. These mechanisms of labour allocation played a crucial role in the settlement of the Americas since the seventeenth century.<sup>1</sup> Certainly, indentured servitude, redemptioner's schemes, debt peonage, the coolies' system, and contract labour were very heterogeneous arrangements;<sup>2</sup> nevertheless, contracts signed by Europeans and Asians thus immigrated to the Americas had the common feature of tying labour for a fixed period or until the repayment of outstanding debts. In a period when high transportation costs constrained international migration, these arrangements allowed for the allocation of labour to regions with relatively high land per labour ratios.<sup>3</sup> Later on, with the expansion of agricultural frontiers in the United States during the nineteenth century, sharecropping played a similar role in allocating labour and came to be seen as an intermediate rung in a socio-economic ladder leading from unskilled agricultural employment to landownership.<sup>4</sup> Another branch of the literature, including critics of sharecropping, studied the re-emergence of that labour–rental arrangement in the post-Civil War American South. Similar to the object of this paper, that literature also aimed at explaining contractual mix and the coexistence of sharecropping and various other labour–rental arrangements in a period of profound institutional change.<sup>5</sup>

Economic theory has offered different rationales for sharecropping, with early critics relating it to disincentives towards rural investments, to patronage, and to allocative inefficiencies.<sup>6</sup> Alfred Marshall argued that because the contract implied the payment of a share of output independently of the level of effort, tenants would have no incentives to put the optimal amount of labour effort into production.<sup>7</sup> This view challenged social scientists to explain why an allegedly inefficient arrangement has remained so pervasive throughout human history and across all global regions.<sup>8</sup> The theoretical rehabilitation of sharecropping started with Steven Cheung, who showed that Marshallian inefficiency depends on assumptions about labour monitoring.<sup>9</sup> Since then, economic theory has discussed the supplementary properties of sharecropping that compensate for its inefficiency, or the conditions under which it could be an efficient contract. The former stressed the role of sharecropping as a mechanism of risk sharing;<sup>10</sup> of screening for different risk and productivity types;<sup>11</sup> and of

<sup>1</sup> Eltis, 'Free and coerced'; Donoghue, 'Indentured servitude'.

<sup>2</sup> Galenson, 'White servitude'; idem, 'The rise and fall'; Roberts and Byrne, 'Summary statistics'; Heavner, 'Indentured servitude'; Menard, 'From servant to freeholder'; Engerman, 'Contract labour'; Grubb, 'The market for indentured immigrants'; idem, 'The auction'; Abramitzky and Braggion, 'Migration and human capital'.

<sup>3</sup> Engerman and Margo, 'Free labour'; Sánchez-Alonso, 'The age of mass migration', p. 12.

<sup>4</sup> Spillman, 'The agricultural ladder'; Tungeln, 'Some observations'; Wehrwein, 'The "agricultural ladder"'; Alston and Kaufman, 'Agricultural chutes and ladders'.

<sup>5</sup> Reid, 'Sharecropping as an understandable market response'; Reid, 'White land, black labour'; Higgs, 'Patterns of farm rental'; Alston and Higgs, 'Contractual mix'; Shlomowitz, "'Bound" or "free"?'; Alston, 'Tenure choice'; Alston and Ferrie, 'Labour costs'.

<sup>6</sup> Newbery, 'Risk sharing', p. 585; Bardhan, 'Interlocking', pp. 94–6; Quibria and Rashid, 'The puzzle of sharecropping', p. 103. For patronage, see Bardhan, 'Interlocking', pp. 94–6; Alston and Ferrie, 'Labour costs'; Alston and Kaufman, 'Agricultural chutes and ladders', p. 467.

<sup>7</sup> Otsuka et al., 'Land and labour'.

<sup>8</sup> Byres, 'Historical perspectives'.

<sup>9</sup> Cheung, 'Transaction costs'.

<sup>10</sup> Stiglitz, 'Incentives'; Reid, 'Sharecropping in history and theory'; Newbery, 'Risk sharing'.

<sup>11</sup> Allen, 'On share contracts'; Braverman and Guasch, 'Capital requirements'; Basu, 'Limited liability'.



lowering transaction costs.<sup>12</sup> The latter studied how sharecropping creates implicit markets for non-tradable services, such as managerial skills and labour monitoring.<sup>13</sup> In a similar vein, if land, labour, and/or credit markets are interlinked and at least one is incomplete, then sharecropping might lead to allocative efficiency.<sup>14</sup> Finally, a recent literature in economic history has focused on the institutional nature of sharecropping, showing that historical choices among rural contracts involve considerations far beyond allocative efficiency, including the regulation of property rights over investments made by tenants and risk considerations about the depletion of soil and crops.<sup>15</sup>

This paper adds to the recent institutional strand of literature by investigating the economic rationale of an arrangement that interlinked sharecropping and credit mechanisms into one single contract in a period when non-captive labour markets were consolidating.<sup>16</sup> From the 1830s, plantation owners in southwestern Brazil, particularly in the province of São Paulo, started looking for alternatives to the institution of slavery. The enforcement of the Brazilian ban on the transatlantic slave traffic, particularly as of 1850, prompted experiments to secure a new source of stable labour supply to expanding plantations. However, these were the same planters who were also buying slaves for regions sufficiently prosperous to afford the increasing prices of captives.<sup>17</sup> This very entrenchment of slavery, the barriers to small-holdings in a plantation economy, and the constrained civil rights, such as lack of religious freedom, made Brazil a rather unappealing destination to immigrants. To countervail these hindrances, plantation owners targeted poor and credit-constrained immigrants by proposing a contract that interlinked labour to credit. In this scheme, landowners supplied foreigners with loans that covered transportation and settlement costs; immigrant households, in turn, bonded their joint labour force to the outstanding debts. Within this tied labour scheme, sharecropping became the prevalent labour–rental arrangement in the 1850s, with immigrants retaining a share of the net profits from harvesting cash crops, usually coffee, and of their foodstuff cultivation.

Even if limited in scale, these experiments were a cornerstone in Brazilian labour history. Immigrant bonded labour was the first alternative to slavery to be considered generally acceptable and feasible in a plantation system that had been fuelled mainly by captive labour for three centuries;<sup>18</sup> and the structure of these sharecropping-*cum*-debt contracts influenced the design of labour arrangements deep into the twentieth century.<sup>19</sup>

Because sharecropping was the first widespread non-captive arrangement to have prevailed in the coffee economy of São Paulo, the historiography has long debated the rationale of its

<sup>12</sup> Cheung, 'Transaction costs'; Reid, 'Sharecropping in history and theory'; Bell and Zusman, 'A bargaining theoretic approach'; Lucas, 'Sharing, monitoring'; Alston et al., 'Tenancy choice'.

<sup>13</sup> Eswaran and Kotwal, 'A theory'; Braverman and Stiglitz, 'Landlords'.

<sup>14</sup> Bardhan, 'Interlocking'; Braverman and Stiglitz, 'Sharecropping and the interlinking'.

<sup>15</sup> Câmara, 'The Portuguese Civil Code'; Carmona and Simpson, 'The "Rabassa Morta"'; eisdem, 'Explaining contract choice'; Garrido and Calatayud, 'The price of improvements'; Garrido, 'Sharecropping'.

<sup>16</sup> See also Lago, 'O surgimento'; Pereira and Nogueiról, 'A transição'.

<sup>17</sup> I use the noun 'slave' when referring to the captive labour system implied by the second slavery and/or comparing it with other labour categories. In such cases, the term refers to a system of labour organization. I use 'enslaved persons' when referring to specific groups subjected to slavery.

<sup>18</sup> This is not to say that free Brazilians were not employed in the plantations, usually per piece rate or as contractors. See section I.

<sup>19</sup> Leff, 'Economic retardation', p. 492; Lago, 'O surgimento', p. 333; Klein, 'European and Asian Migration', p. 208; Viotti da Costa, *Da senzala à colônia*, pp. 73–4.



adoption at that particular juncture. This is also the main inquiry of this paper: to investigate whether sharecropping had an economic advantage in terms of productivity or risk-sharing in the prevailing circumstances. In addition, by noticing that the credit dimension became a ubiquitous feature of Brazilian immigration history, the paper also explores the economic and political rationale of the credit–labour interlinkage. The second main question is thus whether Brazilian elites strategically tailored the country’s immigration policy towards poor and credit-constrained European households.

To reconstruct the context in which sharecropping emerged so prominently, a systematic search of the Brazilian Digital Newspapers’ Repository, the online platform of the Brazilian National Library Foundation for press material, was conducted. Although press materials have been extensively used by the historiography, this paper explores the new digital nature of the repository to find trends in themes and terms as they appeared in nineteenth-century news.<sup>20</sup> These are the main sources of section I, which puts the history of bonded immigration in the context of the ban on the transatlantic slave traffic, and of section II, which sketches the rise and fall of sharecropping contracts in the 1830s–70s. To study the rationale of sharecropping and of bonded labour in sections III and IV, respectively, I collected data on production at the farm level from reports submitted by landowners to provincial authorities in the 1850s–70s stored in the Public Archive of São Paulo State. To the best of my knowledge, this paper thus provides one of the most complete surveys of primary data currently available for rural productivity in the Brazilian coffee economy for the 1850s–70s.

Evidence collected thus far does not indicate any obvious productivity advantage of sharecropping over fixed payments. A descriptive analysis across a sample of eight plantations shows that harvesting under sharecropping was more productive at the level of households, but that labourers under fixed payment contracts were more productive in per capita terms and per person of working age. In fact, differences-in-means tests do not reveal any significant difference in the number of cultivated coffee groves and in earnings between sharecroppers and other non-captive labourers. Similarly, no significant differences were found in a cross-sectional analysis of the only plantation in the sample that reported earnings for different labour–rental arrangements in 1859.

The lack of statistical significance of such results might be a consequence of small sample sizes, even if robust to bootstrapping. However, descriptive data do support the hypothesis that landowners were indifferent to the type of contract in this phase of experimentation with non-captive labour – a conclusion certainly valid for those plantations whose records of production survive to this day. In addition to the empirical evidence, theoretical reasoning shows that the interlinkage to a credit dimension eliminated the risk-sharing mechanisms of sharecropping: for labourers, a bad harvest meant not only lower earnings shared with landowners (i.e. the typical risk-sharing mechanism), but also potentially longer indentures; for landowners, in turn, this implied an increased risk of labourers defaulting on their outstanding debts.

The paper thus concludes that sharecropping had no obvious economic advantage over alternative labour–rental arrangements, and as such, sharecropping was not a necessary first step in the Brazilian transition from slavery. This conclusion is supported by the historical evidence of section II, which highlights the complex contractual mix already in place in the 1830s–40s. Instead, sharecropping consolidated in the 1850s because it was proposed by elites whose political influence, economic power, and positional advantage set a path for its adoption and emulation by other landowners. The first-movers, in turn, emulated other historical and international

<sup>20</sup> See [online app. I](#) for details.

experiences, particularly those rooted in Portuguese rural customs. Finally, the credit interlinkage allowed for a new elite of planters to propose a contract that was not completely unfamiliar to slaveholders, and the indebtedness instrument satisfied the demand for labour without the need to promote institutional reforms to make Brazil more attractive to non-bonded immigrants.

## I | THE BAN ON SLAVE TRAFFIC AND THE 'LABOUR QUESTION' IN NEW COFFEE PLANTATIONS

The abolition of slavery in Brazil was the result of socio-economic, political, and ideological changes that matured for almost a century. The transition was gradual and deliberately sluggish, allowing rural elites with different interests to design compromises that safeguarded their investments in captives and land. The first phase in emancipation started with the abolition of the transatlantic traffic, a historical process that unfolded up to the 1850s and that is the focus of this section. The final abolition in 1888, in turn, was the culmination of decades-long resistance. In spite of the economic viability of slavery until its end in 1888, the institution had been gradually eroded by the strengthening of the abolitionist movement, the 1871 Law of the Free Womb and the 1885 Sexagenarian Law. These laws provided slaveowners with apprenticeship and indenture-ship mechanisms, while enabling mass escapes and revolts of enslaved persons, especially in the 1880s.<sup>21</sup>

Great Britain's mounting pressure was an early trigger for the Brazilian ban on the transatlantic traffic. Building upon international treaties previously signed with Portugal, clauses prescribing the end of the traffic embedded the British recognition of Brazilian independence in 1822.<sup>22</sup> A number of treaties and domestic legislation followed, but the traffic took momentum in spite of the law.<sup>23</sup> The passing of the Aberdeen Act by the United Kingdom in 1845 forced a change, as it ascribed the status of piracy to Brazilian ships trafficking captives, giving jurisdiction to the British Admiralty to try slave traders.<sup>24</sup> The Brazilian government finally enforced the ban in 1850 as a response both to the international pressure and to the domestic fear, shared even by those who benefitted the most from the traffic, of the revolutionary potential represented by the almost one million Africans illegally disembarked in Brazil as enslaved persons in 1827–56.<sup>25</sup>

The actual enforcement of the ban in 1850 reversed the 1845–49 fall in slave prices due to smuggling in Rio de Janeiro's market.<sup>26</sup> Before stabilizing at higher levels in the 1860s, slave prices rose dramatically in the 1850s, as shortages in supply met an increased demand in agricultural frontiers, especially in São Paulo's central-western plateau.<sup>27</sup>

<sup>21</sup> Stein, *Vassouras*, p. 255; Carvalho de Mello, 'The economics of labour', Chapter V; Klein and Luna, *Slavery*, p. 303.

