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Participation and losses in multi-level marketing: Evidence from an FTC settlement

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Participation and Losses in Multi-Level Marketing: Evidence from an FTC Settlement

Claes Bäckman and Tobin Hanspal*

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Abstract

More than 20 million Americans are affiliated with Multi-Level Marketing firms (MLMs), but there is little empirical evidence on who participates in this controversial part of today's labor market. We link data on 350,000 individuals cited in an FTC settlement with one of the largest MLMs to detailed county-level information. We find that participation is greater in areas with higher median income and where women are absent from the labor market, suggesting value in flexible work. However, losses are correlated with higher inequality and lower social capital, suggesting that the pitfalls accrue to vulnerable groups.

Keywords: Multi-level marketing; Alternative work; Consumer financial protection

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1 Introduction

In 2016, more than 5 million Americans were involved in full or part-time work with a multi-level marketing (MLM) firm and an additional 15 million were affiliated with such companies ([Direct Selling Association, 2017a](#)). In Europe, the direct selling industry had over 14 million independent representatives with over 39 billion USD in sales in 2018 ([World Federation of Direct Selling Associations, 2019](#)). But while the industry attracts approximately 118 million workers around the world, there is little research into who these individuals are, and, more importantly given the criticism of the industry, who experiences losses when participating in a direct-selling venture.

MLMs are also referred to as direct sales, referral marketing, or network marketing companies. These types of firms rely on individual retailers' recruitment of new members and their commission-based sales to customers. In this paper, we study participation and losses in the MLM industry using data acquired through a Freedom of Information Act (FOIA) made to the Federal Trade Commission (FTC). We link data on participation with county-level information to conduct an analysis of MLM participation and losses. As a majority of MLM firms are privately held and are reluctant to share data, this dataset presents a unique opportunity to investigate a controversial and previously understudied part of today's labor market.

The MLM industry is often criticized and has faced several legal challenges in recent years. Proponents of the industry argue that joining a MLM provides an opportunity to earn an income, often for individuals who would otherwise not be able to work (for example stay-at-home moms who need flexibility in working hours). Critics instead argue that MLM firms rely on recruitment rather than sales to end-consumers, and that the rosy marketing claims made by recruiters overstate the potential earnings potential ([Taylor, 2011](#); [Federal Trade Commission, 2016a](#)).¹ This criticism derives from the way the business model is organized: The ability to make a profit relies on the individual's ability to recruit new members into the company (often referred to as their 'downline'). Even though retailers purchase products directly from the parent company, they are required to operate independently in their sales and marketing

¹See e.g. [Koehn \(2001\)](#), [Marie \(2018\)](#) and [Shellnutt \(2016\)](#) for critics of the industry. Regarding legal challenges, several MLMs have been the target of individual and class-action lawsuits: Jeunesse Global, Nerium, Herbalife, Young Living, Primerica, LuLaRoe. Other MLMs have been the focus of FTC lawsuits: BurnLounge, Fortune Hi-Tech, Herbalife and Nu Skin. See the website of the FTC for more information on these companies [Federal Trade Commission \(2018\)](#).

operations. Indeed, participants are often prohibited from many of the standard avenues for retail sales and marketing, such as retail sales in physical storefront locations as in traditional franchises. Despite lawsuits brought by the FTC against MLMs, reports about low earnings, and the negative press that the industry has received in recent years, millions of Americans continue to sign up. Understanding why individuals continue to participate is therefore of interest to regulators and the industry as a whole.

Our first goal is to understand the demographic and socioeconomic determinants of participation in MLMs. We find that a higher share of adult women and Hispanics within a county strongly correlates with higher MLM participation. At the same time, higher median household income somewhat surprisingly predicts higher MLM participation, and higher average age predicts lower MLM participation. Household income is uncorrelated with individual losses, implying that low income areas suffer relatively more as a percentage of income. Population within the county and the share with a college degree are uncorrelated with MLM participation.

We then investigate how local labor markets influence participation in MLMs. Does the industry represent an opportunity for individuals further removed from the labor force to join the labor market, in particular women? Does unemployment induce more MLM activity? Our results show that a larger share of women outside the labor market correlate with participation, with stronger results for Hispanic women outside the labor market. This suggests that MLMs indeed offer an opportunity for this group to access the labor market. Furthermore, counties with a larger change in unemployment into the financial crisis have higher participation, but only weakly so. Finally, we investigate if the social capital of a region is associated with lower MLM participation or lower losses conditional on participation. We find support for this using several definitions of county-level social capital. Areas with higher levels of social capital have lower participation rates and lower losses.

That our data is limited to the location of the participants and their losses in a single MLM company that sells weight loss products naturally limits our analysis of the causes and consequences of participation in the MLM industry and raises concerns over external validity. We argue, however, that our findings extrapolate widely to the industry. Similar to our firm, all of the top 10 largest global MLMs sell health-care, beauty, or weight-loss related products, as do 17 of the largest 20 companies (see Appendix Table A.1). Also similar to the firm in our study,

the vast majority of MLMs emphasize the flexibility in working hours and the opportunity to supplement the households' income.

Our data allows us to present an initial but ultimately limited look into an under-explored part of US labor markets. Even though there are abundant warnings about the industry, millions of people around the world participate in these ventures. While it is easy to dismiss all these individuals as ill-informed or over-confident, it is also possible that there are benefits from MLM participation that are not captured simply by income or profits. Compensating differentials such as community with other participants or feeling like a productive member of the family are likely relevant for participation in an industry where the potential upside in terms of income seems limited. Indeed, media reporting on participation sometimes note that participation in a MLM is the only available option for certain demographics and areas. A more thorough examination of why so many are attracted to this industry seems warranted, and we see our study as a step in this direction.

2 Background and hypothesis development

2.1 Institutional background

Multi-Level Marketing (MLM) is a form of direct selling, where an intermediary supplies product that an associated individual can sell. The business model for MLM firms rely on a non-salaried sales force (here called *participants*). Participants act as independent contractors and generate revenue for the parent company. The participants are paid commissions, bonuses, discounts, dividends, and/or other forms of payment in return for selling products or through recruitment of new member (Albaum & Peterson, 2011). Newly recruited members typically need to buy products for themselves, meaning that recruitment also entails product sales. Participants can purchase the company's products at a discount to retail price, either because they want to consume the products themselves or because they wish to sell the products onwards for a profit. Depending on the organization, these products may only be available in the market place through a direct sale from a participant. Indeed, selling the products in a physical store is often prohibited by the parent company, leaving direct sales as the only viable option for generating revenues (Greve & Salaff, 2005). Additionally, the MLM company often regulates the price of the product to end-users but offers bulk-discounts to participants. This provides an

incentive to order large amounts of products, as the per-unit price then decreases. With fixed sales prices, lowering the cost for products and operations becomes important for generating profits. Discounts based on order size becomes problematic, however, if the participant cannot sell their products and instead build up a stock of inventory ([Federal Trade Commission, 2016a](#), p.19).

A criticism of the industry is that direct sales to customers is limited and the main revenue source instead becomes commission payments from recruitment of other participants. By recruiting new members, a participant can potentially generate ‘downstream’ revenue not only from their direct recruits, but also from the recruits of their recruits (their ‘downline’).

