

How Will Millennials Impact Freight Flows in Texas? *Final Report*

PRC 16-63 F



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Texas A&M Transportation Institute

PRC 16-63 F

January 2017

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Executive Summary

Millennials

As young adults, millennials (born between 1983 and 2000) are an important consumer demographic. Millennials represent approximately 25 percent of the U.S. population and make up more of the workforce than baby boomers (born between 1946 and 1964). Austin, Houston, and Dallas-Fort Worth are in the top 10 cities in the United States for highest concentration of millennials.

Purchasing drives much of freight—people demand goods, and those goods are shipped to a store where they can be purchased, or goods are shipped directly to a home in the case of online shopping. Because of this, millennials’ consumer behavior and expectations will impact the future of the freight transportation system in Texas.

The research team used U.S. Census data to compare today’s millennials to baby boomers when they were around the same age, in 1980.

Census data showed that compared to their baby boomer counterparts in 1980, today’s millennials are:

- Better educated (2).
- Save more money (3).
- Spend more on education, rent, and health care (3).
- Living with family as a dependent at a higher rate (author calculations based on U.S. Census Bureau data [4]).
- Have lower homeownership rates (5,6).

Survey

The research team conducted a survey of 1,310 millennials living in Texas in order to gather more detailed information on purchasing. Figure 1 describes the typical respondent.

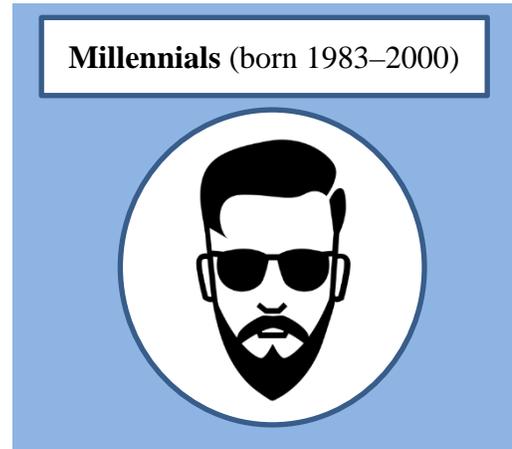


Image source: (1)

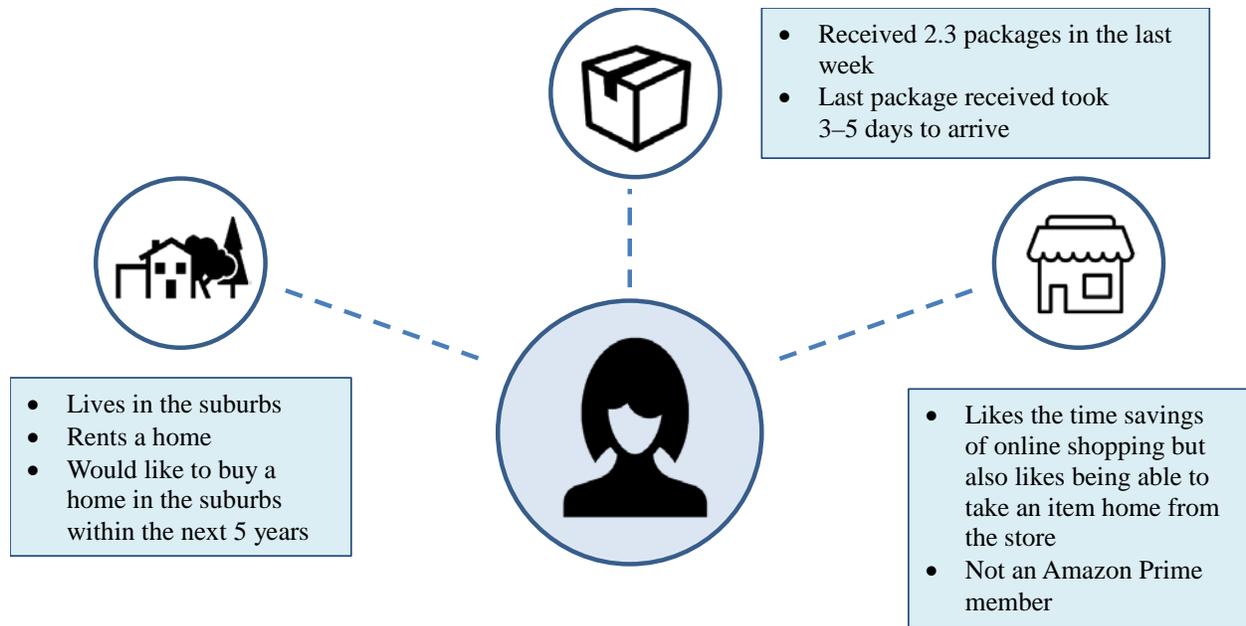


Image source: (7,8,9,10)

Figure 1. Typical Respondent.

Shopping

Online Shopping Is Not Replacing In-Store Shopping

Though most survey respondents shop online (68 percent of respondents received an online order in the previous week), it does not appear that online shopping will replace in-store shopping in the near future. Most respondents (75 percent) like to shop both online and in stores, and 95 percent of respondents had visited a store in the last week, as shown in Figure 2.

Of respondents who had received an online order, 70 percent received two or fewer packages in the previous week.



Image source: (10,11)

Figure 2. Where Respondents Like to Shop.

Where Do Online Packages Go?

Among survey respondents, suburban residents (70 percent) were the most likely to have received a package in the previous week, compared to 68 percent of urban residents and 61 percent of rural residents.



Image source: (12)

Of those who received a package, high-income respondents (earning over \$50,000) received more packages (2.7) than low-income respondents (earning less than \$50,000) (2.1). High-income urban residents received the most packages and were more likely to receive a package in two days or less than low-income respondents.

High-income, urban residents received the most packages in the previous week.

Over half (54 percent) of high-income urban residents would like to buy a home in a suburban or rural area, which means they could shift demand for fast home delivery to a new geographic area if they moved.

What Does This Mean for Freight?

The majority of millennials shop online, and online shopping presents unique challenges to freight. Logistics providers often carry less-than-truckload hauls for home delivery, as opposed to a fully loaded truck that drops off things at a distribution center. An additional issue with home delivery is failed first delivery attempts, which can be between 12 and 60 percent of deliveries (13).

Despite the prevalence of affordable delivery options for consumers, such as Amazon Prime, almost 75 percent of respondents received their most recent package in three days or more. Additionally, the current research shows that millennials have different shopping preferences for

different items. For example, respondents still predominantly buy food, home supplies, personal hygiene products, furniture, and major appliances in-store. Clothing, electronics, and books or newspapers were the top items bought online. With regard to store visits, it appears that online shopping will not replace in-store shopping for now. Most respondents reported liking shopping online and in-store, and 95 percent of respondents visited a store in the previous week, compared to 68 percent who received an online order. Therefore, the demands placed on the freight network by inventory deliveries to brick-and-mortar stores are not expected to change.

According to the survey of millennials, high-income urban residents received the most online orders. However, the largest proportion of respondents across all incomes would like to buy a



Image source: (14)

home in the suburbs. The number of package deliveries was most closely tied to income, so congestion due to this type of delivery may geographically follow high earners. Tracking the volume of online orders by location could help predict demand for freight in city centers—an already congested component of the urban transportation system—and the less congested suburbs.

Introduction

Millennials (born between 1983 and 2000) represent approximately 25 percent of the population in the United States and already outnumber baby boomers (born between 1946 and 1964) in the current population (15,16,17). As young adults, millennials are becoming an important consumer demographic.

Purchasing drives much of freight—people demand goods, and those goods are shipped to a store where they can be purchased, or goods are shipped directly to a home in the case of online shopping. Because purchasing drives freight, millennials’ consumer behavior and expectations will impact the future of the freight transportation system in Texas. This research attempts to understand how millennials differ from baby boomers when they were young adults.

Specifically, this research attempts to provide insight into millennial spending (e.g., types of purchases), purchasing behavior (e.g., frequency and online), and millennials’ expectations for the delivery of purchases.

Definitions

Unless otherwise specified, this report uses the definitions in Figure 3.

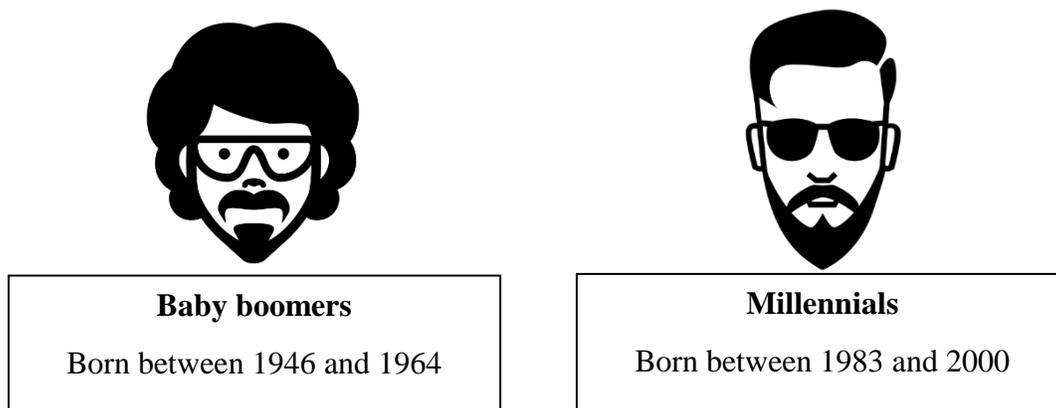


Image source: (18, 1)

Figure 3. Definition of Baby Boomers and Millennials.

Data

The research team collected data for 18- to 34-year-olds for 1980 and data for the most recent year. This was to compare millennials to baby boomers when they were ages 18 to 34 (i.e., not at their current age).

The age range 18 to 34 corresponds with how the U.S. Census groups ages for many measures. The 18- to 34-year-old age range also captures most baby boomers in 1980 (baby boomers were 16 to 34 years old in 1980), captures many millennials in 2010 (millennials were 10 to 27 years old in 2010), and captures most millennials in 2015 (millennials were 15 to 32 years old in

2015). Although this age range does not capture all baby boomers and millennials, it is the most robust data available at this time.

Literature Review

The literature revealed the following information about U.S. millennials compared to baby boomers when they were young adults:

- Millennials are better educated than baby boomers. The Pew Research Center recently conducted an analysis of 25- to 32-year-olds based on survey and census data. They found that 34 percent of millennials have at least a bachelor's degree, compared to 24 percent of baby boomers at a similar age (19).
- The same Pew Research Center study found that despite being better educated than baby boomers, millennials only earn about \$200 a year more than baby boomers did when they were young adults (2012 dollars) (19). Millennials with only a high school diploma are doing worse than baby boomers. The wage gap between millennials with a bachelor's degree and those with a high school diploma is greater than it was for baby boomers.
- Many millennials owe large amounts of student debt. The Pew Research Center stated that in 2010, 37 percent of young households owed money on student debt, up from 22 percent in 2001 (20).
- Millennials are getting married later in life than at any other time. In the United States, the average age of first marriage has been steadily increasing since the 1960s to reach 29.3 for men and 27 for women in 2015 (21).
- Millennials are more racially diverse than baby boomers. Forty-three percent of millennials are non-white, compared to 28 percent of baby boomers (22). Hispanics, the largest minority, make up 21 percent of millennials (22).

In 2013, 22 percent of those aged 25 to 32 with a high school diploma were living below the poverty line. Only 7 percent of baby boomers with high school diplomas were living in poverty at the same age.

Appendix A provides a detailed literature review.

Comparison of Baby Boomers and Millennials

This section provides information about how Texas baby boomers and millennials compare based on available data for 18- to 34-year-olds in 1980 and in the most recent year available, unless otherwise specified.

Appendix B provides a detailed analysis of the available sociodemographic and consumer spending data.

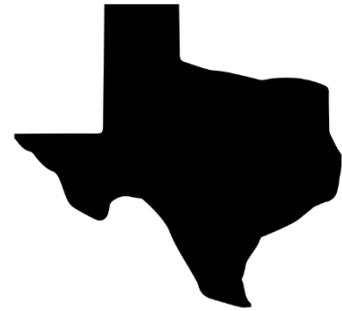
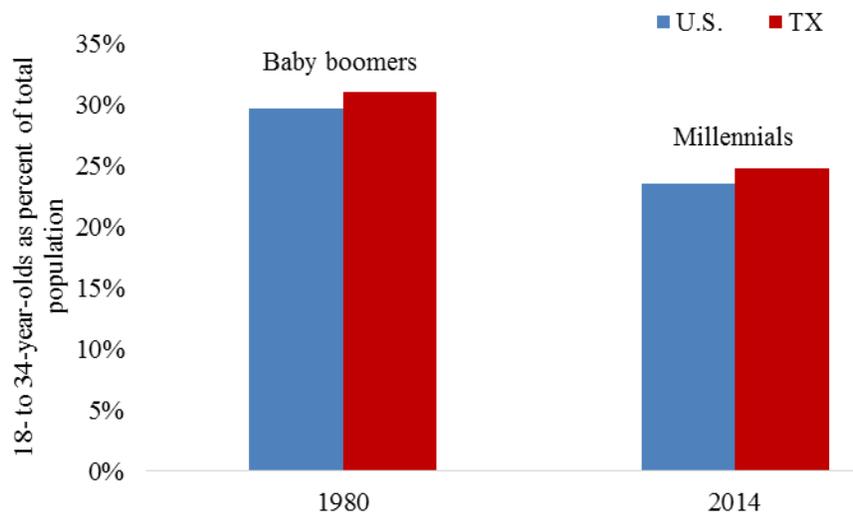


Image source: (23)

Population

Figure 4 shows the percentage of the population aged 18 to 34 in 1980 (i.e., the baby boomers) and in 2014 (i.e., the millennials) (24). In both years, 18- to 34-year-olds were a larger share of Texas's population than that of the United States as a whole. Millennials, however, are a smaller percentage of the population than baby boomers were in 1980.



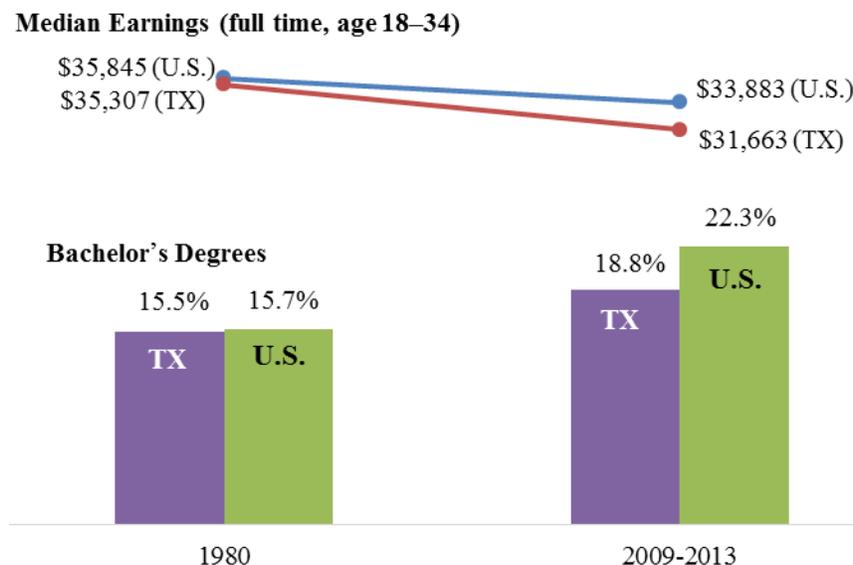
Source: (24)

Figure 4. Population Aged 18 to 34.

However, in 2014 in the total population, there were more millennials than baby boomers in both the United States and Texas (25, 15). In the United States in 2014, millennials made up 25 percent of the population, and baby boomers made up 24 percent. In Texas in 2014, however, millennials made up 26 percent of the population, and baby boomers made up 21 percent. This is reflected by the fact that in 2013, Austin, Houston, and Dallas-Fort Worth were all included in Nielsen's list of the top 10 highest concentrations of millennial populations in the United States (26).

Education and Income

Figure 5 shows median earnings for full-time workers aged 18 to 34 and the percentage of that age group with bachelor's degrees, based on census data. Median earnings have decreased since 1980, despite the growing percentage of young people with bachelor's degrees (2).¹ More millennials have bachelor's degrees than baby boomers did at the same age, but their median earnings are lower than that of baby boomers. Median earnings, which are the middle of all reported earnings, are less affected by outliers than average earnings.



Source: (2)

Figure 5. Median Earnings and Percentage of Bachelor's Degrees.

Comparing Texas to the United States, a smaller percent of Texans aged 18 to 34 have at least a bachelor's degree than the same age group in the United States. Though the percentage of young Texans with bachelor's degrees has increased since 1980, Texas has fallen further behind the United States. For earnings, baby boomers in Texas in 1980 earned only slightly less than the United States as a whole (\$538 per year). Now, a larger gap exists between earnings for ages 18 to 34 in Texas and the United States. In 2009–2013, Texas millennials earned \$2,220 per year less than millennials in the United States.

Marriage Age

For age of first marriage, Texas follows a similar pattern to the United States as a whole, with the age of first marriage steadily increasing since 2005 (28,29). Texans still marry slightly younger than Americans as a whole. In



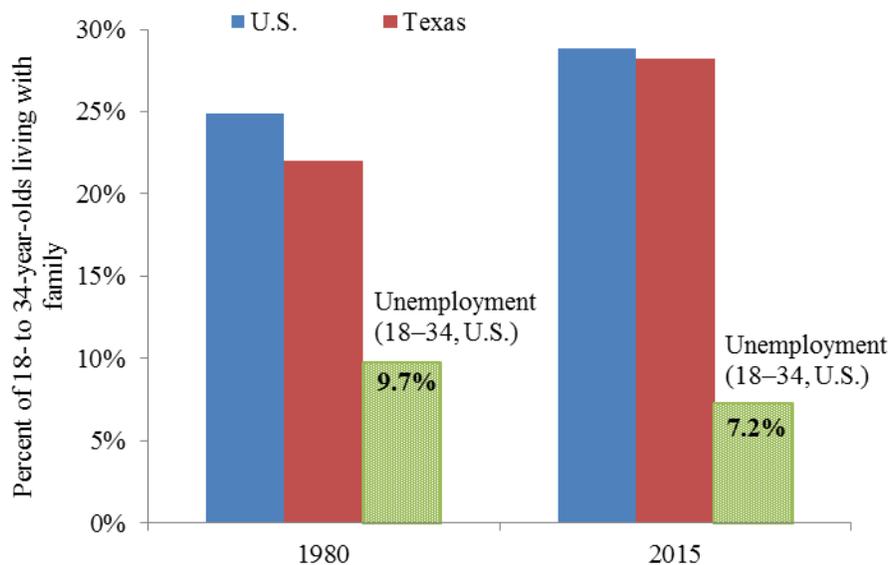
Image source:
(27)

¹ An average for the years 2009–2013 was used to match U.S. Census reporting style. More information on the methodology is available at <https://census.socialexplorer.com/young-adults/#/methodology>.

2014, the median age of first marriage for Texas men was 28.2 (1.1 years younger than Americans as a whole) and 26.6 for Texas women (0.4 years younger than Americans as a whole).

Employment and Living with Family

Figure 6 shows that the percentage of people aged 18 to 34 living with family members has increased since 1980 (author calculations based on U.S. Census Bureau data [4]). This is the case in Texas and the United States as a whole. Living as a dependent with family in this case means living with a parent, grandparent, sibling, or other relative (not including a spouse or partner) and not being the head of household.



Source: (author calculations based on U.S. Census Bureau data [4])

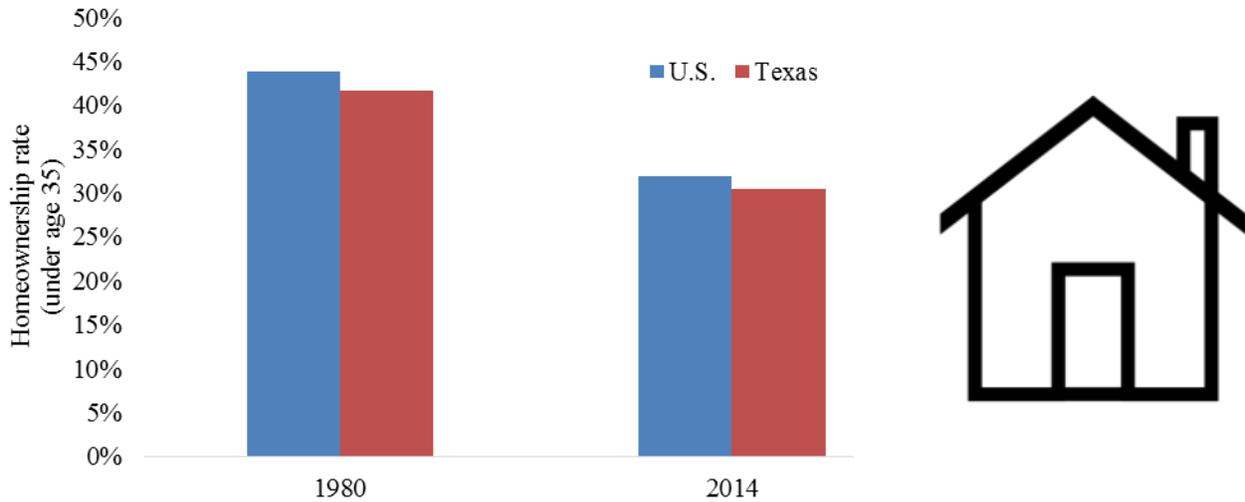
Figure 6. Living with Family and Employment.

In 1980, 25 percent of people in the United States aged 18 to 34 (baby boomers) lived as a dependent with family members. In Texas, 22 percent of baby boomers lived as a dependent with a family member. By 2015, this number had reached 29 percent for all millennials in the United States and 28 percent for millennials in Texas.

The increase in dependent living occurred despite a lower national unemployment rate for this age group (30). The unemployment rate for 18- to 34-year-olds decreased from 9.7 percent in 1980 to 7.2 percent in 2015. This suggests that factors unrelated to employment are leading millennials to live with family.

Homeownership

Figure 7 shows homeownership rates for homeowners under age 35 (5,6).² Homeownership rates for millennials in 2014 were 31 percent in Texas, down from 42 percent for baby boomers in 1980. In the United States, the millennial homeownership rate was 32 percent in 2014, down from 44 percent for baby boomers in 1980. In both 1980 and 2014, Texans had slightly lower homeownership rates than the national average.



Source: (5,6)

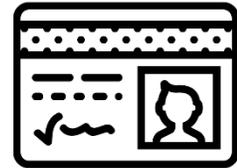
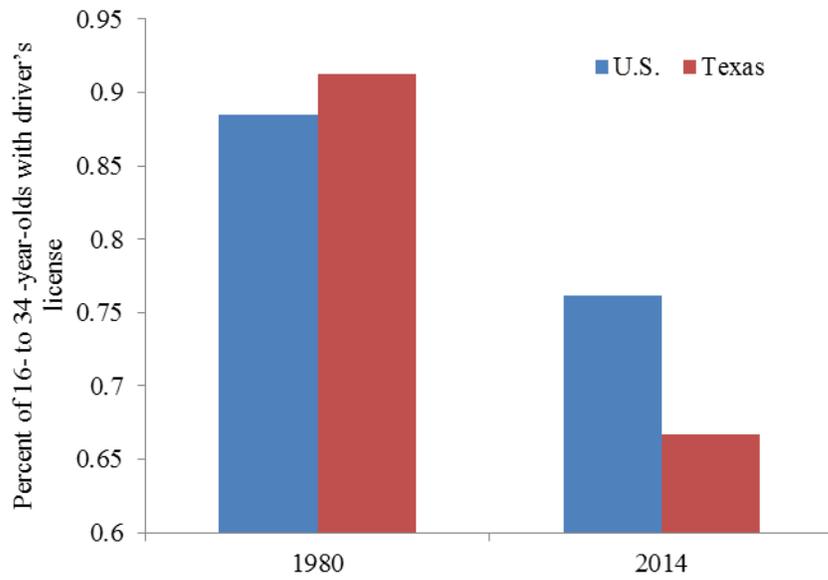
Image source: (31)

Figure 7. Home Ownership.

Driving

Figure 8 shows a steady decrease in young people with driver's licenses since 1980. In 1980, a slightly higher percentage of Texas baby boomers (91 percent) had driver's licenses than the national average (89 percent). However, in 2014, the percentage of Texas millennials with a driver's license (67 percent) was almost 10 percentage points lower than that in the United States (76 percent).

² Data from 1980 are for ages under 35, and data from 2014 are for ages 15–34. This is due to differences in U.S. Census reporting styles. The difference between categories is not expected to bias results because of the low number of people under age 15 who may own homes.



Source: (32,33)
 Image source: (34)

Figure 8. Driver's License.

Millennials' Consumer Behavior and Expectations

Shopping Behavior

Millennials like shopping. A 2013 online survey of millennials reported that 85 percent said they either love or enjoy shopping (36). Though the youngest millennials are the first generation to grow up with the Internet, 82 percent of millennials report preferring shopping in a brick-and-mortar store than online (37).



Image source: (35)

Recent Nielsen reports gave some specific insights into millennial shoppers (38):

- Millennials and generation X shoppers prefer large superstores to smaller drug or grocery stores.
- Millennials take the fewest shopping trips but spend the most at each trip of any generation.

Despite being the first digital natives, millennials are not the most active age group in online shopping (39). Business Insider recently released a report claiming “a disproportionate share of middle-aged Americans shop online” (40). The report stated that people aged 34 to 54 make up a larger percentage of online shoppers than their percentage in the total population. However, 18- to 34-year-olds spend more in value than any other age group. Though more people aged 34 to 54 make online purchases, millennials spend more money when they shop online.

Income and Expenditures

The information on income and expenditures in this section is for households, not individuals, because of the way the Consumer Expenditure Survey (CES) collects data. The numbers represent the spending by the entire household for households where someone under the age of 25 or aged 25 to 34 owns the home or is responsible for the rent.³ Following the CES reporting format, young people are divided into two groups:

- Under age 25 (referred to as *younger* in this section).
- Aged 25 to 34 (referred to as *older* in this section).