<sup>22</sup> Jones, 'The origins', pp. 507–9; Drescher, 'Brazilian abolition', p. 447.

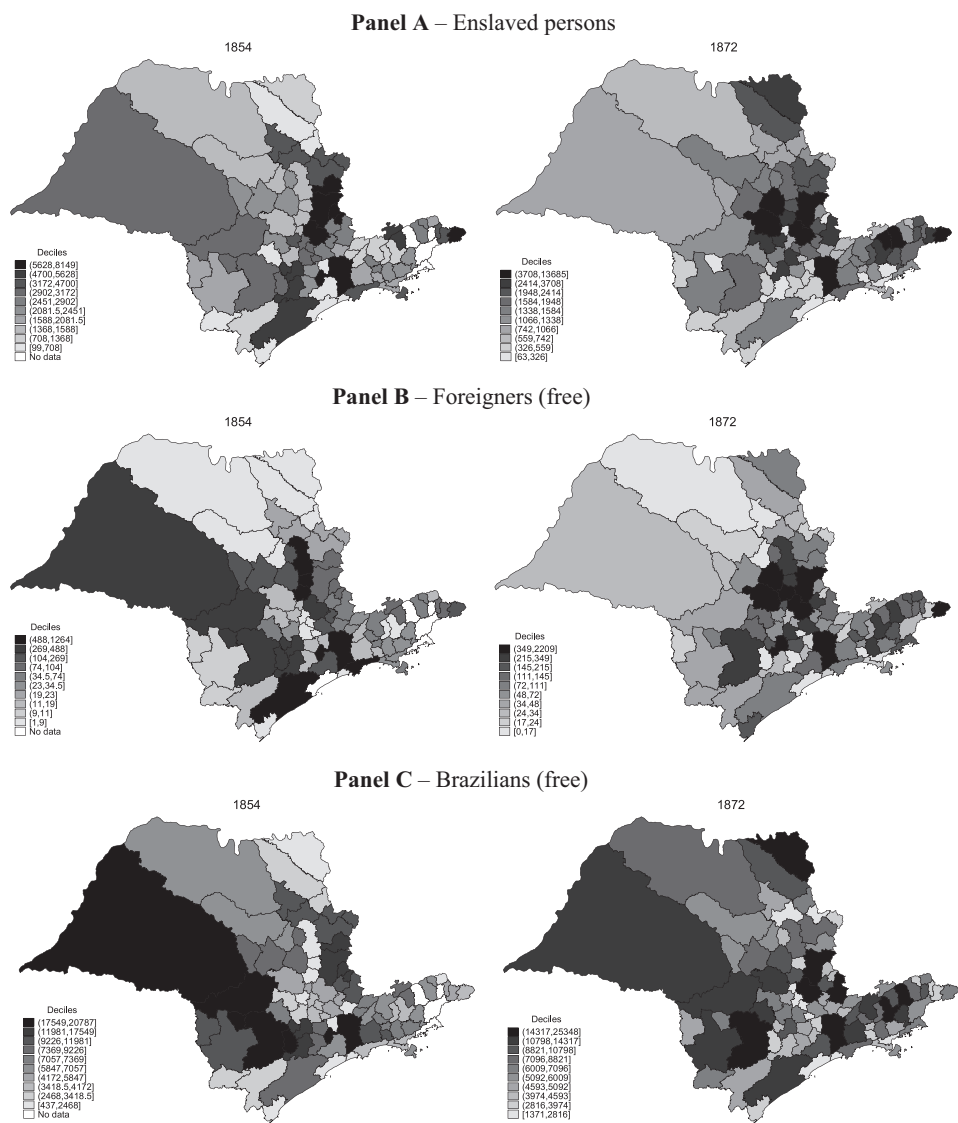
<sup>23</sup> Graden, 'An act', pp. 252–3; Conrad, 'The contraband'.

<sup>24</sup> Jones, 'The origins'.

<sup>25</sup> <https://www.slavevoyages.org/assessment/estimates>, last accessed on 29 April 2023 [Parameters: 1827–66, all flags, disembarkation (only): Brazil]. Graham, 'Causes for the abolition', pp. 129–30; Graden, 'An act'.

<sup>26</sup> Carvalho de Mello, 'The economics of labour', p. 59. That work provides one of the most comprehensive estimates of price profiles by age–sex cohorts in Rio de Janeiro's markets. See also Klein and Luna, *Slavery*, pp. 295–9; Dean, *Rio Claro* [a], p. 55; Graden, 'An act', p. 252.

<sup>27</sup> Carvalho de Mello, 'The economics of labour', pp. 51, 204–7.



**FIGURE 1** Stocks of enslaved persons, free foreigners, and free Brazilians in the counties of São Paulo, 1854 and 1872 (by deciles). Panel A – enslaved persons; panel B – foreigners (free); panel C – Brazilians (free). *Notes:* (1) All maps use administrative frontiers from 1872; (2) for those counties that did not exist as independent political units in 1854, their data was extrapolated from the counties they originally belonged to. *Source:* Author’s creation with data organized by Bassanezi, *São Paulo. II – 1854*; idem, *São Paulo. III – 1872*.

Poorly connected and lacking endowments of immediate interest to the mercantilist economy of the colonial era, São Paulo’s countryside had a comparatively small stock of slaves in the first decades of the nineteenth century.<sup>28</sup> This picture was about to change dramatically: figure 1 plots the spatial distribution of slaves, free foreigners, and free Brazilians per decile across São Paulo’s counties in 1854 and 1872. The figure reveals the simultaneous concentration of enslaved persons

<sup>28</sup> *Buarque de Holanda*, ‘Prefácio’, p. 16; *Viotti da Costa*, *Da senzala à colônia*, p. 69.



(panel A) and of free foreigners (panel B) in the province's centre-west, the agricultural frontier at the time.<sup>29</sup>

After 1850, planters in economically booming regions, with fertile and newly exploited soils, were able to afford the rising prices of slaves, with São Paulo's central-western plateau experiencing the highest growth rate of its enslaved population. The coffee zone started concentrating on not only enslaved persons in general, but also on male prime field hands.<sup>30</sup> However, international smuggling became too risky as of 1850, interprovincial traffic alone was not able to accommodate the labour demand, and new taxation attempted to restrain the drainage of slaves from north-eastern Brazil.<sup>31</sup>

Panel C of figure 1 shows that the stock of free Brazilians could have provided, at least potentially, the abundant labour supply that planters were looking for.<sup>32</sup> As Maria Lúcia Lamounier put it, the 'labour question' was not demographic, but political:<sup>33</sup> it was not a matter of absolute scarcity of labourers, but of finding ways to direct and fasten their labour force to the plantations.

Peonage had always coexisted with slavery, and free Brazilians were frequently employed in rural tasks with high risk of escapes or hazard to slaves, such as in the clearing of forests to form new plantations.<sup>34</sup> However, long-term employment of free Brazilians in ordinary rural tasks, such as caring for crops in the lean season, was less common. Agricultural seasonality seems to have played an important role in driving free Brazilians away from permanent employment in plantations.<sup>35</sup> In addition, because access to legally recognized landownership was very restricted, an abundant physical endowment of land did not translate into an abundance of land as a production factor. Combined with low technological progress, this artificially enforced scarcity of land meant that labour remuneration was rigidly and artificially low. Patron–client relations, in turn, restrained the labour mobility of free Brazilians.<sup>36</sup> Finally, classic literature stresses that, in a slave-based society, employment on someone else's land was generally perceived as degrading, and the reluctance of locals to accept employment in the plantations reinforced ingrained racist views about an allegedly idle, slothful nature of free Brazilians.<sup>37</sup>

The hiring of free European immigrants to the Brazilian Southwest received serious attention in this scenario of a violent penetration of the slave system into São Paulo's countryside concomitant to the final curbing of its transatlantic supply.<sup>38</sup> Plans dating back to the 1810s–20s to

<sup>29</sup> See also Drescher, 'Brazilian abolition', pp. 438–9 (especially footnote 26).

<sup>30</sup> Dean, *Rio Claro* [a], pp. 50–1; Carvalho de Mello, 'The economics of labour', pp. 75, 85–91; Conrad, 'The contraband', pp. 622, 626; Viotti da Costa, *Da senzala à colônia*, p. 70; Klein and Luna, *Slavery*, p. 297. For a similar concentration of slavery in the most profitable crops in the Americas, see Drescher, 'Brazilian abolition', p. 437.

<sup>31</sup> Dean, *Rio Claro*, pp. 69–73; Lago, 'O surgimento', pp. 344–5, 352; Viotti da Costa, *Da senzala à colônia*, pp. 155–7, 256–68.

<sup>32</sup> Dean, *Rio Claro* [a], pp. 118–19.

<sup>33</sup> Lamounier, 'Agricultura', p. 361. In 1842 Magistrate Henrique Velloso de Oliveira (*A substituição*, p. 18) clearly favoured the employment of Brazilians over foreigners.

<sup>34</sup> Stein, *Vassouras*, p. 57; Dean, *Rio Claro* [a], p. 20; Carvalho de Mello, 'The economics of labour', pp. 23–5; Klein and Luna, *Slavery*, p. 312; Lago, 'O surgimento'.

<sup>35</sup> Witter, 'Um estabelecimento', p. 401; Lamounier, 'Formas de transição'; Stolcke and Hall, 'The introduction', p. 170. Lamounier, 'Agricultura'

<sup>36</sup> Leff, 'Economic retardation', p. 495; Stolcke and Hall, 'The introduction', p. 170; Lago, 'O surgimento', pp. 331, 342, 349; Ianni, 'O progresso', pp. 360–1; Viotti da Costa, 'O escravo', p. 172.

<sup>37</sup> Lamounier, 'Agricultura', pp. 354–5, presents a critical literature review.

<sup>38</sup> Leff, 'Economic retardation', p. 492; Viotti da Costa, *Da senzala à colônia*, pp. 143–5; Pereira and Nogueiról, 'A transição', pp. 277–8.





hire European labourers for the plantations gained ground in the 1830s and were finally put into practice in the 1840s. The so-called Vergueiro system epitomized these efforts, setting up the long-lived sharecropping-*cum*-debt arrangement that led to the concentration of free foreigners in São Paulo's centre-west observed in panel C for 1872.<sup>39</sup>

## II | THE RISE AND FALL OF THE VERGUEIRO SYSTEM (1835–80)

The first successful experiment with bonded sharecroppers took place at Ibicaba plantation in 1847. Located in the central-western plateau of São Paulo, that plantation was owned by Nicolau Pereira de Campos Vergueiro, a Portuguese-born senator of the Brazilian Empire.<sup>40</sup> Vergueiro had proposals to promote immigration to plantations in São Paulo since the 1820s, when he opposed the immigration policy of the Brazilian Empire of founding rural colonies for settling immigrants in their own plots of land.<sup>41</sup>

By the mid-1830s, with new legislation against the transatlantic slave traffic, pressure mounted on private companies to promote immigration.<sup>42</sup> In 1835 a joint venture to hire immigrant labourers was proposed under the name of one of the senator's sons, Luiz Vergueiro & Co., in a consortium to be financed by the provincial government and by a well-connected political and economic elite.<sup>43</sup> Luiz Vergueiro & Co. was expected to support the venture with a 90 per cent equity to back up the credit to be offered to immigrants, entitling loans of up to 60 *milréis* for each of the 240 'suitable' Swiss or southern Germans to be thus hired.<sup>44</sup> The envisaged contract was similar to the American headright system, as it included clauses to bond labour temporarily, but also allowed for rural settlement thereafter.<sup>45</sup> The labour dimension was subdivided into three phases. Upon arrival in Brazil, an agent would match immigrants and private employers for a three-year indenture. Two labour arrangements were available: unskilled labourers would earn a fixed payment per day worked (*jornal*), while specific occupations that can be categorized as skilled, such as carpenters, blacksmiths, and potters, would earn according to market conditions and the labourer's 'capacity and merits'.<sup>46</sup> After the three-year indenture, immigrants would receive plots in public lands, which they had to cultivate for another six years. At a final phase, immigrants who actually settled in their plots in the previous period would then receive property titles over the land.

