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Abstract

Korean immigrants in the U.S. rely heavily on ethnic resources to start small businesses. Ethnic resources include business networks and knowledge, start-up capital, and access to labor power that are embedded in networks of family, friends, and co-ethnics. This paper shows how Korean dry cleaners in Southern California used ethnic resources to mobilize in response to an environmental policy initiated by the South Coast Air Quality Management District (AQMD). While Korean immigrants used ethnic resources to start dry cleaning businesses, they found themselves working with a toxic chemical. In 2002, AQMD required dry cleaners in Southern California to convert to costly alternative machines by 2020. Korean dry cleaners used ethnic-based collective action, particularly the Korean Dry Cleaning Association, as a means of fighting for regulatory concessions. They also used ethnic resources to overcome cultural and linguistic barriers to facilitate the adoption of alternative cleaning machines in compliance with the regulation.

Key words: Korean-Americans, dry cleaners, environmental policy, immigrant entrepreneurship, collective action, immigration

Introduction

Korean immigration to the U.S. increased dramatically after the Immigration Act of 1965 eliminated national quotas and made family ties the cornerstone of immigration policy (Min, 1996; Portes and Rumbaut, 1990; Light and Bonacich, 1988). An average of 250,000 Korean immigrants entered the United States each decade between 1970 and 2010. Koreans left South Korea for a number of reasons, including limited civil liberties in that country and better economic opportunities in the U.S. (Light and Bonachich, 1988). Korean immigrants to the U.S. are highly educated and held middle-class professional occupations in South Korea (Takaki, 1998). Upon their arrival to the U.S, however, many Koreans experience 'blocked mobility' in the U.S. labor market due to a lack of English proficiency and racial discrimination in the workplace (Min, 1996, 2008). Consequently, they have used ethnic resources to help them start small businesses as an alternative to wage and salary work (Mata and Pendkur, 1999). Ethnic resources include business knowledge, start-up capital, and access to labor power that are embedded in networks of family, friends, and co-ethnics (Light, 1972; Light and Bonacich, 1988; Waldinger, 1990).

Koreans have high rates of small business ownership when compared with native born Americans and other immigrant groups (Min and Bozorgmehr, 2000; Light and Bonachich, 1988; Park, 1997). In Southern California, for example, Koreans are three times as likely to be self-employed when compared with whites (Light and Bonacich, 1988; Choi, 2010)¹. Korean ethnic organizations in Southern California facilitate social interaction within the Korean community, including churches, alumni associations, media, social service agencies, and recreational associations. Religious institutions are of particular importance as approximately 80 percent of Koreans in the U.S. are Christian (Min, 1996; Choi, 2010). Korean churches are

places where new immigrants cannot only practice their religion, but they can meet and interact socially with other Koreans. In the Southern California region there are approximately 800 Korean churches (Choi, 2010).

Some scholars have conceptualized the social structure of Korean small businesses in the U.S. economy as 'middle-men minorities' (Bonacich, 1973; Min, 1996, 2008; Light and Bonacich, 1988). According to this theory, Korean small businesses tend to locate in low-income minority neighborhoods because rents are low and markets are underserved. Large 'white-owned' corporations avoid these areas because of high crime rates and use Korean small businesses to sell their products to residents in these neighborhoods. As a consequence, Korean business owners often come into conflict with local residents because they are perceived as a cause of their economic poverty. For example, Koreans have encountered 'hostility and rejection in the form of boycotts, arson, physical violence, looting, and attacks in the press' (Min, 1996, p.73; Park, 1999). During the Los Angeles riots of 1992, 2,300 Korean-owned stores were looted, burned, or both (Min, 1996; Gold, 2010). In response to ethnic conflicts, Koreans have utilized ethnic resources to mobilize politically to protect their economic interests. As Min states, 'Their economic activities force them into collective action' (Min, 1996, p. 5).

In this paper we examine how Korean immigrants in Southern California used ethnic resources to start dry cleaning businesses where they now comprise about half of the operators (Lee, 1991). While Korean immigrants entered the dry cleaning industry in search of a secure economic livelihood, they unwittingly found themselves working with perchloroethylene (PERC), the main chemical used by dry cleaners in the U.S. to clean garments (Thomas, 2007). Research has linked the emission of PERC vapors from dry cleaning machines to increased risk of cancer and other human health problems in dry cleaning workers, nearby residents, and people

who shop, work, and go to school near a dry cleaning facility (Altman et. Al, 1995; Brown & Kaplan, 1987; Schreiber et. al., 2002; Sotet et. al., 1990). As a result of these health risks, the industry has been regulated by the federal Environmental Protection Agency (EPA) since the early 1990s (U.S. Environmental Protection Agency, 1995). In 2002, the South Coast Air Quality Management District (AQMD) implemented Rule 1421, a policy requiring all dry cleaners in the Southern California region to phase out the use of PERC-based machines by the year 2020 with costly alternative machines (Ghasemi & Perryman, 2002).