All prices in this section have been adjusted to the 2015-dollar amount to account for inflation.⁴

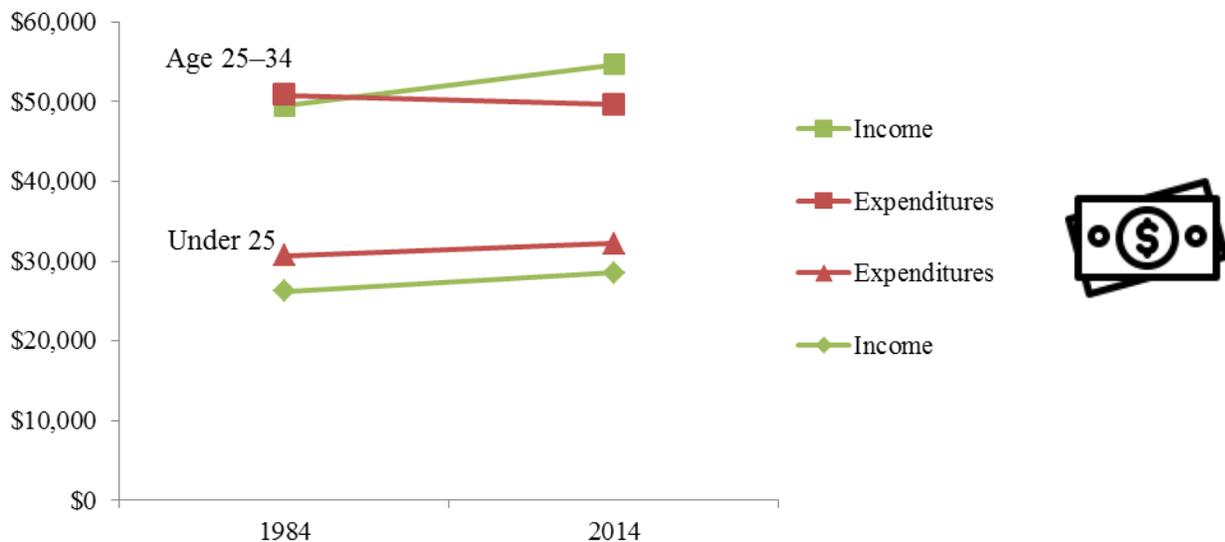
³ The age ranges provided are for the reference person. When an interviewer gathers information as part of the CES, he or she asks who owns the home or is responsible for the rent. The reference person is “the first member mentioned by the respondent when asked to ‘Start with the name of the person or one of the persons who owns or rents the home.’” This means that data for each of these age groups are for households that have a reference person within this age range. Individual spending cannot be determined based on the census data.

More information is available at <http://www.bls.gov/cex/faq.htm#q4>.

⁴ An inflation calculator is available at <http://data.bls.gov/cgi-bin/epicalc.pl>.

Figure 9 shows the total income and expenditures for households where the reference person was under 25 and households where the reference person was 25 to 34 years old (3):

- In 1984, baby boomer households in both groups spent more than they earned.
- Households in the younger group have continued to spend more than they earn. Though they still spend more than they earn, millennial households in the younger group have a higher income by \$2,325 than baby boomers, and they have tightened the gap between expenditures and income.
- For households in the older group, income after taxes is now higher than total expenditures. Baby boomer households in the older group spent almost \$1,400 more than they earned in 1984, whereas millennial households spent \$5,081 less than they earned in 2014.



Source: (3)

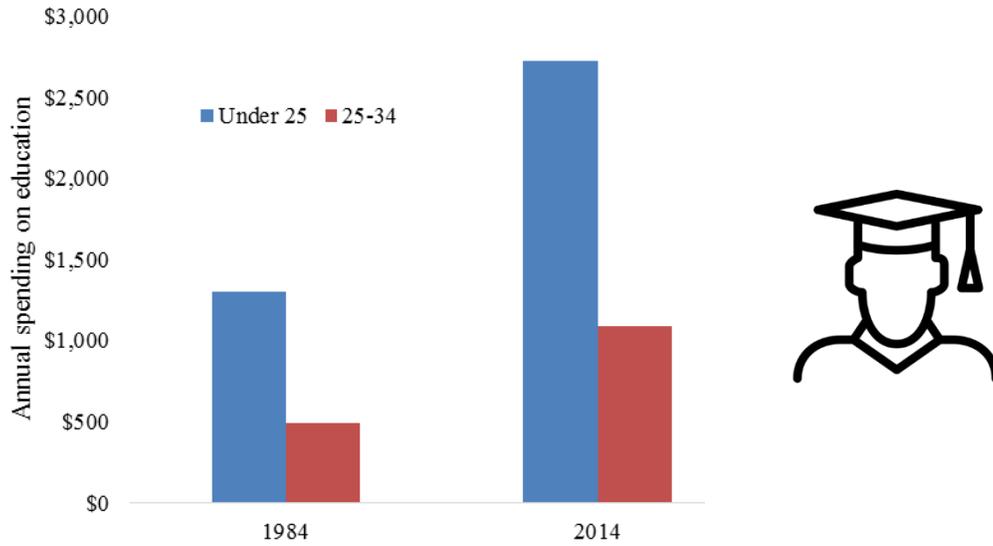
Image source: (41)

Figure 9. Income and Expenditures.

Education

Figure 10 shows that annual spending on education has increased since 1984:

- In 2014, households with younger millennials spent more than twice as much on education as households with older millennials. Households with younger millennials also spent over \$800 more than households with younger baby boomers did (3).
- Younger baby boomers spent \$1,300 on education per year, whereas younger millennials spent \$2,724 per year.



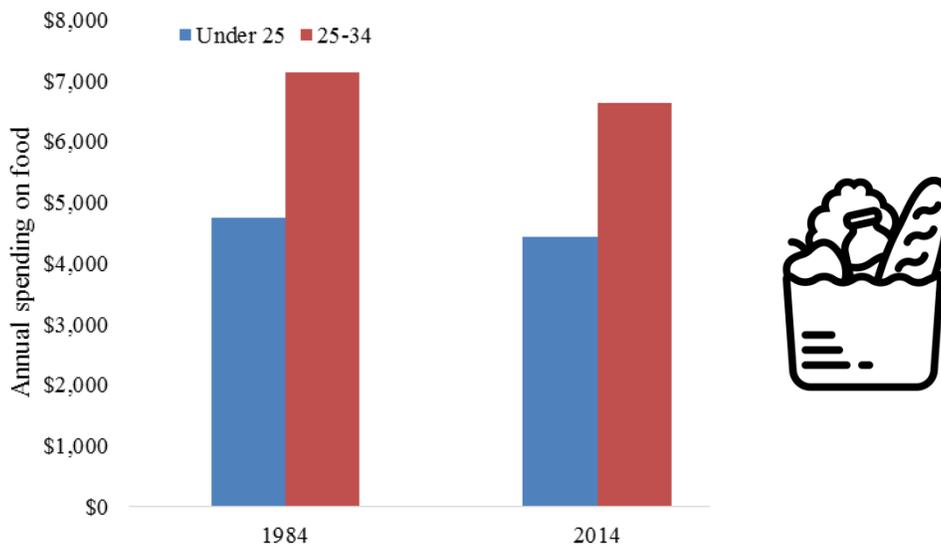
Source: (3)

Image source: (42)

Figure 10. Spending on Education.

Food

Figure 11 shows that millennial households spent less on food than baby boomers did (3): Compared to baby boomers, younger millennial households spent \$331 less on food per year, and older millennial households spent \$505 less.



Source: (3)

Image source: (43)

Figure 11. Spending on Food.

Eating Out

Figure 12 shows that millennial households spent less on going out to eat than baby boomers:

- Spending in this category has changed more in the younger group than the older group (3).
- Compared to younger baby boomers, younger millennial households spent \$428 less per year on food away from home, and older millennial households spent \$46 less.



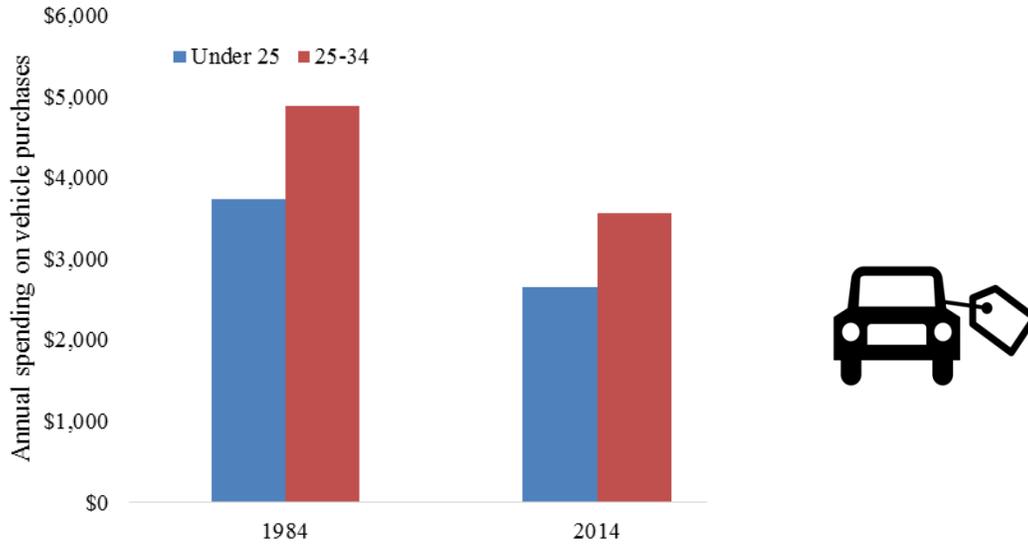
Source: (3)

Image source: (44)

Figure 12. Spending on Going Out to Eat.

Vehicle Purchases

Figure 13 shows that millennial households spent less on vehicles than baby boomer households did in 1984 (3). Younger millennial households spent \$1,087 less than younger baby boomer households per year, and older millennial households spent \$1,322 less than older baby boomer households.



Source: (3)

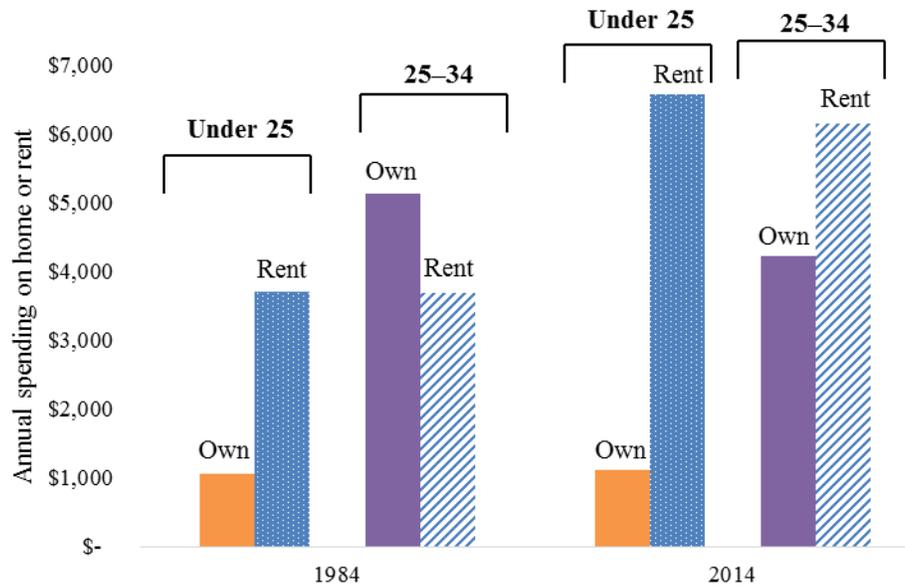
Image source: (45)

Figure 13. Spending on Vehicle Purchases.

Mortgage and Rent

Figure 14 shows annual spending on an owed home or rent by age group in 1984 and 2014 (3):

- For homes they own, younger millennial households spent \$51 more per year than younger baby boomer households. Older millennial households spent \$950 less than older baby boomer households.
- Much larger increases are seen in rent expenditures. Younger millennial households spent almost \$2,869 more per year than baby boomer households. Older millennial households spent \$2,467 more.
- Older millennial households spent more on rent than on homes they own, whereas older baby boomer households spent more on homes they own than on rent.



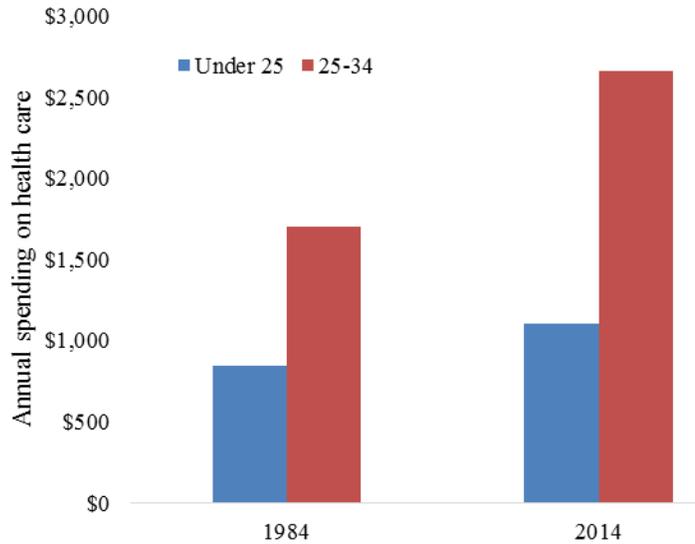
Source: (3)

Figure 14. Spending on Mortgage and Rent.

Health Care

Figure 15 shows that older millennial households spent more on health care than older baby boomer households (3):

- Younger millennial households spent \$258 more than younger baby boomer households on health care per year.
- Older millennial households spent \$960 more than older baby boomer households on health care per year.



Source: (3)

Image source: (46)

Figure 15. Spending on Health Care.

Total Expenditures

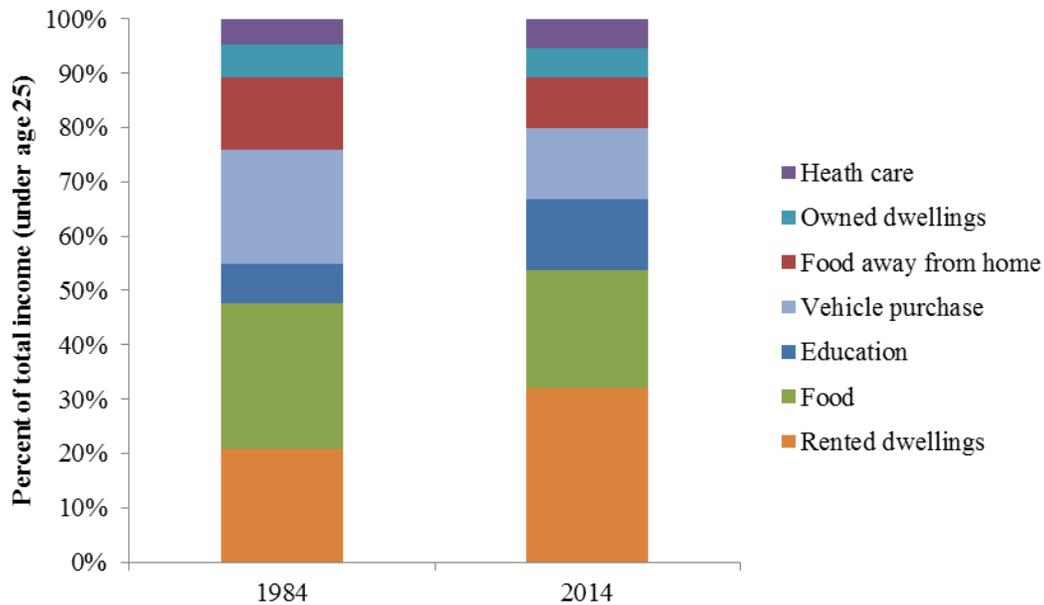
Younger Households

Figure 16 shows that as a percentage of total expenditures, younger millennial households spent the most on:

- Rented dwellings (20 percent).
- Food (14 percent) (3).

Younger baby boomer households spent more on food (16 percent) than rent (12 percent). The largest difference between younger millennial households and younger baby boomer households is spending on rent.

Younger baby boomer households spent 12 percent of their total expenditures on vehicle purchases, whereas younger millennial households spent 20 percent.



Source: (3)

Figure 16. Younger Households' Total Expenditures.

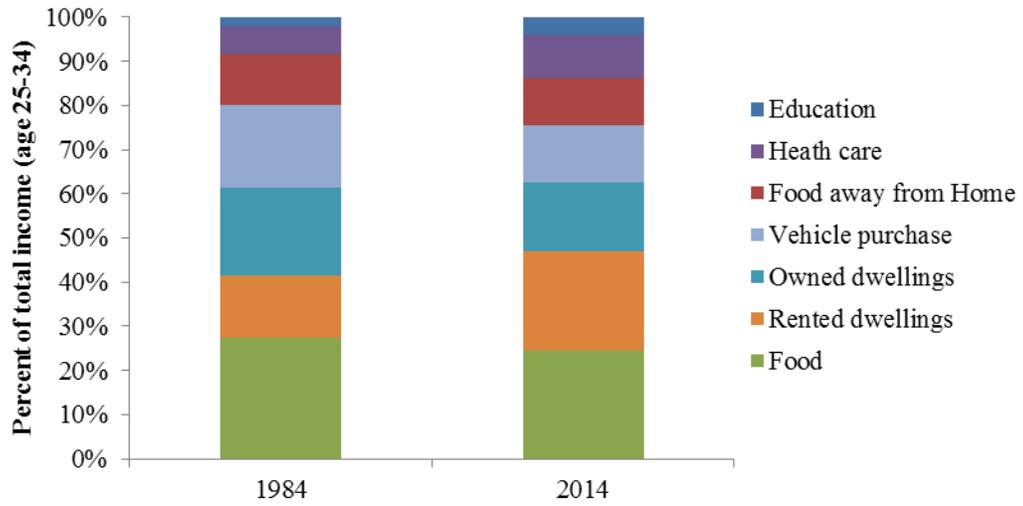
Older Households

Figure 17 shows that older millennial households in 2014 spent the largest percentage of their total expenditures on:

- Food (13 percent).
- Rented dwellings (12 percent).
- Owned dwellings (9 percent) (3).

Older millennial households spent more on rent (12 percent) than older baby boomer households (7 percent).

Older millennial households spent a lower proportion than older baby boomer households on vehicle purchases. Older millennial households spent 7 percent of their total expenditures on vehicle purchases, whereas older baby boomer households spent 10 percent.



Source: (3)

Figure 17. Older Households' Total Expenditures.

Results of Survey

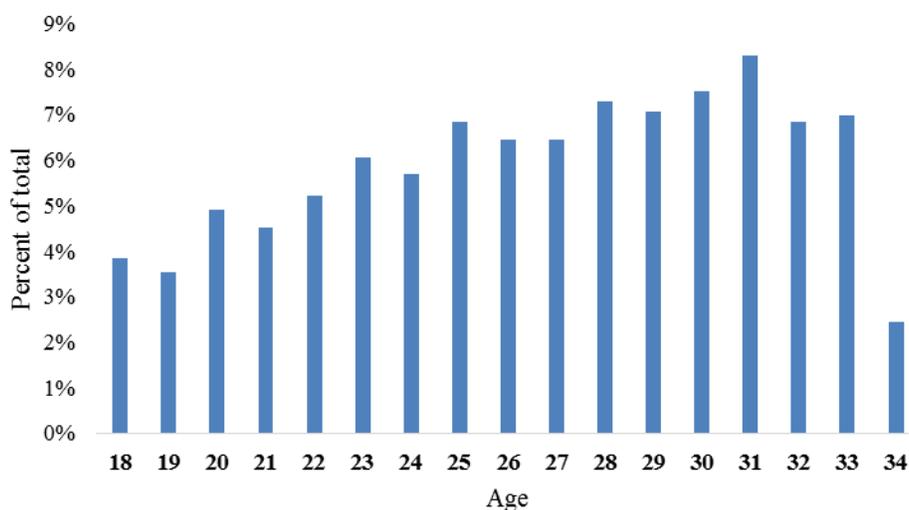
To gather more detailed information on purchasing and Texas millennials (i.e., where they live), researchers used an opt-in survey panel of participants aged 18 to 34 living in Texas. The survey included questions on basic demographic information, as well as shopping and spending habits. Researchers received 1,310 valid responses.

Appendix C contains the full survey questionnaire. Appendix D contains complete descriptive statistics for all survey questions.

Demographics

Age

Figure 18 shows the percentage of each age represented in the survey responses. Most respondents (66 percent) were between 25 and 34 years old, and 34 percent of respondents were 18 to 24 years old.



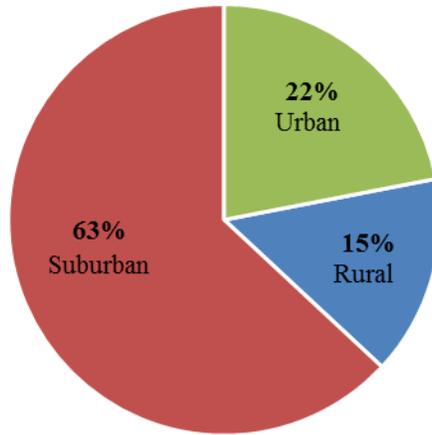
(Number of respondents: 1,310)

Figure 18. Age Distribution of Respondents.

Location

Figure 19 shows where respondents live. The distinction between urban, suburban, and rural was based on housing density data for the respondents' ZIP codes/ZIP code tabulation area codes.⁵ Researchers used this methodology because the U.S. Census *Geographic Areas Reference Manual* includes no official definition of a suburban area (47).

⁵ A full explanation of the methodology is available at <http://jedkolko.com/wp-content/uploads/2015/05/Data-and-methodological-details-052715.pdf>.

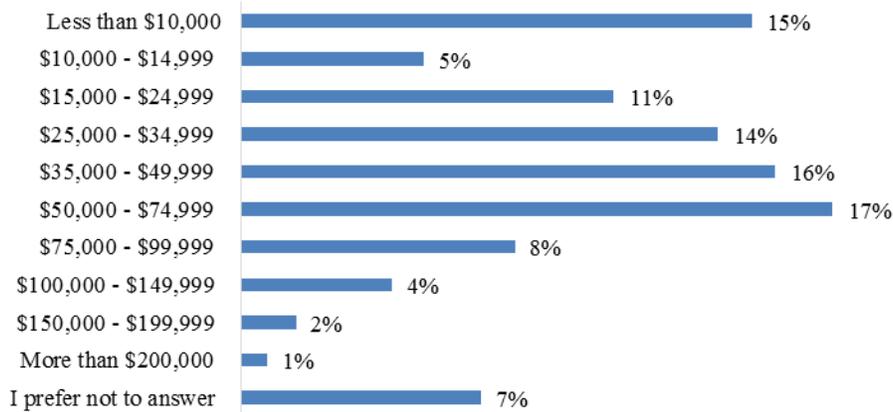


(Number of respondents: 1,307)

Figure 19. Location Distribution of Respondents.

Income

Figure 20 shows the income distribution of respondents. Respondents were asked to select a range for their income. The most frequent response (17 percent) was the income range of \$50,000–\$74,999.



(Number of respondents: 1,310)

Figure 20. Income Distribution of Respondents.

Debt

Table 1 shows the percentage of respondents who reported having each type of debt and the average amount still owed. The most common type of debt was credit card debt (43 percent). However, credit card debt had the lowest average amount still owed. The highest average amount owed was for student debt.

Table 1. Types and Amount of Debt.

Type of Debt	Percent of Respondents	Average Amount
Student debt	37%	\$25,875
Credit card debt	43%	\$4,566
Other debt	28%	\$19,762

Shopping

Where Do Respondents Like to Shop?

Figure 21 shows responses to the question “where do you like to shop?”

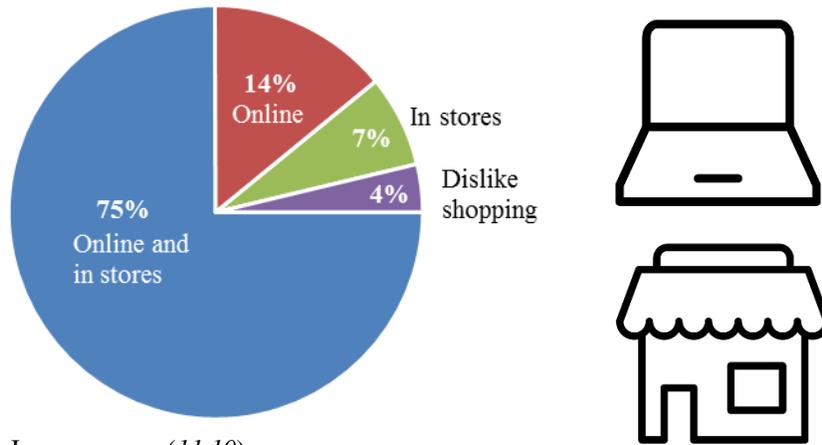


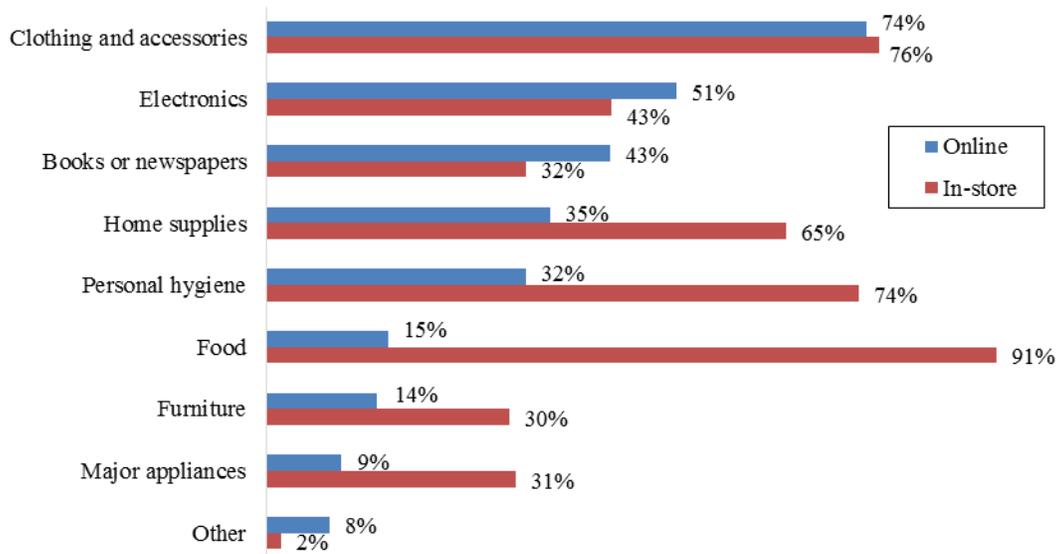
Image source: (11,10)

(Number of respondents: 1,310)

Figure 21. Where Participants Like to Shop.

Type of Products

Figure 22 shows the type of products respondents reported buying online and in stores. The numbers are the percentage of respondents who report buying the item online or in-store. There are differences in the types of products being purchased online and in-store.



Percent of respondents who bought this item

Figure 22. Types of Products.

The figure shows that:

- Clothing and accessories were the most commonly bought product bought online (74 percent of respondents said they bought clothes online). Clothing was even more commonly bought in-store, however (76 percent).
- More respondents reported buying electronics and books or newspapers online than in stores.
- More respondents reported buying home supplies, personal hygiene products, food, furniture, and major appliances in stores than online.

What They Like about Shopping

Table 2 shows what respondents like about online shopping and in-store shopping:

- For online shopping, the most common response was time savings (selected by 70 percent of respondents).
- For in-store shopping, the most common response was taking the item home as soon as it was purchased (selected by 83 percent of respondents).



Image source: (48)

Table 2. What Respondents Like about Shopping Online and In-Store.

Online Shopping		Shopping In-Store	
Time savings	70%	Taking item home	83%
Delivery	66%	Being able to see the item	71%
Lower prices	63%	No delivery fee	64%
More options	60%	Easy returns	38%

Table 3 shows what respondents dislike about online shopping and in-store shopping:

- For online shopping, the most common response was delivery fees (selected by 66 percent of respondents).
- For in-store shopping, the most common response was traveling to the store (selected by 64 percent of respondents).