The profitability of participating in a MLM company is subject to much debate between the industry and its critics. [Taylor \(2011\)](#) report that 99.94 percent of participants in a MLM lose money. In contrast, [Albaum & Peterson \(2011\)](#) report that the mean gross income is \$14,500 and the median gross income is \$2,500 using research by the Direct Selling Association, a national trade association. A recent survey administrated by the AARP found that 75% of participants either lost money or broke even ([DeLiema et al., 2018](#)).² The MLM firm whose data we use in this study stated that “nearly 86 percent of U.S. membership (466,926) did not receive any earnings” ([Herbalife, 2016](#)). However, the company states that many of these members join in order to receive a discount on the products, and that their intention was not to run a business. Moreover, the company states that 14 percent of members in 2015 sponsored at least one person and earned commission payments based on the sales of the member(s) they sponsored. The top 50 percent made \$245 in earnings, the top 10 percent made more than \$4,350 in earnings, and the top 1 percent made more than \$82,000 in earnings ([Herbalife, 2016](#)).

The over-reliance on recruitment for producing revenues and exaggerated claims about potential profitability for the average participant has received criticism ([Koehn, 2001](#)) and legal challenges from regulators. In a recent lawsuit against Herbalife, the FTC alleged that the company had made unlawful claims about the expected income from pursuing either full-time or part-time business opportunities as an independent retailer ([Federal Trade Commission, 2016a](#)).³ The claim against the company was that their compensation program incentivized

²Recent work by [Björkman Nyqvist et al. \(2019\)](#) shows that a door-to-door sales initiative with advice and preventive and curative health products had a positive effect on child mortality in Uganda. In practice the program had features rather reminiscent of an MLM program.

³Several MLMs have been the focus of FTC lawsuits for similar reasons: BurnLounge, Fortune Hi-Tech, and Nu Skin (See the website of the FTC for more information on these companies [Federal Trade Commission \(2018\)](#)).

recruitment of additional participants instead of retail sales, and that the products themselves were not sufficiently profitable. The FTC claims that ‘the overwhelming majority of distributors who pursue the business opportunity make little or no money, and a substantial percentage lose money.’ The FTC cite Herbalife’s own numbers that sales to customers outside the company network accounts for 39 percent of product sales ([Federal Trade Commission, 2016a](#), p.18). The lawsuit was settled in 2016, with Herbalife agreeing to pay \$200 million in fees and restructure their business. The FTC used the payment to partially refund nearly 350,000 distributors who lost money, using company records to identify participants who incurred losses ([Federal Trade Commission, 2016b](#)). These records constitute our main dataset for analysis.

2.2 Hypothesis development

Given the that the current state of academic literature on MLMs is limited, we form three hypothesis based on the previous literature on consumer financial protection, our specific setting, and from anecdotal and media reporting.⁴

We first hypothesize that demographic and socioeconomic characteristics play an important role in the types of individuals who participate and incur losses in Multi-level Marketing. Specifically, we hypothesize that women are particularly targeted and drawn to MLMs. This can be partially attributed to the marketing and sales pitches of MLMs, often emphasizing the ability to earn an income while managing household responsibilities ([Shellnuitt, 2016](#)). Many MLMs in general also tout products which are traditionally feminine such as health and beauty products, perfumes and make-up, clothing, and handbags (see Table [A.1](#)). Furthermore, the industry itself was built on door-to-door sales to housewives in the mid 1900s ([Grant & Kearney, 2016](#)). Additionally, Herbalife has been noted to market to the Hispanic community. We therefore hypothesize that immigrants and women are over-represented in the MLM industry.

Second, we hypothesize that local labor markets play a key role in predicting participation in MLMs. We ask if participation in MLMs presents an opportunity to increase labor supply for those previously further removed from the labor market ([Katz & Krueger, 2017](#)), for example women or the unemployed? In addition, we hypothesize that demographic characteristics interact with labor market conditions. Finally, we investigate how social capital influences par-

Other MLMs have been the target of individual and class-action lawsuits: Jeunesse Global, Nerium, Herbalife, Young Living, Primerica, LuLaRoe, and others.

⁴In particular, see the podcast *The Dream* ([Marie, 2018](#)) and [Shellnuitt \(2016\)](#).

ticipation and losses in MLMs. An established literature in consumer finance has studied the role of social capital and networks in financial decision making (e.g. [Guiso *et al.*, 2004](#)). On the one hand, we hypothesize that individuals in higher social capital areas may be able to warn others about the costs and harms associated with MLMs and reduce participation and losses. On the other hand, given that direct selling and MLM are built on individual-level interaction, higher connectivity and sociability could help MLMs spread.

3 Data

3.1 Sources of data

Our main source of data comes from a Freedom of Information Act (FOIA) made to the Federal Trade Commission in 2017. The FTC filed a lawsuit in 2016 claiming that Herbalife, a large United States-based MLM company, made misleading statements and marketing claims regarding the financial potential of joining the company as an independent retailer and that the company's business model too strongly incentivized the recruitment of new members over direct product sales. The company settled with the FTC and eventually refunded over \$200 million to nearly 350,000 independent participants who lost money between 2009 and 2015 ([Federal Trade Commission, 2016b](#)). The FTC refunded participants who experienced losses above \$1,000, 'but got little or nothing back from the company'. According to the FTC the size of the checks correspond to a 'partial refund' of the losses the individual experienced.⁵

The FOIA provides us with raw, redacted data on the geographic location for each participant along with the size of their personal settlement check. We use the geographical location on the check to assign each individual to a county and calculate a county-level MLM incidence as the number of checks divided by county population. We drop military, international, and non-continental US addresses.⁶ We scale this value by 10,000 individuals for legibility. For much of our analysis the unit of observation will therefore be the county, as we do not have more

⁵We note that the \$1,000 minimum likely presents a reasonable initial investment, as fees are often part of an initial training package and the participants often buy product inventory. If this is the case, the threshold should not impact our analysis unduly. However, the minimum investments required by MLM firms may be lower, and our analysis may therefore under-count low-income households. We note that the results using data that are not subject to this cutoff are similar, which alleviates these concerns.

⁶Specifically, we have data on the city and state where each participant lives. We match the city to a zip-code using Census Bureau crosswalks and then aggregate the zip-codes to the county level. A small number of zip-codes correspond to multiple counties. For these cases we assign the participant to the county in which the zip-code has the largest share of population.

information about the individuals other than where they live and the size of their check. We note that this means that our results apply to the county characteristic and not to individual participants.

We combine the county-level MLM incidence with several other data sources. First, we collect data on income mobility, demographics, unemployment, income and income inequality. We use data from the U.S. Census Bureau's 2006-2010 American Community Survey (ACS) for a county's population, median household income, and race, age, and gender, and educational composition. Unemployment statistics originate from the Bureau of Labor Statistics' (BLS) Local Area Unemployment Statistics (LAUS). We obtain measures of economic mobility and inequality from [Chetty *et al.* \(2014\)](#). These measures are based on federal income tax records from a large subsample of US citizens.

