How Do Employers Belonging to Marginalized Communities Respond to Minimum Wage Increases? The Case of Immigrant-Owned Businesses in Seattle*

Abstract

Minimum wage opponents often argue that businesses owned by marginalized communities—which include woman-owned, Black-owned, and immigrant-owned businesses—are exceptionally vulnerable to minimum wage increases. Little research has investigated this claim. Using a unique survey of Seattle businesses that includes owners' nativity status and was administered while the city began to phase in its \$15 minimum wage ordinance, we find that immigrant-owned businesses responded to the higher minimum wage in ways that largely conformed to the responses of other businesses. Nevertheless, immigrant-owned *franchises* were less likely than other franchises to fire employees, reduce employees' hours, or lower the wages of employees earning more than \$15 per hour. Evidence suggests that immigrant franchisees had a lower likelihood of passing the increased labor costs onto employees because they used fewer employees and relied more heavily on family labor compared to other franchisees. Overall, findings suggest that firms owned by marginalized and non-marginalized groups respond to municipal-level minimum wage increases in comparable ways. Nevertheless, marginalized status may matter more in certain sectors of the economy than in others.

Keywords

minimum wage; marginalized communities; immigrant-owned businesses; franchises

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Introduction

An increasing number of U.S. cities and states are adopting minimum wages that far exceed the federal minimum wage rate of \$7.25 per hour. Scholars hotly debate the consequences of these minimum wage increases for employment, incomes, and job quality (Card & Krueger, 2015; Dube et al., 2007; Neumark & Wascher, 2008; Romich & Hill, 2018). The urgency of these debates has intensified as ever more municipalities simultaneously confront the COVID-19 crisis, the threat of bankruptcy, and the public disagreements that come with a higher minimum wage (Cohn, 2020; Fairlie, 2020; Weir & King, 2021). Consequently, any adverse effects of minimum wage laws must be thoroughly investigated.

One adverse effect frequently mentioned by minimum wage opponents is that a higher minimum wage would disproportionately harm businesses owned by members of marginalized communities, such as woman-owned, Black-owned, and immigrant-owned businesses (Chan, 2013; Khemlani, 2019; Lowrey, 2021; Robinson, 2015). Unlike large corporations, the claim goes, firms owned by these communities tend to be smaller and less able to endure higher labor costs, which forces them to make drastic cuts on staffing or close down altogether. Despite evidence that a higher minimum wage decreases the entrepreneurship rate of some marginalized racial and gender groups (Deskins & Ross, 2018; Kwapisz, 2020), there is virtually no literature on the impact of municipal-level minimum wage ordinances on existing firms owned by members of marginalized communities. The dearth of minimum wage research on employers belonging to marginalized communities stands in contrast to the more robust literature on workers belonging to these same communities (Derenoncourt & Montialoux, 2021; Himmelstein & Venkataramani, 2019; Liu & van Holm, 2019; Orrenius & Zavodny, 2008). To complicate matters further, firms can absorb the impact of a minimum wage increase in various ways, often referred to as channels of adjustment (Hirsch et al., 2015; Romich et al., 2020; Schmitt, 2013). Some firms choose channels of adjustment that can hurt workers, such as firing employees or reducing their hours, while other firms choose channels of adjustment that can protect workers, such as raising prices or adding fees to services. It is possible that marginalized employers are more likely than non-marginalized employers to use worker-friendly channels of adjustment. Many marginalized employers hire family members or employees belonging to the same marginalized communities as themselves (Bates, 1993, p. 10; Menzies 2021), sometimes explicitly advancing fellow community members' careers as a means to support the larger marginalized community (Cardoso & Winter-Ebmer, 2010; Greenberg & Mollick, 2016; Wingfield, 2008; Zhou 2004). Put another way, even if firms owned by marginalized and non-marginalized people are just as likely to adapt to and survive a higher minimum wage, each set of firms may rely on different channels of adjustment to do so.

To understand whether and how the marginalized status of business owners matters when firms confront a minimum wage increase, this study examines how immigrant-owned and nonimmigrant-owned firms responded to the initial phase-in of Seattle's \$15 minimum wage ordinance between 2015 and 2017. Immigrant-owned firms provide a fitting test case for analyzing how marginalized status affects firms' responses to a minimum wage increase. Of all marginalized business owners, perhaps the most has been written about immigrant employers and the community ties that frequently bind them to the welfare of their employees (Dabić et al., 2020; Kloosterman, 2010; Portes and Manning, 2006; Saxenian, 2002). Immigrants, therefore, may be among the likeliest set of employers to use worker-friendly channels of adjustment after a minimum wage increase. Additionally, the analysis of firms in Seattle is valuable given the

city's outsized role in the "Fight for \$15" across the United States (Jardim et al., 2018; Reich et al., 2017). Seattle was the first large city in the nation to adopt a \$15 minimum wage, and debates over the minimum wage in Seattle garnered national attention (Scheiber, 2017). Moreover, our data on Seattle firms includes information on business characteristics such as franchise status and the specific channels of adjustment used by each firm, which helps us contextualize how and why firms varied in their responses to the minimum wage increase.

According to our findings, immigrant-owned businesses reported responding to Seattle's minimum wage ordinance in ways that largely conformed to the responses of other businesses. Immigrant-owned franchises, however, were significantly less likely than other franchises to report that they cut back on staffing, reduced employees' hours, or lowered the wages of employees earning more than \$15 per hour. Evidence suggests that immigrant franchisees tended to use fewer workers and relied more heavily on family workers compared to other franchisees, which likely helped immigrant franchisees endure increased labor costs without reducing employee well-being after the ordinance took effect. Overall, findings suggest that firms owned by marginalized and non-marginalized groups respond to municipal-level minimum wage increases in comparable ways. Nevertheless, marginalized status may matter more in certain sectors of the economy than in others.

Findings reported here are the first to our knowledge that systematically examine how firms owned by members of a marginalized community respond to a municipal-level minimum wage increase. While we believe our findings make clear the value of investigating the demographic characteristics of business owners as well as the specific channels of adjustment firms use to adapt to minimum wage laws, we are cautious in interpretation because our sample of immigrant-owned businesses is small and limited to one municipality. Our argument that

different kinds of employers can adjust to higher minimum wages in various ways, however, has important implications for future research examining the impact of local minimum wage ordinances on low-wage workers.

Conceptual Framework

The Minimum Wage, Channels of Adjustment, and Marginalized Communities

Although there are important differences between various types of marginalized business owners (Cooney & Licciardi, 2019), they share some similar characteristics. Whether owned by immigrants (Dabić et al., 2020), racial minority groups (Bates, 2011), sexual minorities (Kidney, 2021), or gender minorities (Parker, 2018, Ch. 8), many businesses owned by marginalized groups are smaller, in less lucrative niches of the economy, and less able to get formal financing than businesses owned by non-marginalized groups. Furthermore, because of resource constraints, many marginalized employers are more likely than non-marginalized employers to find employees through family and community networks (Menzies, 2021). Employer-employee relations in marginalized businesses are therefore frequently embedded in a larger community context. Rather than negotiate over labor conditions using a purely economic rationale, in other words, owners and workers in firms owned by marginalized groups sometimes negotiate in the context of their shared obligations to each other and the marginalized communities of which they both are a part (Greenberg & Mollick, 2016; Portes & Sensenbrenner, 1993; Ram, 1994). These negotiations can result in interpersonal agreements that are economically inefficient but socially meaningful. For example, some immigrant workers are willing to work extra hours or forego pay increases in order to learn business skills from co-ethnic business owners who can help them run their own business one day (Zhou, 2004). Some female executives explicitly aim to promote and

support female workers (Cardoso & Winter-Ebmer, 2010), and some LGBTQ+ employees seek out employment in businesses owned by LGBTQ+ members because they want to avoid discrimination from heterosexual employers (Galloway, 2012, p. 900).