We extend the literature on immigrant entrepreneurship by showing how Korean dry cleaners in Southern California used ethnic resources to politically mobilize in response to an environmental policy targeted at their industry. The main vehicle through which they mobilized was the Korean Dry Cleaners Association (KDLA), an association founded in the mid-1980s by a handful of Korean dry cleaners to assist them with their business practices. Through the KDLA, Korean dry cleaners established a voice in the regulatory process, actively opposed the regulation of their industry, and won some important concessions from environmental policy makers. Moreover, after the AQMD implemented Rule 1421 in 2002, which mandated the elimination of PERC-based machines, Korean dry cleaners used ethnic resources to facilitate the diffusion of alternative machines.

This paper also contributes to the literature by examining Korean's reaction to the state without the confounding effect of overt inter-racial conflict. As such, it provides new insights into the group-government dynamics and its outcomes on a topic area that has been understudied - Asian Americans and the environment (Sze, Ong and Lee, 2014). Moreover, we are able to quantify outcomes, thus providing concrete measures of the effectiveness of ethnic collective action in adapting to a new regulatory regime. Other studies document political mobilization,

but are not able to statistically determine whether collective action produced collective agency - the ability to achieve desired outcomes.

Accordingly, this paper provides a more comprehensive view by following ethnic solidarity, mobilization and collective action through three distinct stages. The first is the role of ethnicity in creating an ethnic niche within an industry, the second is the role in political protest, and the third is the role in assisting members to make required regulatory changes.

This paper is organized into the following sections. In the first section we review our research methods. In the second section we discuss how Korean immigrants used ethnic resources to settle in the Southern California area and the means by which they used ethnic resources to start dry cleaning businesses. In section three we review the environmental policy background of federal, state, and regional air quality regulations governing the dry cleaning industry. We also document how Korean dry cleaners in Southern California mobilized politically to oppose the regulation of their industry. In section four we review evidence demonstrating that Korean dry cleaners used ethnic resources to facilitate the diffusion of alternative machines in compliance with Rule 1421. We conclude with a summary of our findings.

I. Research Methods

The following case study of Korean dry cleaners in Southern California is based on several sources of information. In addition to reviewing secondary sources of information (scholarly journals, local newspapers, reports written by environmental agencies, and the Public Use Micro Sample from the American Community Survey²), we personally interviewed fifteen Korean dry cleaning owners in Southern California in 2005 using the snowball sampling method. Contact was initially made through the KDLA and respondents thereafter were identified through

referral. The personal interviews with Korean dry cleaning owners were conducted around a set of open-ended questions concerning their backgrounds, how they became dry cleaners, their use of ethnic resources, their attitudes toward environmental regulations, and the degree to which they had engaged in collective action in response to environmental policies. The personal interviews took between one and two hours and were conducted on the premises of dry cleaning facilities with the assistance of a Korean translator. While the snowball sampling method is a non-probability sample, it is unlikely that this limitation biased the study because the personal interviews were intended to illuminate the use of ethnic resources among Korean dry cleaners in response to AQMD regulations (Babbie, 2010). We also personally interviewed several representatives from industry associations.

Moreover, we conducted a larger telephone survey with a random sample of dry cleaners in Southern California³. The sample was derived from a database of 2,806 dry cleaning firms in Southern California obtained from Dun & Bradstreet, a private company that collects information on firms and industries in the U.S. economy (Dun & Bradstreet, 2005)⁴. For each firm, the database listed the company name, the owner's name, and the address and phone number of the facility. From the universe of firms we interviewed a random sample of 188 cleaners. To distinguish Korean owned firms from non-Korean owned firms, we used the last name of the owner as a proxy for Korean ownership (Shin and Yu, 1984; Lauderdale and Kestenbaum, 2000). Of the total sample, thirty-seven per cent were identified as Korean owned, fifty-six per cent were identified as non-Korean owned, and twelve per cent did not include the name of the owner. We note that the percentage of Korean owned dry cleaning firms is likely closer to fifty per cent (Lee, 1991; Choi, personal interview, July 15, 2005). The telephone

interviews were completed between September 2005 and June 2006 by the authors and a graduate student fluent in English and Korean.

Finally, we analyzed merged individual-level administrative data from AQMD and business data from Dun & Bradstreet to test concrete outcomes after the adoption of the PERC regulation. We enhanced this data set by using a surname matching process to impute whether an owner was Korean or not. This enabled us to quantitatively test whether cultural and linguistic barriers hampered Koreans in accessing AQMD resources and in adapting to environmentally more friendly technologies. We describe these databases in more detail in section IV.