We collect local data on the financial sector and social capital. Data on the prevalence of financial institutions, including payday lending, originates from U.S. Census Bureau's County Business Patterns (CBP). We follow the North American Industry Classification System (NAICS) classifications of these establishments as described in [Schmid & Walter \(2009\)](#). In addition, we collect data on social capital using financial complaints from the Consumer Financial Protection Bureau (CFPB). The CFPB provide a database (the Consumer Complaint Data) at the zip-code level on complaints about fraudulent activity. The data from the CFPB is from 2011-2018 and contains the zip code of the complaint filer. We exclude years after 2015 as our measure of MLM incidence is from 2009 to 2015, and exclude approximately 8% (40,000) complaints with incomplete zip codes. We map this data to the county-level by combining the number of Consumer complaints and Consumer fraud complaints and collapsing them to the county-level.

In addition, we use the Social Connectedness Index (SCI) from [Bailey *et al.* \(2018\)](#). This index is based on the number of friendship links on Facebook Inc., the social network platform. We use this data to better understand the social nature of MLM participation. The index provides a measure of connectivity within a county, but also for each county-pair in the United States.

Finally, we leverage a recent wave of the RAND-Princeton Contingent Work Survey, a version of the Contingent Worker Survey from the RAND American Life Panel. The survey wave was conducted by [Katz & Krueger \(2019\)](#) in October and November 2015.⁷ This survey

⁷Please refer to [Katz & Krueger \(2019\)](#) for full details regarding this survey and the questionnaire.

allows us to measure individual-level determinants of participation in direct selling businesses, including individuals who work with direct selling intermediaries, similar to our FOIA dataset. The survey covers approximately 3,800 individuals and was originally designed to be nationally-representative.

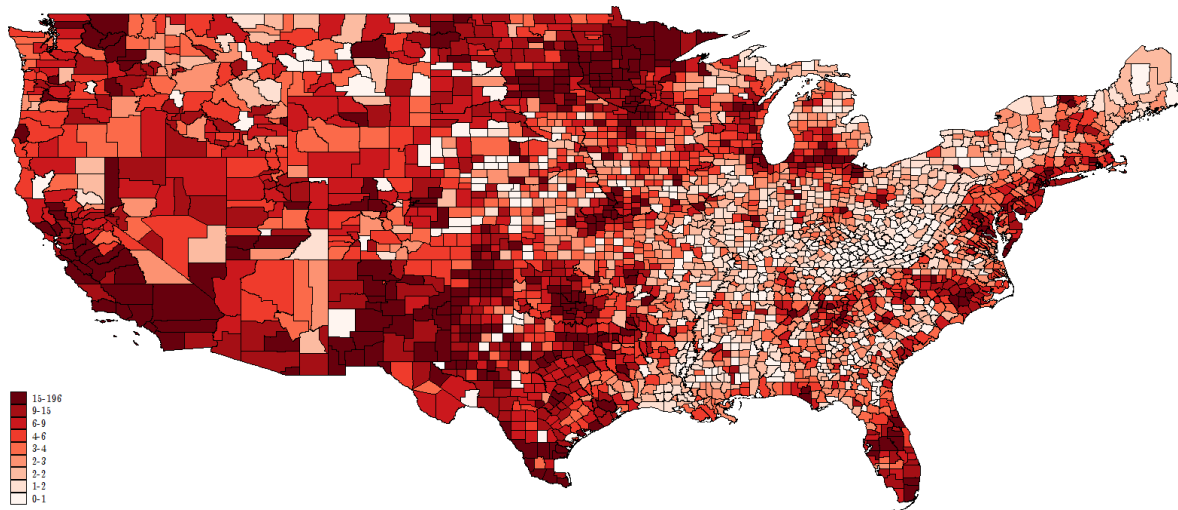
4 Main results

We begin by plotting MLM incidence and the average value of the FTC's reimbursement check in Figure 1. Recall that we normalize the per county MLM incidence by population, so that a MLM incidence of 1 corresponds to 1 claim per 10,000 inhabitants. There is considerable dispersion across the United States in both MLM incidence (Panel A) and average payout (Panel B). We particularly observe concentration for MLM incidence in the southern parts of the United States and in California.

We investigate the three hypotheses outlined above and present our results for county-level participation in MLMs and individual losses incurred from the MLM in our setting. Specifically, we run cross-sectional regressions where the dependent variable is the county-level MLM incidence ($N=3,098$) or the dollar amount of losses incurred by the participants in our sample ($N=335,458$). This means that the stated results for participation are for United States counties and not individuals. We standardize all coefficients to have zero mean and unit variance to ease interpretation and allow comparison between coefficients. Unless otherwise specified, we include state fixed effects, county-level control variables defined in the table notes and report robust standard errors.

We begin by presenting county-level summary statistics in Table 1. We divide all counties into four groups based on the MLM incidence per inhabitant, and report a t -test in Column 6 of differences in means between the group with the lowest incidence (Column 2) and the group with the highest incidence (Column 5). Column 1 presents the average across all counties regardless of their MLM participation rates as a baseline comparison to the average US county. We note that counties with the highest incidence had 83 times as many claims as the counties with the lowest (4.91 compared to 408.96 claims). When we normalize by county population, Column 2 reports that the counties with the lowest incidence had 1.00 claims per 10,000 inhabitants, compared to 18.23 claims per 10,000 inhabitants. The average payout was also the highest

Panel A: Participation per 10,000 Inhabitants



Panel B: Average FTC refund

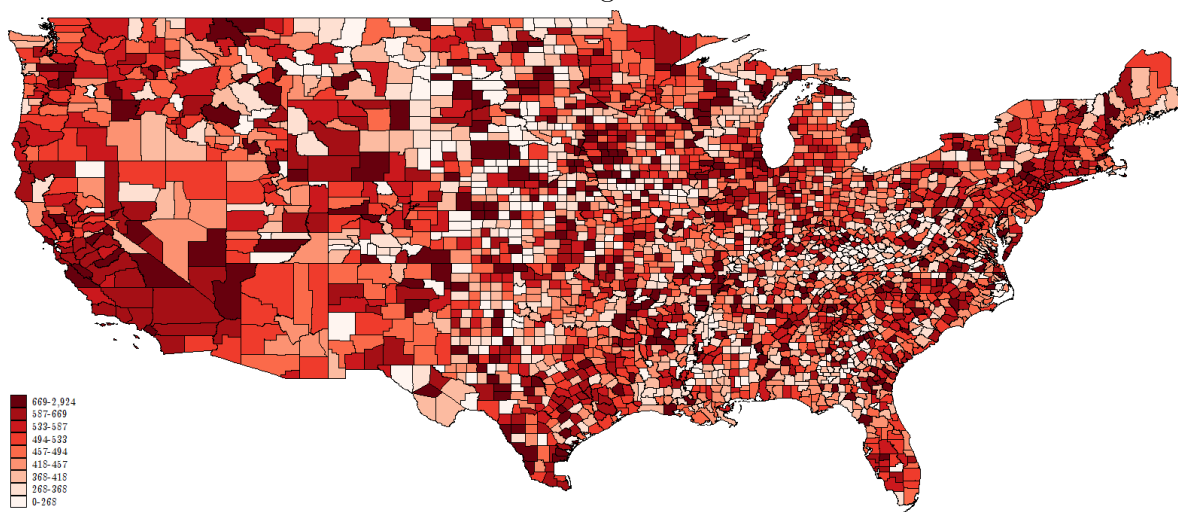


Figure 1: MLM Participation and Average Payout Across the United States

Note: The maps show MLM incidence (Panel A) and the Average FTC refund (Panel B). A darker color corresponds to a higher incidence and a higher average payout. MLM Incidence is scaled by 10,000 inhabitants.

in counties with a higher incidence, \$534 compared to \$407, although the average claims in Column 3 and 4 are similar in magnitude (\$505 and \$509, respectively).