Little has been written on the responses of marginalized business owners to minimum wage ordinances. Nonetheless, literature suggests that minimum wages deter members of marginalized communities from founding businesses. Deskins and Ross (2018), for instance, used data on minimum wage laws across U.S. states to argue that a higher minimum wage decreases Black startup activity but not White startup activity. The authors attribute this finding to the increased opportunity cost that Black workers face when leaving wage and salary employment to start a business in states with a high minimum wage. Kwapisz (2020) finds something similar in her study of nascent entrepreneurship among women in the United States. After a state-level minimum wage increase, women are less likely than men to hire their first employee. Kwapisz explains this finding by noting how women disproportionately start their businesses in industries most affected by minimum wage increases, including personal services and retail.

When analyzing existing businesses rather than startups, the effect of marginalized status is less clear. As mentioned earlier, established firms can use various channels of adjustment to respond to a minimum wage ordinance, and research shows that employers in different sectors of the economy often use diverging channels of adjustment. Nonprofit organizations, for instance, are more likely than for-profit organizations to rely on volunteer labor in response to a higher minimum wage (Allard et al., 2020). Similarly, small for-profit firms in labor-intensive industries are the likeliest organizations to use informal labor to absorb the impact of a higher minimum wage (Arrowsmith et al., 2003). Because labor relations in many firms owned by

marginalized business owners are built on top of social relationships within the larger marginalized community (Portes & Sensenbrenner, 1993; Ram, 1994), marginalized businesses may be more likely than non-marginalized businesses to use channels of adjustment that mitigate the consequences for low-wage workers.

Immigrant-Owned Businesses and the Minimum Wage

Of all the marginalized populations that found and run businesses, immigrants are among the most researched group (Dabić et al., 2020; Fairlie & Lofstrom, 2015; Hunt, 2011; Saxenian, 2002). In part, the scholarly focus on immigrants is motivated by the frequency with which labor relations in immigrant-owned firms are rooted in social ties to the immigrant community. The immigrant entrepreneurship literature uses many concepts to convey this phenomenon, including ethnic resources (Light, 1984), the ethnic economy (Portes & Manning, 2006), training systems (Bailey & Waldinger, 1991), mixed embeddedness (Kloosterman, 2010), brain circulation (Saxenian, 2005), and negotiated paternalism (Ram, 1994). Immigrants, furthermore, are one of the few groups of marginalized business owners whose responses to minimum wage ordinances have been studied in-depth, albeit outside of the U.S. context. Specifically, a wealth of literature has analyzed immigrant business owners' adaptations to the United Kingdom's National Minimum Wage (hereafter referred to as the NMW), passed in 1998 (Finn, 2005).

The overall conclusion of research on the NMW is that the economically inefficient but socially meaningful labor relations in immigrant-run firms enabled these firms to absorb higher labor costs without making drastic cutbacks such as firing workers or reducing hours. For example, one survey of U.K. firms that included many immigrant businesses found that 47 percent of firms reported making no major changes to their employment structure after the law's

passage. In addition, many employers continued to rely on word-of-mouth and personal recruitment to attract and retain workers, just as they did prior to the NMW (Gilman et al., 2002). In retail, accommodation, and other industries heavily affected by minimum wage legislation, it was common for workers in immigrant-owned small businesses to come up with unique arrangements to help the firm survive the minimum wage increase (Arrowsmith et al., 2003). For example, in one immigrant-owned restaurant, an employer decreased employees' hours but provided fringe benefits such as free food and transport to help take care of employees (Arrowsmith et al., 2003, p. 444). These findings suggest that, after a minimum wage increase, immigrant-run firms may be less likely than non-immigrant-run firms to use channels of adjustment that hurt workers such as firing workers or reducing their hours.

On the other hand, rather than protect workers, immigrant employers may exploit their co-ethnic employees to survive a minimum wage increase. Foreign-born workers are often unfamiliar with a host society's language and labor market practices when they first immigrate, so they may have no other option but to work for a co-ethnic who exploits them (Bonacich, 1993; Sanders & Nee, 1987). For instance, some small firms were able to absorb the higher labor cost of the NMW because managers took breaks away from employees and made them work harder to cover increased costs. One employer even eliminated their workers' meal breaks, forcing employees to work 40 hours per week while paying them for 37.5 (Druker et al., 2005, p. 19). Rather than preserve their labor structures after a minimum wage increase, in other words, immigrant-owned firms may use channels of adjustment that worsen labor conditions in the firm, such as lowering wages or eliminating benefits.

Sometimes, immigrant firms absorb the cost of a higher minimum wage by relying on family and co-ethnic labor in the informal economy. The overwhelming majority of firms,

including ones owned by immigrants, complied with the NMW (Ram et al., 2003). Nevertheless, many of the firms that did not comply with the NMW were owned by immigrants and ethnic minorities, who absorbed the cost of the NMW by using a combination of family labor, co-ethnic homeworkers, and payments under the table (Ram et al., 2001, pp. 857-858; Ram et al., 2007). Few native-born business owners used family and friends in the informal economy to absorb the increased minimum wage (Druker et al., 2005), which reinforces the notion that immigrant business owners can be uniquely connected to their co-ethnic communities. In sum, evidence from the NMW offers many reasons to suspect that immigrant-owned firms use different channels of adjustment than other firms when responding to a municipal-level minimum wage increase. It is nonetheless unclear which channels of adjustment immigrant employers may be more likely to use.

Immigrant-Owned Franchises and the Minimum Wage

Beyond a general analysis of immigrant-owned businesses' adaptation to minimum wage ordinances, it is valuable to specifically analyze immigrant-owned franchises. Immigrants often operate franchises in industries notably affected by minimum wage laws, such as fast food, gas stations, and motels (Dhingra, 2012; Min, 2004; Parker, 2013; Rangaswamy, 2007). There is little scholarly consensus on how to apply minimum wage laws to franchises (Conway & Fichter, 2015; Fraser, 2015; Ji & Weil, 2015), yet municipalities across the United States have enacted minimum wage ordinances that force franchises to raise wages more quickly than independently owned businesses (Conway & Fichter, 2015; Jardim et al., 2018; Nelson, 2017). Policy makers sympathetic to marginalized communities have struggled over the implications for franchises operated by marginalized business owners. In Seattle, for instance, immigrant-owned franchises were actively discussed when the city crafted its minimum wage ordinance. A city staffer had this to say prior to implementing the ordinance:

[I] would love some additional thinking to help think through how to answer concerns about the effect on the individual immigrant business owner who decided to open a Subway rather than a bahn mi shop...are there ways for the cost to be born not on those franchise owners? Are they simply going to be a casualty of this transition? (International Franchise Association, 2015, p. 1269).

Unfortunately, minimum wage scholarship has done little to answer this staffer's question, and little if any existing studies examine the potentially divergent impact of municipal-level minimum wage laws on marginalized franchisees versus marginalized independent business owners.