II. Establishing an Ethnic Niche in Dry Cleaning

Most Korean dry cleaners in Southern California are first generation immigrants who arrived to the United States from South Korean during the 1970s and 1980s. They left South Korea for familiar reasons: greater economic opportunities and civil liberties in the U.S. for them and their children. In general, they are highly educated: approximately seventy-eight per cent of Korean dry cleaners in Southern California are college graduates or higher (Lee, 2008). Ethnic networks brought Korean dry cleaners to their final destinations in Southern California: ninety per cent of the respondents in our telephone survey said they settled in Southern California as a result of ties to the Korean community. Consistent with the literature on immigrant entrepreneurship, many Korean dry cleaners used ethnic resources to open small businesses due to frustrations in the U.S. labor market, particularly difficulty speaking fluent English. Our telephone survey revealed that fifty-three per cent of Korean dry cleaners learned how to start and manage a dry cleaning facility from family, friends, or relatives and fifty-eight percent obtained some or all of their capital from family sources to help them get started.

The following three vignettes are illustrative examples of the paths Korean immigrants took to becoming dry cleaners in Southern California⁵. George Ma held a college degree in electrical engineering and worked for Westinghouse in South Korea before he emigrated to the U.S. Upon his arrival in 1971, he obtained a job with a division of Westinghouse in Orange County that designed power motors. After working there for several years, he became frustrated because he believed he could not advance in the company due to the language barrier. He stated: 'My promotion within the company was clear. Language has been a barrier, and I didn't have a degree from a U.S. university' (Lee, 1991, p. 7.) Consequently, Ma decided to quit and start his own dry cleaning business in Southern California in 1980. He raised the money to get started in dry cleaning from his private savings and a loan from a friend (G. Ma, personal communication, July 20, 2005).

Paul Choi decided to drop out of a South Korean college in the mid-1970s and migrate to the United States in search of greater economic opportunities and political freedoms. He was granted a visa because he had a brother living in Lancaster, California, and this is where he settled when he arrived. Upon his arrival, Choi enrolled in a local college to improve his English and complete a degree in structural mechanics. After completing his degree, he was hired by Lockheed where he worked for about fifteen years, moving up to the position of General Inspector. While he enjoyed his job, he was laid off three times during his tenure due to fluctuations in the economy and cutbacks in government defense contracts. This was a source of considerable stress for him and his family. After the third layoff in 1998, according to Choi, 'I knew I had to do something.' Some of his friends in the Korean community owned dry cleaning businesses and were moderately successful. Most importantly for Choi, 'they didn't have to worry about layoffs.' Choi's friends taught him about the dry cleaning business and also loaned

him a share of the necessary capital to get started. The remaining share of capital he obtained from personal savings, a loan on his house, and a loan from a dry cleaning leasing company (P. Choi, personal communication, July 15, 2005).

Jeff migrated to the U.S. with his parents when he was a young child in search of a better education for him and his sister⁶. His father held a degree from a South Korean university and had owned a small liquor store in South Korea. They chose the City of Irvine as their final destination in the United States because they had relatives who lived there. Upon their arrival, Jeff's father went to work for an airplane components manufacturing company owned by Jeff's Uncle. Another relative of the family owned a dry cleaner located in Laguna Hills and this is where his mother went to work. At the time, no one in Jeff's family intended to open a dry cleaning establishment. In the meantime, Jeff completed high school and went to work in the paint department of a construction company that was owned by a friend of his father's. He worked there for about five years and saved enough money to buy a condominium in the area. After a few years the housing market appreciated and he sold the condominium at a considerable profit. By this time his mother had learned how to operate a dry cleaning facility and with Jeff's savings and a loan from a Korean bank, he and his mother started their own dry cleaning business (Jeff, personal interview, July 22, 2005).

Like Ma, Choi, and Jeff, many of our respondents chose dry cleaning over other small businesses for specific reasons. First, profit margins in dry cleaning are potentially higher than some other small business sectors, such as nail salons (Do, 1993). Second, dry cleaning operators, unlike some other small businesses, are traditionally closed on Sundays, providing Korean families time to attend church. As noted earlier, the Christian church is a central institution in the Korean-American community. According to one Korean dry cleaner who had

previously owned a small restaurant: 'Before we never had time to attend church or take our children to Bible studies or the park on Sundays. Now, not only are we making more money, we have our Sundays off' (Do, 1993, p. 10). Fourth, dry cleaning businesses are perceived to be less susceptible to crime than some other small businesses, particularly liquor stores, because dry cleaners are closed in the evening (Lee, 1991.) Finally, Koreans were drawn to dry cleaning because managing a dry cleaning facility does not require speaking fluent English.