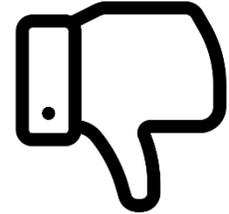


Image source: (49)

Table 3. What Respondents Dislike about Shopping Online and In-Store.

Online Shopping		Shopping In-Store	
Delivery fees	66%	Traveling to store	64%
Waiting for product	62%	Time spent in store	46%
Not able to see item in person	61%	Fewer options	39%
Difficulty of returns	38%	Higher prices	34%

Number of Store Visits

Figure 23 shows the number of store visits per week across geographic area. There is little variation.

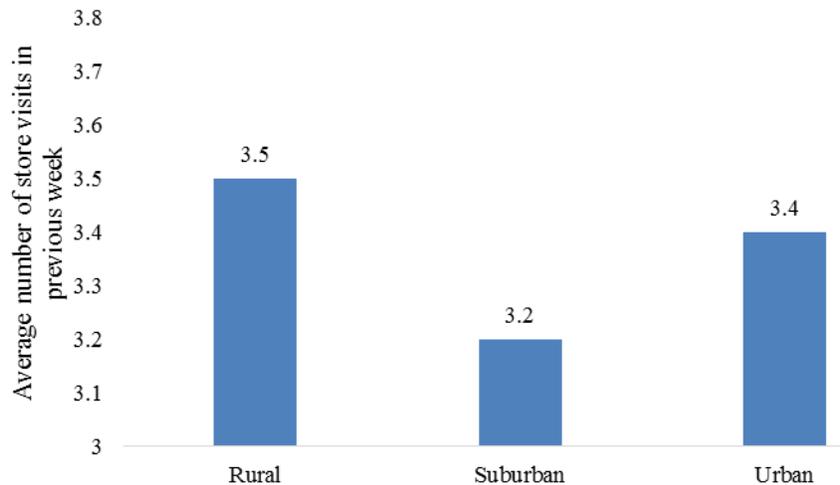


Figure 23. Store Visits per Week by Geographic Area.

Figure 24 shows number of store visits per week across lower (under \$50,000 per year) and upper (over \$50,000 per year) income. Similar to geographic area, there is little variation.

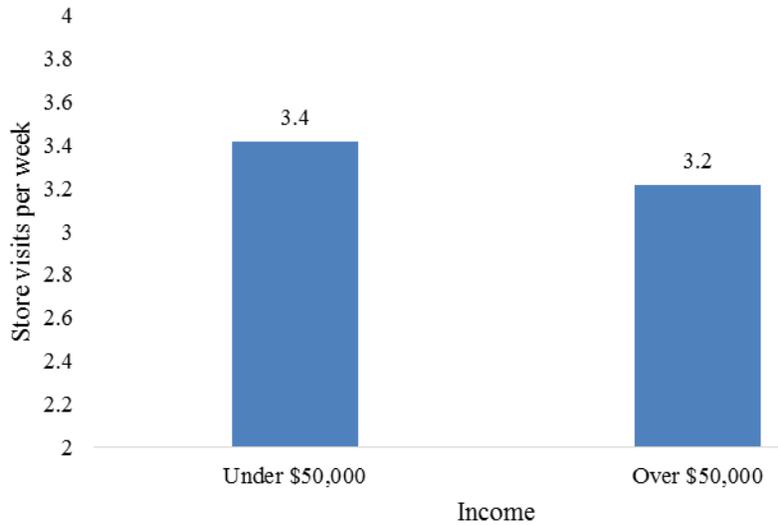


Figure 24. Store Visits per Week by Income.

Figure 25 shows the average number of store visits per week by income level (under or over \$50,000) and geographic area. There does not appear to be a clear relationship between income level and geographic area and number of store visits. For example, low-income rural residents and high-income urban residents, potentially the two groups with the least in common, report the highest number of store visits per week, at 3.8.



Figure 25. Store Visits per Week by Income and Geographic Area.

Figure 26 shows the average number of store visits in the last week by number of packages received.⁶ Respondents who received one package in the previous week reported the lowest number of store visits. Respondents who received eight packages in the previous week reported the highest number of store visits.

⁶ For clarity, the number of packages received in the last week was limited to 10. This excluded only three observations: 20 packages, 25 packages, and 50 packages.



Figure 26. Average Number of Store Visits by Number of Packages Received.

Who Receives the Most Packages?

Figure 27 shows whether or not respondents received a package in the previous week of something they ordered online.

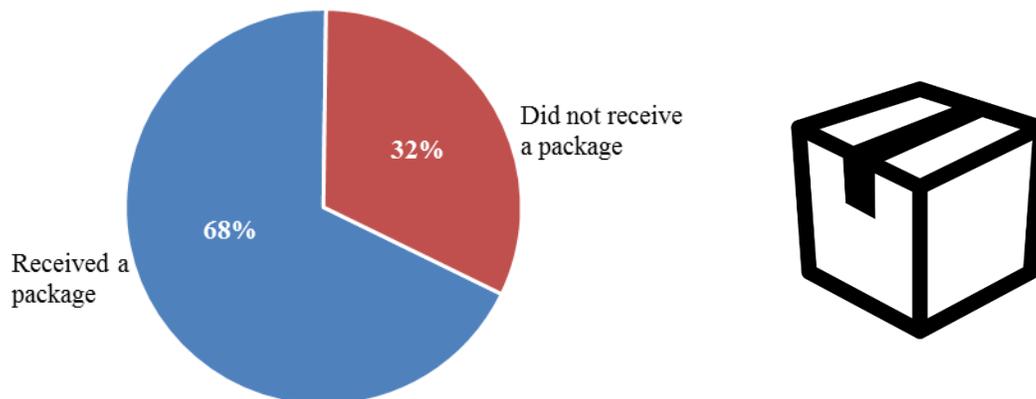


Image source: (8)

(Number of respondents: 1,309)

Figure 27. Which Respondents Received an Online Order in the Previous Week.

Number of Packages

If respondents said that they had received a package from an online order in the previous week, they were asked how many packages they had received. Figure 28 shows the number of packages that respondents reported receiving in the previous week. Seventy percent of respondents received one or two packages in the previous week. This indicates that respondents are not dependent on online shopping for the majority of their goods, but it does seem that online shopping has become a regular part of how millennials purchase items.



(Number of respondents: 854)

Figure 28. Number of Packages Received.

Geographic Area

Figure 29 shows the percentage of respondents who received a package in the previous week, of something they ordered online, by geographic area. A slightly higher percentage of suburban residents received a package (70 percent). However, urban residents received slightly more packages (2.6 packages).

Fewer rural respondents received an online order in the previous week than suburban and urban respondents. However, the number of packages received by those who had received an online order varied little across rural, suburban, and urban area. This suggests that if people are ordering items online, they are receiving a similar number of packages regardless of their geographic area.

Geographic Area Did Not Affect Number of Packages

There was very little difference in the average number of packages received across geographic areas. Of respondents who had received at least one package in the previous week, the average number of packages was:

- **Rural:** 2.4 packages.
- **Suburban:** 2.3 packages.
- **Urban:** 2.6 packages.

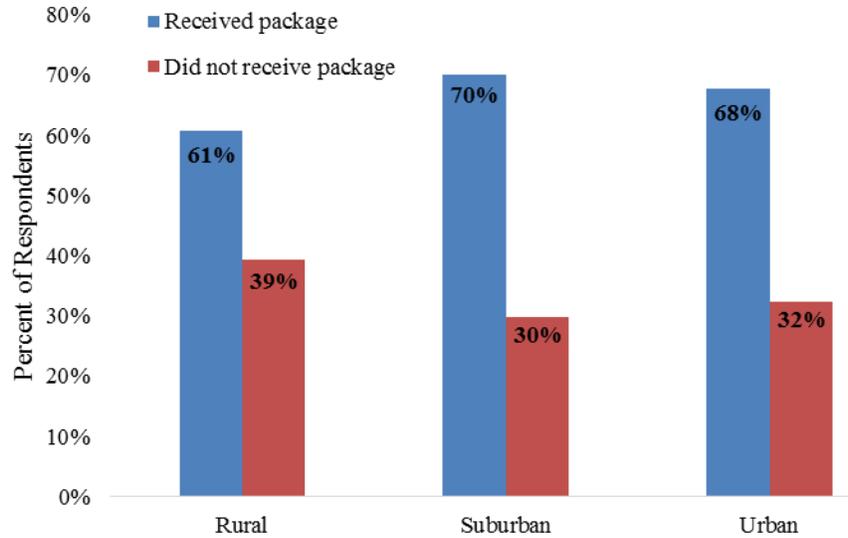


Figure 29. Packages Received by Geographic Area.

Income

Figure 30 shows the percentage of respondents who received an online order by income level. As income level increases, so does the likelihood of having received a package in the previous week.

In the lowest income group (less than \$25,000), 53 percent of respondents had received a package in the previous week. The highest income groups received slightly more packages. Both the \$50,000–\$74,999 income group and the over \$75,000 income group received 2.7 packages per week.

Wealthiest Received the Most Packages

Higher income was associated with more packages received. Of respondents who had received at least one package in the previous week, the average number of packages was:

- **Less than \$25,000:** 2 packages.
- **\$25,000–\$49,999:** 2.2 packages.
- **\$50,000–\$74,999:** 2.7 packages.
- **Over \$75,000:** 2.7 packages.

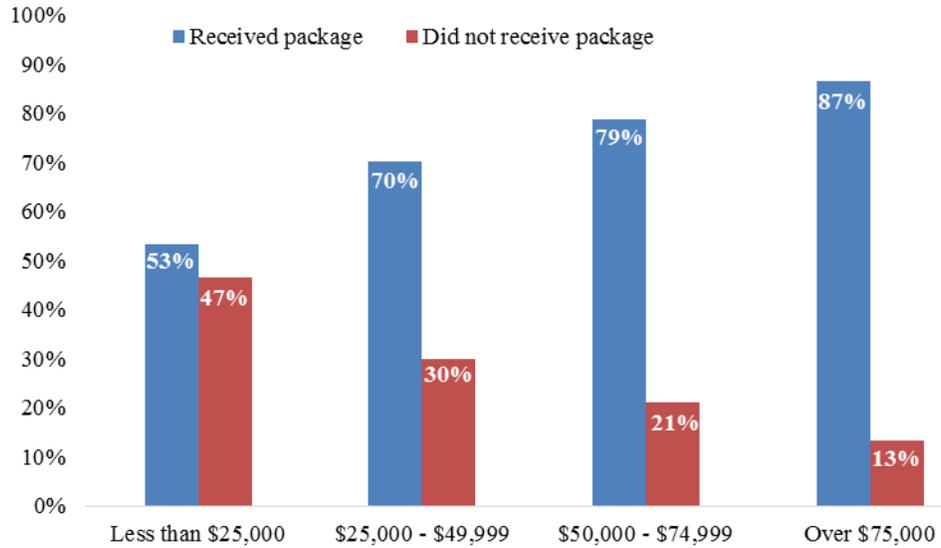


Figure 30. Packages Received by Income.

Relationship between Geographic Area and Income

To create a simple display for the relationship between income and geographic area, researchers combined income groups under \$50,000 and income groups over \$50,000.⁷

Figure 31 shows the percentage of respondents that earn under \$50,000 and over \$50,000 per year by geographic area. The highest percentage of rural residents (77 percent) earns under \$50,000. Suburban and urban areas have very similar percentages of residents earning under \$50,000.

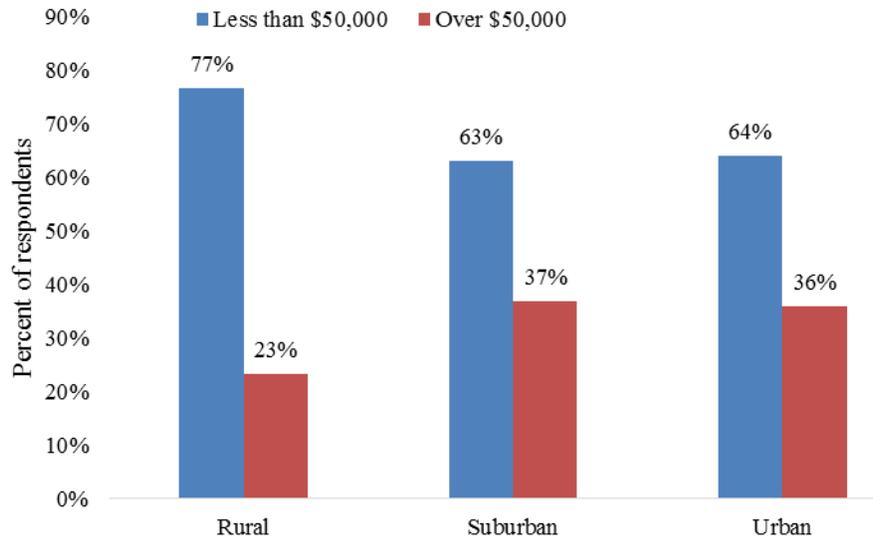


Figure 31. Income by Geographic Location.

⁷ Income of under \$50,000 combines the first half of income ranges participants could choose and includes 61 percent of respondents. Income of over \$50,000 combines the second half of income ranges participants could choose and includes 39 percent of respondents.

Figure 32 shows the number of packages respondents reported receiving in the previous week. Respondents are grouped by geographic area and income (under \$50,000 and over \$50,000). In the under \$50,000 group, there is little variation across geographic area. For earners over \$50,000, however, urban residents received more packages on average than rural or suburban residents.

The number of packages received across geographic area varied only slightly. Income had a stronger relationship with the number of packages received, with the number of packages increasing as income increased. For lower earners, the number of packages received varies little across geographic area. For higher earners, urban residents received more packages than rural and suburban residents.

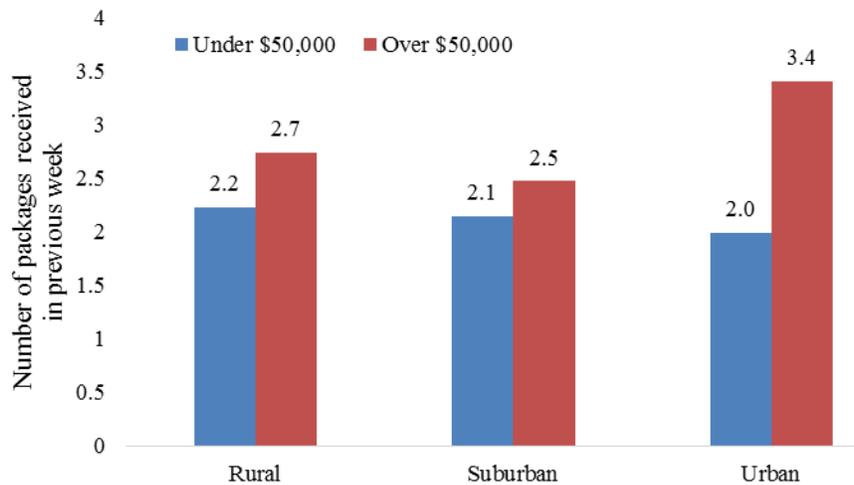


Figure 32. Packages Received by Geographic Area and Income.

How Quickly Do Packages Arrive?

Figure 33 shows how long it took for the last package respondents received to arrive at their home. The most frequent response was three to five business days (48 percent).

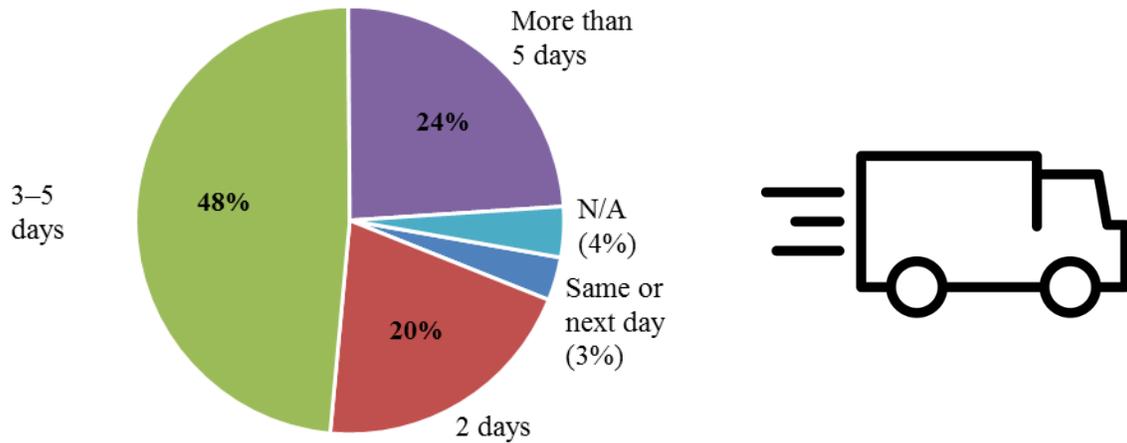


Image source: (50)

(Number of respondents: 1,309)

Figure 33. Delivery Time.

Geographic Area

Figure 34 shows how quickly respondents received their most recent package by geographic area. Less than 5 percent of respondents in all areas received their most recent package the same or next day. The most common delivery time was three to five business days for rural (54 percent), suburban (48 percent), and urban (45 percent) respondents.

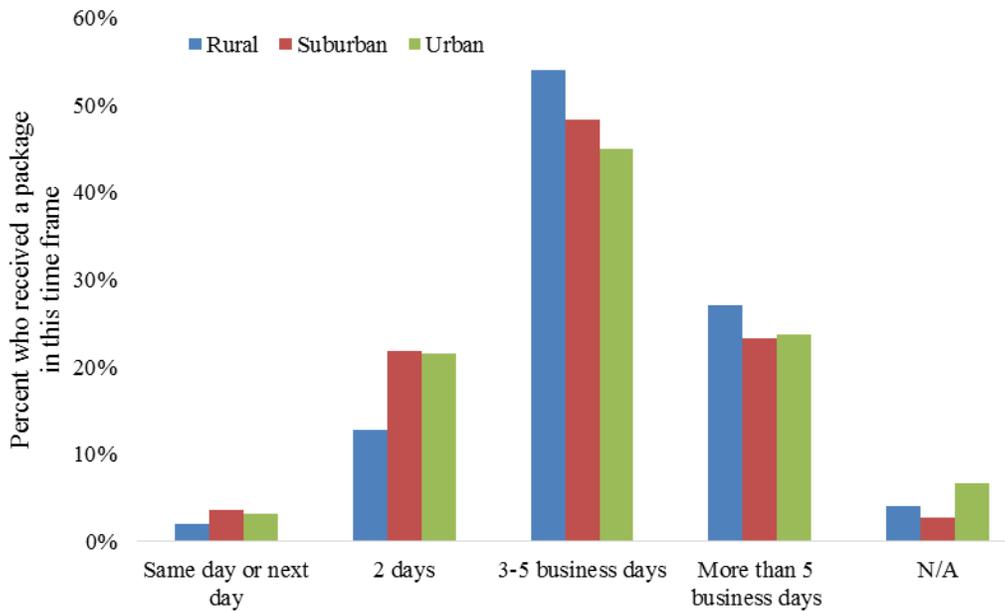


Figure 34. Delivery Time by Geographic Area.

Income

Table 4 shows delivery time for the most recent package received by income. The percent of respondents who received their last package in two days or less increases with income. Over a

third of the highest earners (over \$75,000) received their last package in two days or less, compared to 16 percent of the lowest earners (under \$25,000).

Table 4. Delivery Times by Income.

Income	2 Days or Less	Over 2 Days
Less than \$25,000	16%	78%
\$25,000–\$49,999	24%	73%
\$50,000–\$74,999	31%	68%
Over \$75,000	35%	62%

Relationship between Geographic Area and Income

Figure 35 shows the percentage of respondents who received their last package in two days or less by income, across geographic areas. A higher percentage of high earners (over \$50,000) received their packages within two days than lower earners in all geographic regions.

Urban and suburban residents, however, received packages faster than rural residents in both the low- and high-earner categories. The highest percentage of high-earning, urban residents received their last package within two days.

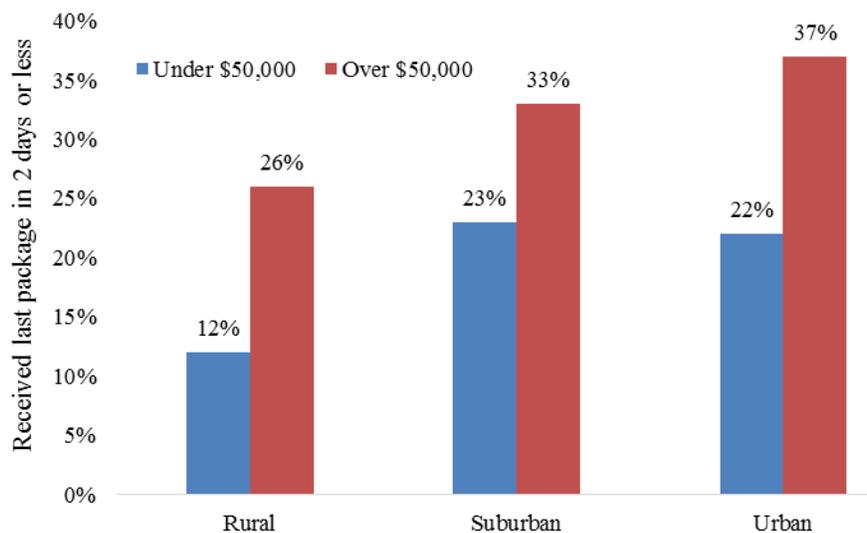


Figure 35. Delivery Time by Geographic Area and Income.

Who Has Amazon Prime?

Because Amazon Prime membership offers free two-day shipping⁸ on many items and same-day delivery on some items, and currently has 54 million members, it is a potentially significant driver of quick home delivery (51). Survey respondents were asked whether or not they were Amazon Prime members.

Figure 36 shows the percentage of respondents who have an Amazon Prime membership.

⁸ Amazon Prime has an annual membership fee of \$99.

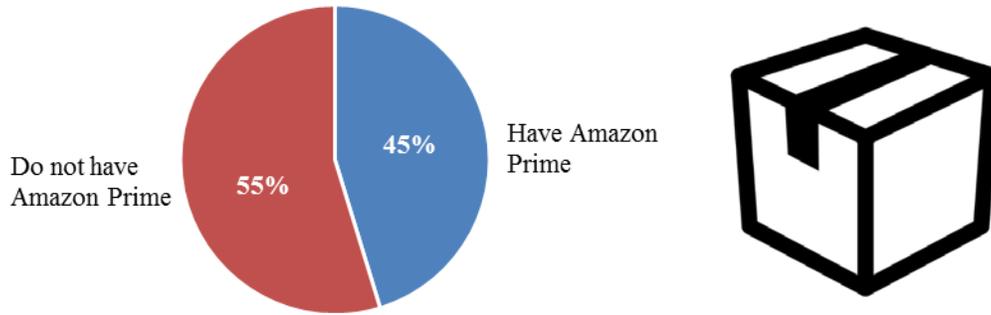


Image source: ()

(Number of respondents: 1,281)

Figure 36. Percentage of Amazon Prime Membership.

Figure 37 shows the percentage of respondents who have Amazon Prime by geographic area. Suburban residents have the highest Amazon Prime membership rate, at 48 percent.

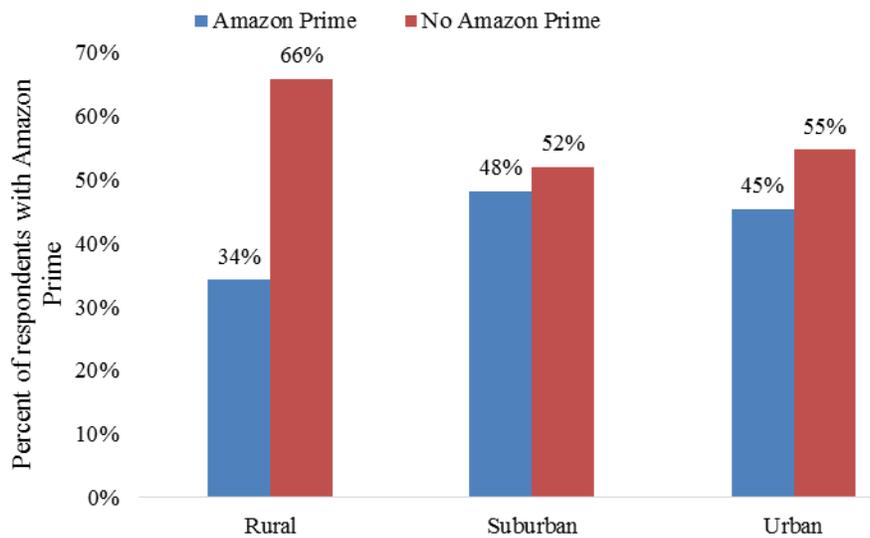


Figure 37. Percentage of Amazon Prime Membership by Geographic Area.

Figure 38 shows the delivery time for the last package Amazon Prime members received by geographic area. Less than 7 percent of Amazon Prime members in each area received packages the same or next day. The three to five business day time frame was the most common for the last package received for Amazon Prime members.

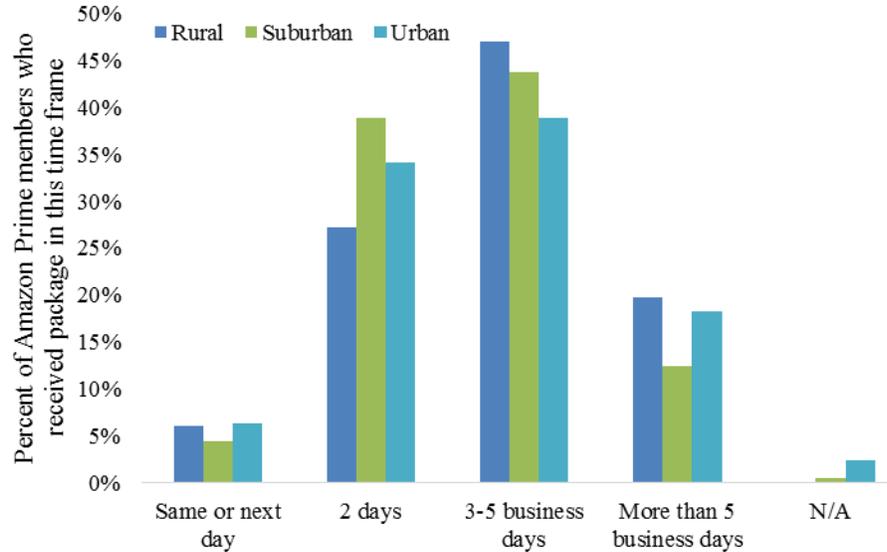


Figure 38. Delivery Times by Geographic Area for Amazon Prime Members.

Table 5 shows the percentage of respondents who received their last package in two days or less by geographic area and Amazon Prime membership. Combining the “two days” and “same or next day” categories provides the percentage of respondents who received their last package in two days or less.