Many of the same community-oriented labor relations found in immigrant-owned independent businesses extend to immigrant-owned franchises as well (Dhingra & Parker, 2015; Rangaswamy, 2007). Therefore, immigrant-owned franchises may adapt to a minimum wage increase without firing workers, reducing hours, or utilizing other channels of adjustment that worsen labor conditions in the firm. At the same time, immigrant-owned franchises may be just as quick as non-immigrant-owned franchises to implement cost-cutting measures that hurt workers (Fraser, 2015; Ji & Weil, 2015; Weil, 2014). Many franchisees' labor practices are determined by franchisors' standards (Sherman, 2011; Wimmer, 1996; Wimmer, 2000; cf. Kaufmann et al., 2015), so both immigrant and non-immigrant franchisees may have little flexibility in the kinds of channels of adjustment they use after a minimum wage increase.

Data

To generate insight into how both independently owned and franchised immigrant businesses respond to minimum wage increases, we rely on the Survey of Seattle Employers (SSE), a survey of employers administered in Seattle as the city started to phase in its \$15 minimum wage ordinance between 2015 and 2017. Seattle instituted its minimum wage ordinance in phases, and each phase applied differently to employers depending on several organizational characteristics. Table 1 describes in detail how Seattle phased in its minimum wage ordinance depending on characteristics of each employer. Large employers, meaning those with 501 or more employees nationwide, were expected to phase in their minimum wage faster than small employers. Whether large or small, employers could count the value of employer-provided health insurance toward the required hourly wage, and small employers could count tips. Wages first increased on April 1, 2015, jumping from the state minimum of \$9.47 to \$10.00 or \$11.00 depending on which schedule the employer was mandated to follow. By January 1, 2017, the minimum stepped up to anywhere between \$11.00 to \$15.00 depending on a given employer's mandated phase-in schedule.

[Table 1]

The SSE is based on a sample of employers drawn from the universe of 90,481 City of Seattle business license holders registered as of December 2014, a publicly available data set. License holders listed as sole proprietors were excluded because these entities were unlikely to have employees. Employers with more than one branch appeared in business license data multiple times. Duplicated firm entries were removed so that each "business legal name" contained one record as well as a flag for having had multiple locations within the city. The final population of Seattle business license holders used for sampling numbered 48,962. A random sample of business license holders was drawn from each of eight strata formed from four industry sectors and two size groups. North American Industry Classification System (NAICS) codes were used to define the four sectors: retail/trade, manufacturing, accommodation/food, and "all other"—which included firms from all other NAICS codes. The survey sought to include more large employers by oversampling employers with more than one branch within Seattle. The survey team invited a final random sample of 3,780 license holders to participate in the study.

Between March and May of 2015, the Survey Research Division of the University of Washington's Social Development Research Group used this random sample to conduct a screening assessment of employers eligible to take part in the survey. Survey staff recruited business owners or senior managers with knowledge of the employer's business practices. The survey team successfully reached 80 percent of the sample (3,011 of 3,780 employers) by phone. If an employer did not have any workers earning less than \$15 per hour, it was screened out of the sample. In some cases, the person answering the phone did not know the needed wage information; these cases were screened in for further follow-up.

Of the employers contacted for SSE screening, 1,119 reported that they had or possibly had workers in Seattle earning \$15 per hour or less at the time of the call and were considered eligible for the survey. The team successfully contacted 62 percent (693 employers) of this screened-in group to complete the survey. Of those contacted, 127 employers definitively reported that they did not have low-wage workers and were excluded from the final sample. The team ultimately completed phone surveys with 566 respondents in 2015, capturing information on employer characteristics like whether the business was immigrant-owned. In April and June of 2017, a follow-up survey was conducted to assess how these businesses responded to the initial phase-in of Seattle's minimum wage ordinance.¹ In the follow-up survey, the team reached 65 percent of original respondents, yielding a final analytical sample of 368 for-profit employers. Multivariate analyses of respondents versus non-respondents indicate that response was unrelated to most tracked business characteristics, and that non-response did not obviously reflect attrition due to firm closure.²

This study uses employer characteristics from the 2015 baseline survey and outcome measures from the 2017 follow-up survey. Because the SSE screened for firms that employed workers earning \$15 per hour or less, the SSE over-represents low-wage industries. According to the 2012 Survey of Business Owners (SBO), among Seattle firms that had paid employees, 10 percent each were in retail/trade and accommodation/food, four percent were in manufacturing, and the remainder were in other industries.³ In the SSE, 28 percent of firms were in retail/trade, 43 percent were in accommodation/food, and 8 percent were in manufacturing. The SSE's emphasis on industries notably affected by minimum wage legislation makes it unrepresentative of all Seattle firms, but it suitably represents those firms most affected by the city's minimum wage ordinance.

Methods and Variables

We conduct our analysis in two stages. First, we compare immigrant firms to other firms, irrespective of their business model. Second, we specifically compare immigrant-owned franchises to other businesses. Part 1 of Appendix A shows the survey question indicating immigrant ownership. According to the survey, roughly 13 percent of firms that we interviewed were owned by immigrants. This percentage is slightly lower than the 22 percent of Seattle businesses that were immigrant-owned according to the 2012 SBO. The SBO, however, considers a firm immigrant-owned if at least one owner is an immigrant. In contrast, we consider a firm immigrant-owned if more than 50 percent of owners are foreign-born. Our stricter requirement likely led to the lower proportion of firms that were immigrant-owned. We took efforts to avoid attrition in our sample, conducting in-person visits to all non-responding immigrant businesses.

Part 2 of Appendix A shows the survey question indicating a firm's business model. Our definition of a franchise was taken directly from the Seattle Municipal Code.⁴ The definition consequently fits existing legal distinctions but does not specify whether a franchise is formally franchised or only licensed from the franchisor. In the former case, franchisees may have less flexibility in how they adjust to a minimum wage because labor standards may be set by the franchisor (Sherman, 2011). Despite this possibility, we presume that both types of franchises would respond to a higher minimum wage similarly. This assumption builds on prior research that groups together both types of franchises when analyzing wage differences between franchises and other businesses (Kim & Jang, 2020; Krueger, 1991).

The core of our analysis examines various channels of adjustment that immigrant business owners, whether independent or part of a franchising arrangement, used in response to Seattle's minimum wage ordinance. We examine channels of adjustment mentioned in prior research (Arrowsmith et al., 2003; Hirsch et al., 2015; Romich et al., 2020). These include whether respondents reported that they *raised prices or added fees to services*;⁵ *raised wages*; *increased qualification requirements for new hires*; *lowered wages of employees earning more than \$15 per hour; fired workers; reduced employees' hours; used contract workers; eliminated benefits*; or *closed down or withdrew sales from Seattle*.⁶ Parts 3 and 4 of Appendix A include the survey questions indicating each channel of adjustment.

For every channel of adjustment, we create a binary variable⁷ and then use it in the logistic regression equation below.

$$log\left(\frac{p}{1-p}\right) = \alpha + \beta_1 I + \beta X \tag{1}$$

where p is the probability that a firm used a given channel of adjustment, I is a dummy for whether or not the firm was owned by an immigrant, and X is a vector of control variables. For regressions that test how immigrant-owned franchises responded to Seattle's minimum wage ordinance, we use

$$log\left(\frac{p}{1-p}\right) = \alpha + \beta_1 I + \beta_2 F + \beta_3 (I * F) + \beta X$$
(2)

where p and I are the same as in Equation (1), and F is a dummy for whether a firm was a franchise or an independent business. (I * F), which interacts immigrant ownership and the firm's business model, is the independent variable of interest in Equation (2).