There is some debate in the immigrant entrepreneurship literature concerning the degree to which immigrant small business owners rely on their children as a source of labor (Raijman and Tienda, 2000). Most Korean dry cleaners, according to our interviews, reported that their children were adverse to working in dry cleaning facilities due to long hours and onerous working conditions. Accordingly, most operated without the advantage of this ethnic resource. Korean dry cleaners, in fact, generally held aspirations that their children would pursue other avenues of economic success. According to one dry cleaner: 'We have two sons -- we hope one will become a priest and the other will become a doctor. For us, the dry cleaning business is good, but we prefer our children have a better life and be socially respected' (Do, 1993, P. 10). For labor, Korean dry cleaners in Southern California typically turned to the formal labor market, commonly preferring to hire Latino workers.

We analyzed a special tabulation of the American Community Survey to obtain background information on Korean owned and non-Korean owned dry cleaners in Southern California. The data revealed that forty-five per cent of dry cleaners in Southern California are Korean owned. This estimate is consistent with other sources (Lee, 1991). The data also confirmed that Korean dry cleaners are highly educated: fifty-nine per cent of Korean dry cleaners held a college degree or higher compared to just twenty-three per cent of non-Korean

dry cleaners. Moreover, fifty-six per cent of Korean dry cleaners in Southern California speak limited English compared to sixteen per cent of non-Korean owned dry cleaners. Finally, ninety-seven per cent of Korean dry cleaners are foreign born compared to thirty-two per cent of non-Korean dry cleaners and forty per cent of Korean dry cleaners are non-citizens compared to fifteen per cent of non-Korean owned dry cleaners. These foregoing differences suggest that Korean dry cleaners share little with other dry cleaners other than a common position within the economy. They face cultural and linguistic barriers and are more politically marginalized. These barriers serve to isolate Korean-owned dry cleaners.

Although isolated from non-Koreans, the bonding social capital of ethnicity became a basis for social solidary along industrial lines. In 1982, sixty-two Korean dry cleaners in Southern California formed the Korean Dry Cleaners Association (KDLA) 'to promote mutual benefits for the members and communities at large where members operate their business through education of members and community, exchanging information as to cleaning skills and research results, and other related activities' (Korean Dry Cleaners and Laundry Association, 2014). By the early 1990s, membership in KDLA grew to over 1,000and, according to our 2005 telephone survey, seventy-five per cent of Korean dry cleaners in Southern California were members of the KDLA (Lee, 2008). In contrast, only thirty-six percent of non-Korean owned dry cleaners reported belonging to an industry association in 2005. KDLA engages in a number of activities to help their members, including publishing a Korean-language newsletter, holding workshops, and exchanging information (Lee, 1991).

Korean dry cleaners work six days a week, twelve hours a day, under hot and physically demanding conditions. KDLA, therefore, provides important bridging social capital, particularly to other trade associations and government agencies. The KDLA, for example, helps Korean dry

cleaners comply with the region's air quality policies. The mission statement of the KDLA includes the following statement:

KDLA maintains a close liaison with the Government agencies overseeing the dry cleaning sector...so as to obtain timely information concerning requirements to be met under relevant laws and regulations. In the event our members receive undue government orders or are assessed inappropriate fees or penalties, we place high priority in contacting relevant government agencies to demand correction and or readjustment (Korean Dry Cleaners and Laundry Association, 2014).

As we will see later, KDLA also provided ties to their counterparts in the industry, particularly the mainstream trade group, with whom they shared a common liability visa vis the state.

III. Ethnic Resources and Political Mobilization

Koreans used ethnic resources to enter the dry cleaning industry in Southern California with an eye to making a stable and lucrative living. In the process, they unwittingly found themselves working with PERC-based dry cleaning machines, a controversial chemical that studies have linked to increased cancer risk (Altman et. Al, 1995; Brown & Kaplan, 1987; Schreiber et. al., 2002; Sotet et. al., 1990). Research has also linked PERC exposure to non-cancer effects, such as contamination of women's breast milk and damage to the kidney, liver, gastrointestinal and respiratory systems (Campbell & Low, 2002). Dry cleaning workers and people who live near a dry cleaning facility are particularly at risk, as well as those who shop or go to school in proximity to the location of a dry cleaning facility. A number of government agencies and health organizations, including the Office of Environmental Health Hazard Assessment (OEHHA) and the International Agency for Research on Cancer (IARC), have classified PERC as a possible human carcinogen (California Environmental Protection Agency, 2002).