Table 5. Percentage of Respondents Who Received Their Last Package in Two Days or Less.

Location	Amazon Prime Member	Non-member
Rural	33%	6%
Suburban	43%	9%
Urban	41%	13%

In all three geographic areas, a higher percentage of Amazon Prime members, compared to non-members, received their last package in two days or less. However, even for Amazon Prime members, less than half of respondents from all three geographic areas received their last package in two days or less.

This indicates that the majority of packages still travel more slowly than the speed offered by Amazon Prime, even among Amazon Prime members. This could be for a number of reasons, including that the most recent items respondents purchased were not purchased through Amazon or that the item did not qualify for Amazon’s two-day shipping.

Did Respondents Return Items?

If respondents received a package in the previous week of something they ordered online, they were asked if they had returned anything. Figure 39 shows that most respondents did not return anything.

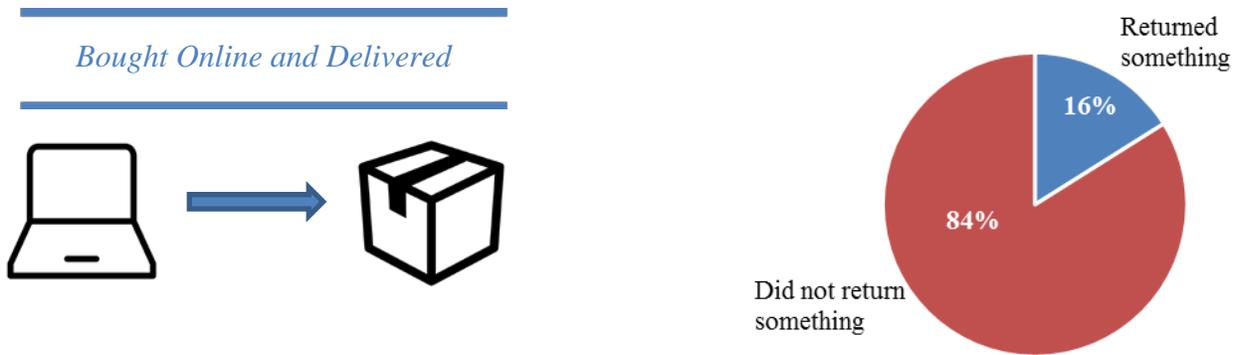


Image source: (11,8)

(Number of respondents: 890)

Figure 39. Percentage of Respondents Who Returned an Online Order.

Figure 40 shows that 26 percent of respondents who ordered something online and picked it up in a store returned an item.



Image source: (11,10)

(Number of respondents: 231)

Figure 40. Percentage of Respondents Who Bought Online and Picked Up In-Store.

Figure 41 shows that 14 percent of respondents returned something they had bought in a store.

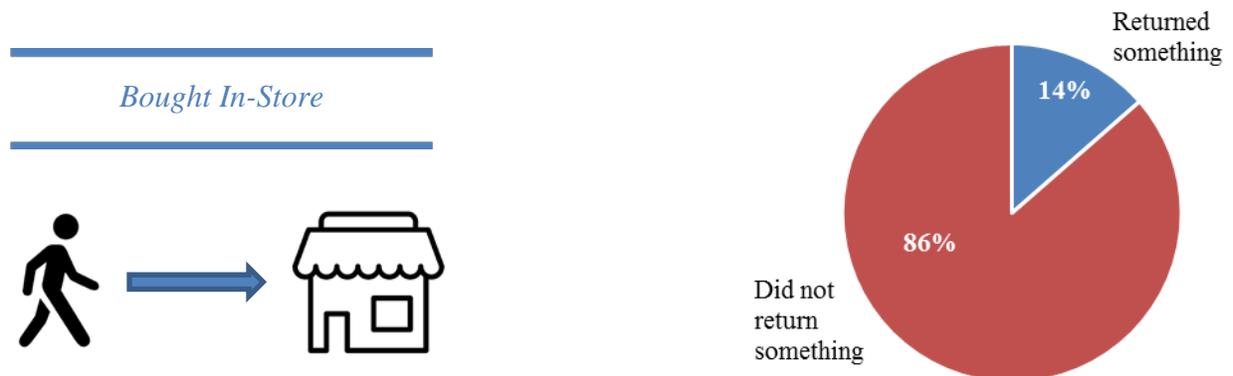


Image source: (52,10)

(Number of respondents: 1,305)

Figure 41. Percentage of Respondents Who Returned Something They Bought In-Store.

Of the three order options, the one that generated the most returns was buying online and picking up in-store, with 26 percent of respondents who ordered something in this way returning an item. This is followed by deliveries for online orders (16 percent) and buying in-store (14 percent).

Living Arrangements and Buying Homes

Respondents were asked questions about their current living arrangements and their future plans for buying a home.

Currently Owning or Renting

Figure 42 shows the percentage of rural, suburban, and urban residents that reported owning or renting their homes. Respondents could also reply “neither.” The tendency to own a home decreases as housing density increases (from rural to suburban to urban). The tendency to rent increases as housing density increases.

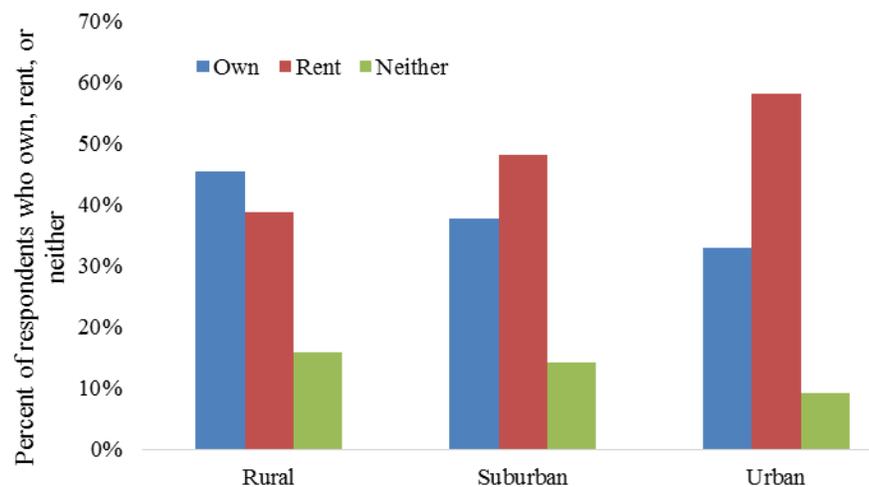
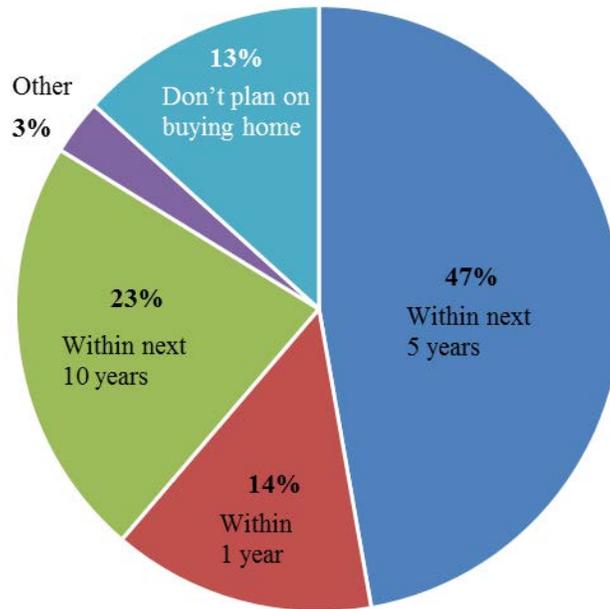


Figure 42. Percentage of Respondents That Reported Owning or Renting Their Homes.

The largest percentage of rural respondents (45 percent) reported owning their home. More suburban residents reported renting their home (48 percent). Urban residents rented at the highest rate (58 percent).

Timeline for Buying a Home

Figure 43 shows the responses when respondents were asked what their timeline for buying a home was. Among the most frequent write-in responses for the “other” category were “in 20 years,” “in 15 years,” and “living with a spouse or inherited a home.”



(Number of respondents: 813)

Figure 43. Respondents' Timeline for Buying a Home.

Where Respondents Want to Buy a Home

Unless respondents indicated that they did not plan on buying a home, they were asked where they would like to buy a home. Figure 44 shows where respondents reported they would like to buy a home.⁹ Some of the write-in answers for the “other” category included “in the countryside,” “near a city,” and “depends on quality of home and location of job.”

⁹ Participants were not provided with a definition of urban, suburban, or rural area. Therefore, the responses to this question reflect how participants themselves define those areas. Participants' perceptions of what an urban, suburban, or rural area is may differ from how the study team categorized zip codes as urban, suburban, or rural (based largely on housing density).

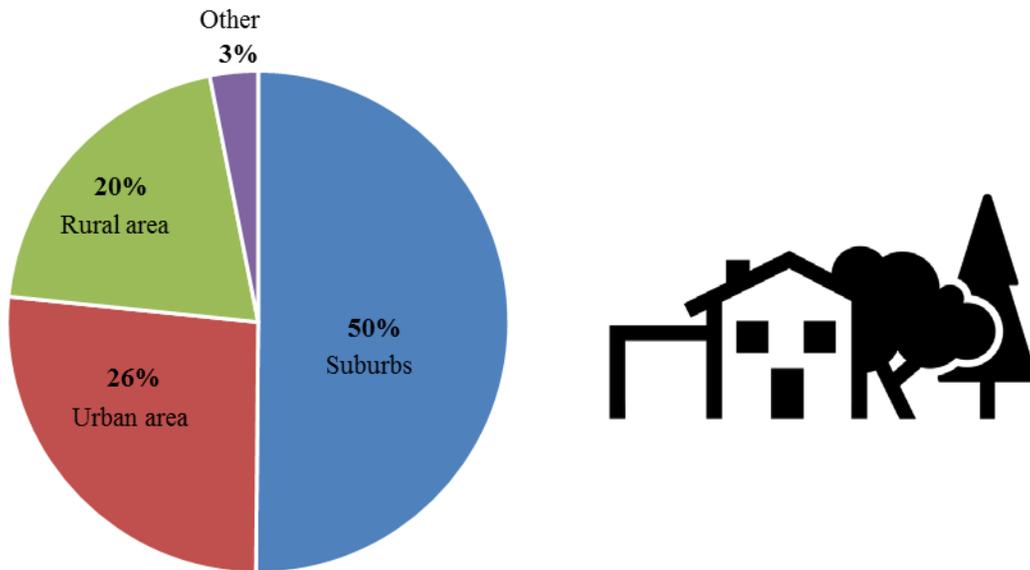


Image source: (7)

(Number of respondents: 716)

Figure 44. Where Respondents Would Like to Buy a Home.

Table 6 shows where respondents want to buy homes and where they currently live.¹⁰ Bold and underlined numbers represent the percentage of respondents who want to buy a home in the same geographic area as they currently live. Most respondents tended to want to buy a home in the same type of geographic area where they currently live. However, urban residents are slightly different—the same percentage of urban residents reported wanting to buy a home in a suburban area as those wanting to stay in an urban area.

Table 6. Where Respondents Would Like to Buy a Home Compared to Where They Currently Live.

Current Location	Desired Location			
	Urban	Suburban	Rural	Other
Rural	6%	38%	<u>57%</u>	0%
Suburban	24%	<u>56%</u>	16%	3%
Urban	<u>42%</u>	42%	12%	4%

Table 7 shows where respondents would like to buy a home by their income level. For each income group, the highest percentage of respondents wanted to buy a home in the suburbs, represented by the bold and underlined numbers. The desire to buy a home in the suburbs is relatively stable across income levels, with around 50 percent of respondents reporting wanting to buy a home there.

¹⁰ Participants were not provided with a definition of urban, suburban, or rural area. Therefore, the responses to this question reflect how participants themselves define those areas. Participants' perceptions of what an urban, suburban, or rural area is may differ from how the study team categorized zip codes as urban, suburban, or rural (based largely on housing density). Totals may not add to 100 because of rounding.

Table 7. Where Respondents Would Like to Buy a Home by Income.

Income	Desired Location			
	Urban	Suburban	Rural	Other
Less than \$25,000	25%	<u>50%</u>	21%	5%
\$25,000–\$49,999	25%	<u>52%</u>	21%	3%
\$50,000–\$74,999	30%	<u>48%</u>	22%	0%
Over \$75,000	33%	<u>51%</u>	16%	0%

As income increases, so does the percentage of respondents who want to buy a home in an urban area. The percentage of respondents who want to buy a home in an urban area is highest (33 percent) among those with incomes over \$75,000.

About 20 percent of respondents want to buy a home in a rural area, except for those with incomes over \$75,000. Among earners over \$75,000, 16 percent said they want to buy a home in a rural area.

Conclusions

This research focused on millennials because of their importance as consumers. As baby boomers get closer to becoming the oldest generation of Americans, millennials have taken their place as the largest generation. Millennials make up more of the total population and more of the workforce than baby boomers (16,53).

In some ways, millennials appear different than their baby boomer counterparts in 1980. Compared to baby boomers at the same age, national data show that millennials are better educated and save more money (2,3). They also spend more on education, rent, and health care than baby boomers did (3). Millennials live with family as dependents at a higher rate than baby boomers did and have lower homeownership rates (author calculations based on [4, 5]).

In other ways, millennials are not unique. They still like to shop in stores, and most would like to buy a home in the near future if they do not already own one.

Shopping behavior is the piece most directly related to freight. Purchasing drives much of freight—people demand goods, and those goods are shipped to a store where they can be purchased, or goods are shipped directly to a home in the case of online shopping. Because of this, millennials' consumer behavior and expectations will impact the future of the freight transportation system in Texas.

Much of the current analysis of millennials has focused on online shopping because of its newness compared to traditional in-store shopping. Though catalog shopping once contributed to home freight deliveries, no data are available on the number of catalog orders placed by baby boomers when they were the same age as millennials. Catalogs are still used by some retailers; however, the focus is on marketing, not mail order sales (54). Currently, most catalogs do not contain order forms. Instead, they encourage shoppers to visit their stores or shop online (55).

The traditional model of goods being purchased in-store is no longer the only option for consumers, and companies offering quick and inexpensive delivery may be shaping consumer behavior and demand. But the relationship between online shopping and individual shopping trips is unclear. The idea that online shopping replaces personal shopping trips and reduces travel has been discredited in various studies (56). Some research has even shown that online shopping is related to more personal shopping trips (57,58).

What is clear is that retailers are innovating to encourage online purchasing, and many are quickly gaining customers. Amazon Prime, which offers free two-day shipping to its members, currently has 54 million members and increased its membership by 35 percent in 2015 (51). In 2014, Amazon introduced Prime Now, which offers 1- to 2-hour delivery on certain items in over 20 cities (59). Other companies, such as Postmates, Deliv, Google Express, and UberRush, deliver food and other goods in the same day. Additionally, grocery delivery on a large scale is a recent development in online shopping. Instacart, an online grocery delivery service, topped the 2015 Forbes "America's Most Promising Companies" list (60). The company, which offers

services in 19 states, mostly in metro areas, is already turning a profit (61,62). Amazon's version, called AmazonFresh, is also available in a handful of metro areas (63).

In order to better understand Texas millennials, the research team surveyed 1,310 people aged 18 to 34 living in Texas. Participants were asked questions about basic demographic information and shopping behavior. Online shopping appears to have become a regular aspect of shopping for millennials, with 68 percent of the current survey respondents receiving an online order in the previous week. However, the study showed that respondents had different shopping preferences for different items. For example, respondents still predominantly buy food, home supplies, personal hygiene products, furniture, and major appliances in-store. They appear to prefer to buy electronics, books, and newspapers online.

Shopping preferences appear to vary by income, more so than by geographic area. Millennials living in rural, suburban, or urban areas reported receiving a similar number of packages. However, higher-income respondents received more packages than lower-income respondents. Higher-income respondents were also more likely to receive a package in two days or less than lower-income respondents.

High earners received more packages across all geographic areas, and high-earning urban residents received the most packages. Over half (55 percent) of high-earning urban residents would like to buy a home in a suburban or rural area, compared to 45 percent who would like to buy a home in an urban area. Because this is the group that reported receiving the most packages, this means that demand for fast home delivery could shift to a new geographic area if they moved.

With regard to store visits, it appears that online shopping will not replace in-store shopping for now. Most respondents reported liking shopping online and in-store, and 95 percent of respondents visited a store in the previous week, compared to 68 percent who received an online order. Of those who did receive orders, 70 percent receive two packages or less. This indicates that millennials are not dependent on online shopping for the majority of their goods, though it does seem that online shopping has become a regular part of how they purchase items. The number of store visits per week is similar across income and geographic areas, but it appears that online shopping may be a supplement to traditional in-store shopping for some groups. This is because online orders increase with income, whereas store visits do not. Online shopping as a supplement to traditional shopping seems most prevalent among high-income, urban millennials who report receiving the most packages in the fastest times.

The prevalence of affordable delivery options for consumers, such as Amazon Prime, may increase demand for fast delivery times in the future. Online shopping presents unique challenges to freight. Certain aspects of home delivery are inefficient compared to the typically full truck loads that drop goods off at warehouses or retail centers. Logistics providers often carry less-than-truckload hauls for home delivery, as opposed to a fully loaded truck that drops things off at a distribution center. An additional issue with home delivery is failed first delivery attempts,

which can be between 12 and 60 percent of deliveries (13). When an item cannot be delivered on the first attempt, not only is the delivery delayed, but the transportation and labor costs increase.

However, currently, millennials still like to shop in stores and do not receive the majority of their packages in two days or less. The survey showed that though online shopping is an important part of how millennials purchase goods, it has not replaced traditional shopping in stores.

Therefore, the demands placed on the freight network by inventory deliveries to brick-and-mortar stores are not expected to change. Online shopping, a more recent development, does appear to place unique demand on the freight network, with a high number of small package home deliveries. High-earning urban millennials received the most packages, and 45 percent reported wanting to buy a home in an urban area. However, 40 percent of high-earning urban millennials stated wanting to buy a home in a suburban area, and overall most participants say they plan to buy a home in a suburban area as well. The number of package deliveries was most closely tied to income, so congestion due to this type of delivery may geographically follow high earners. Increased deliveries to urban areas could add to already congested city centers, and increased deliveries to suburban areas could add congestion to areas where traffic is traditionally lighter.

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Appendix A: Literature Review

A popular narrative exists around millennials that they are lazy, self-centered, and underemployed. A *Time* cover article in 2013 called them “The Me Me Me Generation” and stated: “What millennials are most famous for besides narcissism is its effect: entitlement” (2).

On the other hand, millennials are more educated but make almost no more money than baby boomers at the same age. Additionally, millennials are faced with greater income inequality, and more are living in poverty than baby boomers (3,4).

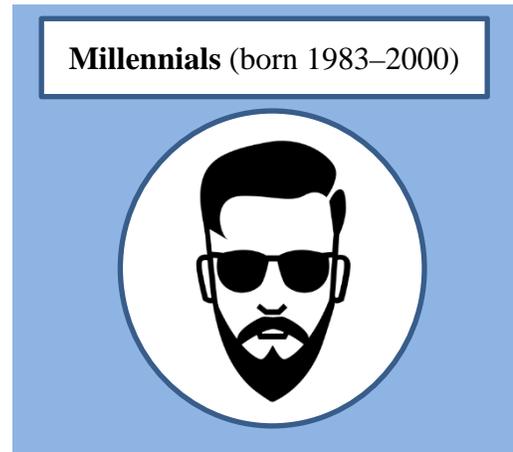


Image source: (1)

In this appendix, the authors summarize the literature about how millennials differ from baby boomers at the same age.

Texas

Millennials make up over 25 percent of the U.S. population and are the largest generation in the workforce (5,6). Texas is home to four of the 10 fastest growing cities in the United States, and millennials have been credited with contributing to the growth (7,8). Austin, Houston, and Dallas-Fort Worth were included in Nielsen’s 2013 list of top 10 highest concentrations of millennial population in the United States (9). Americans overall tend to be moving to areas with fast-growing suburbs in the South (10).

Education and Earnings

Millennials are better educated than baby boomers. The Pew Research Center recently conducted an analysis of 25- to 32-year-olds based on survey and census data. The center found that 34 percent of millennials have at least a bachelor’s degree, compared to 24 percent of baby boomers at a similar age (12). Figure 45 shows that although more millennials have college degrees than baby boomers, most millennials (almost two-thirds) do not have a college degree.



Image source: (11)

Millennials (34%)



Baby Boomers (24%)



 College Degree

Figure 45. More Millennials Have Bachelor's Degrees than Baby Boomers.

Despite being better educated than baby boomers (as shown in Figure 45), millennials are earning less than \$200 a year more than baby boomers (2012 dollars) (12). Furthermore, millennials with only a high school diploma are doing worse than past generations. The wage gap between millennials with at least a bachelor's degree and those who have a high school diploma is greater than in past generations.

Figure 46 shows the earnings of those with a high school diploma as a percentage of earnings with a college degree.¹ High school graduates in 1979, during the boomers' early work years, earned 77 percent of what college graduates earned. In 2013, millennial high school graduates earned 62 percent of what millennial college graduates earned. Additionally, in 2013, 22 percent of people aged 25 to 32 with a high school diploma were living below the poverty line. Only 7 percent of baby boomers with high school diplomas were living in poverty at the same age (12).

¹ The infographic was created using infogr.am, available at <https://infogr.am>.

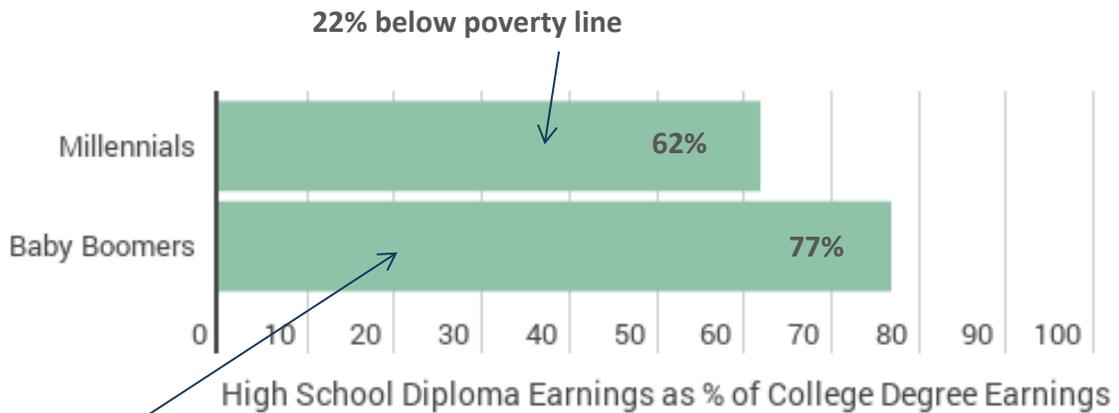


Figure 46. Earnings of Millennials and Baby Boomers with a High School Diploma as a Percentage of Earnings with a College Degree.

Student debt is a financial challenge for many millennials. The Pew Research Center stated that in 2010, 37 percent of young households owed student debt, up from 22 percent in 2001 (13). Between 2005 and 2012 alone, the number of students borrowing money for school increased by over 15 million, and the average student loan balance went from \$16,651 to \$24,803 (14).

Figure 47 shows that average student debt increased by almost 50 percent between 2005 and 2012.² The poorest households seem to be the most impacted. The poorest 25 percent of households by net worth owed 58 percent of all student debt. Student loans are now the most likely type of loan to be overdue on payments.³

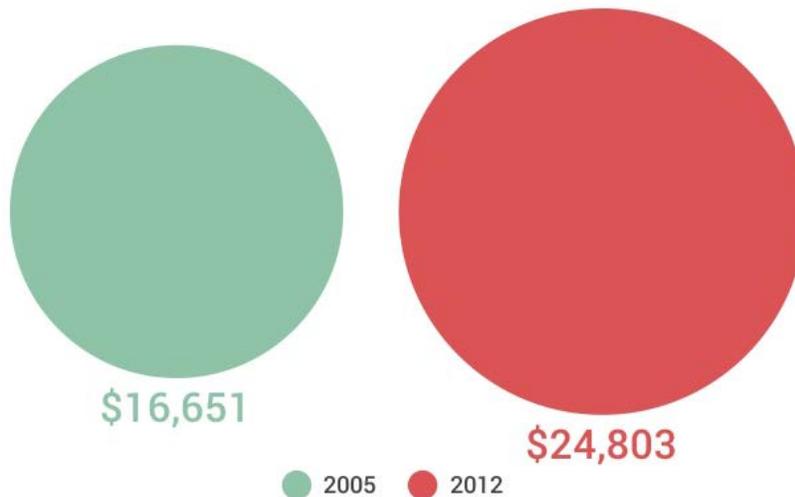


Figure 47. Average Student Debt in 2005 and 2012.

² The infographic was created using infogr.am, available at <https://infogr.am>.

³ Although many millennials owe large amounts of student debt, the Pew Research Center noted that young student debtors are just as likely to own homes or cars as those without student debt. More information is available at http://www.pewsocialtrends.org/files/2014/05/ST_2014.05.14_student-debt_complete-report.pdf.

Leaving the Nest

Housing

During the economic recession, the number of young adults living independently decreased. Young people either delayed moving out of their parents' homes or moved back in with family during difficult financial times (16). However, more recent research shows that the percentage of young men and women living with family has increased since the recession, even though the economy has improved (17). This increase in dependent living has occurred for 25- to 34-year-olds of all education levels (18). More young people live with family even as unemployment among their age group is decreasing. This suggests the reason they live at home may be unrelated to a lack of employment opportunities (18).

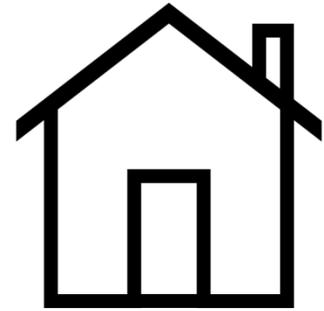


Image source: (15)

Marriage

Millennials are getting married later in life than at any other time. Figure 48 shows an upward trend in age of first marriage in the United States. Average age of marriage has been steadily increasing since the 1960s (19). As more young people live with family and marriage age increases, the median age of home buyers has also increased (20).