Control variables include whether the firm was part of a company that *had more than 500 employees nationwide*. If a firm had more than 500 employees nationally, then Seattle expected the firm to phase in the higher minimum wage faster than other firms. Not all franchises belonged to parent companies with more than 500 employees nationwide. We also control for *number of employees in Seattle* (logged) as well as *industry*. Industry is broken up into four binary variables. The first three represent industries that include many low-wage workers: accommodation and food; retail and trade; and manufacturing. The fourth, "other" industries, represents the baseline. In Equation (1), we include an additional control: a dummy for whether a firm was a franchise or an independent business.

In our regressions, we apply Bonferroni corrections, which compensate for the increased likelihood of Type I error that arises when multiple comparisons are made at once (Bifuco et al., 2011; Shaffer, 1995). Bonferroni corrections address the multiple comparisons that occur when we test how immigrant ownership is related to each channel of adjustment included in our analysis. These corrections reduce statistical power and are conservative tests. Therefore, in our findings, we present regression results with and without Bonferroni corrections.

Results

How Did Immigrant-Owned Firms Respond to Seattle's Minimum Wage Ordinance?

Table 2 provides descriptive statistics comparing immigrant-owned and other firms in our sample. Immigrants were statistically significantly more likely than other employers to be franchisees and to own businesses in the accommodation and food sector. Immigrant employers also had significantly fewer employees in their firms. According to some studies, smaller businesses, industries containing many franchises, and firms in accommodation and food industries tend to be exceptionally affected by minimum wage legislation (Card & Krueger, 2015; Moore, 2008; Weil, 2014). If true, then Seattle's minimum wage ordinance may have affected immigrant-owned firms to an exceptional degree and forced them to respond in unique ways.

[Table 2]

Table 3 includes the channels of adjustment pursued by immigrant business owners and other owners. Immigrants were nine percent more likely than other business owners to make changes in response to Seattle's minimum wage ordinance, but they were no more likely than other owners to pursue any particular channel of adjustment. While Table 3 shows immigrant owners to be slightly more likely than other owners to report raising prices or adding fees, using contract workers, or closing down, these differences did not reach conventional levels of statistical significance. We conclude, therefore, that immigrant-owned and non-immigrantowned businesses in our sample pursued similar strategies in response to Seattle's minimum wage law.

[Table 3]

Table 4 presents average marginal effects from logistic regressions associating immigrant ownership with the most frequently reported channels of adjustment across firms: raised prices or added fees; raised wages; increased qualifications; lowered wages of those earning more than \$15 per hour; fired workers; or reduced hours. The first column in Table 4 tests whether immigrant-owned firms were more likely than other firms to make any kind of change, regardless of the channel of adjustment pursued. The remaining regressions in Table 4 test each major channel of adjustment. For all but one channel of adjustment, immigrant ownership was not statistically associated with how businesses responded to Seattle's minimum wage ordinance. This finding is consistent with the descriptive results reported above. The exception was the reduction of employee hours, which was weakly associated with immigrant ownership (p = 0.04) and does not remain significant after applying a Bonferroni correction. By and large, evidence upholds the notion that immigrant employers were no more or less likely than other employers to make changes in response to Seattle's minimum wage law.

[Table 4]

Table 4 does suggest, however, that franchises as well as businesses in the accommodation and food sector were statistically more likely than other firms to pursue several channels of adjustment. Franchises were simultaneously more likely to pass increased labor costs onto consumers via higher prices or added fees and cut costs by firing workers, reducing employee hours, and lowering the wages of workers earning more than \$15 per hour. These combined influences suggest that Seattle's minimum wage ordinance was especially consequential for how franchisees ran their firms.

Immigrant-Owned Franchises and Seattle's Minimum Wage Ordinance

Given that a sizeable share of immigrant-owned firms in the data set were franchises, and that franchises responded somewhat distinctively to Seattle's minimum wage ordinance, this section examines whether immigrant-owned franchises pursued different channels of adjustment than other firms. Table 5 presents average marginal effects from regressions that repeat those in Table 4 but include an additional variable interacting whether a firm was immigrant-owned and whether it was a franchise. According to the table, non-immigrant-owned franchises were much more likely than immigrant-owned franchises to make changes that affected working conditions in firms. On average, compared to other franchises, immigrant franchises had a 41 percent lower predicted probability of lowering the wages of employees earning more than \$15 per hour, a 37 percent lower predicted probability of firing workers, and a 53 percent lower predicted probability of reducing employee hours. Additionally, immigrant franchises had a 16 percent higher predicted probability than other franchises of raising prices or adding fees. The marginal effect in this latter case is not statistically significant after applying a Bonferroni correction, but it is consistent with the former finding that immigrant franchises were more likely than other franchises to use worker-friendly channels of adjustment in response to Seattle's minimum wage ordinance.

[Table 5]

Findings are robust to a variety of alternative model specifications. For example, franchises in the data set were more likely than independently owned firms to be part of the accommodation and food sector (56 percent versus 41 percent, respectively), the average franchise had fewer employees than the average independently owned business (12 employees versus 15 employees, respectively), and immigrants were more likely than others to own

businesses in the accommodation and food sector (57 versus 41 percent, respectively). In other words, characteristics of immigrant-owned franchises having nothing to do with immigrant ownership or franchise status may explain the findings. We obtain similar results, however, when we include three additional control variables in regressions: an interaction between franchise status and industry, an interaction between franchise status and number of employees, and an interaction between immigrant ownership and industry. None of these interaction terms is statistically significant, and inclusion does not alter the interpretation of other associations in regressions.⁸ Results remain robust, furthermore, when modeled as linear probability models instead of logistic regressions (see Appendix B).

Importantly, independent businesses and franchises owned by immigrants responded to the minimum wage law in a similar fashion. Figure 1 displays predicted probabilities for each of the latter three regressions found in Table 5, and it directly compares the responses of immigrant franchisees to immigrant independent business owners. The figure holds all control variables at their means. As Figure 1 shows, there were no statistical differences in the ways that immigrantowned franchises and immigrant-owned independent businesses fired workers, reduced hours, or lowered wages on workers earning more than \$15 per hour. Instead, non-immigrant-owned franchises were significantly more likely than non-immigrant-owned independent businesses to pursue these channels of adjustment. Therefore, although franchises were much more likely to pass the cost of Seattle's minimum wage ordinance onto their workers, this fact largely applied to franchises that were not owned by immigrants. Immigrant-owned franchises, despite being regulated as franchises, appeared to act more like immigrant-owned independent businesses and absorbed the cost of the minimum wage ordinance without making changes that adversely affected labor conditions in their firms.

[Figure 1]

Why Did Immigrant and Non-Immigrant Franchisees Respond Differently to Seattle's Minimum Wage Ordinance?

Because of the novelty of our study, prior research is limited in its ability to explain why immigrant and non-immigrant franchisees in Seattle used different channels of adjustment. Our data, however, permit us to rule out possible explanations and offer informed hypotheses about underlying reasons. For instance, it is unlikely that the size, closure rate, or location of franchises in Seattle influenced the divergence between immigrant-owned and non-immigrant-owned franchises. One could imagine that immigrant-owned franchises were less likely than other franchises to be affiliated with parent companies that had more than 500 employees nationwide. Firms whose parent companies had more than 500 employees nationally had to phase in Seattle's higher minimum wage more quickly. Therefore, if fewer immigrant-owned franchises to make drastic changes. Despite this possibility, immigrant-owned and other franchises in Seattle were just as likely to be affiliated with a large employer. Fifteen percent of immigrant-owned franchises were.