We find higher participation in counties with larger populations, a lower share of African Americans, a higher Hispanic share, a younger population, a more educated population as measured by the share with a bachelor's degree or more, and a lower state-native population. The share of Hispanic inhabitants is highly predictive of MLM incidence, which corroborates to the facts reported in [Direct Selling Association \(2017a\)](#) and [Direct Selling Association \(2017b\)](#). Finally, median household income and the self-employment share are higher in areas with higher exposure to MLM.

4.1 Demographic and socioeconomic determinants

We present cross-sectional regression results in Table 2 to investigate whether socioeconomic characteristics are important determinants of MLM participation. Consistent with the bivariate results, the Hispanic share and Female share of a county are strongly positively correlated with MLM incidence in Columns 1 and 2. This is consistent with what the Direct Selling Association reports for the industry as a whole, providing supporting evidence that our results on the geography of MLM likely generalize to other firms operating as MLM distributors. The DSA states that 22 percent of the individuals involved in direct selling were Hispanic, compared to their 18 percent share of the US population, and that 74 percent of the individuals involved were female ([Direct Selling Association \(2017a\)](#), [Direct Selling Association \(2017b\)](#)). In addition, the state native share and median age are both negatively correlated with participation. There is a positive correlation between MLM participation and log household median income, absolute upward mobility, and the Gini coefficient.⁸ This is somewhat contrary to our expectations, as the media and indeed the lawsuits against MLM companies allege that these firms are taking advantage of vulnerable households (e.g. [Taylor, 2011](#)). Together with the results reported later for female labor force participation, this suggests that MLM activity may primarily be a way for middle-income Americans to gain some extra income – indeed what the industry themselves suggest. This does not suggest, however, that this is the optimal way for these households to gain some extra income.

⁸Absolute upward mobility is the expected rank of children whose parents are at the 25th percentile of the national income distribution, from [Chetty *et al.* \(2014\)](#).

Table 1: Summary statistics

	(1) Full sample	(2) Low Share	(3) 2	(4) 3	(5) High Share	(6) (5) - (2)
Incidence						
Participants	122.08 (692.84)	4.91 (10.94)	19.03 (37.21)	60.26 (113.80)	408.96 (1,350.11)	353.69*** [7.76]
Share	6.86 (9.31)	1.00 (0.55)	2.77 (0.58)	5.61 (1.29)	18.23 (12.93)	17.23*** [37.74]
Average payout	489.86 (193.52)	407.91 (268.44)	504.54 (190.56)	509.32 (136.99)	534.25 (122.02)	168.66*** [14.33]
Demographics						
Population	109.61 (327.87)	44.18 (100.60)	68.76 (134.62)	103.69 (186.27)	223.05 (594.27)	157.10*** [7.70]
Female share	50.28 (1.88)	50.25 (2.28)	50.46 (1.65)	50.23 (1.97)	50.15 (1.55)	-0.05 [-0.45]
White share	83.55 (16.18)	83.31 (20.60)	84.35 (15.96)	84.30 (14.07)	82.18 (13.19)	-0.44 [-0.50]
Black share	9.30 (15.17)	12.76 (20.01)	10.50 (15.64)	7.94 (12.83)	6.03 (9.53)	-6.45*** [-8.31]
Hispanic share	7.03 (12.87)	1.03 (3.30)	2.70 (4.48)	7.18 (10.92)	17.35 (18.90)	15.26*** [21.64]
Median age	39.38 (4.49)	40.11 (3.79)	40.17 (4.21)	39.49 (4.72)	37.73 (4.74)	-2.11*** [-8.49]
Share over 25	66.91 (4.40)	67.81 (4.14)	67.48 (4.05)	66.93 (4.48)	65.42 (4.54)	-2.24*** [-9.14]
Share college	19.23 (8.84)	14.96 (6.78)	18.78 (7.71)	21.11 (9.23)	21.96 (9.66)	6.50*** [15.65]
Self-employment share	13.13 (4.53)	11.56 (4.33)	13.00 (4.52)	14.00 (4.47)	13.90 (4.37)	2.27*** [6.95]
State native share	67.95 (14.48)	75.25 (10.60)	69.74 (12.94)	64.35 (14.92)	62.54 (15.49)	-11.47*** [-16.69]
Income						
Median household income	44.50 (11.59)	38.28 (8.42)	43.68 (10.27)	47.07 (11.83)	48.84 (12.57)	9.97*** [18.73]
Gini	0.38 (0.09)	0.39 (0.08)	0.38 (0.08)	0.38 (0.08)	0.40 (0.09)	0.01* [1.97]
Absolute upward mobility	43.46 (5.45)	41.89 (5.00)	42.68 (5.09)	44.27 (5.60)	45.00 (5.53)	3.11*** [10.77]
Top 1 percent	0.10 (0.05)	0.09 (0.04)	0.09 (0.05)	0.10 (0.04)	0.11 (0.06)	0.02*** [6.18]
Connectivity						
SCI Inside	0.10 (0.35)	0.04 (0.12)	0.06 (0.16)	0.09 (0.21)	0.19 (0.64)	0.13*** [6.05]
SCI Outside	50.75 (206.58)	15.71 (129.24)	22.94 (61.72)	42.80 (108.87)	122.69 (365.57)	93.81*** [7.17]
SCI	8.33 (24.83)	3.62 (11.58)	5.43 (11.63)	8.21 (16.38)	16.14 (43.18)	11.01*** [7.28]
N	3,098	775	774	775	774	.

We report descriptive statistics: mean and standard deviation for the 3098 U.S. counties in our sample. Columns 1-4 separate the sample by quartile of MLM incidence. Column 5 presents a t-test of differences between the highest quartile of incidence (Column 4), and the lowest (Column 1). Corresponding t-statistics are reported in square brackets. *Incidence* measures are calculated from the data we obtain from the FTC. Participants is the number of refund checks distributed to households per county. The share value is Participants per 10,000 county inhabitants. The average payout is the dollar value of the refund checks per household scaled by 10,000 county inhabitants. *Demographic* measures come from the U.S. Census Bureau's American Community Survey (ACS) and provide the total county population, the shares of white, black, and Hispanic individuals within a county, the median age, the share over the age of 25, the share with a college degree (at least a bachelors degree), the share of the population that is self-employed, and the share of the population born within the same state. Self employment share is the fraction of the county's tax returns filed with a Schedule C declaring net income (losses) from sole proprietorship, calculated using IRS individual tax returns. *Income* measures are obtained from Chetty *et al.* (2014), the ACS and IRS individual tax returns. Median household income at the county-level is in 1,000 USD. Absolute upward mobility is the expected rank of children whose parents are at the 25th percentile of the national income distribution. Top 1 percent is the fraction of income within county accruing to the county's top 1 percent of tax filers. The *Connectivity* measures are derived from the Social Connectedness Index (SCI) from Facebook Inc. The inside value measures connectedness within a county, while the outside value measures connectedness to other counties. These values are weighted by the county's population in 2010. The raw measure provides an average SCI for each county. Standard deviations are in parentheses.