<sup>39</sup> In an important intermezzo, free Brazilians were employed under similar arrangements in the 1860s–70s, before the consolidation of mass immigration in the late 1880s (Lamounier, 'Agricultura', pp. 357–9).

<sup>40</sup> Buarque de Holanda, 'Prefácio'; Witter, 'Um estabelecimento'; idem, Ibicaba. Heflinger Jr., Ibicaba and *A Revolta dos Parceiros* brought into light a vast amount of new archival material. See also Witzel de Souza and Santin Gardenal, eds., Ibicaba.

<sup>41</sup> Siriani, *Uma São Paulo alemã*; idem, 'Os descaminhos' Witzel de Souza, 'From bonded laborers', Chapter 1. O Farol Paulistano [OFP] (15/11/1828, pp. 1–2). For debates on the subsidization of immigration, see OFP (26/03/1828, pp. 2–4; 04/03/1829, pp. 1–2; 10/11/1829, p. 1; 20/06/1829, pp. 1–2).

<sup>42</sup> O Novo Farol Paulistano [ONFP] (08/08/1835; 29/08/1835 – p. 3; 05/09/1835, pp. 3–4; 10/02/1836, pp. 3–4; 08/10/1836, p. 1); O Paulista Official [PO] – 1836 (10/02, pp. 3–4; 12/02, p. 3; 15/02, pp. 2–3; 18/02, p. 1; 01/03, p. 3). See also Calógeras, *A política exterior*, pp. 337–8, 351; Bassanezi et al., *Repertório de legislação*, pp. 14–15; Mendonça, 'Leis', pp. 71–5.

<sup>43</sup> PO (23/01/1836, pp. 3–4).

<sup>44</sup> Plus five *pezos* per person for extraordinary expenses. 'Suitable' (free translation for '*de número*', literally '*those to be counted*') were men and women in the age ranges 8–45 years and 10–35 years, respectively.

<sup>45</sup> Engerman and Sokoloff, 'Once upon a time', p. 26.

<sup>46</sup> Unskilled men older than 45 years were also subjected to this arrangement.



No immigration wave ever materialized on these contractual terms.<sup>47</sup> Nevertheless, Luiz Vergueiro & Co.'s proposal shows how the predominant immigration policies conditioned the design of private contracts. Although Senator Vergueiro had vehemently opposed the foundation of public-sponsored settlement colonies in the 1820s, that policy was still so preponderant by the mid-1830s that Luiz Vergueiro & Co.'s contract proposed the settling of foreigners in smallholdings after a three-year indenture. The contract also provides unique evidence on the various labour arrangements considered feasible and adequate for immigrants. These included fixed payments per time worked and varying salaries per occupation. At this stage, share clauses still had no place in the contract's labour dimension.

Senator Vergueiro resumed his attempts to hire non-captive labourers in 1840, when a group of 80 Portuguese immigrants arrived at Ibicaba. These immigrants received a loan, and it is likely that they were subjected to a fixed-term indenture, as in Luiz Vergueiro & Co.'s 1835 proposal.<sup>48</sup> The labour dimension of the contracts, however, had been modified substantially in that five-year interval. Some of the Portuguese immigrants worked under fixed payments per month; others received plots of land under fixed rents, but had to supply labour services to the planter.<sup>49</sup> This experiment was short-lived and most of the Portuguese immigrants abandoned Ibicaba by 1842.<sup>50</sup> Senator Vergueiro attributed this failure to political hostilities caused by his alleged participation in an insurgency against the central government, but critics saw the roots of the failure in contractual mismanagement. Strict labour monitoring displeased the Portuguese immigrants, and some of them allegedly considered their labour arrangements too similar to a slave gang system.<sup>51</sup>

This long learning process paved the way for the successful experiment of 1847, when 423 German-speakers arrived at Ibicaba, joining 16 Portuguese workers who had remained there. These immigrants signed their contracts with Vergueiro & Co., a coffee export firm founded in 1846. Subsequent arrivals in 1849 and 1851 expanded the number of these pioneers by 65 German-speakers and 50 Portuguese workers.<sup>52</sup> In less than eight years, Ibicaba reached a peak of about 900 non-captive labourers tied to credit obligations, before stabilizing at around 670 in 1855.<sup>53</sup>

The new contract included the usual credit dimension to bond immigrants by debt. Similar in spirit to the 1835 consortium, Vergueiro & Co. obtained a loan of c. 3.2 million *milréis* from the Brazilian central government to supply credit to the immigrants.<sup>54</sup> The focus on poor and otherwise credit-constrained immigrants prevailed in 1847 as it had in 1835 and 1840. However, instead of a fixed-period indenture, labour tying now extended until the repayment of all outstanding debts, implying that immigrants became liable to the amount of credit they demanded to cover immigration costs and all advances they received in cash, foodstuff, and goods bought in the farm's

<sup>47</sup> Viotti da Costa, *Da senzala à colônia*, p. 111, reports an arrival of immigrants in 1836, which is probably not connected to Luiz Vergueiro & Co.'s proposal (see Calógeras, *A política exterior*, pp. 342–3).

<sup>48</sup> According to my interpretation of Calógeras, *A política exterior*, p. 353.

<sup>49</sup> Dean, *Rio Claro*, p. 96.

<sup>50</sup> Correio Paulistano [CP] (20/02/1855, p. 1). Two Spaniards were among these immigrants.

<sup>51</sup> Calógeras, *A política exterior*, pp. 353–4; Buarque de Holanda, 'Prefácio', p. 16; Dean, 'Latifúndia', pp. 612–13; Lamounier, *Formas de transição*, p. 24; Heflinger Jr., Ibicaba, pp. 26–34.

<sup>52</sup> Report of the provincial president (i.e. governor) in CP (20/02/1855, p. 1). See also Dean, *Rio Claro*, p. 98.

<sup>53</sup> CP (20/02/1855, p. 1). The exact number varies between 423 and 426.

<sup>54</sup> In 1855 the provincial presidency required information about a loan received by José Vergueiro & Co., son of Senator Vergueiro, according to the budgetary law of 18 September 1845 (CP 27/04/1855, p. 4).



grocery store. The 1847 contract also devised, for the first time, a labour and a land–rental dimension based on sharecropping mechanisms. In terms of labour, immigrants were responsible for harvesting a pre-specified number of coffee groves compatible with the size of their households and for collaborating in processing the coffee berries;<sup>55</sup> Vergueiro & Co., in turn, was accountable for transporting and marketing the produce. Each contracting party was entitled to a 50 per cent share of the corresponding net yearly profits. As for the land–rentals, each household received a plot of land for cultivation and paid a 50 per cent share of the produce sold in the market, but no share over goods consumed by the household itself.<sup>56</sup>

This sharecropping–*cum*–debt arrangement became the most widespread form of non-captive labour in São Paulo’s coffee economy in the 1850s. After its consolidation in Ibicaba, a number of landowners adopted similar arrangements. In 1851 Vergueiro & Co. became a hiring agency of European immigrants. Profiting from a fee charged per worker imported to other landowners, the firm announced new arrivals of German-speakers and the numerous possibilities to employ them as agricultural labourers.<sup>57</sup> Newspaper announcements in 1851–52 stressed Vergueiro & Co.’s promptitude to fulfil farmers’ demands, tailoring the hiring to their proposals,<sup>58</sup> while inviting them to check the successes of immigrant labour in Ibicaba.<sup>59</sup> Related to its new role as a hiring agency, Vergueiro & Co. intensified its advertisements in the newspaper *O Mercantil* (a support platform to the Vergueiro family),<sup>60</sup> reproducing a laudatory pamphlet about the experience of Ibicaba.<sup>61</sup>

Official reports show that at least 30 farms employed c. 3500 bonded European labourers in 1856, a number that admittedly underreported immigrants working in smaller farms.<sup>62</sup> Current evidence suggests that at least 109 farms across 24 counties employed some form of contract labour between 1847 and 1860.<sup>63</sup>

Notwithstanding its prevalence in the 1850s, contemporaries did not consider sharecropping an obvious solution to the labour question at first. As late as 1847, it was not at all clear that sharecropping should have become the prevailing arrangement with the German-speaking immigrants. Anecdotal evidence suggests that Vergueiro & Co. even considered another contract based on fixed payments per time worked (*locação de serviços*).<sup>64</sup> The latter was actually the only non-captive labour regime regulated by Brazilian legislation, and Senator Vergueiro was closely acquainted with it, as he had actively participated in passing the first laws regulating labour relations in the

<sup>55</sup> Later contracts excluded immigrants from the processing of the coffee berries, probably due to high transaction costs. As compensation, labourers paid a fixed fee for the berries processed at the landowners’ sole expense.

<sup>56</sup> Most plantations, including Ibicaba, later abandoned such clause, given its high monitoring costs.

<sup>57</sup> A Aurora Paulistana [AAP] (14/08, 21/08, 29/08 – 1852, p. 4); O Mercantil [OM] (22/10/1851, p. 4).

<sup>58</sup> O Mercantil [OM] (22/10/1851, p. 4).

<sup>59</sup> Diário de S. Paulo [DSP] (16/01/1868, pp. 1–2); Gazeta de Campinas [GC] (17/10/1872, pp. 1–2).

<sup>60</sup> Opposition newspapers were also active, as for example AAP (22/09/1851, p. 1).

<sup>61</sup> The author of that pamphlet, the Swiss Charles Perret-Gentil, abandoned his consular career to pursue immigration businesses in Brazil; he later became a manager in Ibicaba after the *Sharecropper’s Rebellion* (see below) and united by kinship to the Vergueiro family. Material in OM – 1851 (02/04, p. 2; 23/04, p. 3; 24/05, p. 4; 02/06, pp. 3–4; 19/07, p. 4; 23/07, p. 1; 30/07, p. 4; 02/08, p. 4; 12/11, p. 4). Complete chapters published in OM – 1851 (23/04, pp. 1–2; 17/05, pp. 1–2; 28/05, p. 1; 04/06, pp. 1–2; 14/06, pp. 1–2; 05/07, pp. 1–2; 08/07, pp. 1–2; 12/07, p. 3; 16/07, pp. 3–4; 23/07, pp. 2–3). I thank Marília Jordan for these references.

<sup>62</sup> CP (23/02/1856, p. 1).

<sup>63</sup> Witzel de Souza, ‘Liberdade’, p. 12 and *app. I*.

<sup>64</sup> Stolcke and Hall, ‘The introduction’, footnote 189 and pp. 171, 194; Lamounier, ‘Formas de transição’, pp. 15, 53, 62, 96.

Brazilian Empire, in 1831 and 1837.<sup>65</sup> Adding to this multiplicity of potential arrangements, by 1855, Carlos Kruger, who had worked as manager in Ibicaba, bought a farm in Paraibuna County for reselling plots of land. Interestingly, he used sharecropping arrangements not as a labour contract, but as an amortization mechanism for the debt incurred by immigrants in buying those plots of land.<sup>66</sup>

The solutions proposed to the labour question in the 1850s owe much to a closely networked elite, united by kinship ties and holding highly ranked political positions. Political and economic ascension gradually allowed planters of central-western São Paulo to start designing the immigration policy itself.<sup>67</sup> In 1852 Senator Francisco Antonio de Souza Queiroz joined the efforts of his brother-in-law, Senator Vergueiro, in independently hiring immigrants. In that same year, Vergueiro & Co. reached its apex in the immigration business by signing the first of four contracts with the government of São Paulo to hire Europeans labourers for agriculture and public works.<sup>68</sup>

The Vergueiro and Souza Queiroz families, pioneers in hiring sharecroppers, secured a foothold in the business and politics of immigration. To planters and farmers unaccustomed to non-captive labour in ordinary rural tasks, the contracts proposed by these hirers provided benchmarks and limits for negotiating with their newly hired labourers.<sup>69</sup> The following excerpt provides a picturesque illustration of how Joaquim Bonifácio do Amaral negotiated his first hiring of immigrants with Senator Souza Queiroz in 1851. Bonifácio do Amaral became himself the proposer of many contractual innovations in the 1870s. However, by the early 1850s it is hard to imagine that even a well-informed planter such as Bonifácio do Amaral would have been able to envision clauses much different from those suggested to him by Senator Souza Queiroz. In the words of Bonifácio do Amaral, [Senator Souza Queiroz said]: “You told me elsewhere that you want colonists. I know, however, that you have no single coffee tree. Tell me whether you nevertheless want them, because I have my quill in my hand, ready to place an order”. “I want them”, replied [Bonifácio do Amaral]. The senator replicated: “What type of contract would be considered more suitable for you?” “The same [contract] that is suitable for your Excellency” [...]. And nine months later [...] the small colony was formed with about eighty German workers’.<sup>70</sup>

Sharecropping-*cum*-debt arrangements even became known as the Vergueiro system. To illustrate its pervasiveness, figure 2 plots an annual index of the frequency per page of terms related to sharecropping and bonded labour in a sample of 40 newspapers from the province of São Paulo.