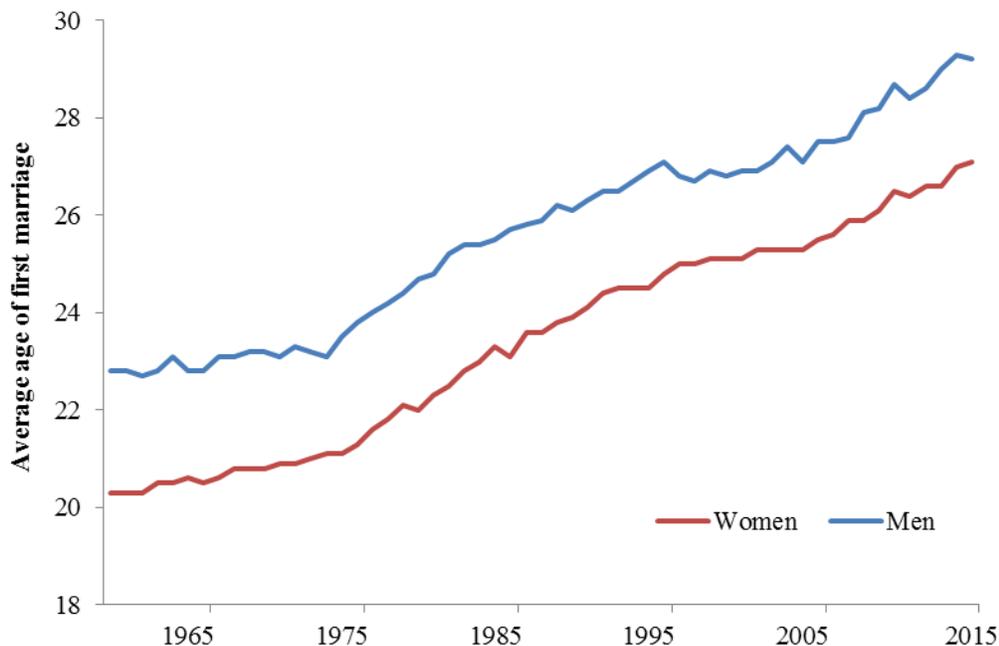


Image source: (21)

Figure 48. Millennials Are Getting Married Later than Before.

City versus Suburb

The literature about whether or not millennials prefer living in the city or suburbs is not conclusive. Some research suggests that millennials prefer living in dense, urban areas. A recent Nielsen study stated, for example, that millennials are living in urban areas at higher rates than other generations, and that 40 percent would like to continue living there in the future (9,22). A study by the City Observatory characterized 25- to 34-year-olds with at least a bachelor's degree as the "young and restless" and pointed out their tendency to move to urban areas close to city cores (23). StatCh@t, a group of demographers at the University of Virginia, states that the current generation of young adults is more likely to live in cities than previous generations but also states that they will most likely move to the suburbs in the future (24).

Other research indicates that millennials may actually prefer the suburbs. Using census mobility data, fivethirtyeight.com showed that more people aged 25 to 29 moved from cities to suburbs between 2013 and 2014 than from suburbs to cities (25). The same article provides data indicating growth in cities is due to immigration and births, not migration from within the United States. Others have noted that less than half of millennials actually live in cities. Numbers range from 30 percent of millennials living in core counties within large metropolitan areas to 39 percent of millennials living in medium-sized or big cities (26,27). Older millennials and young gen Xers, aged 30 to 44, are moving to the suburbs at even faster rates than in the 1990s (25). Figure 49 summarizes the literature on millennials living in cities and suburbs.⁴

⁴ The infographic was created using Piktochart, available at <http://piktochart.com>.

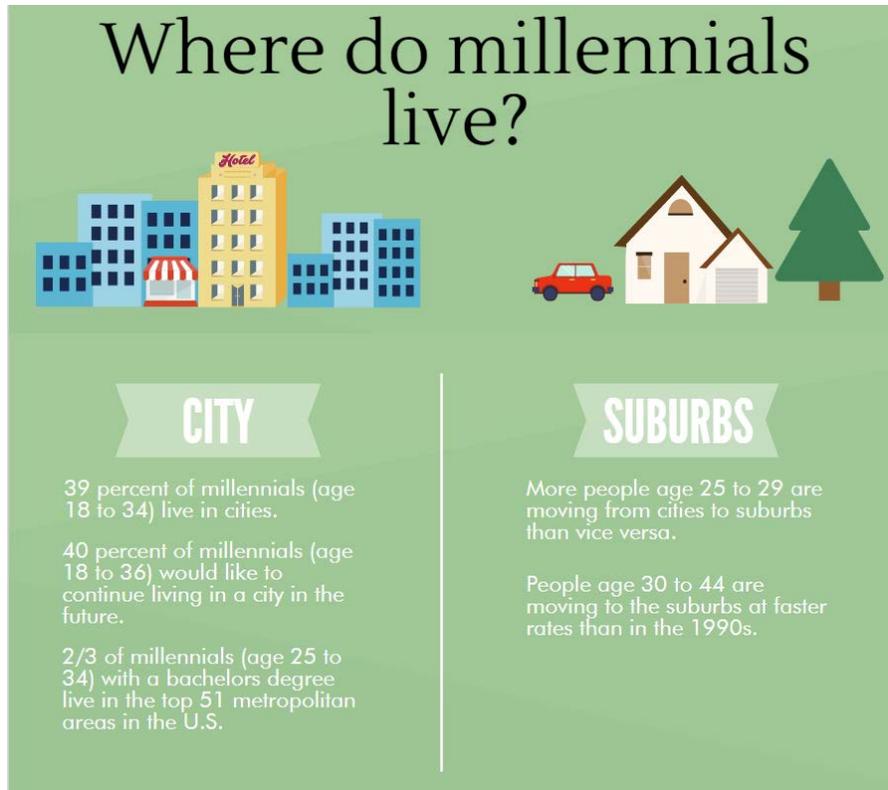


Figure 49. Data about Where Millennials Live.

Driving

Millennials drive fewer miles, take fewer car trips, and are more likely to use transit than previous generations (29). The number of young people with a driver's license has also decreased—from 87 percent of 19-year-olds in 1983 to 70 percent in 2010 (30).



Image source: (28)

This decrease in license holding has not been associated with concerns about the environment among millennials but rather with the costs associated with driving (31).

A 2009 study in the *Journal of the American Planning Association* examines the reasons young people are driving less (32):

- Millennials are driving less because of:
 - Increased online interactions.
 - Different attitudes toward mobility.
- Millennials and gen Xers are driving less because of:
 - Changing attitudes about driving.

- Lifestyle differences from previous generations when they were the same age (for example, forming households later than other generations).
- All age groups are driving less because of a general downward trend in driving starting in the 2000s.

The study pointed out that decreases in driving cannot be attributed to millennials alone. Millennials traveled fewer miles because they were taking fewer trips, not because they were traveling shorter distances or taking other modes of transportation. This has earned millennials the nickname “the go-nowhere generation” (32). The study was published during the economic recession, and it is possible that factors such as increased employment among millennials have affected driving behavior since 2009.

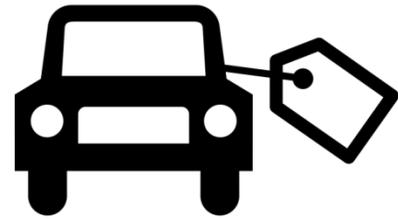


Image source: (33)

Even though miles traveled and the percent of millennials with driver’s licenses are down, car ownership appears to be higher among millennials than previous generations. One study showed that those who were young adults in the late 1990s and 2000s (this includes older millennials) were significantly more likely to own a car at a younger age than previous generations. The same study showed that people are more likely to own a car as they get older, regardless of generation or sociodemographic group (34).

To address millennial car purchases, authors at *The Atlantic* recently published an update to an article they wrote in 2012. The 2012 article called millennials the “Cheapest Generation” and suggested they may never buy cars the way baby boomers did (35). The 2015 update, called “Millennials: Not So Cheap, After All,” points out that millennials now account for more new car sales than gen Xers, and that demand for cars is growing (36).

Purchasing

Millennials like shopping. A 2013 online survey of millennials reported that 85 percent either love or enjoy shopping (38). Though the youngest millennials are the first generation to grow up with the Internet, 82 percent of millennials report preferring shopping in a brick and mortar store than online (39).



Image source: (37)

Recent Nielsen reports gave some specific insights into millennial shoppers (40):

- Millennials and gen Xer shoppers prefer large superstores to smaller drug or grocery stores.
- Millennials take the fewest shopping trips but spend the most at each trip of any generation.

According to the U.S. Census Bureau, purchases made online as a percentage of total commerce rose by almost 15 percent from 2014 to 2015 (42).⁵ Online purchases now make up 7.5 percent of all commerce in the United States and have been steadily increasing over the past 10 years (42).



The 2013 online survey of millennials reported that 91 percent of millennials said that they had made a purchase online in the last six months (38).⁶

Despite being the first digital natives (43), millennials are not the most active age group in online shopping. Business Insider recently released a report claiming “a disproportionate share of middle-aged Americans shop online” (44). The report stated that people aged 34 to 54 make up a larger percentage of online shoppers than their percentage in the total population. However, 18- to 34-year-olds spend more in value than any other age group. Though more people aged 34 to 54 make online purchases, millennials spend more money when they shop online.

Image source: (41)

The relationship between online shopping and individual shopping trips is unclear. The idea that online shopping replaces personal shopping trips and reduces travel has been discredited in various studies (45). Some research has even shown that online shopping is related to more personal shopping trips (46,47). Using other services online, such as banking or medical services, however, has been shown to reduce travel for those services (46).

Amazon, the largest online retailer in the United States, is a pioneer in quick and affordable delivery for customers. Amazon Prime is a membership program that offers free two-day shipping on many items and same-day delivery on some items. Amazon Prime currently has 54 million members and increased its membership by 35 percent between 2014 and 2015 (48). In 2014, Amazon introduced Prime Now, which offers one- to two-hour delivery on certain items in over 20 cities (49). Amazon has recently been erecting some of the largest buildings in the United States as distribution centers, and placing them strategically in or near urban areas to achieve same-day delivery (50). Amazon can currently reach an estimated 15 percent of the U.S. population for same-day delivery (50). Other companies, such as Postmates, Deliv, Google Express, and UberRush, deliver food and other goods in the same day.

Grocery delivery on a large scale is another recent development in online shopping that could impact urban freight. Instacart, an online grocery delivery

“Every distribution company is watching what Amazon does.”
–Jim Richardson, director of Economic Development of Hartford County, Maryland
Source: (50)

⁵ The U.S. Census Bureau defines e-commerce (purchases made online) as sales of goods and services made online, excluding food, online travel services, financial brokers and dealers, and ticket sales.

⁶ Most millennials also reported visiting a variety of other shopping settings including discount department stores (91 percent) and malls (64 percent) in the previous month. For more information, see: <http://uli.org/wp-content/uploads/ULI-Documents/Generation-Y-Shopping-and-Entertainment-in-the-Digital-Age.pdf>.

service, topped the 2015 Forbes “America’s Most Promising Companies” list (51). Instacart functions like Uber in that it hires contract workers to pick up your groceries and deliver them to you. The company, which offers services in 19 states, mostly in metro areas, is already profitable (52,53). Amazon’s version, called AmazonFresh, is also available in a few metro areas (54). Grocery delivery services may be attractive to millennials because 51 percent have reported cutting down on take-away meals in the last year to save money (55).

Home delivery requires a different logistics system than the typical full truckloads that drop goods off at warehouses or retail centers. Logistics providers often carry less-than-truckload hauls for home delivery, as opposed to a fully loaded truck that drops off at a distribution center. One challenge with home delivery is failed first delivery attempts, which can be between 12 and 60 percent of deliveries (56). When an item cannot be delivered on the first attempt, not only is the delivery delayed, but the transportation and labor costs increase.

All Millennials Are Not Created Equal

A factor that is often ignored in the discussion of millennials is the differences among race and socioeconomic status. What is true for one race or socioeconomic group is not always true for another, and it is impossible to generalize across all millennials.

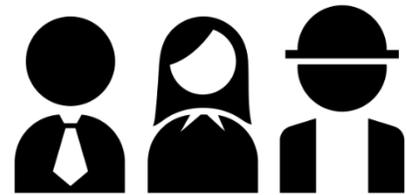


Image source: (57)

Compared to other generations, millennials are more racially diverse. Forty-three percent of millennials are non-white, compared to 28 percent of baby boomers (58). Hispanics, the largest minority, make up 21 percent of millennials (58). By 2043, the U.S. Census Bureau predicts the United States will be a majority-minority country (59).

Millennials are not exempt from the inequality faced by non-whites as a whole in the United States (60). Research has shown that, among all age groups, in comparison to whites, blacks in the United States have (61,62):

- Fewer college degrees.
- Fewer high-income jobs.
- Higher unemployment (regardless of education).
- Lower earnings and wealth.
- Higher poverty rates.
- More health problems.
- Higher likelihood of being a victim of a violent crime.

Among all age groups, Hispanics, in comparison to whites, in the United States have (61,62,63,64):

- Fewer college degrees.
- Lower earnings and wealth.
- Higher unemployment rate.
- Higher poverty rates.
- Lower homeownership.
- More health problems.
- Higher likelihood of being a victim of a violent crime.

Hispanics have an even lower rate of college completion than blacks and see a lower return on the investment in a college education (65). Hispanics also have the highest uninsured rate for medical coverage of any group in the United States (62).

Three-quarters of millennial children report receiving financial support from their parents. Black and Hispanic millennials, however, are less likely to receive this type of support and are, in fact, more likely to be expected to support their parents later in life (60). One study recently showed that 20 percent of wealth growth can be attributed to family income, implying that the more money a family has, the more likely their wealth is to grow (66). The same study mentioned the importance of inheritance and financial support from friends and family.

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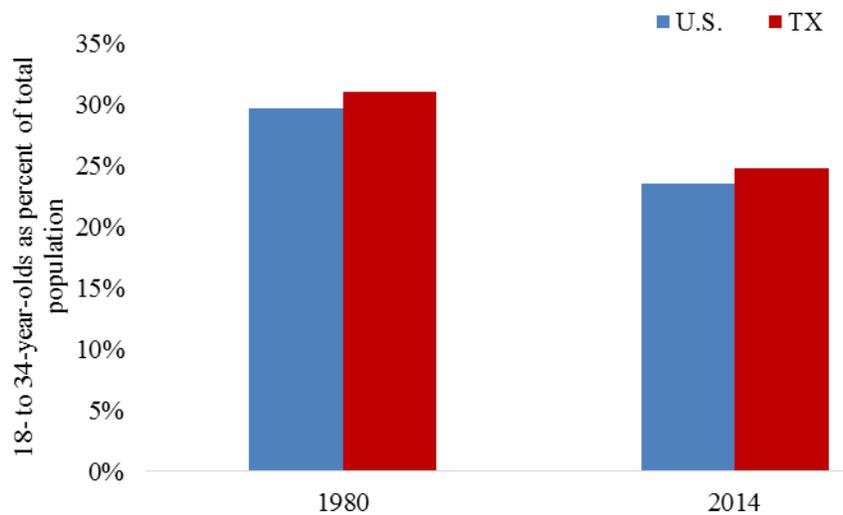
Appendix B: Data Analysis

The data analysis compares millennials to baby boomers at more or less the same age in the United States and Texas. Researchers collected data from 1980 and the most recent available year on 18- to 34-year-olds (whenever possible) in an effort to compare baby boomers and millennials.

The age range of 18 to 34 years was used because it is the age range used by the U.S. Census groups for many measures. This age range also captures most baby boomers in 1980 (they were 16 to 34 years old), many millennials in 2010 (they were 10 to 27 years old), and most millennials in 2015 (they were 15 to 32 years old).⁷

Population

Figure 50 shows the percent of the population aged 18 to 34 in 1980 and 2014 (*I*). In both years, 18- to 34-year-olds were a larger share of Texas's population than that of the United States as a whole. Millennials, however, are a smaller percent of the population than baby boomers were in 1980.

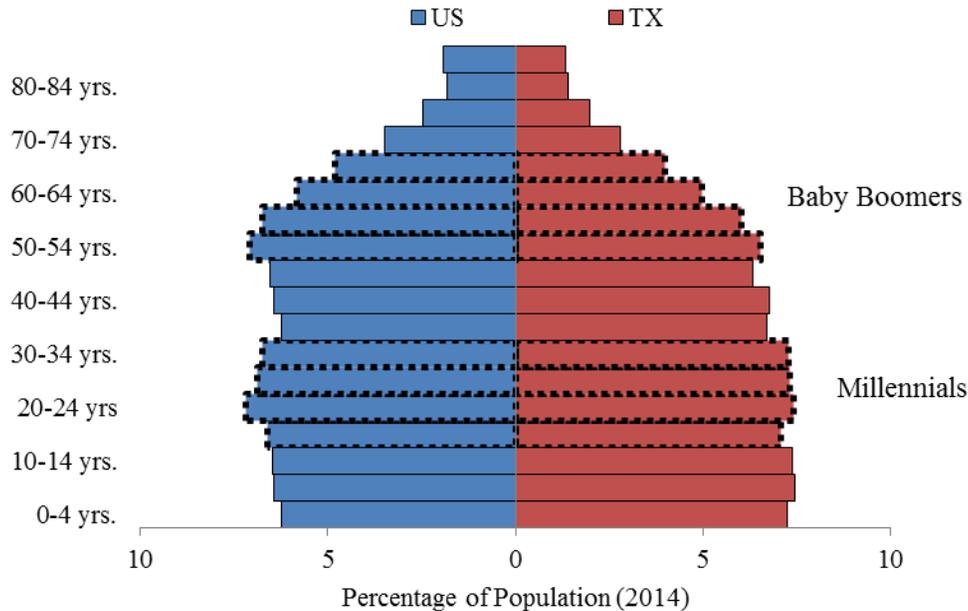


Source: (*I*)

Figure 50. Population Aged 18 to 34.

⁷ Baby boomers are defined as those born between 1946 and 1964, and millennials are those born between 1983 and 2000.

Figure 51 compares the populations of millennials and baby boomers in 2014 (2,3). The figure shows that in 2014, there were more millennials than baby boomers in both the United States and Texas.⁸ In the United States, millennials made up 25 percent of the population, and baby boomers made up 24 percent in 2014. Millennials outnumbered baby boomers by a greater difference in Texas, where millennials made up 26 percent and baby boomers 21 percent in 2014.



Source: (2,3)

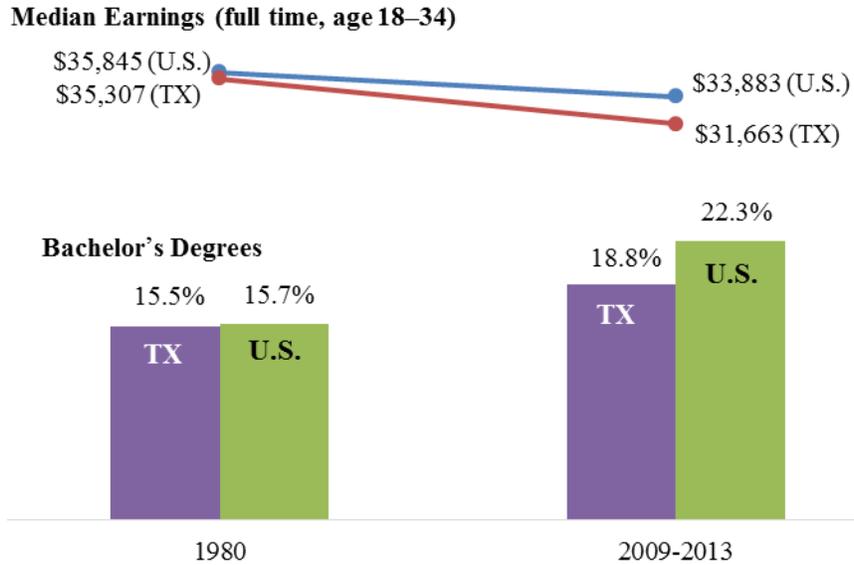
Figure 51. Percentage of Population by Age.

Education and Earning

Figure 52 shows that median earnings have decreased since 1980, despite the growing percentage of young people with bachelor’s degrees (4).⁹ A higher percentage of millennials have bachelor’s degrees than baby boomers at the same age, but the median is earning less. Median earnings, which are the middle of all reported earnings, are less affected by outliers than average earnings.

⁸ In Figure 51, the age segments are five-year ranges. This was done for clarity. Because each bar represents five years, a few additional ages were included to include all of the ages in the original definition (millennials were born from 1983 to 2000, and boomers were born from 1946 to 1964). For millennials, the ages included are 15 to 34, and for baby boomers, the ages included are 50 to 69.

⁹ An average for the years 2009–2013 was used to match U.S. Census reporting style. More information on the methodology is at <https://census.socialexplorer.com/young-adults/#/methodology>.



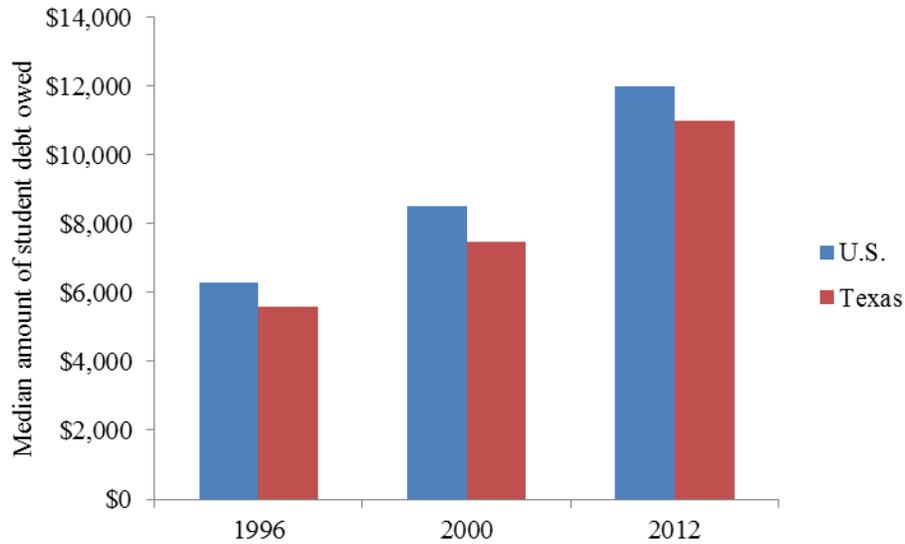
Source: (4)

Figure 52. Median Earnings and Percentage of Bachelor's Degrees.

A smaller percent of Texans aged 18 to 34 have at least a bachelor's degree than the national percentage. Though the percentage of young Texans with bachelor's degrees has increased since 1980, Texas has fallen further behind the U.S. percentage. For baby boomers in 1980, there was little difference between median earnings for full time work in Texas and the United States. However, in 2009–2013, the median earnings of Texas millennials were \$2,220 less than millennials in the United States.

Student Debt

Figure 53 shows the median amount owed on undergraduate loans for those under age 35 who still owed money in 1996, 2000, and 2012. The median amount owed on undergraduate student loans has increased significantly since 1996 for those under age 35 (author calculations based on [5]). Specifically, the median amount of student debt owed almost doubled between 1996 and 2012.



Source: (5)

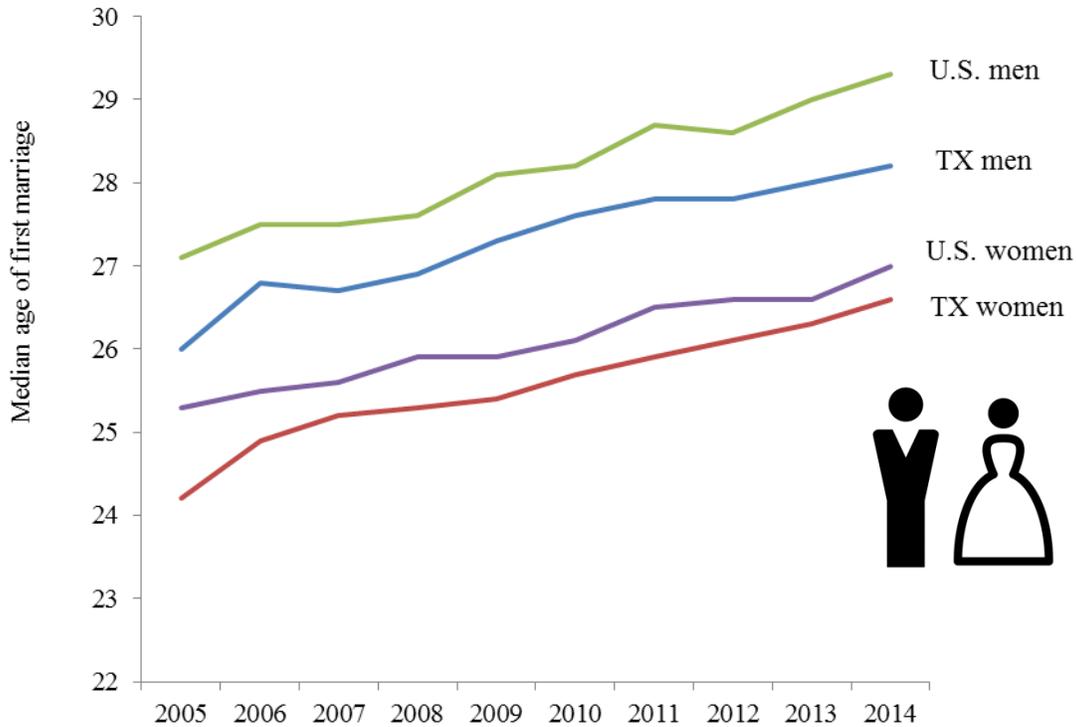
Figure 53. Median Amount Owed on Student Loans.

Between 1996 and 2012, the median amount individuals 34 and younger owed on undergraduate student loans increased from \$6,279 to \$12,000. In Texas, the median amount owed went from \$5,608 in 1996 to \$11,000 in 2012.¹⁰ The median student debt for young Texans is \$1,000 less than the U.S. median debt load.

Marriage

Figure 54 shows that Texas follows a similar pattern to the United States as a whole, with the median age of first marriages steadily increasing since 2005 (6,7). Texans, however, still marry slightly younger than the United States as a whole. In 2014, the median age of first marriage for Texas men was 1.1 years younger than the U.S. median, and 0.4 years younger for Texas women. Of the groups shown, Texas women saw the largest increase in median age of first marriage, up 2.4 years.

¹⁰ Prices adjusted to 2012-dollar amounts. More information is available at <http://data.bls.gov/cgi-bin/cpicalc.pl>.



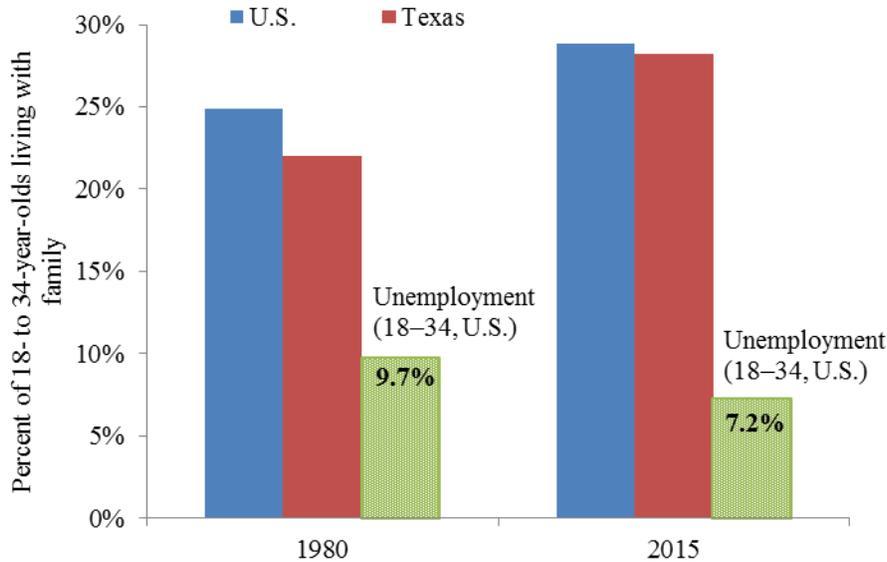
Source: (6,7)

Image source: (8)

Figure 54. Median Age of First Marriage.