The losses from participation follows a different pattern as we can see in Columns 3-4. Losses are positively correlated with population but negatively correlated with the Black, the female,

Table 2: Demographic characteristics

	Participation		Losses		Direct selling	
	(1)	(2)	(3)	(4)	(5)	(6)
Log population	-0.04 (0.48)	-0.17 (0.66)	1.35*** (0.50)	0.67 (0.51)		
White share	0.23 (0.44)	-0.36 (0.52)	-3.09*** (1.03)	-3.35*** (1.00)	1.81** (0.45)	2.67 (2.18)
Black share	0.02 (0.45)	-0.47 (0.51)	-2.79*** (0.90)	-3.51*** (0.88)		
Hispanic share	3.07*** (0.33)	3.49*** (0.38)	0.75 (0.76)	0.47 (0.77)	1.56 (0.43)	5.62* (5.06)
Female share	0.69*** (0.14)	0.68*** (0.17)	-0.34 (0.30)	-0.31 (0.30)	0.74* (0.11)	3.10* (1.79)
State native share	-0.94*** (0.21)	-0.99*** (0.21)	-2.15*** (0.59)	-2.19*** (0.54)		
Median age	-0.60*** (0.21)	-0.63*** (0.22)	0.45 (0.32)	0.37 (0.33)	0.98*** (0.01)	1.01 (0.02)
Share college	-0.01 (0.48)	-0.27 (0.63)	-0.55 (0.45)	-0.82* (0.46)		
Log median household income	0.94*** (0.21)	1.09*** (0.24)	-0.63 (0.44)	0.57 (0.55)		
Gini		0.73** (0.34)		2.42*** (0.85)		
Top 1 percent		-0.20 (0.24)		-1.45** (0.72)		
Absolute upward mobility		0.59* (0.34)		-0.41 (0.52)		
Bottom tercile income					0.84 (0.15)	0.87 (0.49)
Top tercile income					0.87 (0.17)	0.61 (0.29)
College degree					0.82 (0.13)	1.54 (0.64)
Household business					3.82*** (0.73)	4.53*** (1.96)
Multiple jobs					1.60** (0.34)	7.72*** (3.80)
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,098	2,741	335,458	334,622	3,800	3,800
Adjusted R^2	0.34	0.37	0.01	0.01	0.08	0.20

This table presents county-level demographic correlates of MLM incidence across the United States. The dependent variable is the MLM incidence rate scaled by 10,000 county inhabitants. Column 1 includes race and gender compositional measures of the county. The female share is the fraction of women in the total county population, other variables are defined as previous. Columns 2 and 3 include additional characteristics of the county. In Column 4, we include measures of income inequality from Chetty *et al.* (2014), where Gini represents the income Gini coefficient, Top 1 percent is the fraction of income within county accruing to the county's top 1 percent of tax filers, and absolute upward mobility is the expected rank of children whose parents are at the 25th percentile of the national income distribution. All specifications include state-fixed effects. For participation in columns 1-2 and direct selling in columns 5-6, we use robust standard errors. For individual losses in columns 3-4, we cluster standard errors on the county level.

and the state native shares of a county. While higher income areas participate more, they do not experience higher losses - average payouts are equal across low- and high-income areas. This implies that low income areas suffer relatively more as a percentage of income, even though they participate at a lower rate. Furthermore, losses are higher in more unequal areas, but are lower in areas with a higher top 1 percent income share.

There are several reasons to be cautious and not over-interpret these results. First, the FTC cutoff for sending checks was losses exceeding \$1,000, and low-income households may simply not have exceeded that threshold. Second, joining a MLM as an independent contractor requires

that the household has access to financial resources, which may require a certain level of income. Low income household may not be able to afford the initial costs related to starting a MLM business, which may prohibit them from joining. Third, it is not certain that the individuals who joined the MLM are similar to the median individual in the county, even more likely for counties with higher income inequality. Finally, higher participation in high income counties does not imply that losses individuals suffered from joining the MLM are trivial in low income areas. Higher income individuals may not have invested more into their MLM business.

To help add context to the above caveats, we complement our county-level results on MLM participation with micro-data on participation in direct selling through an intermediary. We use a recent wave of the RAND-Princeton Contingent Work Survey. This survey, conducted in October and November of 2015, contains rich demographic information about households and their participation in direct selling organizations. We use the question on direct selling to customers and on work for an intermediary to provide additional context to our previous analysis. Respondents are weighted in line with the CPS, which means that the results will be qualitatively comparable to our county-level results.

Columns 5 and 6 present the results. In Column 5 the dependent variable is an indicator variable which takes the value of one if the individual stated that they are involved in direct-selling to customers, while in Column 6 the outcome variable takes the value of one if the individual answered yes to the following question: *‘Do you work with an intermediary, such as Avon or Uber, in your direct selling activity?’*. The coefficients are the odds ratios after a logistic regression.⁹ A coefficient value greater than one indicates a positive correlation of the explanatory variable in explaining participation in direct selling, whereas a value less than one indicates that the explanatory variable is less likely to predict direct selling.

In general, Column 5 shows that participation in direct selling to customers is overrepresented by white men and is correlated with self-employment and entrepreneurial behavior.¹⁰ However, this includes workers involved in all direct-selling activities and does not necessarily

⁹While [Katz & Krueger \(2019\)](#) include only individuals who worked in the previous week from the survey, we include the full sample surveyed in this wave of the CWS since direct selling through MLMs are noted to vary in schedules.

¹⁰[Katz & Krueger \(2019\)](#) note that the CWS may over represent self-employed workers. To address this and make their results more nationally-representative, they construct an alternative weighting measure. We obtained these weights from the authors and confirmed that our results are qualitatively similar regardless of the weights used. Our results are therefore presented with the original RAND provided weights for ease of use for other researchers.

correspond to our interest in the MLM business. When we instead focus on direct selling through an intermediary (Column 6), we find correlations that correspond to our previous results: Hispanics and women are heavily overrepresented when direct selling is part-time or through an intermediary. Although not statistically significant, we note with the coefficients for income terciles two and three, that middle-income households are more likely to work with a direct selling intermediary. This finding is also supported in Appendix Figure A.1, where we plot the odds ratios for each household income decile predicting participation in direct selling with an intermediary. We present this as additional corroborating evidence that MLM participation is likely to be a middle-income phenomenon. Note that these results have large confidence intervals, not surprising given the small sample distributed across bins. Finally, we note that entrepreneurial activity, both as main employment and also represented in other household members, strongly predicts uptake into direct selling with an intermediary.

One potential source of concern is that our findings may reflect supply-side characteristics for MLM firms. For example, the firm in our dataset perhaps specifically targets areas with a high fraction of Hispanics, or women. This is a reasonable assumption, however our research suggests that, for at least the firm our sample, advertising and targeting efforts are concentrated at a regional level rather than locally. Direct television advertising and event planning is often coordinated at the MSA level, therefore controlling for individual states and allowing our results to vary at the county level at least partially reduces this concern.