As a result of the human health risks associated with PERC emissions from dry cleaners, the U.S. EPA initiated the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Perchloroethylene Dry Cleaning Facilities in 1993 (U.S. Environmental Protection Agency, 1995). NESHAP was designed to achieve reductions in PERC emissions through the use of 'add-on' control equipment, such as refrigerated condensers and carbon absorbers, technologies that recover PERC vapors. The NESHAP also required dry cleaners to closely monitor their use of PERC through recordkeeping. State and regional agencies were given responsibility for enforcing the NESHAP regulations with discretion to adopt stricter requirements. In 1994 the State of California went slightly beyond the NESHAP by enacting the Air Toxic Control Measure (ATCM) (Krause, 2002). The ATCM required California dry cleaners to use closed-loop machines with refrigerated condensers or equivalent primary control systems by 1998. After, all new machines were required to have integrated primary and secondary controls. The AQMD was given responsibility for enforcing the NESHAP and the ATCM in Southern California, a regulatory regime classified as Rule 1421.

The AQMD was created by the State of California in 1977 to implement and enforce air pollution control rules in the region encompassing Los Angeles and Orange Counties and parts of Riverside and San Bernardino Counties, an area covering approximately 10,473 square miles⁸. In this paper we refer to this region as Southern California. The AQMD is legally required to adopt an air quality management plan for Southern California demonstrating compliance with all federal and state ambient air quality standards (Krause, 2002). Because the region is home to approximately 16,000,000 people and has one of the largest regional economies in the world, it has a severe air pollution problem (Ghasemi & Perrman, 2002). The poor air quality is compounded by the region's topography as mountains ringing the area create a bowl that restricts

air circulation. The high levels of pollution in Southern California place residents in the region at a significant health risk. On overage, residents in Southern California are exposed to a lifetime cancer risk from toxic air pollution of 1,200 in 1,000,000, one of the highest in the country (South Coast Air Quality Management District, 2000).

In 2000 the AQMD completed the Multiple Air Toxics Exposure Study (MATES II), a research project attempting to identify health risks to the citizens of Southern California from exposure to industrial air toxics (South Coast Air Quality Management District, 2000). The study concluded that dry cleaners in the region were annually emitting approximately 850 tons of PERC into the ambient air, posing a cancer risk eight times above acceptable levels to residents living twenty-five meters or less from a dry cleaning facility (Polakovic, 2002a, p. B1; AQMD Governing Board, 2000). According to Barry Wallerstein, AQMD's Executive Officer, 'The average dry cleaner poses a higher cancer risk to its neighbors than a typical oil refinery or power plant' (Carroll, 2002, p. A.18). In response to the MATES II study, the AQMD announced the establishment of a 'rule development process' to investigate the feasibility of reducing PERC emissions from the dry cleaning industry in Southern California (Dabirian, 2002). The rule development process took two years and included one public workshop, five public consultation meetings, eight working group meetings, site visits to dry cleaning firms, two focus group meetings, and pilot programs testing alternative machines. AQMD staff also conducted a socioeconomic and environmental analysis of the feasibility of requiring the industry to convert to alternative machines. Korean dry cleaners participated in the rule development process through the KDLA. The KDLA ensured that all documents related to the rule development process were made available in Korean and that Korean language translators were available at all of the public consultation meetings (Ghasemi & Perryman, 2002).

By the end of the rule development process, AQMD officials concluded that several environmentally safe alternative technologies to PERC-based machines were 'commercially available and economically viable' (Ghasemi & Perryman, 2002, p. ES1). The alternative machines included wet cleaning, hydrocarbon, Green Earth, and CO2. Table one shows estimated costs of purchasing and operating PERC-based machines compared to the approved alternative machines in 2002. The capital costs of the alternatives ranged from \$27,000 to \$100,000 depending on the size and model of the equipment (Dabirian, 2002). The operating costs varied slightly.

By the end of the rule development process, the AQMD put forward a proposal to significantly reduce PERC emissions and completely eliminate the use of PERC-based machines from the dry cleaning industry by the end of 2010. The reduction in PERC emissions which will have resulted from the implementation of their proposal is shown in figure one.

TABLE 1 AROUND HERE

Korean dry cleaners were strongly opposed to AQMD's proposal to eliminate PERC based machines by 2010. First, most Korean dry cleaners do not believe that PERC poses a significant health risk to them or the public. For example, one Korean dry cleaner stated: 'I have been in dry cleaning for fifteen years and I have never heard that PERC is a very dangerous chemical' (Smith, 2002a, p. A3). Second, Korean dry cleaners believed they were being targeted for regulation by the AQMD because they are politically marginalized first generation immigrants. According to one Korean dry cleaner: 'The AQMD is going after us because they know immigrant dry cleaners can't fight back' (Kim, 2002b, p. B1). Another stated: 'We're being victimized again. We're being called the polluters and the killers and the cause of all the problems with bad air and polluted water' (Plavkovic, 2002, p. B1). Third, Korean dry cleaners

believed that the alternative machines recommended by the AQMD were not as effective as PERC-based machines at cleaning garments. Finally, they argued that they could not afford to purchase the alternative machines. Their feelings toward the proposal to eliminate PERC based machines were articulated in a letter written to the AQMD by San Kahng, a Korean dry cleaner in the region:

I strongly oppose proposals advanced by the South Coast staff which would completely phase out the use of PERC in dry cleaning. The complete elimination of PERC will devastate my business. The proposal is based on inaccurate, invalid and inflated assumptions. The alternatives of no PERC usage have their own environmental concerns. Please fully consider other options before you place my business, and hundreds of other dry cleaners out of business. (Krause, 2002, p. F-16).