It is also possible that any differences between immigrant-owned and other franchises were due to differential closure rates after Seattle instituted its minimum wage ordinance. As shown in Table 3, however, there were few differences in closure rates between immigrant-owned and other businesses. When accounting for business model, eight percent of immigrant-owned franchises closed or left Seattle, while 10 percent of other franchises did.⁹

Another possible explanation is that immigrant-owned franchises served different parts of Seattle than other franchises. Many immigrant-owned firms tend to have a close connection to the communities that they serve, relying on co-ethnics in the local community as patrons and workers (Dabić et al., 2020; Kerr & Kerr, 2021). A devoted consumer base and labor supply may have given immigrant-owned franchises the security to withstand the higher minimum wage. Again, evidence does not support this possible explanation. Figure 2 shows the locations of immigrant-owned businesses in our data set. For confidentiality reasons, businesses are aggregated at the census tract level, and immigrant-owned franchises are grouped together with immigrant-owned independent businesses. As the figure shows, immigrant-owned businesses were spread all throughout Seattle. Areas of notable concentration include Downtown, South Lake Union, and the University District, which are highly active commercial corridors rather than immigrant neighborhoods. Furthermore, the correlation between the number of immigrantowned businesses in a tract and percentage foreign-born in a tract was 0.18, which fails a correlation test.¹⁰ It is unlikely that location played a role in explaining why immigrant-owned franchises more readily absorbed the minimum wage increase.

[Figure 2]

So what did drive the divergence between immigrant and non-immigrant franchisees? Although we are cautious in interpretation due to the nature of our sample, out data suggest two factors: immigrants employed fewer workers and were more reliant on family labor.¹¹ Regarding the number of employees, the median immigrant franchisee in our sample reported employing nine workers, irrespective of family status. In contrast, the median non-immigrant franchisee reported employing 17 workers.¹² With fewer employees, immigrant franchisees were likely less impacted by Seattle's minimum wage ordinance. Despite this fact, the inclusion of a control variable in regressions for number of employees has little bearing on statistical results, as shown in Tables 4 and 5. Whether this control variable is included or excluded from regressions, and whether it is interacted with immigrant ownership, regression results do not change.

Regarding the use of family labor, 31 percent of immigrant franchisees reported relying on family labor, compared to 17 percent of other franchisees. This difference was not statistically significant according to Pearson's chi-square tests and Fisher's exact tests, and the inclusion of a control variable for whether or not a firm employed family members does not change regression results (see Appendix C). Regardless, immigrant franchises' higher usage of family workers is consistent with literature showing that immigrant entrepreneurs regularly rely on family members as workers (Portes & Sensenbrenner, 1993; Sanders & Nee, 1996). Previous literature on the minimum wage, in fact, shows that many immigrant-owned firms turn to the use of family labor to absorb minimum wage increases (Ram et al., 2001, pp. 857-858; Ram et al., 2007). Firms that are smaller and more reliant on family labor are almost certainly less likely to respond to a higher minimum wage by lowering wages, firing workers, or reducing employees' hours, even if this fact does not always reach statistical significance.

Discussion and Conclusion

Despite rhetoric around the adverse effect of municipal-level minimum wage increases on businesses owned by marginalized communities (Chan, 2013; Khemlani, 2019; Lowrey, 2021; Robinson, 2015), scholars have only begun to investigate the issue systematically (Deskins & Ross, 2018; Kwapisz, 2020). This study analyzed how one marginalized group of employers—immigrant business owners—adapted to the early phase-in of Seattle's \$15 per hour minimum wage ordinance. Many immigrant employers hire through family and community networks (Dabić et al., 2020; Menzies, 2021; Portes & Sensenbrenner, 1993; Ram, 1994), which suggests the possibility that immigrant-owned firms were more likely than other firms to use channels of adjustment (Hirsch et al., 2015) that supported workers rather than worsening labor conditions in their firms. Our findings suggest that immigrant firms responded to Seattle's minimum wage increase in a similar fashion to non-immigrant firms. Immigrant-owned franchises, however, reported being less likely than other franchises to fire workers, reduce employee hours, or lower the wages of workers earning more than \$15 per hour. Findings suggest that immigrant franchisees to pass the increased labor costs onto their employees because the former tended to have fewer employees and relied more heavily on family labor.

Our study has several implications for the minimum wage debate. First, and most obviously, immigrant and non-immigrant business owners in our study reported being similarly impacted by Seattle's minimum wage ordinance. Immigrant business owners were also no more vulnerable than non-immigrant business owners to the minimum wage increase, at least when considering rates of business closure and withdrawal of sales from Seattle. Our study, in other words, suggests that marginalized and non-marginalized business communities may be affected by minimum wage increases similarly and adapt in comparable ways. Many immigrant-owned and non-immigrant-owned firms likely face similar opportunities and constraints when responding to a higher minimum wage, which public policy can do more to acknowledge. We view our results as suggestive and encourage future scholarship to assess whether our findings extend to marginalized groups other than immigrants.

Importantly, the adaptations of immigrant-owned and non-immigrant-owned franchises in Seattle diverged, suggesting complications when franchises are regulated using a "one size fits

all" policy. Debates surrounding how to apply the minimum wage to franchises (Conway & Fichter, 2015; Fraser, 2015; Wimmer, 2000) likely stem in part from the heterogeneity of labor structures that exists within the franchise sector (Yin & Zajac, 2004). In our study, immigrant franchisees were less likely than other franchisees to report passing along the cost of the ordinance onto their employees. It is possible that other sectors within the franchise industry are characterized by a similar pattern.

In addition to the implications above, our study suggests several additional directions for future scholarship. We are cautious about making causal claims because our sample of firms was small, our outcomes relied on self-reports, and our survey followed up with firms only a short time after Seattle started to phase in its minimum wage ordinance. Given these issues, and the fact that local minimum wage laws come in many varieties, we welcome other municipal-level case studies of immigrant businesses' responses to the minimum wage. Additionally, future scholarship should find ways to comprehensively assess channel of adjustments not considered in this study. Channels of adjustment include non-compliance and reliance on labor in the informal economy (Arrowsmith et al., 2003; Ram et al., 2001), neither of which our study examined. Researchers should also directly investigate how the channels of adjustment that firms use affect low-wage workers' job quality. Although a smaller staff and more family workers likely helped immigrant-owned franchises absorb Seattle's minimum wage ordinance better than other franchises did, future research can determine whether employees in immigrant-owned franchises ultimately experienced better working conditions. Furthermore, future scholarship should test for differences across immigrant groups. Asian immigrant businesses, for example, are on average larger and generate more revenue than Hispanic immigrant businesses (Fairlie & Lofstrom, 2015), which may result in varied responses to minimum wages across Asian and

Hispanic immigrant firms. Finally, the importance of immigrant franchisees to our findings highlights the need for more research on immigrant franchisees as employers in the low-wage labor market. If immigrant owners concentrate in the kinds of franchises that are characterized by frachisor control over hiring and staffing decisions, then the findings in this study may be caused by franchisor policy rather than foreign-born status.¹³ The literature on immigrant franchisees is growing (Dhingra & Parker, 2015; Parker, 2013; Rangaswamy, 2007), but more scholarship is needed on immigrant employers who choose franchising over independent business ownership.