4.2 Local labor markets

Our next focus is to understand how unemployment and labor markets influence participation and losses in MLMs. In Table 3, we are particularly interested in exploring whether MLMs can substitute formal employment for unattached workers (Katz & Krueger, 2017) and if larger unemployment rates induce MLM activity.

We begin with unemployment in 2009 and with the change in unemployment between 2000 and 2009. We use the rate of unemployment in 2000 to measure unemployment prior to the housing boom and use 2009 because our affected sample was active in the MLM from 2009 to 2015. Changes between 2000 and 2009 has the additional benefit of capturing the change in unemployment until the bottom of the business cycle. Neither participation nor losses was

Table 3: Local labor markets

	Participation						Individual losses					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Unemployment 2009	0.35 (0.36)					-0.24 (0.56)	0.27 (0.47)					0.02 (0.55)
Change in Unemployment		0.54 (0.29)				0.73 (0.43)		0.27 (0.46)				0.40 (0.54)
Female non-labor force ratio			0.46 (0.26)			0.32 (0.16)			1.15 (0.40)			0.03 (0.29)
Female labor force ratio				-0.22 (0.19)		0.20 (0.20)				-1.53 (0.49)		-1.45 (0.48)
Hispanic female non-labor force ratio					2.26 (0.69)	3.04 (0.32)					4.77 (2.29)	1.23 (0.86)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,098	3,098	3,098	3,098	3,098	3,098	335,458	335,458	335,458	335,458	335,458	335,458
Adjusted R^2	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.01	0.01	0.01	0.01	0.01

This table investigates how local area labor force participation correlates with MLM incidence across the United States. The dependent variable is the MLM incidence rate scaled by 10,000 county inhabitants. Female labor participation is the fraction of women in the labor force relative to the total population of the county. Female labor nonparticipation is correspondingly the fraction of women outside the labor force. The gender ratio is the ratio of labor force nonparticipants of women relative to men. The change in unemployment is the county level change from 2000 to 2009. All specifications control the log. of 2010 population, the white, black, and Hispanic shares of the population, the female share of the population, the median age of residents within the county, the fraction of individuals with at least a bachelors degree, the log of median household income, and the fraction of state natives. All specifications include state-fixed effects. For participation, we use robust standard errors. For individual losses, we cluster standard errors on the county level.

not higher in areas with higher unemployment in 2009. We find (weak) evidence that a larger change in unemployment is correlated with higher rates of participation, but not with higher losses given participation.

We proceed to investigate female labor force participation. Since our previous result suggests that MLM participation is overrepresented in areas with a higher share of women, we expect that measures of women in the labor force are an important correlate of MLM participation. Moreover, higher penetration in areas with lower female labor force participation is consistent with a value of flexibility for women who otherwise stay home. Consistent with the above, the female share of a county is positively correlated with participation rates. When we disaggregate the female share into those outside (Column 3) and those inside the labor force (Column 4), we note that the extensive margin result appears to be driven by women outside of formal work. Given the strong correlation between MLM activity and the Hispanic share, we examine whether a similar relationship holds for Hispanic women and labor market conditions. Hispanic female non-labor force participation strongly predicts participation in the MLM and also individual losses. The relationship is considerably stronger for Hispanic women than for the full sample. These findings support a “housewife” hypothesis: MLM participation represents, at least for certain households, a potential business activity for non-working spouses. This echoes marketing claims about working from home and on your own schedule, often made by MLM businesses.

Moving on to Columns 7-12, the pattern for losses is similar to the pattern for participation. Higher female non-labor force ratio is associated with higher losses, whereas higher female labor force participation (i.e. a higher share of women in the labor force) is correlated with lower losses. Non-participation among Hispanic women is strongly positively correlated with losses.

4.3 Social capital and financial inclusion

We continue by exploring the relationship between involvement with MLMs and various measures of social capital. We measure social capital with a number of proxies as suggested by the extant literature: payday lending, consumer complaints and consumer fraud complaints to the FTC, electoral participation, and credit scores. As a unique measure of (negative) social capital and trust, we aggregate the number of Consumer complaints and Consumer fraud complaints from the Consumer Complaint Data at the Consumer Financial Protection Bureau (CFPB).¹¹

¹¹Bricker & Li (2017) use a similar measure of complaints from the Federal Communications Commission

We are forced to remove 107 counties where we do not match complaint data.¹² County level presidential electoral participation rates in the 2008 election has been used as a measure of social capital (Guiso *et al.*, 2004) on institutional determinants of financial development, along with the log of the county's credit score (Bricker & Li, 2017).

Participation is positively correlated to a higher concentration of payday lending institutions per person and higher credit scores, is uncorrelated with consumer complaints and consumer financial complaints, and is negatively correlated with electoral participation. When we include all variables in Column 5, log credit scores and electoral participation are the strongest predictors, and all other variables are insignificant. The positive relationship between participation and credit scores echoes the results in Table 2 for income – MLM activity is not necessarily a low-income phenomenon.

Credits scores are also positively and strongly correlated with losses. Consumer complaints are negatively correlated with losses, whereas fraud-specific complaints are positively correlated to individual losses. Electoral participation is also correlated with losses. In Column 10, credit scores and electoral participation remain the strongest predictors.

As our connectivity measures are on the county level, it is important to first discuss the implications for MLM participation. First, it is obvious that the *participant's* connections are what matter, not the county's. Second, we measure the average county-level connectivity, which essentially calculates how many connections the average person within the county has. A county with more connections may have larger opportunities to profit from a MLM business, as the pool of retail sales and recruitment is larger. However, it is not certain that individuals make this calculation when they are deciding on whether to join a MLM business, or that MLM businesses are more active in areas where social connectivity is high. Individuals who do have large social networks may have more employment options through their social networks that do not involve a MLM (Montgomery, 1991; Munshi, 2003; Bayer *et al.*, 2008). Even with these caveats, it is still important to investigate the link between MLM incidence and connectivity. Sales in physical locations are often prohibited by the parent MLM company, leaving social networks such as family and friends as the main source of potential customers (Greve & Salaff, 2005; Legara *et al.*, 2008). For example, Greve & Salaff (2005) describes a case study of an (FCC) rather than financially-focused complaints. Raval (Forthcoming) uses a measure of complaints from the Consumer Sentinel Database.

¹²Our results are robust to encoding the missing counties as zero.