Panel A plots the frequency per page of the terms *Vergueiro*, *Ibicaba*, and *Angélica* farm (another plantation of Vergueiro & Co. that employed indebted immigrants). An advantage of surveying these terms is their unambiguous meaning. The first peak in the term *Vergueiro* in the late 1820s is due to Nicolau Vergueiro’s participation in the provincial debates on immigration,

<sup>65</sup> Mendonça, ‘Leis’, pp. 68, 76. For an analysis of the legislation and its impact on labour relations in the 1850s, see Lamounier, ‘Formas de transição’.

<sup>66</sup> CP (20/02/1855, p. 1). In 1851 Vergueiro & Co. had also assisted households with whom the firm ‘was not pleased’ to buy their own land (OM, 04/10/1851, p. 2). See also Dean, *Rio Claro*, p. 98.

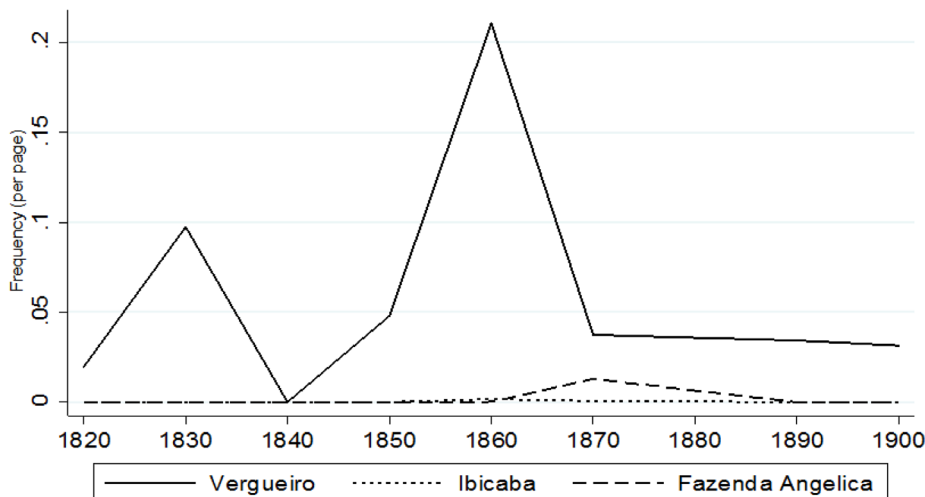
<sup>67</sup> Buarque de Holanda, ‘Prefácio’, p. 17; Witter, ‘Um estabelecimento’, pp. 403–6; Lamounier, *Formas de transição*, pp. 24, 39, 52.

<sup>68</sup> CP (26/08/1854, p. 1; 28/08/1854, p. 1; 12–13/09/1854, p. 1; 19/09/1854, p. 3; 17/02/1855, p. 2; 11/05/1855, p. 1; 18/05/1855, p.1). The similarities between the two last contracts and that of Luiz Vergueiro & Co. in 1835 are remarkable (CP 12/09/1854, p. 1; 27/12/1854, pp. 3–4; 03/01/1855, p. 1; 11/01/1855, p. 1). Viotti da Costa, *Da senzala à colônia*, p. 151, notices that Vergueiro & Co. made similar propositions in the provinces of Minas Gerais and Maranhão.

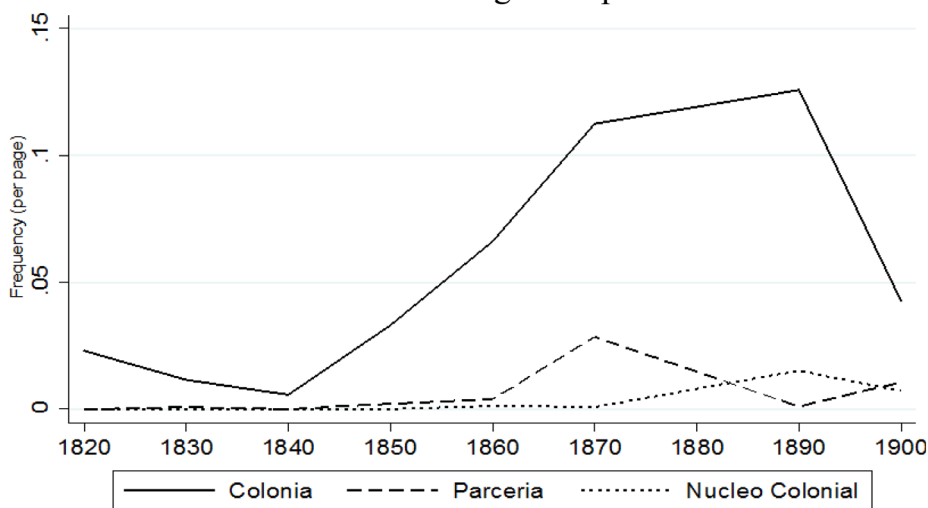
<sup>69</sup> Buarque de Holanda, ‘Prefácio’, p. 34; Dean, *Rio Claro*, p. 164; Stolcke and Hall, ‘The introduction’, p. 183.

<sup>70</sup> GC (27/01/1870, p. 2), reproduced in CP (08/02/1870, p. 1).

### Panel A – Vergueiro system



### Panel B – Immigration policies



**FIGURE 2** Frequency per page of news related to contract labour in 40 newspapers from São Paulo (1820–99). Panel A – Vergueiro system; panel B – immigration policies. *Note:* For the list of newspapers and methodology to compute frequency per page, see online appendix I. *Source:* Author’s creation using the Brazilian Digital Newspapers Repository. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

while the subsequent trend reflects the persistence of the Vergueiro system in public debates on how to organize non-captive labour as of 1840 and its growing influence in the 1850s.

Panel B plots the frequency per page of the terms *colônia*, *parceria* (the most common Brazilian translation for sharecropping), and *núcleo colonial* (government-sponsored settlements). A disadvantage of these terms is their multiple meanings, as *parceria* might refer to any type of partnership and *colônia/núcleo colonial*, to various expatriate clusters.<sup>71</sup> Subject to these ambiguities,

<sup>71</sup>In his glossary of ‘local usage’ terms in Rio de Janeiro, Stein, *Vassouras*, p. 299, refers to *parceiro* as ‘fellow worker, companion; also sharecropper’ and *parceria* (sic) as ‘share-tenancy’, but he remarks that ‘some [terms] have additional



the term *colônia*, which appears prominently in the 1820s in reference to government-sponsored settlements, first shows a declining trend up to 1840, and then an upward trend until the late 1860s—at that time most likely associated with sharecropping, as Senator Vergueiro frequently referred to his experiments as *colônias de parceria*. The term *parceria*, in turn, increases steadily throughout the 1840s–50s, picking up pace in the 1860s, but declining steadily as of the 1870s, to be finally surpassed by *núcleo colonial* by the mid-1880s.

The entry of new players in the immigration business coincided with the termination of the public contracts signed by Vergueiro & Co. In 1856 the provincial presidency signed contracts with *Theodor Wille & Co.* and with Captain Joaquim de Andrada for the hiring of new European labourers.<sup>72</sup> At first, *Theodor Wille & Co.* advanced loans to a mere 49 emigrants departing to São Paulo, a number that increased to 519 in 1859.<sup>73</sup> In that year, the French engineer Achilles d'Estadens, who was residing in São Paulo at the time, proposed a new sharecropping arrangement in partnership with the Antwerpian charterer *Leroy & Steinmann*; their contract included longer maturations of interest-free debt and lower interest rates than those of Vergueiro & Co.<sup>74</sup>

Meanwhile, non-captive labour introduced a new problem to landowners: strikes led by free immigrants. Contrary to the then prevailing imagery that sharecropping was a harmonious arrangement,<sup>75</sup> even the more progressive landowners had an inclination towards patronage relations, while immigrants frequently nourished exaggerated expectations about working conditions in Brazil.<sup>76</sup> This sparked a number of conflicts. In fact, labour disputes had been recurrent at least since 1851, when some German sharecroppers in Ibicaba accused Vergueiro & Co. of breaching contractual arrangements. At the time, Senator Souza Queiroz dissuaded the discontented immigrants from filing their complaints, while Vergueiro & Co. invested in its public image by publishing an open letter of other, supportive immigrants.<sup>77</sup> However, it was in 1856/7 that labour disputes reached an unprecedented height with the so-called Sharecroppers' Rebellion. Led by the Swiss schoolmaster Thomas Davatz, this rebellion was in fact a strike that broke out in Ibicaba and is one of the best-known episodes in the history of immigration to Brazil, not least because its leader published a detailed account of events in 1858.<sup>78</sup> Even if unprecedented for its consequences, this strike was by no means an isolated event. At least two other strikes had preceded it in that same year, taking place in different counties and involving foreigners under different working conditions.<sup>79</sup> The similarities between these and other strikes throughout the 1850s reveal that conflicts were all caused by the non-enforcement of contracts, biased interpretations of clauses, monitoring problems, and/or lack of transparency in accountancy.

In the aftermath of the Sharecroppers' Rebellion, the Swiss Confederation, Prussia, and the Duchy of Saxe-Coburg-Gotha conducted intense diplomatic inquiries, followed by Brazilian and

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meanings in Brazilian Portuguese'. In fact, Stein's stress on the land–rental aspect of sharecropping differs from the *paulista* usage in mid-nineteenth century, which was more focused on the labour dimension of the Vergueiro system.

<sup>72</sup> CP (12/09/1856, p. 1; 25/07/1857, p. 1). See also Viotti da Costa, *Da senzala à colônia*, p. 124; Siriani, 'Os descaminhos', p. 97.

<sup>73</sup> CP (21/12/1859, pp. 1–2); Lamounier, *Formas de transição*, p. 50.

<sup>74</sup> CP (03/06/1856, p. 4). The case discussed by Davatz, *Memórias*, p. 218, most likely refers to this contract.

<sup>75</sup> Tschudi, *Viagem*, pp. 129–30, provides an illustrative example.

<sup>76</sup> Dean, *Rio Claro*, p. 124; Siriani, 'Os descaminhos', p. 95.

<sup>77</sup> It may be the case that Perret-Gentil wrote *A Colônia* as a reaction to these early labour disputes.

<sup>78</sup> Davatz, *Memórias*.