Taken together, our findings indicate the need for more granularity in the minimum wage debate. A robust body of literature analyzes the effect of minimum wages on labor markets (Card & Krueger, 2015; Neumark & Wascher, 2008), but few studies investigate how and why certain employers are more likely to use one channel of adjustment over another (Allard et al., 2020; Hirsch et al., 2015; Romich et al., 2020). Even fewer studies examine how channels of adjustment intersect with the demographic characteristics of employers, which may influence how low-wage workers in specific sectors of the labor market are affected by minimum wage laws (Deskins & Ross, 2018; Kwapisz, 2020). As an increasing number of municipalities confront the triple threat of the COVID-19 crisis, the risk of bankruptcy, and the public disagreements that come with a higher minimum wage (Cohn, 2020; Fairlie, 2020; Weir & King, 2021), it is more important than ever to consider how employers from marginalized social groups respond to regulatory changes in the low-wage labor market.

Notes

1. The team conducted a brief follow-up survey in 2016 as well, but this study does not rely on any variables from that wave of data collection.

2. Attrition was also not systematically associated with immigrant ownership or franchise status, two business characteristics important to our findings. Breaking out retention rates by immigrant ownership and franchise status, they were 78 percent for non-immigrant-owned independent businesses, 76 percent for non-immigrant-owned franchises, 75 percent for immigrant-owned independent businesses, and 86 percent for immigrant-owned franchises.

3. These statistics come from the 2012 SBO, treating Seattle as an economic place.

4. https://library.municode.com/wa/seattle/codes/municipal_code

5. This channel of adjustment combines responses to the first two questions reported in Part 3 of Appendix A. Results do not change if raising prices and adding fees are treated as two distinct channels of adjustment.

6. Information on withdrawal and closure combines the question on withdrawal in Part 3 of Appendix A with the question on closure in Part 4 of Appendix A. Results do not change if withdrawal and closure are treated as two distinct channels of adjustment.

7. We set each binary variable equal to 1 for employers who responded that they "*have already done this*" channel of adjustment or "*have done some and plan to do more*." Each binary variable equals 0 for employers who responded that they "*plan to do this*," "*do not plan to do this*," "*does not apply*," "*don't know*," or "*refuse*." Even when we take firms who responded, "*does not apply*," "*don't know*," or "*refuse*" out of the analysis, overall results do not change.
8. Results of these robustness checks are not shown but are available from the authors.

9. Because our sample includes a substantial number of firms whose employees earned above \$15 per hour in 2017, it is possible that our data overrepresent larger businesses and miss smaller businesses that may have closed or left Seattle due to the minimum wage ordinance. Even when dropping from the data set those firms that reported raising wages or lowering the wages of employees earning more than \$15 per hour, however, overall results do not change.

10. Data on the foreign-born population come from the 2013-2017 American Community Survey5-Year Estimates. Results are consistent even when the number of businesses in a tract is logged.11. Part 5 of Appendix A includes the survey question on the use of family labor.

12. This difference is statistically significant using both a Wilcoxon ranked sum test on the raw variable as well as a t-test on the logged version. In both cases, p < 0.02.

13. We thank an anonymous reviewer for pointing this out.

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	Small E	mployers ^a	Large En	nployers ^b
	Does Employ	er Pay toward		
	Employee's Med	ical Benefits and/or	Does Employe	er Pay toward
	Does Employ	yee Earn Tips?	Employee's Me	edical Benefits?
Year	Yes (\$)	No (\$)	Yes (\$)	No (\$)
2015	10.00	11.00	11.00	11.00
2016	10.50	12.00	12.50	13.00
2017	11.00	13.00	13.50	15.00
2018	11.50	14.00	15.00	
2019	12.00	15.00		
2020	13.50			
2021	15.00			

 Table 1. Seattle Minimum Wage Ordinance Phase-In Schedule

Source. Seattle Office of Labor Standards (2021).

Note. After the minimum wage reaches \$15.00 an hour, it will be adjusted each year on January

1, based on the Consumer Price Index for the Seattle-Tacoma-Bremerton Area.

a. Small employers are defined as employing 500 or fewer employees nationally.

b. Large employers are defined as employing 501 or more employees nationally.

	Overall	Immigrant-Owned Firms	Other Firms	p-value
Franchise	0.12	0.28	0.10	0.000
	(0.32)	(0.45)	(0.29)	
> 500 Employees Nationwide	0.10	0.06	0.11	0.370
	(0.30)	(0.25)	(0.31)	
Number of Seattle Employees ^a	14	8	15	0.001
1 5	(1 - 3500)	(2 - 215)	(1 - 3500)	
Industry				
Accommodation & Food	0.43	0.57	0.41	0.035
	(0.50)	(0.50)	(0.49)	
Retail & Trade	0.28	0.28	0.28	0.992
	(0.49)	(0.45)	(0.49)	
Manufacturing	0.08	0.02	0.09	0.106
	(0.27)	(0.15)	(0.29)	
Other	0.21	0.13	0.22	0.141
	(0.41)	(0.34)	(0.42)	
Total Number of Firms	368	47	321	

Table 2. Descriptive Characteristics of Immigrant-Owned and Other Firms

Note. Values include means and standard deviations unless noted otherwise. For all variables excepting Number of Seattle Employees, *p*-values come from either a Pearson's chi-square test or a Fisher's exact test. *p*-values in bold are statistically significant.

a. This row reports the median and range of Seattle employees in firms in our sample. The variable is logged in regressions, and the *p*-value comes from a t-test comparing the logged value across immigrant-owned and other firms.

	Overall	Immigrant-Owned Firms	Other Firms	p-value
Made Any Changes at All?	71	78	69	0.193
Raised Prices or Added Fees	62	64	61	0.746
Raised Wages	85	80	85	0.305
Increased Qualifications for New Hires	21	20	21	0.960
Lowered Wages of Those Earning >\$15/hr	21	18	23	0.443
Fired Workers	22	20	27	0.469
Reduced Employee Hours	26	30	31	0.337
Used Contract Workers	3	5	3	0.548
Eliminated Benefits	5	2	5	0.408
Closed Down or Withdrew Sales from Seattle	6	8	6	0.433

Table 3. Channels of Adjustment Used by Immigrant-Owned and Other Firms

Note. Values are percentages. p-values come from Pearson's chi-square tests. No differences

between immigrant-owned and other firms reached statistical significance using either a

Pearson's chi-square test or a Fisher's exact test.