Table 4: Social capital

	Participation					Individual losses				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Payday lending	0.52* (0.28)				0.41 (0.28)	0.46 (0.35)				0.50 (0.36)
Log credit score	0.71** (0.34)				0.99*** (0.34)	2.02*** (0.77)				2.03*** (0.79)
Consumer complaints		0.38 (0.30)			0.64 (0.39)		-0.59** (0.27)			-0.38 (0.27)
Consumer fraud complaints		-0.05 (0.16)			-0.05 (0.17)		0.40* (0.21)			0.36* (0.21)
Electoral participation			-0.77** (0.39)		-0.81* (0.45)			-1.55 (1.10)		-1.22 (1.02)
Log SCI				2.06* (1.19)	1.65 (1.18)				-3.72 (3.61)	-2.90 (3.32)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,096	2,991	3,098	3,098	2,990	335,458	334,857	335,458	335,458	334,857
Adjusted R^2	0.34	0.35	0.34	0.34	0.35	0.01	0.01	0.01	0.01	0.01

This table investigates how social capital correlate with MLM participation across the United States. The dependent variable is the MLM incidence rate scaled by 10,000 county inhabitants. Payday Lending is the number of such establishments in the county in 2009 per 10,000 inhabitants. Log credit score is the log of the average credit score for the county. Consumer complaints and Consumer fraud complaints are the aggregate number of complaints and complaints from fraudulent activity county level from the Consumer Complaint Data at the Consumer Financial Protection Bureau (CFPB). Both variables are scaled by 10,000 county inhabitants. Electoral participation is the number of votes cast in the 2008 presidential election scaled by the number of individuals living in the county using 2010 Census estimates. Log SCI is the log of an the average Social Connectedness Index (SCI) for each county. All specifications control the log. of 2010 population, the white, black, and Hispanic shares of the population, the female share of the population, the median age of residents within the county, the fraction of individuals with at least a bachelors degree, the log of median household income, and the fraction of state natives. All specifications include state-fixed effects. For participation, we use robust standard errors. For individual losses, we cluster standard errors on the county level.

immigrant in Canada who uses her social network to recruit new participants and sell products. Connectivity measures the *potential* profitability for a business that relies on social networks for sales. A high incidence in areas with low connectivity suggest that individuals are not less likely on average to profit from their business, which is important for regulators concerned with MLMs.

We find that the Social Connectivity Index (SCI) is positively correlated with participation. The coefficient on losses is large in magnitude but is not statistically significant. Individuals living in high SCI counties make smaller losses, consistent with a larger potential market limiting losses. When we include all variables in Columns 5 and 10, log SCI is not significant.

5 Discussion

In this paper we provide an initial examination of participation and losses in Multi-Level Marketing firms. This study is an initial but important step towards a more comprehensive understanding of an understudied aspect of today's labor markets. We find that MLM participation is higher in middle-income and more unequal areas, in areas with relative female labor force non-participation, in Hispanic, and less financially developed areas. These areas are often also where individuals experience the largest losses. On the other hand, areas with higher levels of social capital have lower participation rates and less losses.

At the end of this study, we want to discuss the implications of the MLM industry for the economics of labor markets. This is an industry that continues to expand (see [Direct Selling Association, 2017a](#)), despite legal challenges and easily accessible negative press coverage that include allegations of pyramid schemes and exaggerated earnings potential.¹³ Even so, millions of individuals are involved with a MLM companies. To us, it seems presumptuous to assume that participants are simply making ill-informed decisions. A striking fact about the industry is that participants often join multiple MLMs [Marie \(2018\)](#). While it is certainly possible that MLM participants are ill-informed or are over-estimating their chance of success (see for example [Bosley et al., 2019](#)), we cannot discount the possibility that MLM firms provide real benefits outside of any monetary rewards.

For households who need flexibility, joining a MLM may be the only available option. At

¹³The number of individuals involved in the direct sales industry rose from 15.6 million in 2010 to 20.5 million in 2016 ([Direct Selling Association, 2017a](#)).

the very least, this is one way that MLM firms market themselves: work on flexible hours that enable you to combine a career and children. If flexibility in working hours is required, what other business opportunities exist with similar advantages in terms of flexibility but with better success rates?¹⁴ Even if the income from such work is exaggerated, we should not underestimate the desire to contribute something positive to family and society. Perhaps it is better to work even though the chance of success is limited, rather than not work at all. In the end, we need to understand why individuals join before we can design effective regulation against bad practices in the industry or understand how to limit participation in ventures with a negative expected return.

In conclusion, our study presents new research on an understudied but growing part of today's labor market. At the same time, we bring many new questions that future research may attempt to analyze in further depth. For example, what are the relative welfare implications for this type of employment opportunity? How has the MLM industry evolved over time? And how can the business model persist when MLM have negative expected returns, and have products which are often more expensive and of worse quality?

¹⁴It is interesting that the rise of the Gig-economy has not led to decline in the direct sales industry, even though both industries emphasize flexibility for workers.

References

- Albaum, Gerald, & Peterson, Robert A. 2011. Multilevel (network) marketing: An objective view. *The Marketing Review*, **11**(4), 347–361.
- Bailey, Michael, Cao, Rachel, Kuchler, Theresa, Stroebel, Johannes, & Wong, Arlene. 2018. Social connectedness: measurement, determinants, and effects. *Journal of Economic Perspectives*, **32**(3), 259–80.
- Bayer, Patrick, Ross, Stephen L, & Topa, Giorgio. 2008. Place of work and place of residence: Informal hiring networks and labor market outcomes. *Journal of Political Economy*, **116**(6), 1150–1196.
- Björkman Nyqvist, Martina, Guariso, Andrea, Svensson, Jakob, & Yanagizawa-Drott, David. 2019. Reducing child mortality in the last mile: experimental evidence on community health promoters in Uganda. *American Economic Journal: Applied Economics*, **11**(3), 155–92.
- Bosley, Stacie A, Bellemare, Marc F, Umwali, Linda, & York, Joshua. 2019. Decision-making and vulnerability in a pyramid scheme fraud. *Journal of Behavioral and Experimental Economics*, **80**, 1–13.
- Bricker, Jesse, & Li, Geng. 2017. Credit scores, social capital, and stock market participation. *FEDS Working Paper No. 2017-008*.
- Chetty, Raj, Hendren, Nathaniel, Kline, Patrick, & Saez, Emmanuel. 2014. Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics*, **129**(4), 1553–1623.
- DeLiema, Marguerite, Shadel, Doug, Nofziger, Amy, & Pak, Karla. 2018. AARP Study of Multilevel Marketing: Profiling Participants and their Experiences in Direct Sales. *Working Paper*.
- Direct Selling Association. 2017a. Direct Selling in 2016: An Overview. https://www.dsa.org/docs/default-source/research/growth-outlook/dsa_2016gandofactsheet.pdf?sfvrsn=6. Online: Accessed: 2018-02-22.

- Direct Selling Association. 2017b. The Value of Direct Selling to Hispanic Americans. https://www.dsa.org/docs/default-source/direct-selling-facts/the-value-of-direct-selling-to-hispanic-americans_2.pdf?sfvrsn=2. Online: Accessed: 2018-02-22".
- Direct Selling News. 2017. DSN Announces the 2017 Global 100! <https://www.directsellingnews.com/dsn-announces-the-2017-global-100/>. Online: Accessed: 2018-02-22".
- Federal Trade Commission. 2016a. Case No. 2:16-cv-05217: COMPLAINT FOR PERMANENT INJUNCTION AND OTHER EQUITABLE RELIEF. <https://www.ftc.gov/system/files/documents/cases/160715herbalifecmpt.pdf>. Online: Accessed: 2018-03-01.
- Federal Trade Commission. 2016b. Case No. LA CV16-05217 STIPULATED ORDER FOR PERMANENT INJUNCTION AND MONETARY JUDGMENT. <https://www.ftc.gov/system/files/documents/cases/160725herbalifeorder.pdf>. Online: Accessed: 2018-03-01.
- Federal Trade Commission. 2018. Business Guidance Concerning Multi-Level Marketing. <https://www.ftc.gov/tips-advice/business-center/guidance/business-guidance-concerning-multi-level-marketing>. Online: Accessed: 2010-08-13.
- Grant, Jordan, & Kearney, Caitlin. 2016. Parties for plastic: How women used Tupperware to participate in business. <https://americanhistory.si.edu/blog/parties-plastic-how-women-used-tupperware-participate-business>, November. [Online; Accessed 2019-05-28].
- Greve, Arent, & Salaff, Janet W. 2005. Social network approach to understand the ethnic economy: A theoretical discourse. *GeoJournal*, **64**(1), 7–16.
- Guiso, Luigi, Sapienza, Paola, & Zingales, Luigi. 2004. The role of social capital in financial development. *American Economic Review*, **94**(3), 526–556.
- Herbalife. 2016. Statement of Average Gross Compensation. <http://www.herbalife.com/Content/en-US/pdf/business-opportunity/>

[statement-of-average-gross-compensation-usen.pdf6](#). Online: Accessed: 2018-02-22.