<sup>79</sup> CP (27/05/1856, pp. 2–3).



two Swiss inspections, in 1857 and 1860, in plantations that employed European bonded labourers.<sup>80</sup> In 1858 Prussia enacted a censure motion inviting the German States to oppose emigration to Brazil due to the precarious status of Protestants in the Catholic Empire and by comparing the working conditions of European agricultural labourers in Brazil to those of African enslaved persons.<sup>81</sup> This propaganda of a ‘white slavery’ served its political goal<sup>82</sup>: the von der Heydt Rescript was enacted in Prussia one year later, cancelling hiring licenses and prohibiting pro-emigration propaganda, first to São Paulo and later to Brazil in general. From then on, Brazilian immigration policies became a frequent source of diplomatic tension with the German States and the German Empire.<sup>83</sup>

In this scenario, in 1871 Joaquim Bonifácio do Amaral attempted to engage labour directly, acting on his own account to recover some credibility for the Brazilian immigration policy in the German States.<sup>84</sup> Two decades after having accepted the contractual terms of Senator Souza Queiroz, Bonifácio do Amaral now urged to solve the following agency problem, because European agents received a commission per immigrant hired, so the argument that they had no incentives to screen properly for labourers with adequate skills and high morals.<sup>85</sup> Although frequently exaggerated, this recurrent complaint of planters was not completely devoid of truth. In 1859 Brazilian consular authorities expressed concern with the fact that the most accredited charterers transporting immigrants from the German States to the United States refused to enter the Brazilian market for lack of adequate regulations.<sup>86</sup> However, the already difficult political circumstances around Bonifácio do Amaral’s intents worsened with the breaking out of the Franco-Prussian War. After some exploratory travels and in spite of his previous critiques, Bonifácio do Amaral ended up contracting the services of a hiring agent from Hamburg.<sup>87</sup>

Bonifácio do Amaral’s new contracts incorporated new features, further developed in the 1860s. That decade witnessed the spread of fixed payments per piece rate and time worked, as well as of side payments for the cultivation of coffee groves during the lean season, whereas harvesting was still mostly regulated by sharecropping arrangements. In the 1870s, Bonifácio do Amaral added yet another layer of complexity to the land–rental dimension by allowing immigrants to choose the size of plots for their own cultivation via a system of fixed rents, with leasing rates increasing

<sup>80</sup> Davatz, *Memórias*; Tschudi, *Viagem*. See also Dean, *Rio Claro*, p. 107; Heflinger Jr., *Ibicaba*, pp. 65–6; idem, *A Revolta dos Parceiros*, pp. 55, 71.

<sup>81</sup> GC (14/04; 08/05 – 1870, pp. 1–2). Switzerland passed a motion demanding a ‘more humane’ treatment of immigrants; GC (05/05/1870, p. 1).

<sup>82</sup> Citing Molinari, even José Vergueiro argued in that direction (GC, 31/03/1870, p. 1). See also Witter, ‘Um estabelecimento’, pp. 420–1; Dean, *Rio Claro*, pp. 97, 173; Rossfeld and Ziegler, *Der Traum*.

<sup>83</sup> For example, CP (12/10/1865, p. 1; 11/03/1866, pp. 3–4; 19/09/1875, p. 2; 29/05/1879, p. 1); DSP (04/09/1872, p. 2). See also Witzel de Souza, ‘From bonded laborers’, pp. 215–17.

<sup>84</sup> CP (01/07/1870, p. 1); GC (24/07/1870, p. 1). See also Buarque de Holanda, ‘Prefácio’, p. 33; Viotti da Costa, *Da senzala à colônia*, p. 233. Analogously, Francisco de Queiroz Telles commissioned an ex-sharecropper to hire immigrants in Switzerland (Scheler, ‘Beiträge’, p. 180; Grininger, *Imigração*).

<sup>85</sup> GC (27/01, pp. 1–2), reproduced in CP (08/02, p. 1) – 1870. For José Vergueiro’s opposite view, see GC (27/03/1870, pp. 1–2). A debate in the press between José Vergueiro and Joaquim Bonifácio do Amaral is analysed by Stolcke and Hall, ‘The introduction’, footnote 56.

<sup>86</sup> CP (21/12/1859, p. 2).

<sup>87</sup> CP (19/11/1870, pp. 2–3) and GC (24/11/1870, p. 1), first published in *O Diário do Rio* (07/11/1870).



stepwise according to the demanded area.<sup>88</sup> This arrangement provided a screening mechanism to the landowner and gave more agency to immigrants: households with a comparative advantage in subsistence agriculture could lease-in more land, from which the landowner derived fixed rents. The stepwise increase in rents, in turn, implied that the average household would probably not completely specialize in the production of foodstuff at the expense of cultivating and harvesting coffee.

Even if later tarnished by labour disputes and strikes, Bonifácio do Amaral's experiments prospered.<sup>89</sup> Planning to engage up to 1000 northern Germans to his plantations, he obtained a declaration of 24 household heads who pleaded for the hiring of friends and relatives. These household heads expressed the intention of supplying credit by themselves to their compatriots, including 140 *milréis* for people older than 10 years and 70 *milréis* otherwise, as well as free inland transportation.<sup>90</sup> As immigrants became potential credit suppliers for chain migration, the indebtedness scheme originally designed by Vergueiro & Co. started losing strength. However, this did not imply that the credit dimension was fading away. Operating within a plantation, with very limited access to external credit markets (if existent at all), labourers' credit was most likely a net positive balance in the plantation's accounting. As such, not only debt, but also credit tied labourers to landowners.<sup>91</sup> Moreover, the focus clearly remained on those who could not afford their own migratory costs; and by using the funds of immigrants, the landowner even avoided the direct risks of default.

The 1860s–70s thus constituted an intermediary phase after the predominance of sharecropping and before the consolidation of mass immigration. Fixed payments became ever more frequent and some more radical, sporadic experiments took place, such as that of Commander João Elisário de Carvalho Montenegro, who operated *Nova Lousã* plantation exclusively under a wage system and no slaves.<sup>92</sup>

While landowners missed no opportunity to vent their distress with strikes and contractual renegotiations, and although the enthusiasm with the Vergueiro system had given way to a nostalgia for the era of abundant supply of slaves, the rural elite in São Paulo could not afford to dispense with immigrant labour. Landowners who kept hiring immigrants did so by exploring well-known channels, that is, by focusing on poor immigrants mostly from the German States, Switzerland, and Portugal. In addition, in spite of all contractual innovations, sharecropping remained a central labour–rental arrangement throughout. Expertise since the 1840s made planters more able to use sharecropping arrangements. Francisco de Souza Queiroz, for instance, still considered sharecropping the most common way to organize non-captive labour in 1869, as he kept hiring German-speakers to his plantation, for which he praised the memory of the deceased Vergueiro.<sup>93</sup> Defending sharecropping even became a matter of national pride, a type of Brazilian response to accusations in Germany about precarious working conditions in São Paulo.<sup>94</sup>

<sup>88</sup> CP (15/10/1871, p. 1).

<sup>89</sup> A curious festivity staged for his free labourers, clearly essayed for propagandistic purposes, is described in GC (16/07, pp. 2–3; 30/07, p. 2; 02/08, p. 2; 06/08, pp. 1–2 – 1874); CP (17/07/1874, p. 1).

<sup>90</sup> GC (06/08/1874, p. 1).

<sup>91</sup> Dean, 'A pequena propriedade', p. 489. For the same reasoning applied to a later period, see Holloway, *Immigrants*, p. 99.

<sup>92</sup> Witter, 'Um estabelecimento', pp. 409–10; Lamounier, 'Formas de transição', pp. 45–7; Freitas, *Vida e obra*.

<sup>93</sup> DSP (20/06/1869, p. 1; 10/08/1869, p. 2; 15/06/1870, p. 1).

<sup>94</sup> DSP (04/08, p. 2; 04/09, p. 2; 05/09, p. 1 – 1872).





It is in this context that we reach the *colonato* system, the labour–rental arrangement that prevailed during the mass immigration era starting in the second half of the 1880s. From an economic point of view, the *colonato* system was a mixed contract with two main sources of labour income: (1) a varying parcel based on household’s annual harvest, but with a predetermined remuneration per unit harvested; and (2) a fixed parcel based on predetermined tasks to be executed during the lean season for a predetermined remuneration, for example, pruning the coffee trees and cleaning the coffee groves.<sup>95</sup>

Such an arrangement was the final unfolding of sharecropping contracts with increasingly better defined side payments and ever fewer clauses based on shares.<sup>96</sup> As for the credit interlinkage, criticism mounted about individual indebtedness being a disincentive for labour effort and a cause of diplomatic tension.<sup>97</sup> A solution was to substitute an elastic supply of immigrants for indebtedness with individual landowners.<sup>98</sup> These views underpinned projects to subsidize immigration publicly with the provincial budget, the implementation of which attracted a substantial share of the c. 1.15 million immigrants who entered São Paulo in 1885–1914.<sup>99</sup>

### III | THE RATIONALE OF SHARECROPPING

The ubiquitous question in economics of why sharecropping is such a pervasive labour–rental arrangement finds its echo in the historiographical controversy on why sharecropping contracts were the first to be successfully enforced with non-captive labourers in São Paulo’s coffee economy. Explanations for the predominance of sharecropping in this juncture of the Brazilian transition from slavery oscillate between two traditions. Macro-oriented explanations are embedded into an evolutionary approach; because sharecropping arrangements changed over time and were substituted by other labour–rental arrangements, these approaches highlight the economic drawbacks of the first contracts to explain why planters preferred alternatives, especially during the age of mass migration. Micro-oriented approaches, in turn, investigate the rationale of different contracts at the farm level; they stress potential economic advantages of sharecropping to explain its rationale in specific circumstances.

The macro-oriented tradition is frequently embedded in theories of developmental stages, which were very influential in classical Latin American studies of rural labour relations.<sup>100</sup> These interpretations posit an evolutionary process that starts with slavery and ends up in modern labour markets. One strand of the historiography used this benchmark to describe the transition from slavery in Brazil as a process that led to the adoption of ever-more efficient contracts, with

<sup>95</sup> Holloway, *Immigrants*. For the purposes of this paper, see also Stolcke and Hall, ‘The introduction’, p. 179; Lago, ‘O surgimento’, footnote 36 and p. 361; Viotti da Costa, *Da senzala à colônia*, p. 240.

<sup>96</sup> In line with theoretical predictions in Bardhan, ‘Variations’; Lucas, ‘Sharing, monitoring’; and Kotwal, ‘The role of consumption credit’.

<sup>97</sup> CP (04/03/1874, p. 2) and quote in Viotti da Costa, *Da senzala à colônia*, p. 130.

<sup>98</sup> CP (11/10/1870, p. 2). José Vergueiro was one of the first to make that suggestion.

<sup>99</sup> Levy, ‘O papel da imigração’, app. tab. 8; Dean, ‘A pequena propriedade’, p. 488; idem, *Rio Claro*, p. 95; Holloway, ‘Creating the reserve army?’, pp. 194–5, 204–6; Lamounier, ‘Formas de transição’, pp. 152, 154; Viotti da Costa, *Da senzala à colônia*, p. 328; Petrone, ‘Imigração’, p. 327.

<sup>100</sup> Otsuka et al., ‘Land and labour’, p. 1973, footnote 51; Sadoulet, ‘Labour-service tenancy’, pp. 1031–2; Pereira and Nogueiról, ‘A transição’, p. 266. The concept of stages of development is an underlying thread in Duncan and Rutledge, eds., *Land and labour* (see, for instance, “the editors” note on p. 343).

non-captive labour markets gradually departing from its first arrangement.<sup>101</sup> Another strand, broader in scope, considered slavery a backward stage of development. Its gradual abolition would be endogenously related to technological progress, the freeing up of capital invested in slaves, and the development of various markets, including credit, capital, and labour. In this all-encompassing interpretation, labour regimes employed at the final stages of the transition would be economically superior to previous arrangements because of the latter's proximity to slavery.<sup>102</sup>

The evolutionary approach implicitly assumes that sharecropping must have been the least advanced contract because it was the first to predominate during the transition from slavery. This literature has parallels to traditional economic theories of sharecropping, including those of Adam Smith and Alfred Marshall, who compared sharecropping in pre-capitalistic settings to wage systems and fixed rents in regions where more modern markets prevailed. Joseph Stiglitz synthesizes a critique of this approach: '[i]t is not as if landlords and workers, anticipating the analysis of Marshall and other economists, discovered that [sharecropping] provided too little incentive to work and therefore they replaced an inefficient payment system with a more efficient one'.<sup>103</sup> Additionally, the contractual mix discussed in section II provides evidence against a transition theory based on perfectly identifiable phases and mutually exclusive contracts.<sup>104</sup>

Microeconomic explanations for contractual choice in São Paulo, in turn, were pioneered by Thomas Holloway and by Verena Stolcke and Michael Hall.<sup>105</sup> To the best of my knowledge, they were the first authors to point out the multidimensionality of Brazilian sharecropping as an instrument that coalesced a labour and a land–rental dimension.<sup>106</sup> This multidimensionality would give more agency to households and reduce landowners' costs with the maintenance of labourers, as the latter could cultivate their own subsistence goods. Contrary to then prevailing interpretations that sharecropping was an economically backward arrangement, Verena Stolcke and Michael Hall argued that an income level varying with the yield of annual harvests could incentivize immigrants to increase their labour effort. Their argument thus ran counter to the classical interpretation that sharecropping was inefficient because it extracted a pre-determined share of produce, independent of the level of effort.