There was clearly a gulf between beliefs held by Koreans concerning the negative health effects of PERC and material reality. As discussed earlier, there was a wealth of scientific evidence about the long-term health implications of PERC on owners, workers and others.

Moreover, it is doubtful that they were being unjustly targeted by the AQMD. The AQMD was only the implementing agency for a national policy, with the state of California turning over the responsibility to the regional body. The national government was not motivated by targeting a politically weak minority group, such as Koreans. The disjuncture between beliefs and reality was probably due both to limited information because of cultural and linguistic barriers, and to rationalizing an anti-regulation position because of a perceived attack on their livelihood.

Moreover, Koreans interpreted AQMD's actions through a racialized lens because of the social climate in Los Angeles, particularly around the intense conflicts before, during and after the 1992 riots, which disproportionately damaged Korean stores and properties (Ong and Hee, 1993).

Regardless of the reason behind the interpretation and narrative given by Korean dry cleaners, the beliefs as political rhetoric motivated and shaped their collective response.

In response to AQMDs proposal, the KDLA put forward an alternative proposal calling for moderate reductions in PERC emissions without the complete elimination of PERC-based machines (figure one). Their proposal was supported by an unusual alliance of other stakeholders. For example, Korean dry cleaners were in alliance with the California Cleaners Association (CCA) and the International Fabricare Institute (IFI), associations in which they had experienced ethnic tension in the past (Polakovic, 2002a, p. B6; Smith, personal interview, 2005). Moreover, Korean dry cleaners were allied with the three major 'white' suppliers of PERC, including Dow Chemical Co., PPG Industries, and Vulcan Materials Co. (Kim, 2002a, p. B2). Typically, large corporate suppliers have exploited Korean small businesses by using them as 'middlemen minorities' between themselves and low-income minority consumers. Finally, the KDLA acted in solidarity with stakeholders outside of the Korean community who also opposed strict environmental regulations, including the Small Business Reform Taskforce and the California Governor's office (Polakovic, 2002b, p. B1.).

FIGURE 1 AROUND HERE

Rule 1421, to become official policy, had to be approved by AQMD's eleven member Governing Board. Accordingly, a hearing was scheduled for the Governing Board on November 2, 2002 for a possible vote on approving Rule 1421. Korean dry cleaners, led by the KDLA, mobilized into political action to protest the meeting. On that day, 'hundreds' of Korean dry cleaners made their way to AQMD headquarters located in the City of Pomona (Polakovic, 2002b, p. B1.). They arrived by the 'busload' wearing black armbands and waving protest banners, creating a 'raucous' at AQMD headquarters (Polakovic, 2002b, p. B1). According to one eye witness observer:

By 8 a.m. the walkway to the [AQMD] building's entrance was lined with nattily dressed men and women wearing black armbands and hoisting red-and-blue

corrugated plastic signs declaring 'CA Dry Cleaners Fighting for Fairness.' More than 50 people testified in front of the AQMD Board and an overflow crowd watched on televisions set up in the lobby, the cafeteria, and several conference rooms nearby. Many spoke in Korean as an interpreter translated tales of life savings sunk into PERC machines and fears that the regulations would put them out of business (Beeman, 2002, p. A1).

At the end of the day, AQMD's Governing Board postponed their decision in order to spend an additional month considering KDLA's alternative proposal.

At the next meeting of the Governing Board on Dec 6, 2002 Korean dry cleaners turned out by the 'dozens' to again protest the regulations (Smith, 2002b, p. A4). This time the Governing Board rejected KDLA's proposal and approved AQMD's proposal by a vote of eleven to zero with one caveat: the Governing Board agreed to extend the deadline for completely banning the use of PERC machines in Southern California from 2010 to 2020. The extension of the deadline to 2020 was a partial victory for the KDLA. According to one Korean dry cleaner, the extension of the deadline to 2020 was 'a very big relief' (Smith, 2002b, p. A4). However, most Korean dry cleaners remained adamantly opposed to the policy. One Korean dry cleaner, upon the Governing Board's final decision, stated: 'It's unfair what the air district is asking us to do' (Chacon, 2002, p. 5). The President of the KDLA responded: 'This is not better for us. It just makes it harder for future generations. This is very disappointing' (Frith, 2002, p. E1). According to the President of the Korean American Federation of Los Angeles: 'This is bad for the dry cleaners. It was not reasonable. I'm very disappointed' (Polakovic, 2002c, p. B6). Finally, a member of the KDLA stated that the rejection of KDLA's alternative proposal 'will hurt us badly.' He continued:

It's a life-threatening situation. Most cleaners in California are owned by minorities, and those people came to the U.S.A. for the American dream. They've been working hard to support their family and children from the cleaners, but if this law passes, we're going to have to spend a lot of money and some cleaners

won't have money to replace a new machine. Some of them are going to go out of business (Polakovic, 2002a, p. B1).