Housing

Figure 55 shows that a higher percentage of people aged 18 to 34 live with family members in 2015 compared to 1980 (authors calculations based on [9]). This is the case in both Texas and the United States as a whole. Living as a dependent with family in this case means living with a parent, grandparent, sibling, or other relative (not including a spouse or partner) and not being the head of the household. In 1980, 25 percent of all people aged 18 to 34 (baby boomers) lived as a dependent with family members. In Texas, 22 percent of baby boomers lived as a dependent with a family member. By 2015, this percentage had increased to 29 percent for all millennials and 28 percent for millennials in Texas.



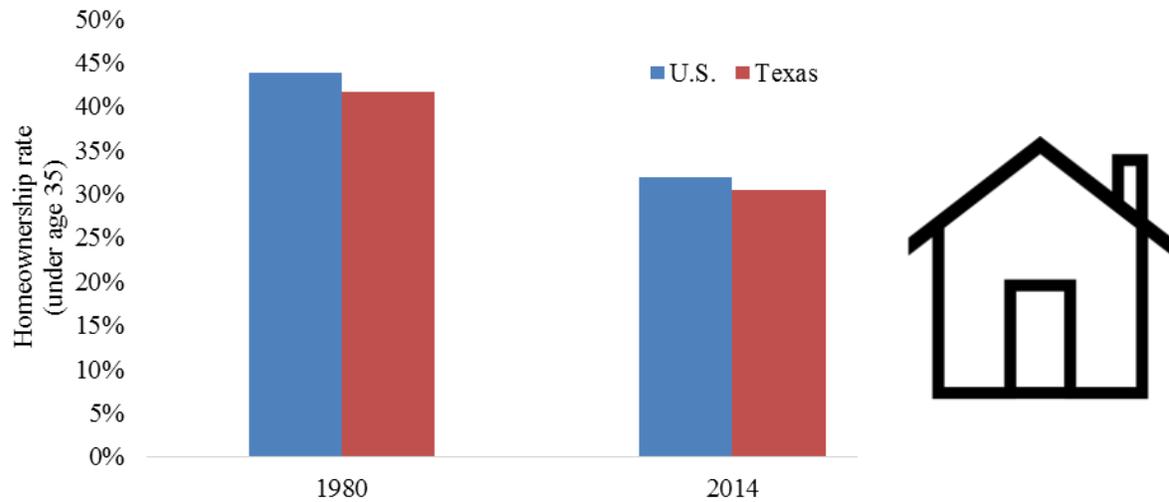
Source: (Authors calculations based on [9])

Figure 55. Living with Family and Employment.

The increase in dependent living occurred despite a lower national unemployment rate for this age group in 2015 relative to 1980 (10). The unemployment rate for 18- to 34-year-olds was 2.5 percent lower in 2015 than in 1980. This suggests that factors unrelated to employment are leading millennials to live with family.

Figure 56 shows homeownership rates for people under age 35 (11,12).¹¹ Homeownership rates for millennials in 2014 were 31 percent in Texas and 32 percent in the United States, about 10 percent lower than baby boomers at that age. In both 1980 and 2014, Texans had slightly lower homeownership rates than the national average.

¹¹ Data from 1980 are for ages under 35, and data from 2014 are for ages 15 to 34. This is due to differences in U.S. Census reporting. This difference, however, is not expected to bias results because of the low number of people under age 15 who may own homes.



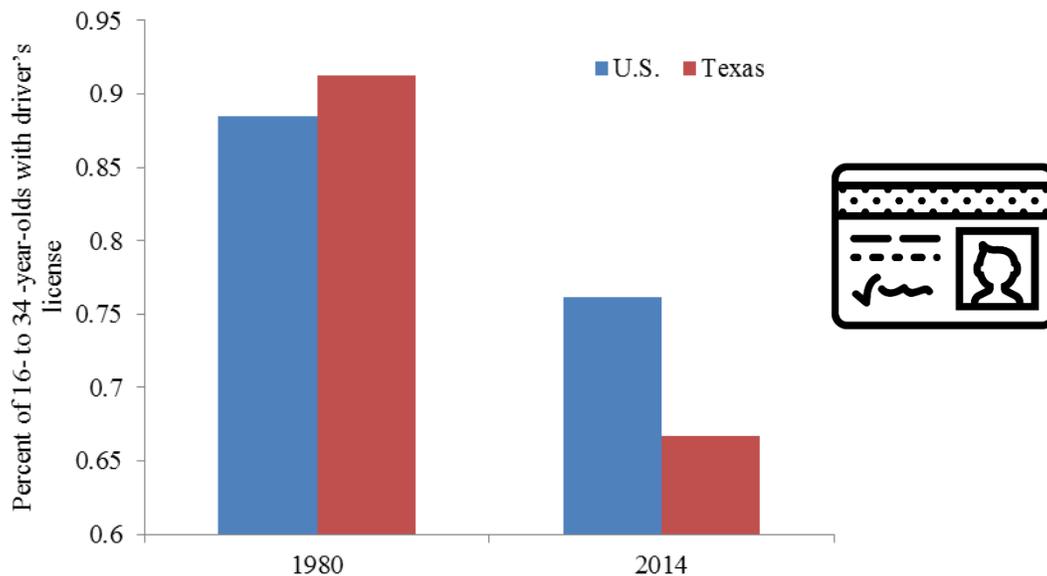
Source: (11,12)

Image source: (13)

Figure 56. Home Ownership.

Driving

Figure 57 shows a lower percentage of people aged 16–34 with driver’s licenses in 2014 than in 1980 (14,15). In 1980, a slightly higher percentage of Texas baby boomers (91 percent) had driver’s licenses than the national average (89 percent). However, in 2014 the percentage of Texas millennials (67 percent) with a driver’s license was almost 10 percent lower than in the United States (76 percent).

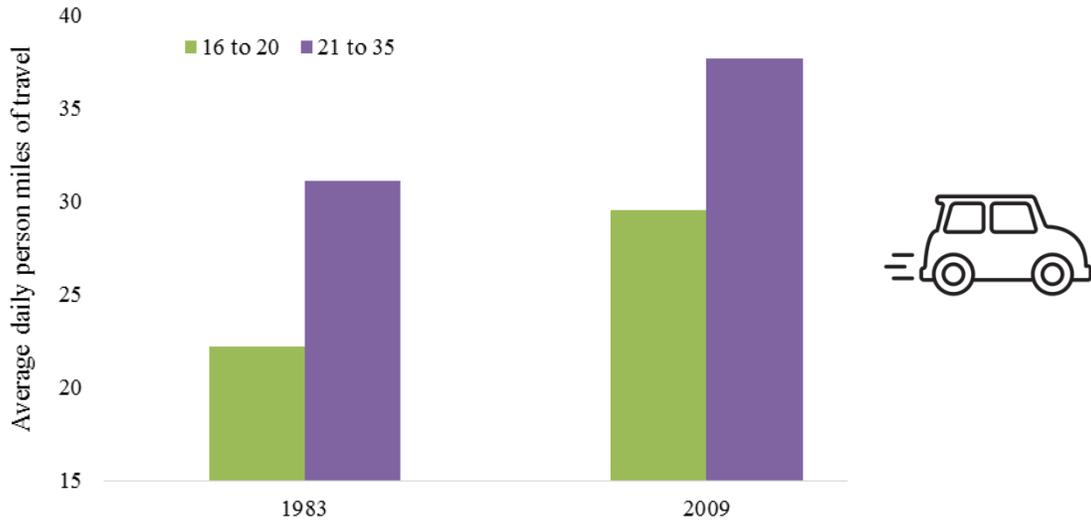


Source: (14,15)

Image source: (16)

Figure 57. Driver’s License.

Figure 58 shows that average daily miles of travel have increased since 1980 at a national level (17). *Person miles of travel* is defined as the total number of miles traveled by an individual in a day by any mode of transportation, including walking, regardless of whether or not the individual is a driver or passenger. Based on the National Household Travel Survey data, the Federal Highway Administration calculated averages by age group.



Source: (17)

Image source: (18)

Figure 58. Travel.

For both baby boomer and millennials, the older part of the generation (21- to 35-year-olds in this case) traveled more miles than the younger part of the generation (16- to 20-year-olds).

In 2009, older millennials (21- to 35-year-olds) traveled more miles per day (37.7) than older baby boomers did in 1983 (31.1). Younger millennials also traveled more miles per day (29.5) than younger baby boomers (22.2).

Figure 59 shows that the average number of daily person trips for people aged 16 to 35 have increased since 1980 (17). Daily person trips are defined as a trip from one place to another by any mode of transportation, including walking, regardless of whether or not the individual is a driver or passenger. Based on the National Household Travel Survey data, the Federal Highway Administration calculated averages by age group. The majority of daily person trips were by private vehicle in 1983 (82 percent) and 2009 (83 percent) (17).



Source: (17)

Image source: (18)

Figure 59. Daily Trips.

In 2009, older millennials made 3.9 daily trips on average, compared to 3.5 average daily trips by older baby boomers in 1983. Younger millennials made 3.5 daily trips on average, compared to 3.3 average daily trips by older baby boomers.

Purchasing

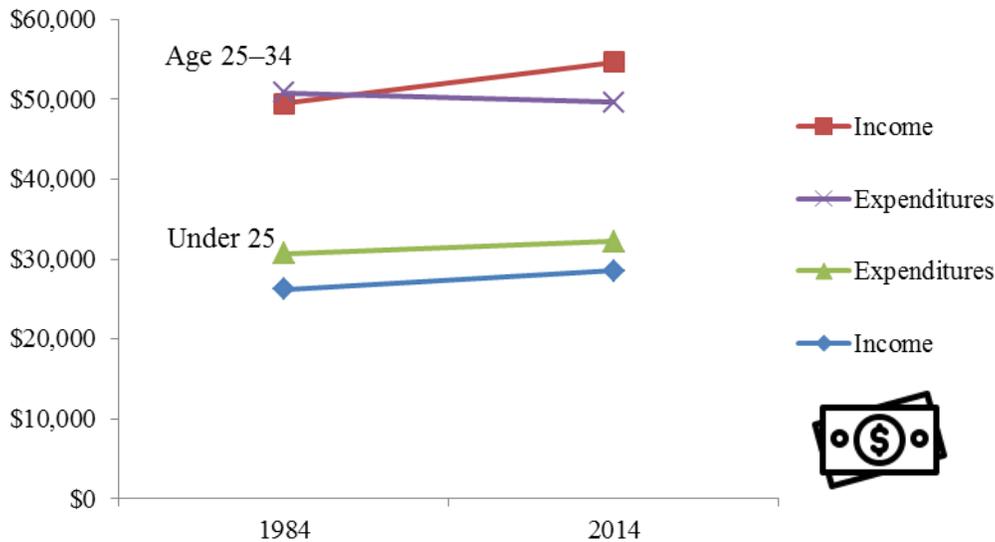
This section provides information on income and expenditures. The information in this section is for households, not individuals, because of the way the Consumer Expenditure Survey (CES) collects data. The numbers reported here represent the spending by the entire household for households where someone under the age of 25, or aged 25 to 34, owns the home or is responsible for the rent.¹² Following CES reporting format, this section divided young people into two groups: under age 25 and aged 25 to 34. All prices in this section have been adjusted to the 2015-dollar amount to account for inflation.¹³

Figure 60 shows total income and expenditures for households where the reference person was under 25 and households where the reference person was 25 to 34 years old (19). In 1984, baby boomer households (where the reference person was under 25 and where the reference person was between 25 and 34) spent more than he or she earned. Households where the reference person was under 25 have continued to spend more than they earn. Though they still spend more

¹² The age ranges provided are for the reference person. When an interviewer gathers information as part of the CES, he or she asks who owns the home or is responsible for the rent. The reference person is “the first member mentioned by the respondent when asked to ‘Start with the name of the person or one of the persons who owns or rents the home.’” This means that data for each of these age groups are for households that have a reference person within this age range. Individual spending cannot be determined based on the census data. More information is available at <http://www.bls.gov/cex/faq.htm#q4>.

¹³ An inflation calculator is available at <http://data.bls.gov/cgi-bin/cpicalc.pl>.

than they earn, households with young millennials (under age 25) as the reference person have a higher income by \$2,325 than baby boomers with a reference person under age 25 in 1984, and they have tightened the gap between expenditures and income.



Source: (19)

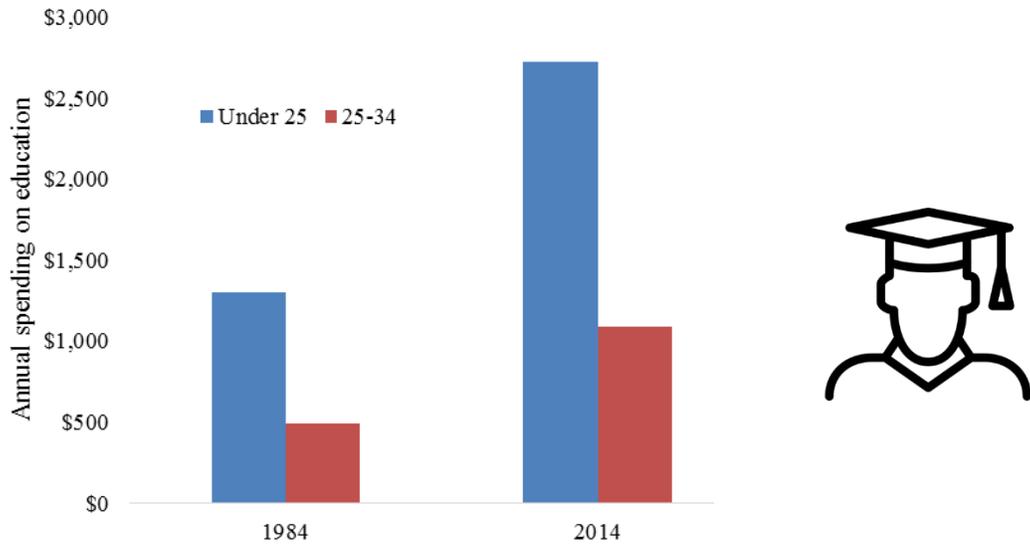
Image source: (20)

Figure 60. Income and Expenditures.

For households with older baby boomers as the reference person, on the other hand, income after taxes is now higher than total expenditures. Older baby boomer households (a reference person 25 to 34 years old) spent almost \$1,400 more than they earned in 1984, whereas older millennials spent \$5,081 less than they earned in 2014.

Education

Figure 61 shows that annual spending on education has increased since 1984. In 2014, households with younger millennials (a reference person under 25) spent more than twice as much on education as households with older millennials. Households with younger millennials also spent over \$800 more than younger baby boomers did in 1984 (19). Younger baby boomers spent \$1,300 on education per year in 1984, whereas younger millennials now spend \$2,724 per year.



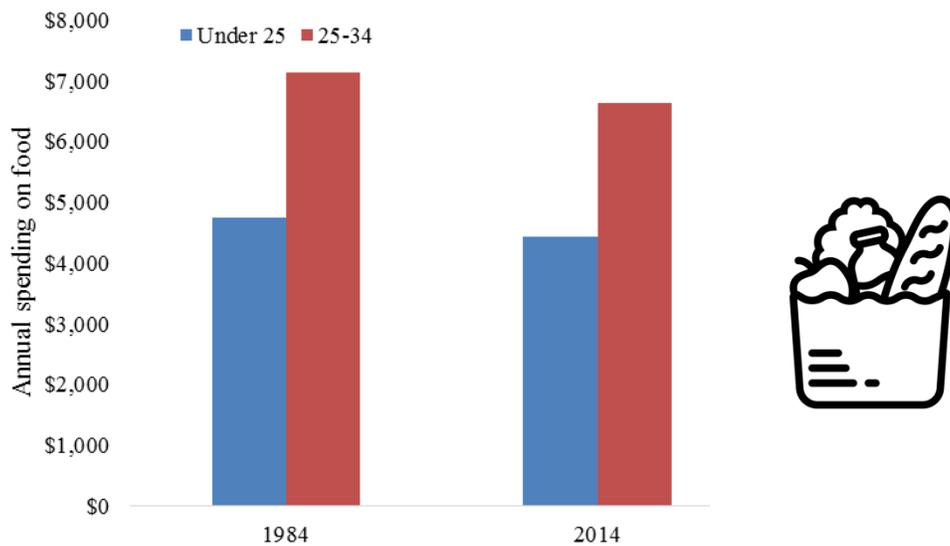
Source: (19)

Image source: (11)

Figure 61. Spending on Education.

Food

Figure 62 shows that millennial households spent less on food than baby boomers did (19). Compared to baby boomers in 1984, younger millennial households (a reference person under 25) spent \$331 less, and older millennial households spent \$505 less on food per year.



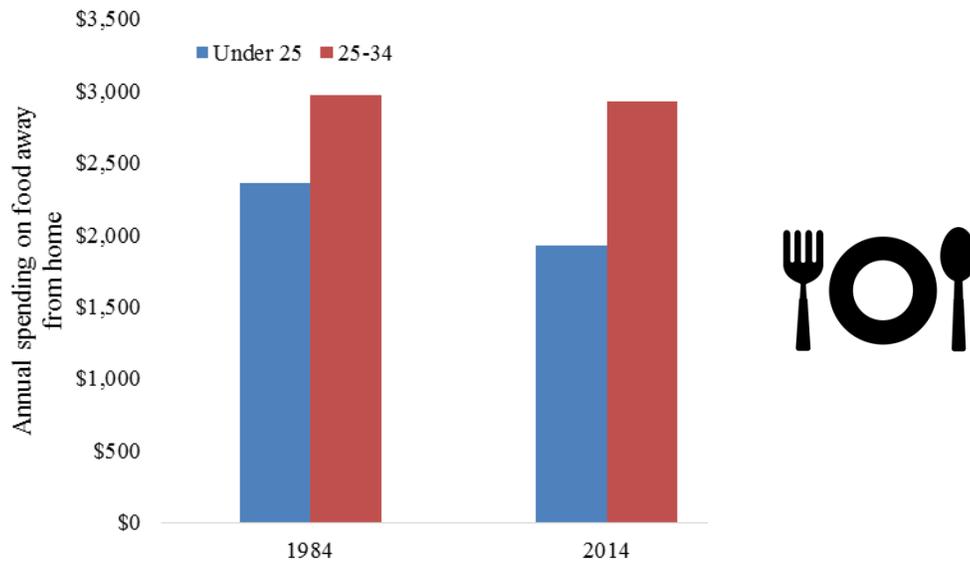
Source: (19)

Image source: (21)

Figure 62. Spending on Food.

Eating Out

Figure 63 shows that millennial households spent less on going out to eat than baby boomers. Spending in this category has changed more in the younger group (a reference person under 25) than the older group (a reference person aged 25 to 34) (19). Compared to younger baby boomers, younger millennial households spent \$428 less, and older millennial households spent \$46 less per year on food away from home.



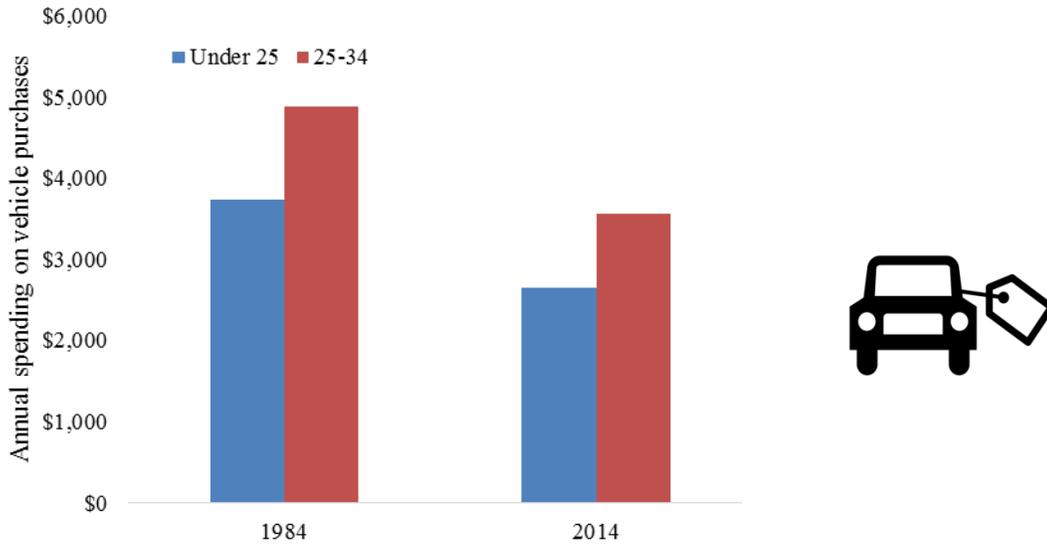
Source: (19)

Image source: (22)

Figure 63. Spending on Going Out to Eat.

Vehicle Purchases

Figure 64 shows that millennial households spent less on vehicles than baby boomers did in 1984 (19). Young millennial households (a reference person under 25) spent \$1,087 less than young baby boomers, and older millennial households (a reference person aged 25 to 34) spent \$1,322 less than older baby boomers per year.



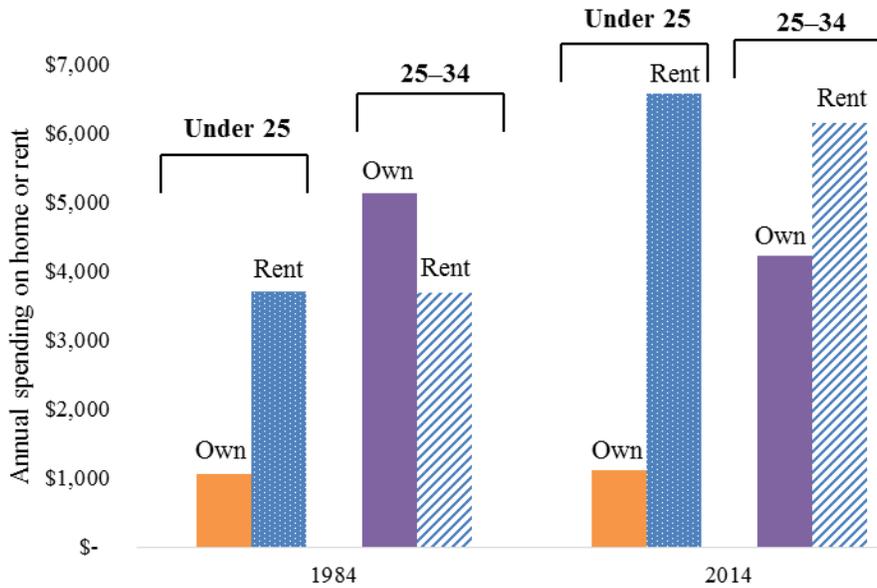
Source: (19)

Image source: (23)

Figure 64. Spending on Vehicle Purchases.

Mortgage and Rent

Figure 65 shows annual spending on an owed home or rent by age group in 1984 and 2014 (19). For homes they own, younger millennial households (a reference person under 25) spent \$51 more per year than younger baby boomers, and older baby boomer households (a reference person aged 25 to 34) spent \$950 more than older millennials. Much larger increases are seen in rent expenditures. Younger millennial households spent almost \$2,869 more per year than baby boomers, and older millennial households spent \$2,467 more per year. Older millennial households spent more on rent than older millennial households on homes they own, whereas older baby boomer households spent more on homes they owned in 1984 than older baby boomer households spent on rent.

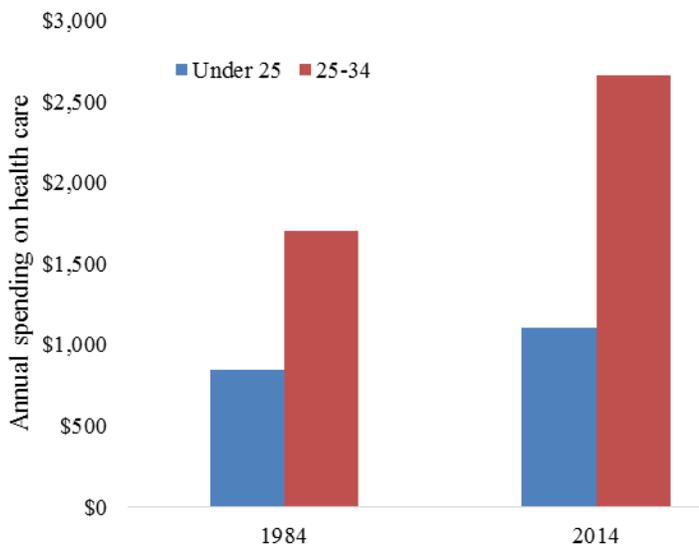


Source: (19)

Figure 65. Spending on Mortgage and Rent.

Health Care

Figure 66 shows that older millennial households (a reference person aged 25 to 34) spent more on health care than older baby boomer households (19). Young millennial households (a reference person under 25) spent \$258 more than young baby boomer households on health care per year, whereas older millennial households spent \$960 more than older baby boomer households on health care per year.



Source: (19)

Image source: (24)

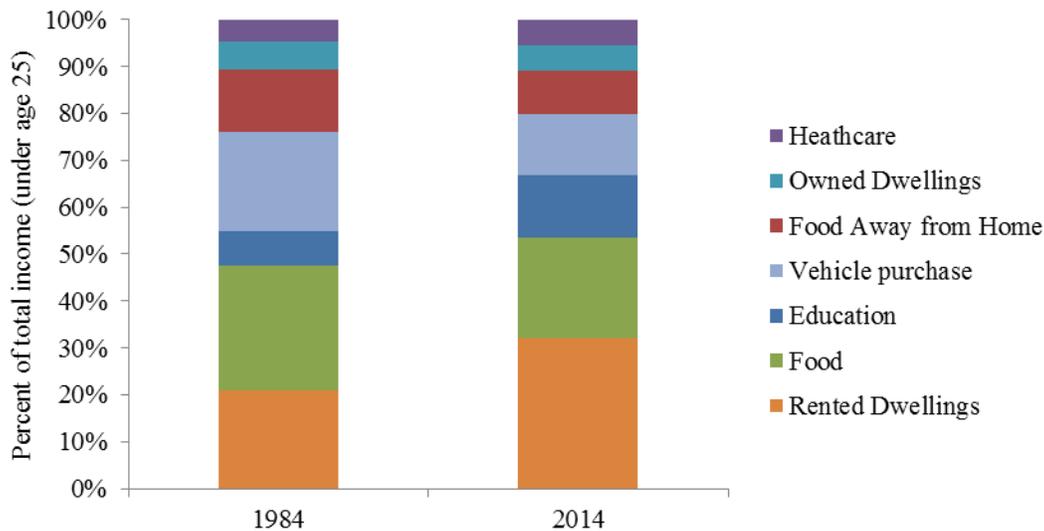


Figure 66. Spending on Health Care.