The direction of this effect is not so clear, however, precisely because labour and land–rentals were interlinked to a third dimension in the Vergueiro system: credit. While the expectation of a poor harvest could incentivize risk-averse households to put more effort into production, another consequence of increased indebtedness could be bonded labourers abandoning cash crops in favour of the rental dimension, or striking and abandoning all dimensions altogether – alternatives that labourers in fact did not refrain from.

<sup>101</sup> Witter, 'A contribuição'; idem 'Um estabelecimento'; idem, Ibicaba. Petrone, 'Imigração', pp. 324–6, adopts a similar framework, but stresses contractual mix.

<sup>102</sup> Stein, *Vassouras*, pp. 20, 29–30; Viotti da Costa, *Da senzala à colônia*; Ianni, 'O progresso', pp. 363–4. Drescher, 'Brazilian abolition', provides a critical review of this approach. In Duncan and Rutledge, eds., *Land and labour*, Holloway, 'The coffee *colono*', implicitly considers sharecropping an intermediary rung between the coercive structure of slavery and the incentive-prone *colonato* (p. 306). This view persisted in his writings in spite of his careful microeconomic analyses: *Immigrants*, p. 71, explicitly relates sharecropping to 'premodern agriculture'.

<sup>103</sup> Stiglitz, 'Incentives', p. 251.

<sup>104</sup> Buarque de Holanda, 'Prefácio', Stolcke and Hall, 'The introduction' and Lamounier, *Formas de transição*, stress the ubiquity of contractual mix.

<sup>105</sup> Holloway, 'The coffee *colono*'; idem, *Immigrants*; Stolcke and Hall, 'The introduction'.

<sup>106</sup> Buarque de Holanda, 'Prefácio', Witter, 'Um estabelecimento' and Dean, *Rio Claro*, hint upon multidimensionality, but they do not thoroughly investigate such issue.



The efficiency of sharecropping relative to alternative labour–rental arrangements thus becomes an empirical question. Although governmental reports, farm minutes, inspection memos, immigrant letters, and news have all thoroughly debated the labour question in the 1850s–70s, quantitative information on productivity and labour–rental arrangements are scattered across Brazilian and European archives, use non-standardized definitions, and include a wide range of data that are frequently non-comparable across farms. In an attempt to start filling in this gap, I surveyed boxes C07212–C07214 of the Public Archive of São Paulo State, which contain sources on immigrant labourers in mid-nineteenth-century coffee zones. Combining these with the Brazilian Digital Newspapers’ Repository, I compiled those memos submitted by landowners to public authorities that contained information about contracts, rural production, and demographics of the labour force. Unfortunately, for most farms it was not possible to determine with certainty the prevailing non-captive contract.<sup>107</sup> Combined with the paucity of production data, the final sample does not allow for analyses beyond descriptive statistics and, at best, difference-in-means tests. These limitations notwithstanding, table 1 reports the number of coffee groves cultivated and the amount of coffee harvested per household, per capita, and per person of working age in the sample.

For the plantations covered in table 1, sharecroppers cultivated, on average, almost twice as many coffee groves as those cultivated under alternative contracts (145 916 versus 78 344); however, the variation within the former was so high as to render the differences-in-means insignificant. Sharecropping also led to a larger, but not significant, number of coffee groves cultivated per adult (1330 versus 1122) and per household (4375 versus 3148). The opposite, however, occurred in per capita terms (660 versus 857), which suggests the presence of a large number of children and/or elderly of non-working age in households hired under sharecropping.

This variability in the number of cultivated coffee groves did not translate into any obvious productivity advantage in harvesting. Although the differences-in-means remain statistically insignificant, the data show sharecroppers’ disadvantage in productivity per capita (with their mean harvest corresponding to 64 per cent of alternative contracts) and per adult (at 88 per cent). At the same time, the enormous advantage that sharecroppers had at the household level (twice as productive as alternative contracts) is overshadowed by its equally large variance. The results per household are clearly pushed by the extraordinarily high productivity of Hercules Florence’s farm in 1859. That farm was known for its small number of well-screened immigrants, for whom supervision costs were low; a textbook example of Steven Cheung’s conditions to reject the Marshallian inefficiency of sharecropping, but hardly applicable to large plantations.

As with every sample in economic history, the information is composed from surviving records, which required landowners to have cared enough and been able to report on such matters to the provincial government. This could confound contractual productivity with planters’ managerial capacity and inclination towards innovations, as more educated and economically progressive landowners were probably more likely to be among the first to experiment with non-captive labour, and thence, adopt the earlier contractual forms of sharecropping. However, if anything, this implies that the sample is not biased *against* sharecropping. A more pressing problem that cannot be addressed with evidence currently available is that of extremely small sample sizes. This limitation casts doubt on any inferential procedure, but does not invalidate the descriptive information for the individual plantations recorded in table 1.

<sup>107</sup> Online appendix II reports differences-in-means tests for scenarios in which all uncertain labour–rentals are considered sharecropping and vice versa. These upper- and lower-bound scenarios do not change the conclusions that follow.



**TABLE 1** Productivity of non-captive labourers in coffee cultivation, by labour-rental arrangement: evidence from plantations' reports.

Colony or plantation (year)	Coffee groves cultivated by non-captive labourers <sup>a</sup>			Coffee harvested by non-captive labourers (in alqueires)		
	Total	Per hh	Per capita	Total	Per hh	Per capita
Sharecropping						
Senador Vergueiro (1851) <sup>b</sup>	<b>286547</b>	3980	819	20382.10	283.08	58.23
Senador Vergueiro (1853) <sup>c,d</sup>				28909.75	238.92	51.99
Hercules Florence (1859)	14000	7000	737	3587.00	1793.50	188.79
São Jerônimo (1859)	<b>137200</b>	2144	425	25770.00	402.66	79.78
Mean	<b>145916</b>	4375	660	19662.21	679.54	94.70
SD	<b>136482</b>	2452	208	11280.55	745.85	63.84
Diff-in-means wrt. 'Other land-rental arrang.' (Pr(TI > It) = )	0.42	0.57	0.64	0.38	0.48	0.48
Other land-rental arrangements (fixed payments and/or piece-rates)						
Martyrios (1869)	42400	1927	451	11222.00	510.09	119.38
Crescival (1869) <sup>(i),g</sup>	<b>137789</b>	1378	265	22664.75	226.65	43.59
Pacheco e Silva (1870) <sup>(k)</sup>	2000	2000	2000	280.00	280.00	280.00
Salto Grande (1878) <sup>(l)</sup>	<b>131187</b>	7288	857			
Mean	78344	3148	893	11388.92	338.91	147.66
SD	66949	2774	778	11193.31	150.63	120.72

(Continues)



TABLE 1 (Continued)

Colony or plantation (year)	Coffee groves cultivated by non-captive labourers <sup>a</sup>			Coffee harvested by non-captive labourers (in <i>alqueires</i> )		
	Total	Per hh	Per capita	Total	Per hh	Per adult
Labour-rental arrangements potentially including sharecropping or mechanisms of crop-sharing						
Senador Vergueiro (1870) <sup>e,f</sup>	130953	2673		52254.83	1066.42	373.25
Castilho Neves (1854)	50000	10000	1515			
Boa Vista (1854) <sup>g</sup>	31000	1824	348	1988.00	116.94	22.34
S. Joaquim (1854) <sup>g</sup>	30000	1250		2500.00	104.17	
Palmeiras (1859) <sup>h</sup>	17510	1251	357	2883.00	205.93	58.84
Araras farm (1859)	4500	2250	346			
São Lourenço (1870)	45132	1556				
São Lourenço (1872)	26712	921				

*Note:* hh refers to household; (a) Number of coffee groves rounded up to the first integer; (b) 'minors' (excluded from 'per adult' calculations) probably refer here to household members other than their heads, instead of children younger than 10 years, as otherwise defined; (c) the total number of households does not sum up to the number of resident households, probably because some families left the plantation when the data were being compiled; (d) not computed in productivity were '53 families that did not harvest on their own and just harvested under the farm's account' (free translation); (e) the source reports a total of 140 954 coffee groves, which differs from the sum of individual entries; the latter was used in this table; (f) the source reports a total yearly harvest of 52 222 *alqueires*, which differs from the sum of individual entries; the latter was used in this table; (g) *Boa Vista* and S. *Joaquim* colonies probably employed sharecropping contracts with a pre-determined indenture; (h) the source reports '12 fogaens' (referring to the number of households), but there were 13 households registered (excluding the director); the latter was used in this table; (i) 'The difference between the number of people employed in cultivating coffee groves and those harvesting is due to exit and entry of [new] colonists' (free translation); (j) I grouped together all nationalities that were reported separately in the source; (k) article by Quirino dos Santos discussing data presented by A. C. Pacheco e Silva, who compared the productivity of a colonist under fixed payments to that of slave; (l) the source contains a disparity between the number of individuals in the colony and that reported for each family, with 10 more adults reported in the families than in the sum; the individual entries were used in this table. *Sources* (in order of appearance): Perret-Gentil, *A Colônia*, p. 88 (manuscript table published by Heflinger Jr., *A Revolta dos Parceiros*, pp. 30–1); 'Colônia Senador Vergueiro no ano de 1853', signed by Director João Adolfo Jonas, 31 December 1853 (*Arquivo Público do Estado de São Paulo*—APESP); 'Relatório dado por Hércules Florence a respeito de seus colonos [...]', signed by Hércules Florence, 09 October 1859 (APESP); 'Relação da Colônia Senador Souza Queirós em S. Jerônimo [...]', signed by Director Henrique Braun, St. Jerônimo, 30 November 1859 (APESP); 'Colonização agrícola' in CP (26/11/1870, p. 2); idem; 'Campinas—Temos a Gazeta de 6' in CP (07/10/1870, p. 2); 'Parecer da Comissão [...]' sobre o estado da Colônia denominada Salto-Grande pertencente ao Exm. Sr. Barão de Indaítuba' (APESP); 'Immigração para o Oeste da Província de S. Paulo' in CP (11/10/1870, pp. 1–2), signed by José Vergueiro, Ybicaba, 24 August 1870; 'Colônia de Castilho e Neves' (statistical summary), unsigned (APESP); 'Delegado de Polícia, Bragança 30/12/1859, Esclarecimento sobre as colônias [...]', idem; 'Fundação da Colonização de 1858', signed by Lourenço Franco da R., Fazenda da Palmeira, 16 November 1859 (APESP); 'Fundação da Colonização 1859', signed by Joze da Silveira Franco, Fazenda das Araras, 16 November 1859 (APESP); 'Negócios de colonização' in CP (10/06/1874, p. 2), signed by Luiz Antonio de Sousa Barros, S. Paulo, 5 June 1874; idem, *ibidem*.

**TABLE 2** Contractual mix and earnings: evidence from Franco de Camargo's farm (1859).

	Dep. Var: Earnings		
	(1)	(2)	(3)
<i>Lavoura</i>	226.1 (197.0)	310.5 (245.0)	139.1 (127.7)
Household size	57.69** (24.15)	55.25* (30.02)	64.64** (27.29)
% Non-working children	-338.6 (264.0)	-450.7 (307.1)	-235.9 (270.2)
Foreign household head	-806.2 (536.8)		-700.8 (504.5)
Nationalities	No	Yes	No
Non-married household head	No	No	Yes
Observations	23	23	23
Adj. $-R^2$	0.4223	0.4222	0.4214

Notes: (a) All regressions include a constant; (b) robust standard errors in parentheses. Source: 'Colonos pertencentes a Colonia de Alf.s Joaqm. Franco de Camargo [...] Limeira. 17 de 9bro de 1859' (APESP). HH indicates household.

A unique document found in this research can partly circumvent some of these issues with a within-farm study. In 1859 Officer (*Alferes*) Joaquim Franco de Camargo compiled a nominal list of workers with their age, civil status, nationality, earnings, and 'professions'. The latter is actually a categorization of labour relations at his farm: besides slaves (for whom no earnings were assigned), labourers were separated between *camaradas* (workers per piece-rate or fixed time) and *lavoura de café* (literally, 'coffee crop'). Unfortunately, it is impossible to know exactly which type of arrangement *lavoura de café* refers to, but it was likely related to sharecropping mechanisms and was certainly not a contract per piece-rate or fixed time.