Despite continuing protest, the hard reality was that Korean and non-Korean dry cleaners would have to adopt alternative machines or go out of business. This moved ethnic mobilization and collective action to a third stage. The first two were entry into the industry and political protest, and the next was adjusting to a new regulatory regime.

IV. Ethnic Resources and Regulatory Compliance

The final version of Rule 1421, approved by AQMD's Governing Board on December 2, 2002, required the gradual phase out of PERC machines with approved alternatives by the year 2020. Additional provisions of Rule 1421 included:

A facility starting operations in 2003 or later was required to purchase an alternative
machine;
Dry cleaners using PERC had to be in compliance with AQMD's Rule 1402 which
limits the lifetime cancer risk from a facility to no more than 25 in 1,000,000; and,
By November 1, 2007 all dry cleaners using PERC machines were required to have
state of the art air pollution controls. (Ghasemi and Perryman, 2002; Dabirian, 2002
Krausa 2002) 10

These provisions required many dry cleaners to adopt an alternative machine well before the 2020 deadline.

Korean dry cleaners faced a number of barriers to adopting alternative PERC machines in compliance with Rule 1421. As noted earlier, Korean dry cleaners faced cultural and linguistic barriers: few spoke fluent English and most believed they were being targeted by the AQMD because they were first generation immigrants. Moreover, Korean dry cleaners argued that the alternative machines were inferior to PERC-based machines and too costly. It's relevant to note that the industry in general is very competitive and profit margins for many dry cleaners are relatively small.

Another significant barrier to adopting alternative machines was Korean's distrust of the suppliers of those machines. Research has shown that close relationships with suppliers are crucial to the successful diffusion of new technologies (Rogers, 2005). Korean dry cleaners voiced their distrust of the suppliers of alternative machines in two ways. First, they believed that the suppliers had misled the AQMD concerning the technological feasibility of their machines during the rule development process so they could have a captive market for their machines. Second, after Rule 1421 was approved by AQMDs Governing Board, Korean dry cleaners argued that the suppliers continued to overstate the quality of their machines and made promises for servicing the machines that they would not keep. According to our telephone survey, only thirty-four per cent of Korean dry cleaners trusted information from suppliers concerning the feasibility of alternative machines. In contrast, eighty-two percent of non-Korean dry cleaners said they trusted information given to them by suppliers.

Korean dry cleaners used ethnic resources, particularly the KDLA, to help bridge the foregoing barriers to adopting alternative machines. Our telephone survey revealed that eighty percent of Korean dry cleaners learned about the viability of the alternative technologies through the KDLA.

We examined two sources of data to support the argument that Korean dry cleaners used ethnic resources to facilitate the diffusion of alternative machines. First, after AQMDs Governing Board approved Rule 1421 in 2002, AQMD officials allocated \$2,000,000 dollars to a grant program to help dry cleaners purchase alternative machines. Grants of up to \$10,000, depending on the type of machine, were made available 'on a first come first serve basis' (Ghasemi & Perryman, 2002, p. 3-3). We obtained a database from the AQMD listing the names of the grant recipients and the amount of money they received between 2002 and 2007, the year

that the grant money was depleted. Using surnames as a proxy for Korean ownership, we found that about one-half of the grants, forty-eight per cent, were awarded to Korean owned dry cleaning establishments while fifty-two per cent were awarded to non-Korean owned firms (Table 2). Moreover, Korean dry cleaners received forty-six per cent of the entire pool of grant money for conversion to new machines compared to fifty-four per cent for non-Korean owned dry cleaners. These percentages indicate that Koreans were near parity relative to their overall share of the industry, which was approximately half of all dry cleaners. Statistically, the minor differences are not statistically significant at even the ten per cent level.