	Made Any	Raised Prices	Raised	Increased	Lowered Wages of	Fired	Reduced
	Changes at All?	or Added Fees	Wages	Qualifications	Those Earning > \$15/hr	Workers	Employee Hours
Immigrant-Owned	0.05	-0.04	-0.06	-0.01	0.02	-0.09	-0.12*
	(0.07)	(0.08)	(0.07)	(0.07)	(0.07)	(0.06)	(0.06)
Franchise	0.07	0.16*	0.08	0.09	0.18*	$0.24^{**^{\dagger}}$	$0.22^{**^{\dagger}}$
	(0.07)	(0.07)	(0.05)	(0.08)	(0.08)	(0.08)	(0.08)
> 500 Employees Nationwide	-0.14	-0.18*	-0.02	-0.04	-0.10	0.01	-0.13*
	(0.09)	(0.09)	(0.08)	(0.07)	(0.06)	(0.08)	(0.06)
log(Number of Seattle Employees)	0.01	0.02	0.04*	-0.01	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry							
Accommodation & Food	$0.19^{**^{\dagger}}$	$0.26^{***^{\dagger}}$	0.08	-0.07	0.02	0.09	0.15*
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
Retail & Trade	0.02	-0.04	0.08	-0.05	-0.03	0.09	0.12
	(0.06)	(0.07)	(0.04)	(0.06)	(0.06)	(0.07)	(0.07)
Manufacturing	0.04	0.06	0.02	0.04	-0.09	-0.11	$-0.20^{**^{\dagger}}$
	(0.08)	(0.09)	(0.06)	(0.09)	(0.07)	(0.08)	(0.07)
McFadden's R ²	0.05	0.09	0.05	0.03	0.03	0.05	0.07
-2LL	415.50**	436.56***	285.88*	339.60*	339.60*	342.91*	366.98***
N	361	361	347	345	347	345	345

Table 4. Average Marginal Effects from Logistic Regressions of Channels of Adjustment on Immigrant Ownership

Note. **p*<0.05, ***p*<0.01, ****p*<0.001 (two-tailed tests)

Table 5. Average Marginal Effects from Logistic Regressions of Channels of Adjustment on the Interaction of Immigrant

Ownership and Business Model

	Made Any	Raised Prices	Raised	Increased	Lowered Wages of	Fired	Reduced
	Changes at All?	or Added Fees	Wages	Qualifications	Those Earning > \$15/hr	Workers	Employee Hours
Immigrant-Owned	0.03	-0.10	-0.09	0.01	0.15	-0.01	-0.01
	(0.08)	(0.08)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)
Franchise	0.05	0.09	0.04	0.10	$0.32^{**^{\dagger}}$	$0.32^{**^{\dagger}}$	$0.34^{***^{\dagger}}$
	(0.08)	(0.09)	(0.07)	(0.09)	(0.09)	(0.09)	(0.09)
Immigrant-Owned x Franchise	0.09	0.25*	0.10	-0.05	-0.21*** [†]	$-0.18^{**^{\dagger}}$	$-0.26^{***^{\dagger}}$
	(0.16)	(0.11)	(0.07)	(0.12)	(0.03)	(0.05)	(0.04)
> 500 Employees Nationwide	-0.14	-0.18*	-0.02	-0.03	-0.10	0.01	-0.13*
	(0.09)	(0.09)	(0.08)	(0.07)	(0.06)	(0.08)	(0.06)
log(Number of Seattle Employees)	0.01	0.02	0.04*	-0.01	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry							
Accommodation & Food	$0.19^{**^{\dagger}}$	$0.26^{***^{\dagger}}$	0.08	-0.07	0.01	0.09	0.15*
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
Retail & Trade	0.02	-0.04	0.07	-0.05	-0.01	0.09	0.14
	(0.06)	(0.07)	(0.04)	(0.06)	(0.06)	(0.07)	(0.07)
Manufacturing	0.04	0.05	0.01	0.04	-0.08	-0.10	-0.19*
	(0.08)	(0.09)	(0.07)	(0.09)	(0.08)	(0.08)	(0.08)
McFadden's R ²	0.05	0.10	0.05	0.06	0.06	0.06	0.10
-2LL	415.24**	433.92***	285.02	329.15**	329.15**	339.34**	358.55***
N	361	361	347	345	347	345	345

Note. **p*<0.05, ***p*<0.01, ****p*<0.001 (two-tailed tests)

Figure 1. Predicted Probabilities of Lowering Wages, Firing Employees, and Reducing Hours



by Immigrant Ownership and Business Model

Note. n.s.= difference not statistically significant at the .05 level.

p*<0.01, *p*<0.001 (two-tailed tests)





Note. For confidentiality reasons, businesses are aggregated at the tract level, and franchises and independent businesses are combined.

Appendix A. Key Interview Questions from the Survey of Seattle Employers

1. Question on Immigrant Ownership (asked in 2015)

Is {BUSNAME} an immigrant-owned firm? (Immigrant-owned means 51% ownership or greater is first generation immigrant to the U.S.)

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuse

2. Question on Business Model (asked in 2015)

Is {BUSNAME} part of a franchise?

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuse

A "franchise" means a written agreement by which:

- A person is granted the right to engage in the business of offering, selling, or distributing goods or services under a marketing plan prescribed or suggested in substantial part by the grantor or its affiliate;
- The operation of the business is substantially associated with a trademark, service mark, trade name, advertising, or other commercial symbol; designating, owned by, or licensed by the grantor or its affiliate; and
- The person pays, agrees to pay, or is required to pay, directly or indirectly, a franchise fee.

3. Questions on Channels of Adjustment (asked in 2017)

Have you made or do you	Have	Have	Plan	Do	Does	Don't	Refuse
intend to make any of the	already	done	to do	not	not	know	
following changes to	done	some	this	plan	apply		
accommodate the Seattle	this	and		to do			
Minimum Wage Ordinance?		plan to		this			
		do					
		more					
Raise prices on goods or							
services.							
Add service charges or other							
fees specifically meant to offset							
the wage mandates.							
Raise the wages of one or more							
Seattle employees.							
Increase the experience or							
qualification requirement of							
employees.							
Limit raises or decrease wages							
for employees earning more							
than minimum wage.							
Reduce the number of							
employees.							
Reduce the number of							
scheduled hours for minimum							
wage employees who work							
inside the City of Seattle.							
Contract out work currently or							
previously provided in-house.							
Eliminate another (i.e. non-							
health care) benefit for some							
employees.							
Withdraw your							
{business/organization} sales or							
services from the City of							
Seattle.							

4. Question on Closure (asked in 2017)

Did your site close or suspend operations?

- 1 Yes
- 2 No
- 3 Don't know
- 4 Refuse

5. Question on Use of Family Labor (asked in 2015)

Please indicate whether you have any Seattle employees with the following characteristic:

	Yes	No	Don't Know	Refuse
Family members				

Appendix B. Key Regressions of Interest as Linear Probability Models

	Made Any	Raised Prices	Raised	Increased	Lowered Wages of	Fired	Reduced
	Changes at All?	or Added Fees	Wages	Qualifications	Those Earning $>$ \$15/hr	Workers	Employee Hours
Immigrant-Owned	0.05	-0.04	-0.06	-0.01	0.01	-0.10	-0.14
	(0.07)	(0.08)	(0.06)	(0.07)	(0.07)	(0.07)	(0.06)
Franchise	0.07	0.15*	0.08	0.08	0.18^{**^\dagger}	$0.24^{**^{\dagger}}$	$0.23^{**^{\dagger}}$
	(0.07)	(0.07)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
> 500 Employees Nationwide	-0.14	-0.18*	-0.03	-0.03	-0.11	0.01	-0.14
	(0.08)	(0.09)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)
log(Number of Seattle Employees)	0.01	0.02	0.04*	-0.01	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry							
Accommodation & Food	$0.20^{**^{\dagger}}$	$0.26^{***^{\dagger}}$	0.09	-0.07	0.02	0.09	0.15*
	(0.06)	(0.06)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
Retail & Trade	0.02	-0.04	0.09	-0.05	-0.02	0.08	0.11
	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Manufacturing	0.05	0.08	0.02	0.05	-0.09	-0.09	-0.14
	(0.10)	(0.10)	(0.08)	(0.09)	(0.09)	(0.09)	(0.10)
Intercept	$0.58^{***^{\dagger}}$	$0.45^{***^{\dagger}}$	$0.67^{***^{\dagger}}$	$0.27^{***^{\dagger}}$	0.14*	0.12	0.15*
	(0.08)	(0.08)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
R^2	0.06	0.11	0.05	0.02	0.04	0.05	0.07
N	361	361	347	345	347	345	345