Total Expenditures

Younger Households

Figure 67 shows that as a percentage of total expenditures, young millennial households (a reference person under 25) in 2014 spent the most on rented dwellings (20 percent), followed by food (14 percent) (19). In 1984, young baby boomer households spent more on food (16 percent) than rent (12 percent). The largest difference between young millennial households and young baby boomer households is spending on rent. Young baby boomer households spent 12 percent of their total expenditures on vehicle purchases, whereas young millennials spent 20 percent.

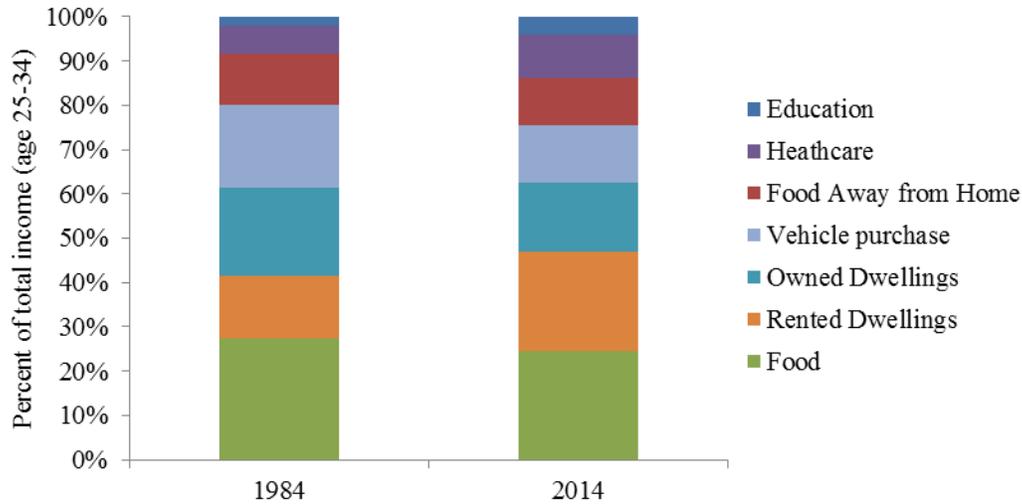


Source: (19)

Figure 67. Younger Households' Total Expenditures.

Older Households

Figure 68 shows that older millennial households in 2014 spent the largest percentage of their total expenditures on food (13 percent), followed by rented dwellings (12 percent), and owned dwellings (9 percent) (19). Older millennial households spent more on rent (12 percent, compared to 7 percent for older baby boomer households) than baby boomer households did in 1984. Older millennial households spent a lower proportion than older baby boomer households on vehicle purchases—7 percent of total expenditures for older millennial households versus 10 percent for older baby boomer households.



Source: (19)

Figure 68. Older Households' Total Expenditures.

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Appendix C: Survey Questions

1. Do you like shopping? (*Choose one*)
 - a. Yes, online
 - b. Yes, in stores
 - c. Yes, online and in stores
 - d. No, I don't like shopping
 2. How do you shop? (*Choose one*)
 - a. Online
 - b. Going to stores
 - c. Combination of both
 3. In the last 7 days, did you receive any package deliveries for things that you purchased online? (*Choose one*)
 - a. Yes
 - b. No
 4. **[If “Yes” to Question 3]**—How many packages did you receive in the last 7 days of things that you ordered online? (*Write in*)
 5. **[If “Yes” to Question 3]**—During the last 7 days, did you return any items that you ordered online and were delivered to your home? (*Select Yes or No*)
 6. **[If “Yes” to Question 5]**—During the last 7 days, how many items did you return that you ordered online and were delivered to your home? (*Write in*)
 7. What do you buy online? (*Select all that apply*)
 - a. Food
 - b. Major appliances (for example, washing machines or microwaves)
 - c. Clothing and accessories
 - d. Books or newspapers
 - e. Personal hygiene products
 - f. Home supplies (for example, cleaning supplies or office supplies)
 - g. Electronics
 - h. Furniture
 - i. Other (*Write in*)
 - j. I don't buy anything online
 8. What do you like about online shopping? (*Select all that apply*)
 - a. Time savings
 - b. Delivery
 - c. Easy returns
 - d. Customer service (for example, online chatting options)
 - e. Lower prices
 - f. More options
 - g. Easy to compare items
 - h. Easy to research products
-

- i. Customer product reviews
 - j. Other (*Write in*)
 - k. I don't like online shopping
9. What do you dislike about online shopping? (*Select all that apply*)
- a. Delivery fees
 - b. Waiting for a product to be delivered
 - c. Difficulty of returns
 - d. Having to sign up for email lists
 - e. Security concerns about using a credit card online
 - f. Higher prices
 - g. Difficult to compare items
 - h. Not able to see item in person
 - i. Not able to speak with a salesperson
 - j. Other (*Write in*)
 - k. None of the above
10. The most recent package you received took _____ number of days to arrive at your house from the time of purchase: (*Choose one*)
- a. The same day or next day
 - b. 2 days
 - c. 3–5 business days
 - d. More than 5 business days
 - e. Not applicable
11. Do you have an Amazon Prime membership? (*Choose one*)
- a. Yes
 - b. No
12. During the last 7 days, did you purchase something online and pick it up in a store? (*Choose one*)
- a. Yes
 - b. No
13. **[If “Yes” to Question 12]**—How many packages did you order online and pick up in a store? (*Write in*)
14. **[If “Yes” to Question 12]**—During the last week, did you return any items that you ordered online and picked up in a store?
- a. Yes
 - b. No
15. **[If “Yes” to Question 14]**—How many packages did you return that you ordered online and picked up in a store? (*Write in*)
16. What type of stores do you visit? (*Select all that apply*)
- a. Superstores (for example, Target or Walmart)
 - b. Malls or outdoor malls

- c. Outlets
 - d. Local businesses
 - e. Other (*Write in*)
17. Please rank the following in terms of where you prefer to shop: (*Drag and drop the options in the order of your choice*)
- a. Superstores (for example, Target or Walmart)
 - b. Malls or outdoor malls
 - c. Outlets
 - d. Local businesses
 - e. Other (*Write in*)
18. How many times did you go to a store in the last 7 days to buy something or with the intention of buying something? (*Write in*)
19. During the last 7 days, did you return any items that you purchased in a store?
- a. Yes
 - b. No
20. **[If “Yes” to Question 19]**—In the last 7 days, how many items did you return that you purchased in a store? (*Write in*)
21. What do you buy in stores? (*Select all that apply*)
- a. Food
 - b. Major appliances (for example, washing machines or microwaves)
 - c. Clothing and accessories
 - d. Books and newspapers
 - e. Personal hygiene products
 - f. Home supplies (for example, cleaning supplies or office supplies)
 - g. Electronics
 - h. Furniture
 - i. Other (*Write in*)
22. What do you like about shopping in a store? (*Select all that apply*)
- a. Taking the item home as soon as you buy it
 - b. Avoiding delivery fees
 - c. Enjoy being in the store
 - d. Easy returns
 - e. Customer service (for example, talking to salespeople)
 - f. Lower prices
 - g. More options
 - h. Easy to compare items
 - i. Being able to see items in person
 - j. Security concerns about using a credit card online
 - k. Other (*Write in*)
 - l. I don’t like shopping in a store

23. What do you dislike about shopping in a store? (*Select all that apply*)
- Having to go out of your way to go to the store
 - The environment in the store
 - Time spent in the store
 - Interacting with salespeople
 - Higher prices
 - Fewer options
 - Difficult to compare items
 - Other (*Write in*)
 - None of the above
24. How much do you spend per month on:
- Groceries (*write in*)
 - Eating out (*write in*)
 - Transportation (*write in*)
 - Health care (*write in*)
 - Education (*write in*)
 - Personal investment or savings (*write in*)
25. Do you live: (*Choose one*)
- Alone
 - With roommate(s)
 - With spouse or partner
 - With family member other than a spouse or partner
 - Other (*Write in*)
26. Do you own a home or rent? (*Choose one*)
- Own
 - Rent
 - Neither
27. [**If answer to Question 26 is “Own”**]*—*How old were you when you bought your home?
(*Write in*)
28. [**If answer to Question 26 is “Own”**]*—*How much is your mortgage per month? (*Write in*)
29. [**If answer to Question 26 is “Rent”**]*—*How much do you pay in rent per month? (*Write in*)
30. [**If answer to Question 26 is “Rent” or “Neither”**]*—*What is your timeline for buying a home? (*Choose one*)
- Within the next year
 - Within the next 5 years
 - Within the next 10 years
 - Other (*Write in*)
 - I do not plan on purchasing a home

31. [If answer to Question 30 is “Within the next year” or “Within the next 5 years” or “Within the next 10 years” or “Other”—Where would you like to purchase a home? (Choose one)
- a. Urban area
 - b. Suburban area
 - c. Rural area
 - d. Other (*Write in*)
32. Do you have a driver’s license? (Choose one)
- a. Yes
 - b. No
33. Do you own a car? (Choose one)
- a. Yes
 - b. No
34. What year were you born in? (*Write in*)
35. What zip code do you live in? (*Write in*)
36. What is your highest level of education? (Choose one)
- a. Less than 9th grade
 - b. Some high school
 - c. High school graduate (including GED or equivalent)
 - d. Some college
 - e. Associate’s degree
 - f. Bachelor’s degree
 - g. Graduate or professional degree
 - h. Other (*Write in*)
37. Marital status: (Choose one)
- a. Single, never married
 - b. Single, living with a partner
 - c. Married
 - d. Separated
 - e. Divorced
 - f. Widowed
 - g. Other (*Write in*)
38. What is your employment status? (*Check all that apply*)
- a. Employed full-time
 - b. Employed part-time
 - c. Unemployed
 - d. Other (*Write in*)

39. Are you a student?
- Yes, full-time
 - Yes, part-time
 - No
40. Do you personally have student debt that you are responsible for repaying? (Note: this does not include debt that someone else is repaying for you.) (*Choose one*)
- Yes—**[If Yes]**—What is the current balance of the student debt you owe? (*Write in*)
 - No
41. **[If “Yes” to Question 40]**—What is the current balance of the student debt you owe? (*Write in*)
42. Do you personally have credit card debt that you are responsible for repaying? (*Choose one*)
- Yes
 - No
43. **[If “Yes” to Question 42]**—What is the current balance of the credit card debt you owe? (*Write in*)
44. Do you personally have any other debt that you are responsible for repaying? (*Choose one*)
- Yes
 - No
45. **[If “Yes” to Question 44]**—What is the current balance of this debt? (*Write in*)
46. What is your annual income? (*Choose one*)
- Less than \$10,000
 - \$10,000–\$14,999
 - \$15,000–\$24,999
 - \$25,000–\$34,999
 - \$35,000–\$49,999
 - \$50,000–\$74,999
 - \$75,000–\$99,999
 - \$100,000–\$149,999
 - \$150,000–\$199,999
 - More than \$200,000
 - I prefer not to answer

Appendix D: Survey Results

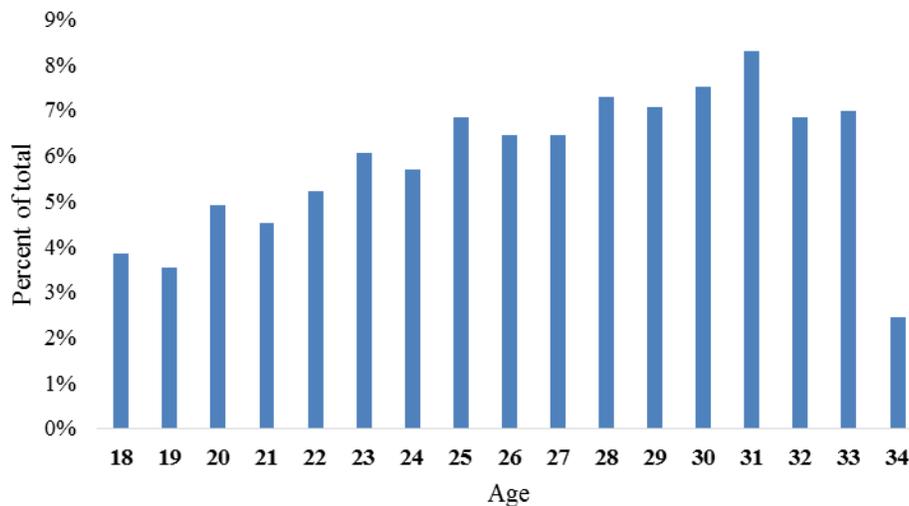
Researchers used a survey panel of participants aged 18 to 34 living in Texas. Recruitment for the panel was conducted using non-probability techniques. Survey results for individuals outside of the 18–34 age range were removed from further analysis. None of the questions were mandatory. Participants could move on to the next question without answering a question. The number of valid responses totaled 1,310.

This appendix provides the survey responses. The survey included questions on basic demographic information, as well as shopping and spending habits.

Demographics

Age

Figure 69 shows the percentage of each age represented in the survey responses. Most respondents (66 percent) were between 25 and 34 years old, and 34 percent of respondents were 18 to 24 years old.



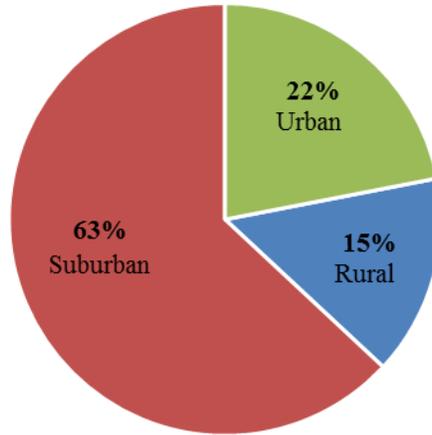
(Number of respondents: 1,310)

Figure 69. Age Distribution of Respondents.

Location

Figure 70 shows that 63 percent of respondents live in suburban areas, 22 percent live in urban areas, and 15 percent live in rural areas. The distinction between urban, suburban, and rural was based on housing density data for the respondents' ZIP codes/ZIP code tabulation area codes.¹⁴ This methodology was used because the U.S. Census's *Geographic Areas Reference Manual* includes no official definition of a suburban area (1).

¹⁴ A full explanation of the methodology is available at <http://jedkolko.com/wp-content/uploads/2015/05/Data-and-methodological-details-052715.pdf>.

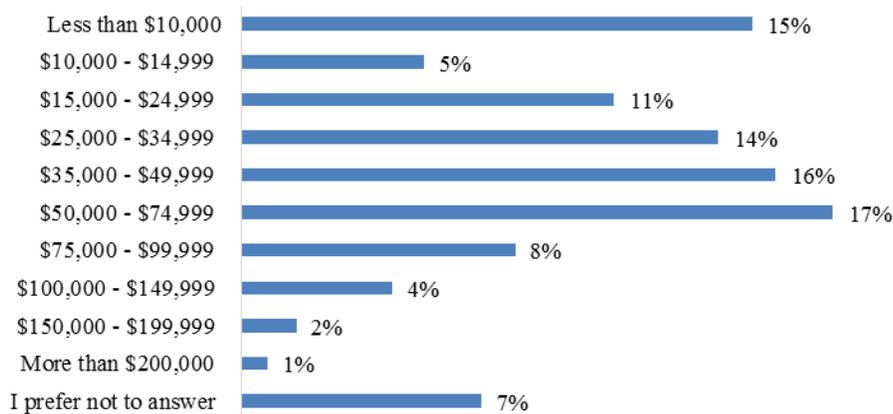


(Number of respondents: 1,307)

Figure 70. Location Distribution of Respondents.

Income

Figure 71 shows the income distribution of respondents. Respondents were asked to select a range for their income. The most frequent response (17 percent) was the income range of \$50,000–\$74,999. The next most common response was \$35,000–\$49,999 (16 percent), followed by less than \$10,000 (15 percent), and \$25,000–\$34,999 (14 percent). Other responses included \$15,000–\$24,999 (11 percent), \$75,000–\$99,999 (8 percent), \$10,000–\$14,999 (5 percent), \$100,000–\$149,999 (4 percent), \$150,000–\$199,999 (2 percent), and more than \$200,000 (1 percent). Seven percent of respondents preferred not to answer this question.



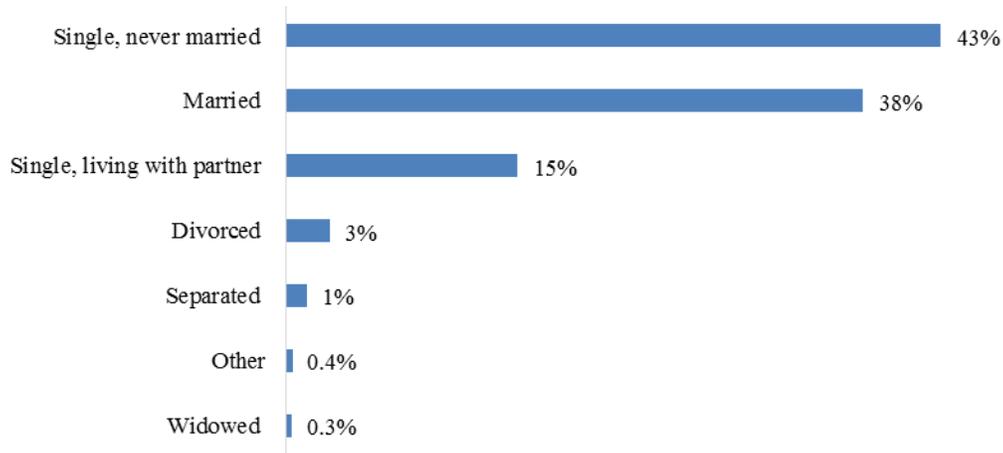
(Number of respondents: 1,310)

Figure 71. Income Distribution of Respondents.

Marital Status

Figure 72 shows the most frequent response for marital status was “single, never married” (43 percent). Over a third of respondents (38 percent) reported being married, and 15 percent reported being single and living with a partner. Therefore, over half of the millennial respondents (53 percent) are either married or living with a partner. Other options included divorced

(3 percent), separated (1 percent), and widowed (0.3 percent). Only 0.4 percent of respondents selected the “other” option. The most common write-in response for the “other” category was “not single, but living with a partner.”

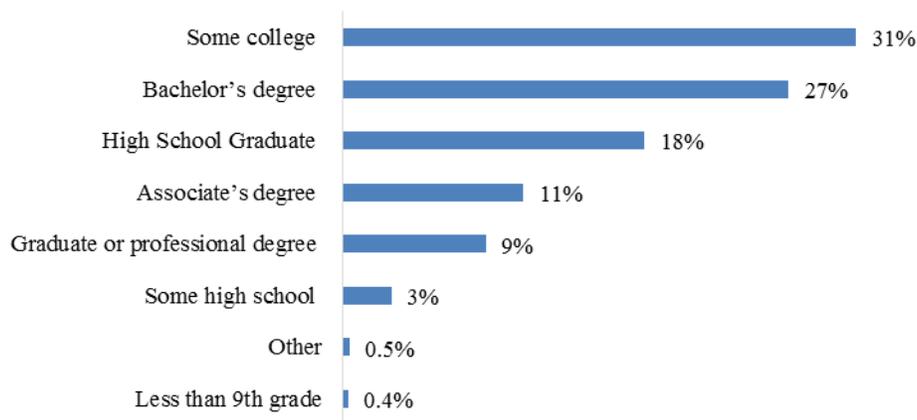


(Number of respondents: 1,308)

Figure 72. Marital Status Distribution of Respondents.

Education

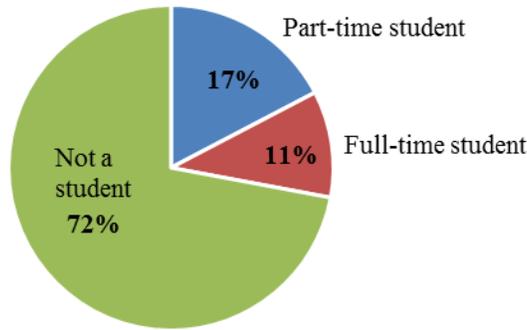
Figure 73 shows the level of education of respondents. Nearly a third (31 percent) of the respondents reported having some college education. Similarly, 27 percent had a bachelor’s degree, 18 percent were high school graduates (including GED or equivalent), 11 percent had associate’s degrees, 9 percent had a graduate or professional degree, 3 percent had some high school, 0.4 percent had less than 9th grade, and 0.5 percent selected “other.” Those who selected “other” had the option of writing in a response. Some of the write-in responses included vocational training and certifications.



(Number of respondents: 1,310)

Figure 73. Education Distribution of Respondents.

Figure 74 shows that most respondents (72 percent) were not students, followed by 17 percent part-time students, and 11 percent full-time students.

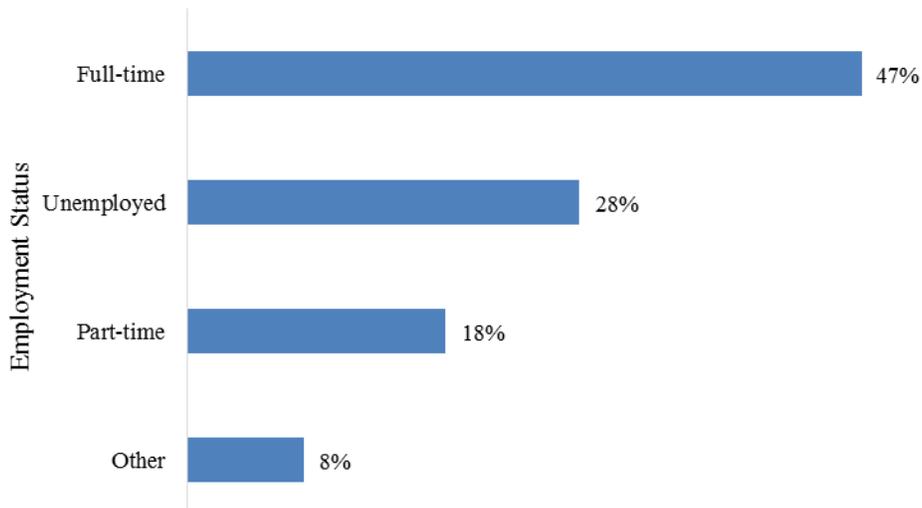


(Number of respondents: 1,303)

Figure 74. Student Status Distribution of Respondents.

Employment

Figure 75 shows the employment status of respondents. Respondents were allowed to select more than one answer. Almost half of respondents (47 percent) reported having a full-time job. This was followed by 28 percent were unemployed, 18 percent who had a part-time job, and 8 percent who replied “other.” Those who selected “other” had the option to write in a response. The most common responses included “homemaker,” “self-employed,” “student,” and “disabled.”



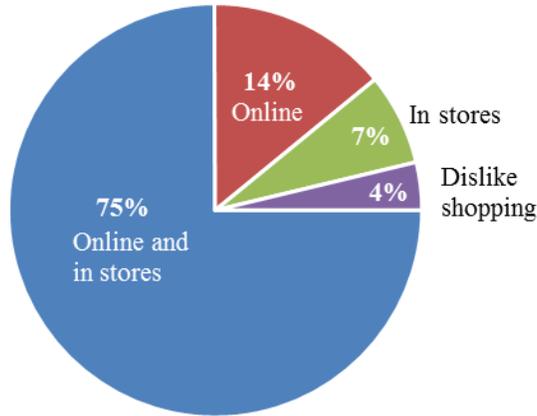
(Number of respondents: 1,299)

(Number of responses: 1,318)

Figure 75. Employment Status Distribution of Respondents.

Shopping

The survey included questions about shopping behavior, including preferences for online and in-store shopping, and what types of goods were purchased online and in stores. Figure 76 shows the responses to the question “do you like shopping?” About 75 percent of respondents liked shopping online and in stores, 14 percent liked shopping online, 7 percent liked shopping in stores, and 4 percent did not like shopping.



(Number of respondents: 1,310)

Figure 76. Responses to the Question “Do You Like Shopping?”

Figure 77 shows responses to the question “how do you shop?” About 82 percent of respondents shop online and in stores, 9 percent shop online, and 9 percent shop in stores.

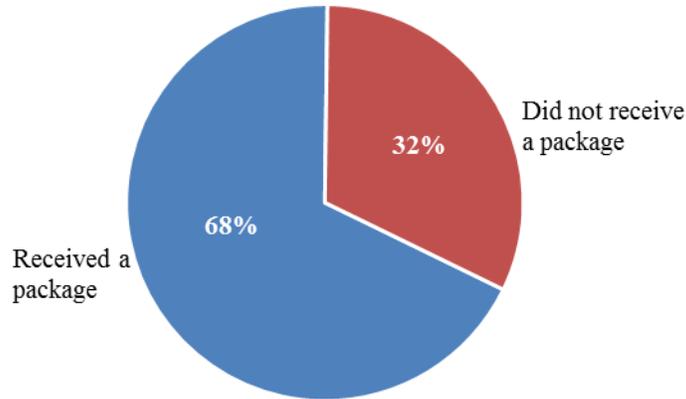


(Number of respondents: 1,305)

Figure 77. Responses to the Question “How Do You Shop?”

Shopping Online

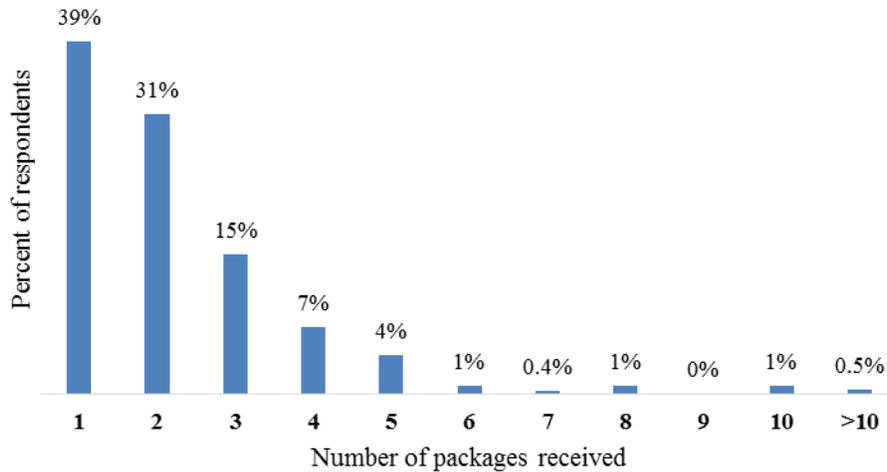
Figure 78 shows whether or not respondents received a package in the last week of something they ordered online. Sixty-eight percent of respondents received a package, and 32 percent did not.



(Number of respondents: 1,309)

Figure 78. Percentage of Respondents Who Received an Online Order in the Previous Week.

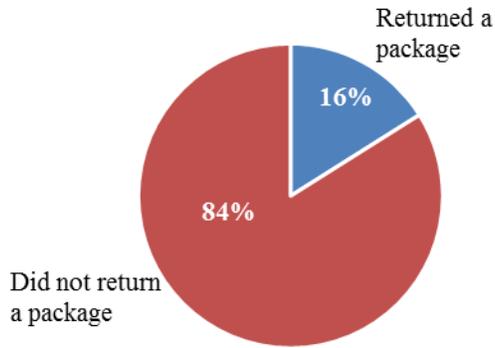
If respondents replied “yes” to the previous question (see Figure 78), they were asked how many packages they had received in the previous week. Figure 79 shows the number of packages that respondents reported receiving the previous week. Of the 854 respondents who had received a package and responded to this question, 39 percent received one package in the previous week, and 31 percent received two packages. This means that 70 percent of respondents received one or two packages in the previous week. The number of packages received ranged from one to 50, and the median number of packages was two.