TABLE 2 AROUND HERE

Second, we examined AQMD permit databases to assess the degree to which alternative technologies have been adopted by Korean dry cleaners compared to non-Korean owned dry cleaners since the implementation of Rule 1421 in 2002. Dry cleaners in Southern California are required to have a permit on file with the AQMD if they are operating a PERC-based machine or a hydrocarbon machine, one of the approved alternatives. Permits are required for hydrocarbon machines because hydrocarbon is solvent based, although it is not considered toxic. Permits are not required for the other approved alternative machines – Green Earth, wet cleaning, and CO2. We note that hydrocarbon machines have proven to be the most preferred alternative among dry cleaners since the implementation of Rule 1421 in 2002 (Thomas, 2007). We obtained permit databases from the AQMD for the years 2006, 2009, and 2013. In 2006, as shown in Table three, twenty per cent of Korean owned firms were using hydrocarbon machines compared to twenty-five per cent of non-Korean owned firms. By 2009, fifty-one per cent of Korean owned firms were using hydrocarbon machines compared to fifty-three per cent of non-Korean owned dry cleaners. Finally, in 2013 the percentage of Korean owned firms using hydrocarbon increased to

fifty-seven per cent and sixty per cent for non-Korean owned firms. The differences are not statistically significant. Moreover, a multivariate analysis of the probability of adopting shows that Koreans were as likely to adopt as non-Koreans after accounting for firm and contextual factors (See Ong, 2012 for method). The empirical results are surprising, and they point to the effectiveness of KDLA in assisting its members to adapt to the new regulatory regime.

V. Conclusion

The immigrant entrepreneurship literature has documented the pervasive use of ethnic resources among Korean immigrants as a means of establishing small businesses in the U.S. economy. Moreover, Korean small business owners often come into conflict with low-income minority groups and are forced to mobilize politically to protect their economic interests. We have contributed to this literature by showing how Korean dry cleaners used ethnic resources to politically mobilize in response to government environmental policies aimed at regulating their industry, particularly the attempt to eliminate PERC-based machines by the AQMD. Korean dry cleaners in Southern California, working primarily through the KDLA, used ethnic resources to overcome linguistic and cultural barriers to establish a voice in the regulatory process. An important achievement was getting AQMDs deadline for eliminating PERC machines extended from 2010 to 2020. Korean dry cleaners also used ethnic resources as a means of facilitating the adoption of alternative technologies.

- ¹ Southern California in this paper refers to the region encompassing Los Angeles and Orange Counties and parts of Riverside and San Bernardino Counties. The AQMD has the authority to regulate air quality in this region.
- ² For a general discussion about the American Community Survey, see information on the following web site: www.census.gov/acs/www/about_the_survey/american_community_survey/. For details on the PUMS, see information on the following web site: https://urldefense.proofpoint.com/v2/url?u=http-3A__www.census.gov_acs_www_data-

5Fdocumentation_public-5Fuse-5Fmicrodata-

 $5F sample_\&d=AAIF aQ\&c=Oo8 bPJ f7k7r_cPTz1JF7vE iFxvFRfQtp-left AAIF aQ\&c=Oo8 bPJ f7k7vE iFxvFrFT AAIF aQ\&c=Oo8 bPJ f7k7vE iFxvFrFT AAIF aQ\&c=Oo8$

j14fFwh71U&r=CPokmPTLZthe7FWOn8LnZlf49THb3xQBj5o0X1JaKHc&m=JO6vHQRgHVieFCiWTNKyQnJjBrnvsfpTO8ZZvfW8cMs&s=LAaGA5ciCREioxcnI5EuzYuhrGpDF_ucWyKPIo_yyCc&e=

- ³ A copy of the telephone survey may be obtained from the authors.
- ⁴ Dun and Bradstreet keeps track of industries in the U.S. economy using the Standard Industrial Classification (SIC) system that was used by the Bureau of the Census until 1997. We used SIC code 7216 to identify dry cleaning firms in Southern California. We obtained data for the counties of Los Angeles, Orange, Riverside, and San Bernardino, although we excluded firms that fell outside of AQMDs jurisdiction in Riverside and San Bernardino counties.
- ⁵ Most of the information on these three individuals was obtained from personal interviews with them. Some additional information was obtained from the Los Angeles Times.
- ⁶ The last name of this individual is not known to the authors.
- ⁷ One dissenting opinion came from the American Council on Science and Health (ACSH), a consortium of more than 350 scientists and physicians funded by industry. They concluded that PERC was not hazardous to humans at typical levels of use (Ghasemi & Perryman, 2002).
- ⁸ The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health & Safety Code, §§40400-40540).
- ⁹ Cancer risk is the number of excess cancer cases among a million people if the people are exposed to levels of a toxic air pollutant over 70 years. As an example, a cancer risk of 100 in a million at a location means that the individuals staying at that location for 70 years have a 100 in a million chance of contracting cancer.

¹⁰ Rule 1421 also contained a provision requiring facilities with the oldest PERC machines that emitted high levels of emissions to convert to PERC dry cleaning machines with state of the art pollution controls by July 2, 2004. However, there were only about 20 dry cleaners in the region who met this criteria.

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