Table 2 explores this document to check for the impact of different labour regimes on household earnings. The variable of interest, *lavoura*, is an indicator for workers assigned to the category *lavoura de café*, in opposition to *camaradas*. Simple OLS regressions controlling for demographic features (column 1), national origins (column 2), and non-married household heads (column 3) show that different labour arrangements had no statistically significant impact on households' earnings. Whether *lavoura* refers to sharecropping mechanisms or not is an open question. What is certain is that contractual mix in Franco de Camargo's farm did not lead to any disadvantage of contracts based on fixed payments per piece-rate/time worked.<sup>108</sup>

Current empirical evidence thus points to no consistent productivity differentials in favour of sharecropping or fixed payments across coffee plantations in the 1850s–70s. Additionally, different labour–rental arrangements had no effect on households' earnings for a cross-section of labourers within a plantation in 1859. Even if the difference is not significant, the descriptive data indicate that productivity rankings of labour–rental contracts change if figures are considered per capita and per person of working age, on the one hand, and per household, on the other. If the objective function of planters was pure profit maximization, then contracts based on fixed payments would

<sup>108</sup> Online appendix II presents a series of robustness checks, including bootstrapping techniques to account for small sample size.



best fit it, as these had a slight advantage in productivity per worker. However, if landowners were looking for a degree of stability in the labour supply, then they could focus on sharecropping.

Two alternative explanations related to sharecropping's risk-sharing mechanisms can also be ruled out. The first is that landowners could have used an alleged allocative inefficiency to increase the length of contracts. In other words, landowners could be trading effort for a secure supply of labour. With labourers tied by debt, low effort could imply longer contractual duration. This proposition assumes the Marshallian inefficiency of sharecropping, for which no consistent evidence was found. Moreover, non-risk-seeking landowners would not have accepted contracts that excessively increased the risk of default. The second is that risk-sharing features of sharecropping could have increased the pool of risk-averse, poor, and otherwise credit-constrained European immigrants.<sup>109</sup> The problem with this proposition is that fixed remunerations would have been a simpler solution to the same problem. That was in fact one of the reasons for planters to rely more on fixed remunerations in the 1860s, and as Thomas Holloway noticed, a reason to add piecework remunerations that would lead to *colonato* in the 1880s.<sup>110</sup> Even more importantly, as previously argued, in the Vergueiro system the shares applied not only to the land—rentals, but also (and more crucially) to the labour dimension of the contract. With this design, it is not clear that sharecropping provides a risk-sharing mechanism at all. In the Vergueiro system not only the rents on land paid to the landowner were a share of the yields (as in the typical tenant-landlord relationship), but also the household's labour income was a share of a varying output. Variations in prices caused by market fluctuations and changes in output caused by agro-ecological shocks were important sources of risk to labourers.<sup>111</sup> Table 1 shows that harvests per household under sharecropping had a standard deviation (745.85 *alqueires*) that was even larger than the sample mean (679.54 *alqueires*), *ceteris paribus* indicating an enormous variability in households' expected income.<sup>112</sup>

Another reasoning for the rationale of sharecropping is that it can compensate for the nonexistence or incompleteness of markets, enhancing the comparative advantages of the contracting parties over capital and labour.<sup>113</sup> From an economic point of view, this explanation describes well the experience in São Paulo's coffee plantations.<sup>114</sup> Landowners provided managerial skills, and a firm such as Vergueiro & Co. had obvious comparative advantages in marketing agricultural output.<sup>115</sup> In turn, immigrants were able to closely monitor the labour effort of each household member.<sup>116</sup> However fitting, this explanation has an implication for the political economy of labour relations that is at odds with the historical evidence. By exploring the synergies between capital and labour, it considers sharecropping as an arrangement that harmonizes the interests of contracting parties, failing to explain labour disputes and strikes, that triggered contractual changes. Moreover, applicable to large plantations with available managerial personnel, such an explanation is much weaker for the multitude of smaller farms employing contract labour in the 1850s.

<sup>109</sup> Stolcke and Hall, 'The introduction', p. 174.

<sup>110</sup> Viotti da Costa, *Da senzala à colônia*, pp. 148–9; Holloway, 'The coffee *colono*', pp. 306–8; *idem*, *Immigrants*, pp. 71–3.

<sup>111</sup> Buarque de Holanda, 'Prefácio', p. 31; Witter, 'Um estabelecimento', p. 434; Viotti da Costa, *Da senzala à colônia*, p. 149; *idem*, 'O escravo', pp. 193–5.

<sup>112</sup> In line with Holloway's observation that the annual volatility of income from harvests under *colonato* could be as high as 100% (*Immigrants*, p. 76).

<sup>113</sup> Eswaran and Kotwal, 'A theory'.

<sup>114</sup> Lago, 'O surgimento', p. 361.

<sup>115</sup> Dean, 'Latifundia', pp. 613–14, 617–19; Leff, 'Economic retardation', p. 491; Levy, 'O papel da imigração', p. 51.

<sup>116</sup> Stolcke and Hall, 'The introduction', p. 174; Lamounier, 'Formas de transição', p. 24.



Taking into account (1) the various labour–rental arrangements that preceded sharecropping in the Vergueiro system, (2) the contractual mix prevalent at any historical moment, (3) the lack of consistent productivity differentials between arrangements for which data are available, and (4) the absence of a risk-sharing mechanism in the sharecropping-*cum*-debt system, this paper concludes that sharecropping was not an unequivocal economic solution to the labour question in nineteenth-century Brazilian coffee plantations. Instead, its prevalence in non-captive labour markets requires an explanation beyond economic rationality, in line with yet another approach that assesses sharecropping as an institution in itself.<sup>117</sup>

The centrality that sharecropping attained in the coffee economy of São Paulo in the 1850s resulted from the positional advantage and oligopolistic power of an emerging elite that proposed this labour–rental arrangement to landowners mostly unaware of alternatives. The prevalence of sharecropping in the early transition from slavery in Brazil was less the result of an economically informed choice by landowners and more a consequence of emulation and dependence in contract design. The deferential attitude of Bonifácio do Amaral that heads the title of this paper reflects the uninformed position of even an influential landowner on alternative labour arrangements, who was nonetheless willing to pursue an experiment with contracts designed by third parties.

The final question then remains as to why magnates like Vergueiro and Souza Queiroz proposed sharecropping contracts in the first place. The answer to this inquiry has a tentative nature, but sharecropping-*cum*-debt arrangements in São Paulo very likely built upon similar arrangements applied elsewhere. Precedents with ample coverage were the long-lived French *métayage* and its ‘share correspondent’ in the United States.<sup>118</sup> Another obvious reference point was sharecropping as employed in the Iberian Peninsula and in the Portuguese Atlantic Islands.<sup>119</sup>

As early as 1810–14, Antonio Rodrigues Velloso de Oliveira, a prestigious magistrate of the Portuguese Empire born in São Paulo, wrote two essays on how to promote economic development of his native captaincy and of Brazil.<sup>120</sup> For the agricultural sector, Velloso de Oliveira favoured the emulation of land–rental arrangements from Madeira and the promotion of subsidized settlements using an example from Florida, each of them based on sharecropping contracts.<sup>121</sup> As expected from his socio-economic background, Velloso de Oliveira opposed land reforms, but wished to encourage land–rental markets within large plantations with the so-called *colôniaS parciárias* (sharecropping, or ‘partnership’ settlements), a long-term sharecropping contract from Madeira based on customary practices and Portuguese legislation.<sup>122</sup>

<sup>117</sup> Koo, ‘Towards a more general model’, p. 579; Bardhan and Srinivasan, ‘Cropsharing’, p. 48; Bardhan, ‘Interlocking’, pp. 87–90; Quibria and Rashid, ‘The puzzle of sharecropping’. For the relationship between sharecropping and historical persistence, see Stiglitz, ‘Incentives and risk sharing’, pp. 251–2; Bell and Zusman, ‘A bargaining theoretic approach’, pp. 578–9; Bardhan, ‘Variations’, p. 105; idem, ‘Interlocking’ pp. 82–7; Mitra, ‘A theory’, p. 167.

<sup>118</sup> Higgs, ‘Metayage’; Marshall, *Principles*, p. 535; Hoffman, ‘The economic theory of sharecropping’. Stein, *Vassouras*, p. 23 (footnote 51) mentions the French bibliography on Antillean coffee cultivation referred to in Brazilian coffee manuals as early as 1813.

<sup>119</sup> Buarque de Holanda, ‘Prefácio’, p. 19.

<sup>120</sup> Velloso de Oliveira, *Melhoramento*; idem *Agricultura*. To the best of my knowledge, Dean, *Rio Claro* [a], footnote 5 to ch. 4, was the first to trace Vergueiro’s ideas about sharecropping to Iberian emulation. My research expands on that discovery, discussing the experiments referred to by Velloso de Oliveira more broadly.

<sup>121</sup> Velloso de Oliveira, *Melhoramento*, pp. 78–81; idem, *Agricultura*, pp. 91, 99–102, 115–6.

<sup>122</sup> Idem, *Melhoramento*, p. 80; idem, *Agricultura*, pp. 101–3. In Rio de Janeiro, sharecropping experiments with Azoreans in the 1850s seem to have been much more tilted towards land-rentals (Stein, *Vassouras*, p. 59).





It may well be that common features found in the Madeiran *colônia parciária* and in São Paulo's sharecropping arrangements are coincidences owing much to customary rural practices. However, having studied law at the University of Coimbra – as Velloso de Oliveira before him – and being an important figure in the high politics of the Portuguese and Brazilian Empires, where these ideas had been circulating for decades, it seems beyond doubt that Senator Vergueiro was well acquainted with such experiences, as well as with the so-called *contractos de meia* (a crop-sharing arrangement) and *contractos de colônia* (a type of perennial tenancy), also prevalent in Madeira at least since the 1750s.<sup>123</sup> It is even tempting to trace a parallel between all these specific nomenclatures and the term *colônias de parcerias*, as Senator Vergueiro referred to his own experiments.

Echoing some of his father's ideas, in 1842 Magistrate Henrique Velloso de Oliveira wrote an essay in which he considered sharecropping one of '[...] the various ways to set up [free] agricultural labourers'; other alternatives included contractors (*empresas* or *empreitadas*), land leases (*foros* and *arrendamentos*), and predetermined wages (*salario certo* [sic]), which he considered the worst option.<sup>124</sup> It is remarkable that Henrique Velloso de Oliveira attributed the term *colono* only to sharecroppers (whom, he argued, should ideally be married), before Vergueiro's 1847 experiment with the German sharecroppers. It is also noteworthy that sharecropping was then seen as an alternative to arrangements very similar to those considered by Vergueiro after his hiring of Portuguese immigrants in 1840. While it would be absurd to attribute Vergueiro's decision to the essay of Velloso de Oliveira's son, the latter provides evidence that, while in practice moving into new territory, the concepts and ideas Vergueiro stood for had been lingering around for decades and were deeply rooted in Luso-Brazilian jurisprudence and rural custom.

Nineteenth-century Central European immigrants were also well-accustomed to sharecropping contracts.<sup>125</sup> Educated in the German States, two sons of Senator Vergueiro – José, shareholder of Vergueiro & Co. and head of Ibicaba, and Luiz, who headed the 1835 consortium – were also likely acquainted with labour–rental regimes prevailing in Northern Europe.<sup>126</sup>

A similar argument regarding contractual emulation applies with even greater certainty to the use of the credit dimension as a labour-tying mechanism. Joseli Mendonça has shown that, in passing national legislation to regulate private contracts in 1837, Senator Vergueiro actively sought to tighten legal controls over indebted labourers, including imprisonment for defaults on debt – legal prerogatives that can be traced as far back as to Portuguese ordinances of the seventeenth century.<sup>127</sup> Bonded labour had also played a central role in the settling of the United States since the seventeenth century, with the German States abundantly supplying redemptioners. Velloso de Oliveira enthusiastically cited the experience of redemptioners in Massachusetts as a settlement strategy to be emulated in Brazil.<sup>128</sup> In addition, by the mid-nineteenth century, various forms of labour tying had regained ground with Asian indentures in the Caribbean and northern South America.<sup>129</sup> Brazilian politicians and public commentators who favoured the hiring of Chinese

<sup>123</sup> Câmara, 'The Portuguese Civil Code'.

<sup>124</sup> Velloso de Oliveira, *A substituição*, p. 17.