- Katz, Lawrence F, & Krueger, Alan B. 2017. The role of unemployment in the rise in alternative work arrangements. *American Economic Review*, **107**(5), 388–92.
- Katz, Lawrence F, & Krueger, Alan B. 2019. The rise and nature of alternative work arrangements in the United States, 1995–2015. *ILR Review*, **72**(2), 382–416.
- Koehn, Daryl. 2001. Ethical issues connected with multi-level marketing schemes. *Journal of Business Ethics*, **29**(1-2), 153–160.
- Legara, Erika Fille, Monterola, Christopher, Juanico, Dranreb Earl, Litong-Palima, Marisciel, & Saloma, Caesar. 2008. Earning potential in multilevel marketing enterprises. *Physica A: Statistical Mechanics and its Applications*, **387**(19-20), 4889–4895.
- Marie, Jane. 2018 (9). *The Dream*. Stitcher.
- Montgomery, James D. 1991. Social networks and labor-market outcomes: Toward an economic analysis. *The American Economic Review*, **81**(5), 1408–1418.
- Munshi, Kaivan. 2003. Networks in the modern economy: Mexican migrants in the US labor market. *The Quarterly Journal of Economics*, **118**(2), 549–599.
- Raval, Devesh. Forthcoming. Whose Voice Do We Hear in the Marketplace?: Evidence from Consumer Complaining Behavior. *Marketing Science*, Forthcoming.
- Schmid, Markus M, & Walter, Ingo. 2009. Do financial conglomerates create or destroy economic value? *Journal of Financial Intermediation*, **18**(2), 193–216.
- Shellnuitt, Kate. 2016. Why your Facebook feed is filled with women selling essential oils and press-on nails. <https://www.vox.com/2016/5/12/11577466/multilevel-marketing>, November. [Online: Accessed 2019-05-28].
- Taylor, Jon M. 2011. Who Profits from Multi-Level Marketing (MLM)? Preparers of Utah Tax Returns Have the Answer.

World Federation of Direct Selling Associations. 2019. Global Direct Selling - 2018 Retail Sales.

<https://wfdsa.org/wp-content/uploads/2019/06/Sales-Seller-Report-FINAL.pdf>. [Online: Accessed 2019-08-22].

Supplemental Appendix for

**“Participation and Losses in Multi-Level Marketing:
Evidence from an FTC Settlement”**

by

Claes Bäckman and Tobin Hanspal

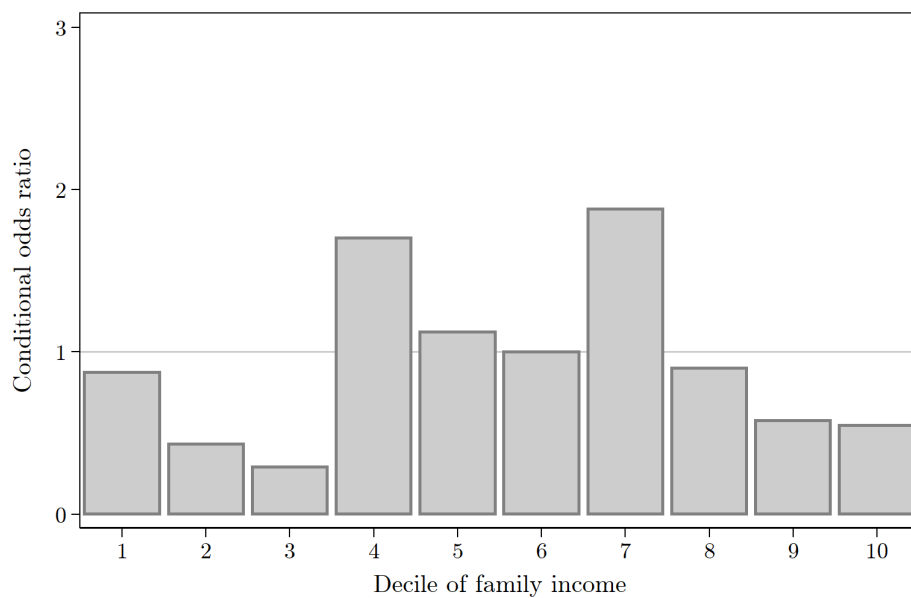


Figure A.1: Direct Selling with Intermediaries and Household Income

Note: This figure presents odds ratios after a logistic regression predicting a positive outcome for working with a direct-selling intermediary. We include control variables for Hispanic and white races, gender, age and age-squared, married, and college education. Confidence intervals are large due to the small sample size across bins, and therefore unreported for scale.

Table A.1: The 20 largest global MLM firms

Company	2017 Revenue	Country	Year Founded	Products
Amway	\$8.80 bln	USA	1959	Health, beauty, and home care products
Avon	\$5.70 bln	USA	1886	Beauty, household, and personal care
Herbalife	\$4.50 bln	USA	1980	Dietary supplements, personal-care
Vorwerk	\$4.20 bln	Germany	1883	Household/kitchen appliances, cosmetics
Mary Kay	\$3.50 bln	Germany	1963	Cosmetics, skin care
Infinitus	\$3.41 bln	China	1992	Chinese herbal health products
Perfect	\$3.06 bln	China	1994	Health food, beauty/skin care
Quanjian	\$2.89 bln	China		Chinese herbal health products
Natura	\$2.26 bln	Brazil	1969	Beauty, health, and personal care
Tupperware	2.210 bln	USA	1946	Kitchen and home products
Nu Skin	\$2.208 bln	USA	1984	Personal care and dietary supplements
Primerica	\$1.52 bln	USA	1977	Insurance and financial services
JoyMain	\$1.49 bln	China	2000	Ecological health products
Jeunesse	\$1.41 bln	USA	2009	Beauty, health, and personal care
Oriflame	\$1.40 bln	Luxemborg	1967	Personal care and dietary supplements
Ambit Energy ++	\$1.2 bln	USA	2006	Electricity and natural gas services
New Era	\$1.16 bln	China	1995	Beauty, household, and personal care
Telecom Plus	\$1.12 bln	UK	1998	Telephony, broadband, gas, and electricity
Belcorp	\$1.09 bln	Peru	1968	Cosmetics, skin care
USANA	\$1.01 bln	USA	1992	Dietary supplements and skincare

This table lists the top global MLM firms by 2017 revenue. Information comes [Direct Selling News \(2017\)](#) and the authors own research.

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