Table B1. Linear Probability Models of Channels of Adjustment on Immigrant Ownership

Note. **p*<0.05, ***p*<0.01, ****p*<0.001 (two-tailed tests)

	Made Any	Raised Prices	Raised	Increased	Lowered Wages of	Fired	Reduced
	Changes at All?	or Added Fees	Wages	Qualifications	Those Earning > \$15/hr	Workers	Employee Hours
Immigrant-Owned	0.03	-0.10	-0.10	0.01	0.15	-0.01	-0.01
	(0.08)	(0.09)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)
Franchise	0.05	0.08	0.04	0.10	0.33*** [†]	0.33***†	0.36*** [†]
	(0.09)	(0.09)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)
Immigrant-Owned x Franchise	0.07	0.28	0.16	-0.07	$-0.55^{***^{\dagger}}$	-0.37*	$-0.51**^{\dagger}$
	(0.17)	(0.18)	(0.14)	(0.16)	(0.15)	(0.16)	(0.16)
> 500 Employees Nationwide	-0.14	-0.18*	-0.03	-0.03	-0.10	0.01	-0.14
	(0.09)	(0.09)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)
log(Number of Seattle Employees)	0.01	0.02	0.04*	-0.01	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry							
Accommodation & Food	$0.20^{**\dagger}$	$0.26^{***^{\dagger}}$	0.09	-0.07	0.02	0.09	0.14*
	(0.07)	(0.07)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
Retail & Trade	0.02	-0.05	0.09	-0.05	-0.01	0.09	0.13
	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Manufacturing	0.05	0.06	0.01	0.05	-0.07	-0.07	-0.12
	(0.10)	(0.10)	(0.08)	(0.09)	(0.09)	(0.09)	(0.10)
Intercept	$0.59^{***^{\dagger}}$	$0.46^{***^{\dagger}}$	0.67*** [†]	$0.27^{***^{\dagger}}$	0.13	0.11	0.13
	(0.08)	(0.08)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
\mathbf{R}^2	0.06	0.12	0.04	0.02	0.07	0.07	0.10
Ν	361	361	347	345	347	345	345

Table B2. Linear Probability Models of Channels of Adjustment on the Interaction of Immigrant Ownership and Business Model

Note. **p*<0.05, ***p*<0.01, ****p*<0.001 (two-tailed tests)

	Made Any	Raised Prices	Raised	Increased	Lowered Wages of	Fired	Reduced
	Changes at All?	or Added Fees	Wages	Qualifications	Those Earning > \$15/hr	Workers	Employee Hours
Immigrant-Owned	0.05	-0.05	-0.05	-0.02	0.02	-0.08	-0.12*
	(0.07)	(0.08)	(0.07)	(0.07)	(0.07)	(0.06)	(0.06)
Franchise	0.07	0.16*	0.07	0.10	0.18*	$0.24^{**^{\dagger}}$	$0.23^{**^{\dagger}}$
	(0.07)	(0.07)	(0.05)	(0.08)	(0.08)	(0.08)	(0.08)
> 500 Employees Nationwide	-0.14	-0.18*	-0.02	-0.04	-0.10	0.01	-0.13*
	(0.08)	(0.09)	(0.08)	(0.07)	(0.06)	(0.08)	(0.06)
log(Number of Seattle Employees)	0.01	0.02	0.05**	-0.01	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry							
Accommodation & Food	$0.19^{**^{\dagger}}$	$0.26^{***^{\dagger}}$	0.08	-0.07	0.01	0.09	0.15*
	(0.06)	(0.06)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
Retail & Trade	0.02	-0.03	0.07	-0.05	-0.03	0.08	0.12
	(0.06)	(0.07)	(0.04)	(0.06)	(0.06)	(0.07)	(0.07)
Manufacturing	0.04	0.06	0.02	0.04	-0.09	-0.11	$-0.20^{**^{\dagger}}$
	(0.08)	(0.09)	(0.06)	(0.09)	(0.07)	(0.08)	(0.07)
Employs Family	0.01	0.02	-0.05	0.03	-0.02	-0.02	0.03
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
McFadden's R ²	0.05	0.09	0.05	0.04	0.04	0.05	0.07
-2LL	415.45**	436.48***	284.79*	339.40*	339.40*	342.68**	366.61***
N	361	361	347	345	347	345	345

Appendix C. Key Regressions Including a Control Variable for the Use of Family Labor

Table C1. Average Marginal Effects from Logistic Regressions of Channels of Adjustment on Immigrant Ownership

Note. **p*<0.05, ***p*<0.01, ****p*<0.001 (two-tailed tests)

Table C2. Average Marginal Effects from Logistic Regressions of Channels of Adjustment on the Interaction of Immigrant Ownership

and Business Model

	Made Any	Raised Prices	Raised	Increased	Lowered Wages of	Fired	Reduced
	Changes at All?	or Added Fees	Wages	Qualifications	Those Earning > \$15/hr	Workers	Employee Hours
Immigrant-Owned	0.03	-0.11	-0.07	-0.01	0.15	-0.01	-0.02
	(0.08)	(0.09)	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)
Franchise	0.05	0.09	0.04	0.11	$0.31^{**^{\dagger}}$	0.31** [†]	$0.36^{***^{\dagger}}$
	(0.08)	(0.09)	(0.07)	(0.09)	(0.09)	(0.09)	(0.08)
Immigrant-Owned x Franchise	0.09	0.25*	0.11	-0.05	$-0.21^{***^{\dagger}}$	$-0.17^{**^{\dagger}}$	$-0.26^{***^{\dagger}}$
	(0.16)	(0.11)	(0.07)	(0.12)	(0.03)	(0.05)	(0.04)
> 500 Employees Nationwide	-0.14	-0.18*	-0.03	-0.04	-0.10	0.01	-0.13*
	(0.09)	(0.09)	(0.08)	(0.07)	(0.06)	(0.08)	(0.06)
log(Number of Seattle Employees)	0.01	0.02	$0.05^{**^{\dagger}}$	-0.01	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Industry							
Accommodation & Food	$0.20^{**^{\dagger}}$	$0.26^{***^{\dagger}}$	0.08	-0.07	0.01	0.09	0.15*
	(0.06)	(0.07)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
Retail & Trade	0.02	-0.04	0.07	-0.05	-0.01	0.09	0.14
	(0.06)	(0.07)	(0.04)	(0.06)	(0.06)	(0.07)	(0.07)
Manufacturing	0.04	0.05	0.01	0.04	-0.07	-0.10	-0.19*
	(0.08)	(0.09)	(0.07)	(0.09)	(0.08)	(0.08)	(0.08)
Employs Family	0.01	0.02	-0.05	0.03	-0.02	-0.02	0.03
	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
McFadden's R ²	0.05	0.10	0.05	0.06	0.07	0.06	0.10
-2LL	415.20**	433.83***	283.94*	345.25*	328.92**	339.12**	358.15***
N	361	361	347	345	347	345	345

Note. **p*<0.05, ***p*<0.01, ****p*<0.001 (two-tailed tests)