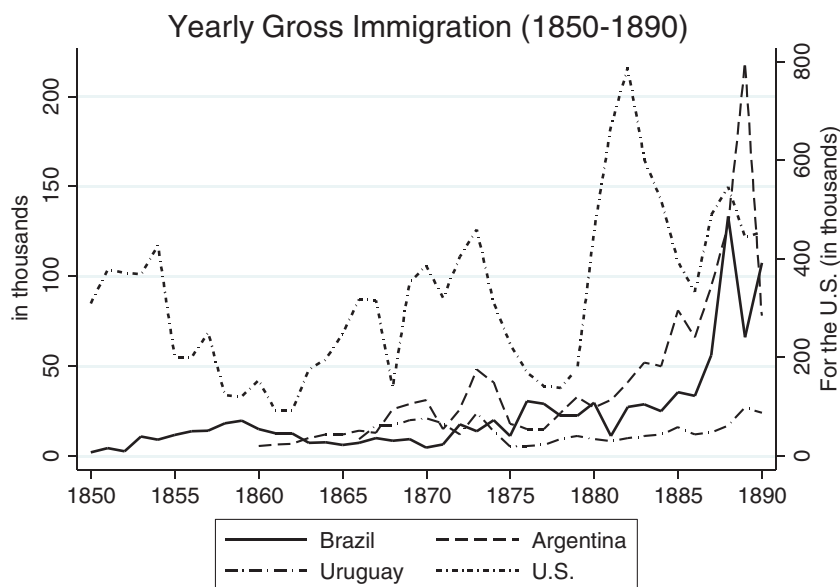
<sup>125</sup> Anderson, 'Proto-industrialization', pp. 11–3, footnote 8; Tschudi's report in GC (07/04/1870, p. 1).

<sup>126</sup> Castro, *Album*, p. 25; Tschudi, *Viagem*, p. 134.

<sup>127</sup> Mendonça, 'Leis', pp. 76–7, 81–5.

<sup>128</sup> Velloso de Oliveira, *Melhoramento*, pp. 81–2.

<sup>129</sup> Buarque de Holanda, 'Prefácio', p. 18; Galenson, 'White servitude'; Engerman, 'Contract labour'.



**FIGURE 3** Immigrant gross inflows to Argentina, Brazil, Uruguay, and the United States (1850–90). *Notes:* (1) Different scale for the US series shown on the right axis; (2) for its longer coverage, the Brazilian series is based on Brazil, *Revista de imigração*, which differs only in minor aspects from Mitchell. *Sources:* Brazil, *Revista de imigração*, pp. 227–8; Mitchell, *International historical statistics*. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

coolies frequently referred to those experiences,<sup>130</sup> and similar arrangements to bond labour had been employed with north-eastern Brazilians in rubber extraction in the Amazon basin.<sup>131</sup>

#### IV | THE RATIONALE OF BONDED LABOUR

The single most important feature cutting across Brazilian immigration policies in the nineteenth century was the policymakers' strategic targeting of poor and credit-constrained foreigners. The pervasiveness of credit interlinkages in various labour–rental arrangements resulted from the conjunction of interests of plantation owners and Brazilian policymakers, in a symbiosis that grew tighter over time, as well as of sending regions, particularly in Central Europe, where outmigration became a measure of poverty alleviation by the mid-nineteenth century.<sup>132</sup>

International competition for immigrant labour was fierce, as figure 3 shows. A substantial increase of gross inflows to Brazil started only by the mid-1880s, when the province of São Paulo put its program of subsidized immigration in place. Throughout the nineteenth century, Brazil faced serious difficulties in competing even with its neighbours in the Southern Cone, and these

<sup>130</sup> Leff, 'Economic retardation', p. 492; Conrad, 'The planter class'; Lamounier, 'Formas de transição', pp. 131, 135; Viotti da Costa, *Da senzala à colônia*, p. 187.

<sup>131</sup> Lago, 'O surgimento', p. 358.

<sup>132</sup> Davatz, *Memórias*, pp. 142–3, 233–7; CP (12/02/1857, pp. 1–2).



with the United States, where civil liberties and easier access to landownership precluded the need to subsidize immigration.<sup>133</sup>

Contemporaries recognized that to encourage ‘spontaneous’ immigration, Brazil had to ‘facilitate land acquisition by the immigrant; allow for religious liberty, civil marriage, [and] easy naturalization [...]’.<sup>134</sup> In short, reforms that would touch upon matters of land redistribution and civil-political rights – dreadful prospects to the economic elite and the political status quo.

Alternatively, the country could persist in hiring foreigners who wished to immigrate, but who lacked the means to finance the upfront costs. Certainly, tying labour and/or subsidizing immigration with public funds was costly: from 1851 to 1909, the Brazilian central government spent about 173 million *milréis* with immigration and settlement policies, a value topped by the government of São Paulo with another *c.* 176 million *mil réis* from 1881 to 1927.<sup>135</sup> Nonetheless, these policies supplied the labour necessary for the rapid expansion of coffee exports (and the ensuing revenues) without promoting risky reforms for the ruling elites.<sup>136</sup>

Highly ranked Brazilian authorities explicitly acknowledged this strategy.<sup>137</sup> A provincial president (i.e. governor) and a Brazilian consul shared the opinion that Brazil would obtain no other type of immigrant than tied labourers while it failed to advance civil reforms; noticeably, two decades separated their analyses.<sup>138</sup> Similarly, the Brazilian Consul General in Hamburg argued in 1858 that Brazil could expect only subsidized immigrants, as only the poor considered the country as a destination.<sup>139</sup> Two years before, the Brazilian Consul in the Hanseatic Cities had suggested that the government of São Paulo should provide collaterals to immigrants, a proposition welcomed by the Swiss Consul in Hamburg.<sup>140</sup>

At the farm level, landowners were looking for a secure and stable supply of labourers. Estimates of the time required by an average immigrant household to amortize its debts in the 1850s vary between 3 years and 9 years, depending on assumptions about sharecropping’s productivity.<sup>141</sup> In any case, the average duration of an immigrant’s contractual obligations was definitely shorter than the life expectancy of an enslaved person – *c.* 20 years in São Paulo’s coffee zone.<sup>142</sup> By interlinking labour to credit, landowners had a control mechanism to limit labour turnover, thus diminishing the transaction costs of engaging in non-captive labour markets.

The credit interlinkage was also very flexible. Section II has shown that the credit dimension survived the decline of sharecropping and that it could be easily accommodated to systems of fixed payments. It is noticeable that the same Swiss Consul who supported the granting of collaterals to immigrants, mentioned previously, also suggested that planters could experiment

<sup>133</sup> Lago, ‘O surgimento’, p. 322; Engerman and Margo, ‘Free labour’, pp. 297–8, 302.

<sup>134</sup> GC (24/04/1870, p. 2); Viotti da Costa, *Da senzala à colônia*, p. 186.

<sup>135</sup> Brazil, *Revista de imigração*, pp. 227–8 (all data in nominal terms). Other estimates in Viotti da Costa, *Da senzala à colônia*, pp. 183, 248; Dean, *Rio Claro*, p. 152.

<sup>136</sup> Petrone, ‘Imigração’, p. 346.

<sup>137</sup> See also Leff, ‘Economic retardation’, p. 493; Sánchez-Alonso, ‘The other Europeans’, p. 399.

<sup>138</sup> CP (20/02/1855, p. 1); DSP (04/12/1875, pp. 1–2).

<sup>139</sup> CP (21/12/1859, pp. 1–2).

<sup>140</sup> CP (12/02/1857, pp. 1–2). Ironically, this report is dated 26 December 1856, two days after the *Sharecroppers’ Rebellion*, still certainly unknown to the consular authority.

<sup>141</sup> Stolcke and Hall, ‘The introduction’, footnote 32. Dean, *Rio Claro*, argues that 3 years is a lower-bound for a five-year average.

<sup>142</sup> Dean, *Rio Claro* [a], p. 127. Carvalho de Mello, *The economics of labour*, pp. 123–5, estimates a life expectancy of 18–23 years for male enslaved persons in Rio de Janeiro’s coffee zone.



not only with the Vergueiro system, but also with fixed remunerations, or with an arrangement that combined fixed payments and shares for the acquisition of smallholdings.<sup>143</sup> It was clear to him that labour–rental dimensions could vary, but that the credit interlinkage was doomed to persist.

## V | CONCLUDING REMARKS

This paper examines the emergence of immigrant labour markets and the consolidation of non-captive arrangements in the slave-based coffee economy of southwestern Brazil. The enforcement of the Brazilian ban on the transatlantic slave traffic in 1850 stimulated landowners to look for alternative sources of labour in those regions with an initially low stock of slaves and expanding plantations. The credit interlinkage developed in this period long outlived the sharecropping arrangements to which it was initially interlocked. In fact, the credit–labour link experimented with in 1850s São Paulo set a cornerstone in global labour history, as the tying of non-captive labourers to outstanding debts helped to insert Brazil into the circuits of mass migration in spite of its political elites failing to promote institutional reforms to attract non-bonded immigrants.

In the 1830s–40s, an array of labour–rental contracts were deemed feasible in promoting non-captive labour markets, particularly with immigrants; these included fixed payments per piece-rates and time worked, fixed rents, and even an arrangement similar to the American head-right system. Such a range of alternatives is typical of contractual mix in junctures of profound institutional changes.<sup>144</sup> Among these many alternatives, sharecropping became the most prevalent contract in non-captive labour markets in the 1850s, triggering a debate on the economic rationale of that arrangement. The new evidence collected for this paper did not indicate consistent productivity or earning differentials between sharecropping and arrangements based on fixed payments. Additionally, theoretical reasoning showed that the credit interlinkage precluded the risk-sharing mechanisms of sharecropping, as varying annual remunerations were tied to a debt mechanism. As such, the adoption of sharecropping cannot be interpreted as a purely economic answer to the Brazilian labour question. Instead, this paper argued that the economic and political power of the first hirers of European bonded labourers, particularly Vergueiro & Co. and Senator Souza Queiroz, set a contractual design that was followed by other landowners first unaware of alternatives. Positional advantage, corporate power, and political influence prevailed over economic rationality. At this time sharecropping-*cum*-debt contracts were even known as the Vergueiro system. Finally, new historical evidence suggested that these magnates operated in a political milieu that was well aware of international experiences with sharecropping and debt bondage, particularly in Portugal, the Portuguese Atlantic Isles, the United States, and the German States.

Although already embedded into an extremely rich historiography, the study of sharecropping-*cum*-debt in Brazil is far from exhausted. The most urgent task is to expand the empirical evidence of labour productivity. At the micro-level, this requires collecting new primary data to assess the causes of productivity differentials between labour–rental arrangements. A new historical

<sup>143</sup> CP (12/02/1857, pp. 1–2). Notice the similarity of the latter to Carlos Kruger's arrangements and to [Velloso de Oliveira's](#) proposals in 1810–4.

<sup>144</sup> Reid, 'Sharecropping as an understandable market response'; idem, 'Sharecropping in history and theory'; Engerman, 'Contract labour'; Kotwal, 'The role of consumption credit'.



archive recently created in Ibicaba plantation should spur renewed interest and also provide fresh empirical material.<sup>145</sup> Similarly, finding and creating new archives of Brazilian plantations is an urgent endeavour, especially in those plantations that are less well known and whose collections are therefore more endangered. Macro-level studies, in turn, must provide comparisons between counties where different arrangements prevailed, expanding this type of analysis to other Brazilian provinces/states as well. Web scraping online archives and data mining of official reports, travellers' diaries, and travellers' compendia, and the German and Swiss press bear great potential for this line of inquiry, as shown in this paper by the non-automated research conducted with the Brazilian Digital Newspapers' Repository.

## ACKNOWLEDGEMENTS

Special thanks to Stephan Klasen (*in memoriam*) for all discussions on the rationale of sharecropping. Renato Colistete and Leonardo Gardenal provided invaluable feedback to the ideas that embed this paper. Thanks also to Robert Bernsee, Bram van Besouw, Samuel Garrido, Guilherme Grandi, Marília Jordan, André Lanza, Hakan Mihci, Andrew Seltzer, Holger Strulik, and Jan Luiten van Zanden, as well as to the participants of seminars at the universities of Göttingen, Roma Tor-Vergata, and Utrecht, the 2018 World Economic History Congress, the 2018 FRESH meeting, the Hermes & Clio Seminar, and the 6th Brazilian Economic History Workshop. Usual disclaimers apply and the author is solely responsible for the content of this paper.

Open access funding enabled and organized by Projekt DEAL.

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<sup>145</sup>The collection 'Labor, livelihood and immigration in a Brazilian plantation: the archives of Ibicaba farm' is now available online. <https://meap.library.ucla.edu/projects/ibicaba-farm/>



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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Witzel de Souza, B. G., "The same contract that is suitable for your Excellency": Immigration and emulation in the adoption of sharecropping-cum-debt arrangements in Brazil (1835–80), *Economic History Review*, 77 (2024), pp. 612–643.

<https://doi.org/10.1111/ehr.13282>