(Number of respondents: 854)

Figure 79. Number of Packages Received.

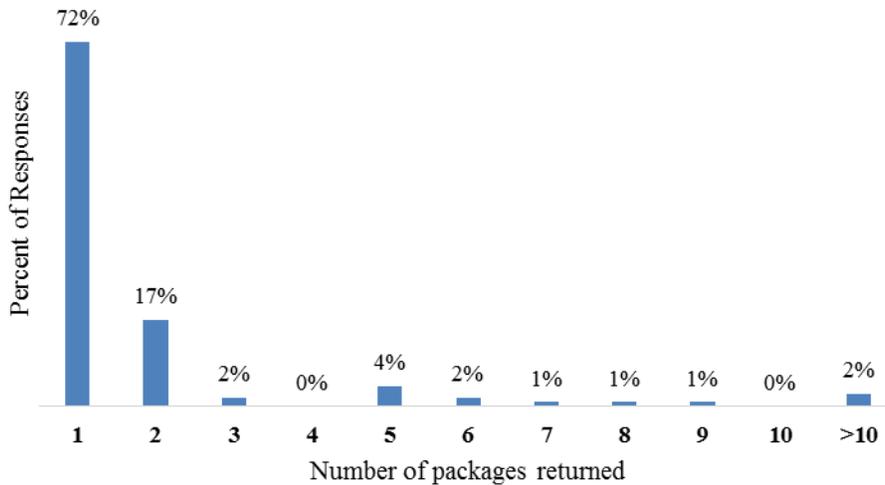
If respondents received a package in the previous week of something they ordered online, they were asked if they had returned anything. Figure 80 shows that most respondents did not return anything. Specifically, 16 percent returned something, whereas 84 percent did not return anything.



(Number of respondents: 890)

Figure 80. Percentage of Respondents Who Returned a Package.

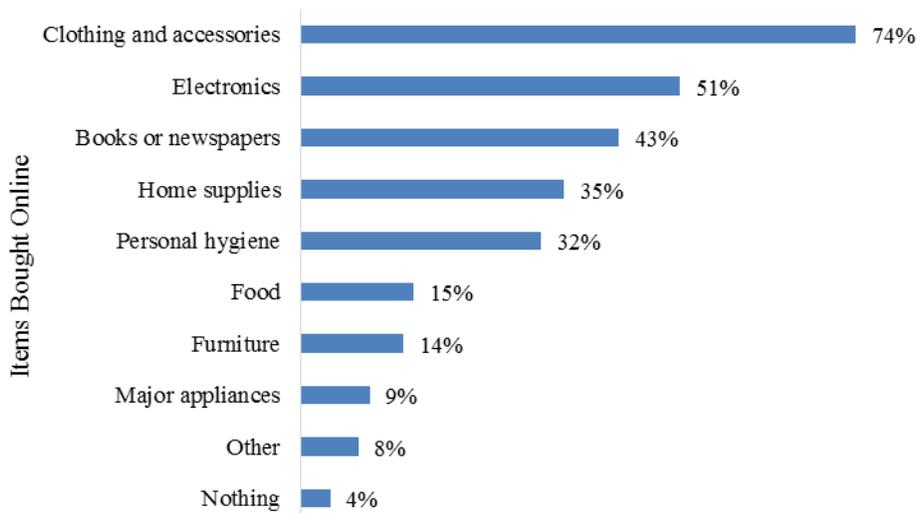
If respondents had returned items that they had ordered online and had delivered to their home, they were asked how many items they returned. Figure 81 shows that the majority (72 percent) of respondents reported returning only one package, and 17 percent returned two packages. Thirteen percent reported returning more than two packages. The range of number of packages returned was 0 to 25.



(Number of respondents: 130)

Figure 81. Number of Packages Returned.

Figure 82 shows the type of products respondents reported buying online. Respondents were allowed to choose more than one option.



(Number of respondents: 1,309)

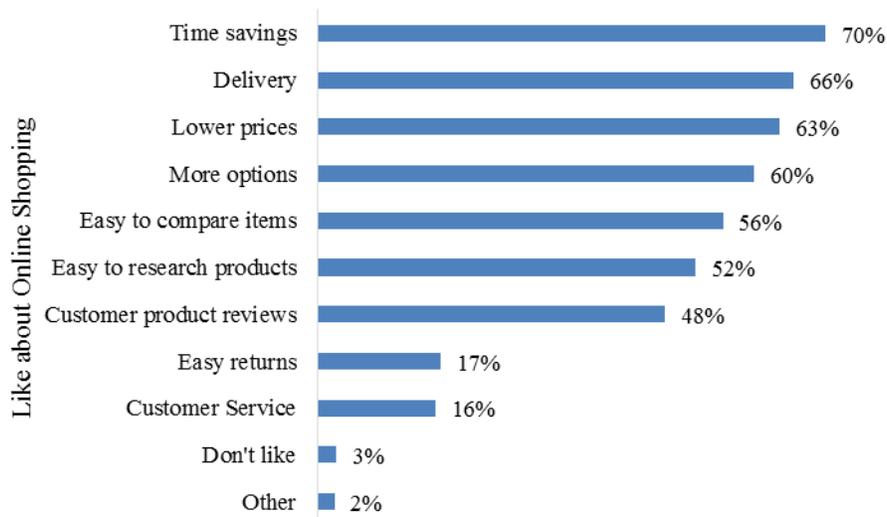
(Number of responses: 3,729)

Figure 82. Type of Items Bought Online.

The category most frequently reported was clothing and accessories with 74 percent of respondents reporting they bought this online. This was followed by electronics (51 percent of respondents), books or newspapers (43 percent), home supplies (35 percent), personal hygiene products (32 percent), food (15 percent), furniture (14 percent), major appliances (9 percent), and “other” (8 percent).

For the “other” category, respondents were able to write in answers. Where applicable, these responses were coded into one of the provided categories. Some of the most common re-categorized items were makeup and health-related items (coded as personal hygiene items), and baby and pet related items (coded as home supplies). Other write-in responses that remained in the “other” category included toys, games, gifts, phone accessories, media, and outdoor equipment. Lastly, 4 percent reported that they do not buy anything online.

Figure 83 shows what respondents reported liking about online shopping. Respondents were able to choose more than one option. The most common response was time savings, with 70 percent of respondents indicating that they liked this about online shopping. This was followed by delivery (selected by 66 percent of respondents), lower prices (63 percent), having more options (60 percent), ease of comparing items (56 percent), ease of doing research on products (52 percent), and customer product reviews (48 percent). Ease of returns was selected by 17 percent of respondents, and customer service by 16 percent of respondents.



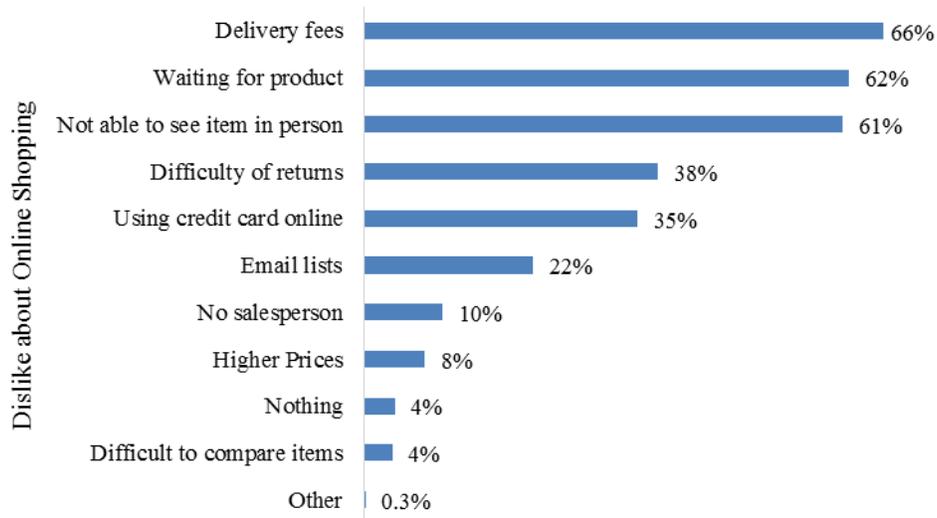
(Number of respondents: 1,306)

(Number of responses: 5,912)

Figure 83. What Respondents Reported Liking about Online Shopping.

Additionally, 3 percent of respondents chose “I don’t like online shopping,” and 2 percent chose “other.” Respondents were able to write in responses for the “other” category. Some of the most common write-ins included ease of not bringing children to a store, not having to leave home, and not having to deal with lines or people.

Figure 84 shows what respondents reported disliking about online shopping. Respondents were allowed to select more than one answer. When asked what they disliked about online shopping, the most common response was delivery fees, with 66 percent of respondents choosing this option. This was followed closely by waiting for the product to be delivered (62 percent) and not being able to see the product in person (61 percent of respondents).



(Number of respondents: 1,304)

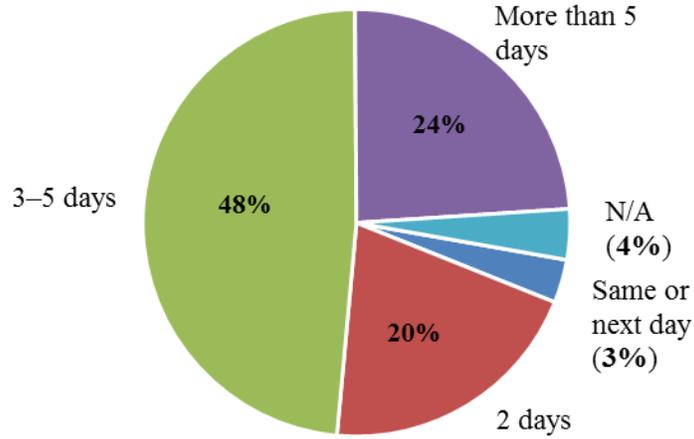
(Number of responses: 4,032)

Figure 84. What Respondents Reported Disliking about Online Shopping.

Following this was difficulty of returns (chosen by 38 percent of respondents), security concerns about using a credit card online (chosen by 35 percent of respondents), having to sign up for email lists (22 percent), not being able to speak with a salesperson (10 percent), higher prices (8 percent), and the difficulty of comparing items (4 percent of respondents).

Four percent of respondents selected “none of the above,” indicating that they did not dislike any of the options provided. Less than 1 percent of respondents chose “other.”

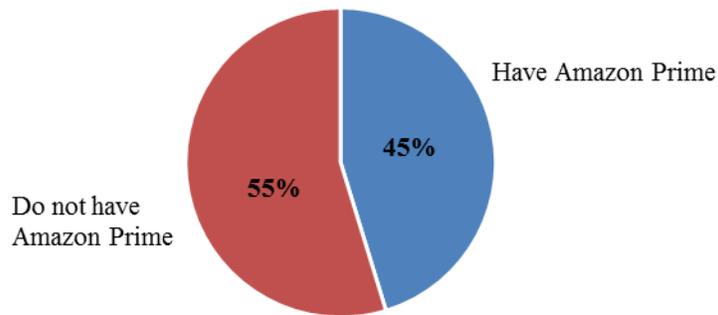
Figure 85 shows how long it took for the last package respondents received to arrive at their home. The most frequent response was three to five business days (48 percent). This was followed by more than five business days (24 percent), two days (20 percent), and the same day or next day (3 percent). About 4 percent of respondents indicated that this question was not applicable to them.



(Number of respondents: 1,309)

Figure 85. How Long Packages Took to Arrive.

Figure 86 shows the percentage of respondents who have an Amazon Prime membership to be 45 percent. About 55 percent of the respondents indicated that they did not have an Amazon Prime membership.

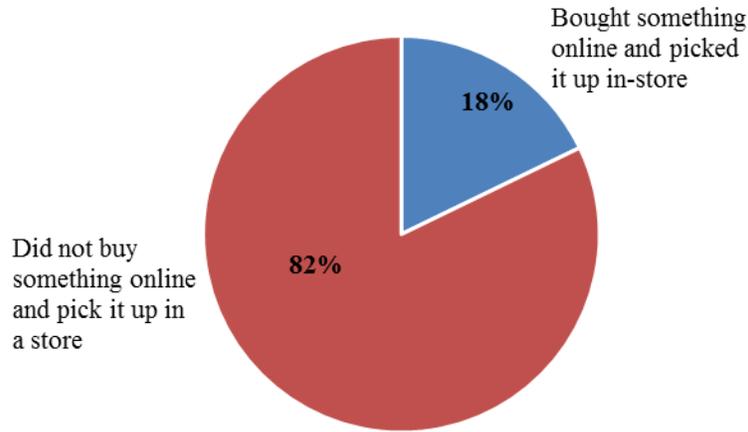


(Number of respondents: 1,281)

Figure 86. Percentage of Respondents Who Have an Amazon Prime Membership.

Shopping Online and Picking Up In-Store

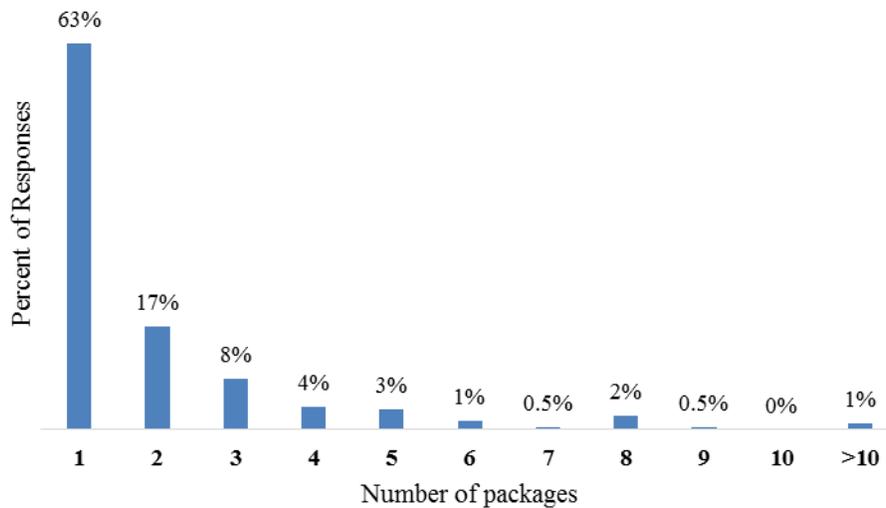
Figure 87 shows that only 18 percent of respondents purchased something online and picked it up in a store.



(Number of respondents: 1,308)

Figure 87. Percentage of Respondents Who Ordered Something Online and Picked It Up In-Store.

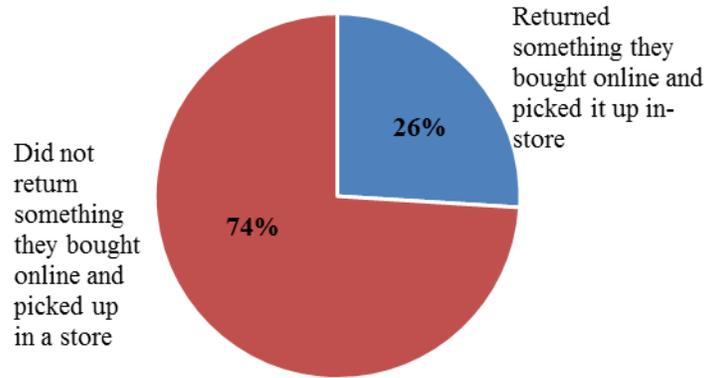
If respondents said that they had ordered something online and picked it up in a store, they were asked to indicate how many packages they had purchased in this way. Figure 88 shows that most respondents (63 percent) only picked up one package they had ordered online.



(Number of respondents: 216)

Figure 88. Number of Packages Ordered Online and Picked Up In-Store.

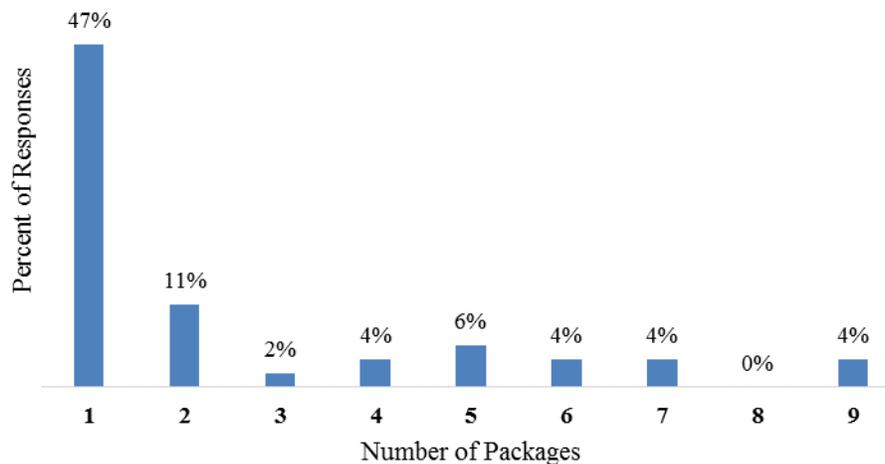
Figure 89 shows that 26 percent of respondents who ordered something online and picked it up in a store returned an item.



(Number of respondents: 231)

Figure 89. Percentage of Respondents Who Returned Items Bought Online and Picked Up In-Store.

Figure 90 shows the number of packages returned when the item was ordered online and picked up in a store. Figure 90 shows that 47 percent of respondents who returned packages returned only one package.



(Number of respondents: 52)

Figure 90. Number of Packages Ordered Online, Picked Up In-Store, and Returned.

Shopping In-Store

Figure 91 shows the types of stores respondents reported visiting in the previous week. When asked what types of stores respondents visited, 88 percent of respondents indicated they had visited a superstore (for example, Target or Walmart). This was followed by malls or outdoor malls, which 37 percent of respondents reported visiting. Local businesses were visited by 30 percent of respondents, and outlets by 17 percent of respondents in the previous week. About 4 percent of respondents selected “other” for stores they had visited. The “other” category included grocery stores, Costco, convenience stores, and pharmacies. One percent of respondents said that they had not visited any stores in the previous week.

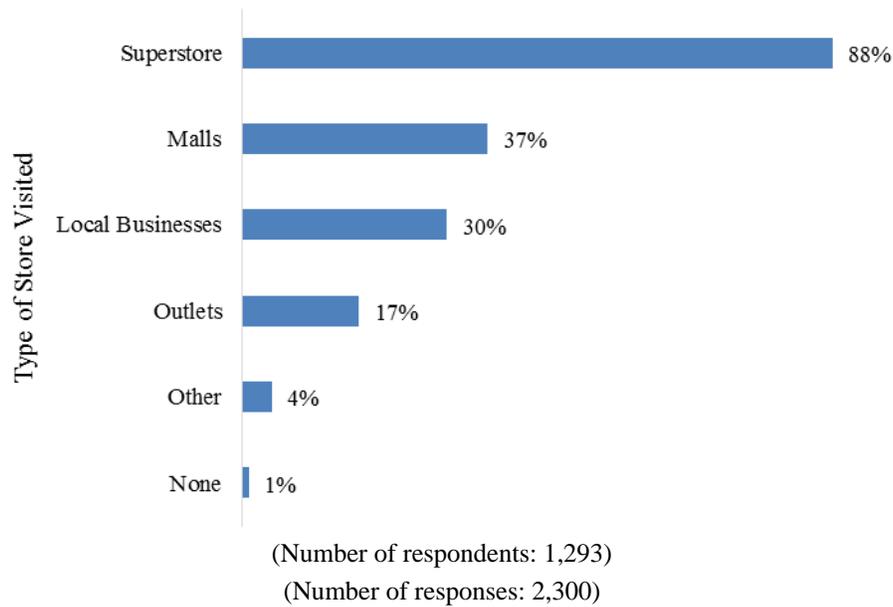


Figure 91. Percentage of Respondents Who Visited a Store in the Previous Week.

Figure 92 shows how respondents ranked stores when asked where they like to shop.¹⁵ Respondents ranked superstores highest in terms of where they liked to shop. This was followed in order by malls, local stores, outlets, and “other.” For the “other” category, respondents were able to write in answers. Some of the most frequent write-ins included pharmacies, thrift stores, grocery stores, and convenience stores.

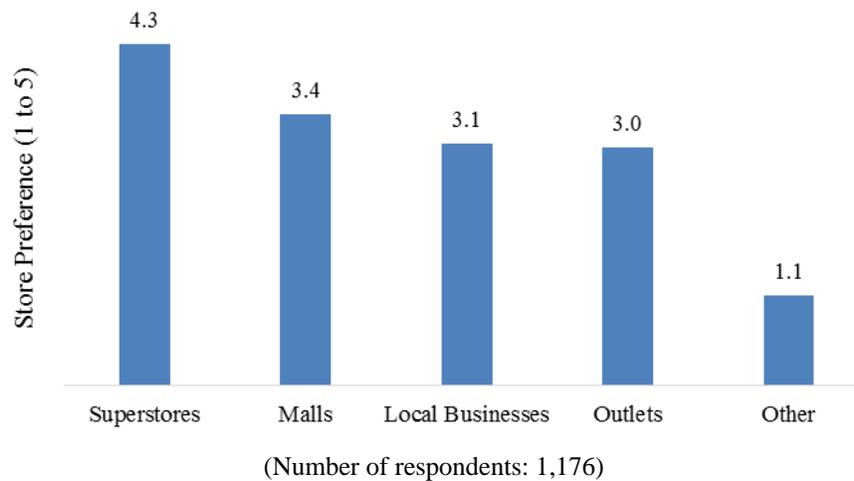
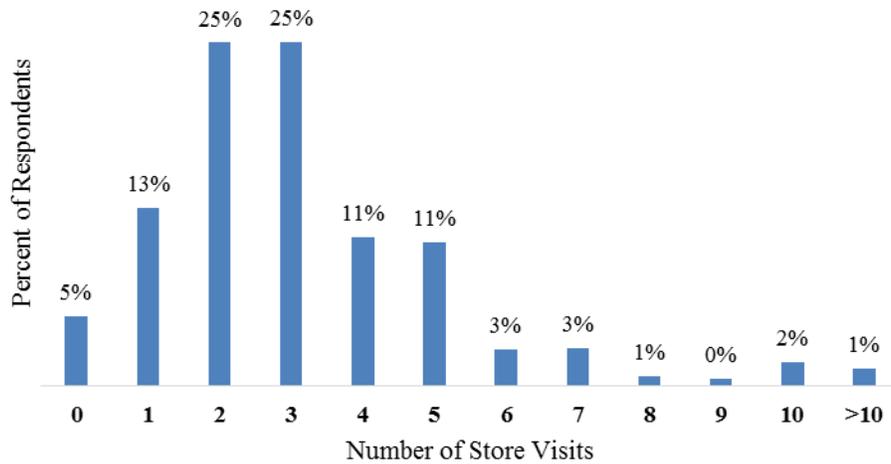


Figure 92. Stores Where Respondents Like to Shop.

¹⁵ In the original survey, stores were ranked from 1 to 5, with 1 being the store they liked most and 5 being the store they liked least. For ease of interpretation, the scores were inverted (1 became 5, 2 became 4, etc.), and averaged for each category. Therefore, stores with the highest scores are the stores respondents like most.

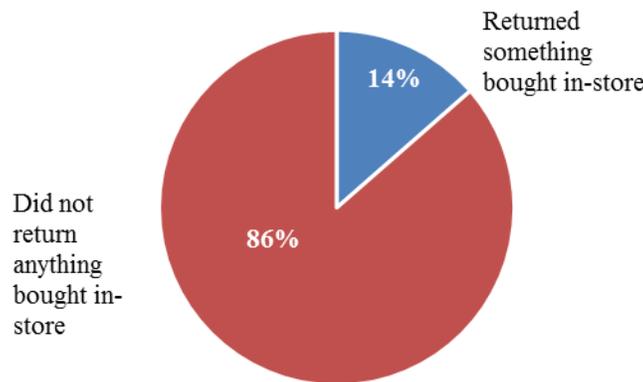
Figure 93 shows the number of times respondents reported visiting a store in the previous week. Half of the respondents reported two to three store visits, and 57 percent of respondents went to the store at least three times in the previous week.



(Number of respondents: 1,251)

Figure 93. Number of Store Visits.

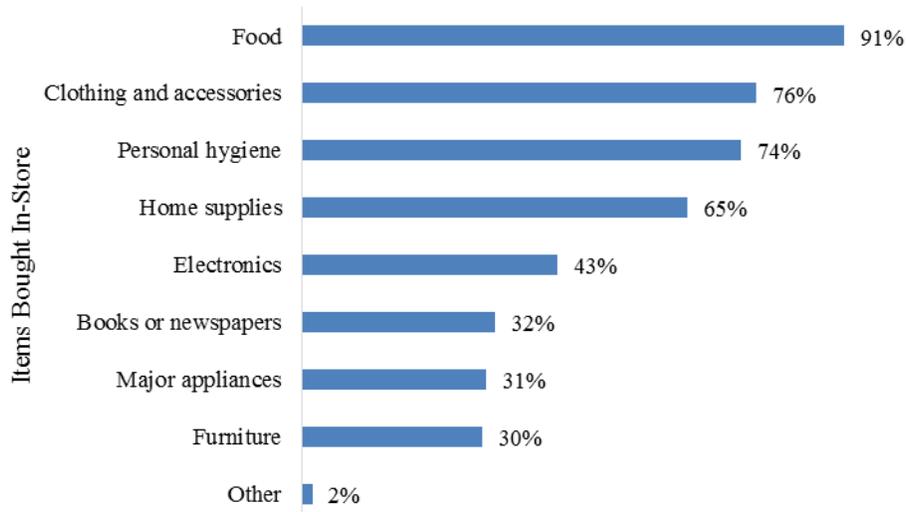
Figure 94 shows that, in the previous week, 14 percent of respondents returned something they had bought in a store. Eighty-six percent of respondents said they had not returned anything purchased in a store in the previous week.



(Number of respondents: 1,305)

Figure 94. Percentage of Respondents Who Returned Something They Bought In-Store.

Figure 95 shows the items that respondents reported buying in-store. Respondents were allowed to select all options that applied. The most common response was food, with 91 percent of respondents reporting buying food in-store. This was followed by clothing and accessories (76 percent of respondents), personal hygiene products (74 percent), home supplies (65 percent), electronics (43 percent), books or newspapers (32 percent), major appliances (31 percent), furniture (30 percent), and “other” (2 percent).



(Number of respondents: 1,303)

(Number of responses: 5,769)

Figure 95. Most Common Items Bought In-Store.

Figure 96 shows what respondents liked about shopping in stores. Respondents were allowed to choose all options that applied. Most respondents (83 percent) liked taking the item home as soon as it was purchased. This was followed by being able to see the item in person (71 percent of respondents), avoiding delivery fees (64 percent), easy returns (38 percent), enjoying being in the store (38 percent), customer service (28 percent), ease of comparing items (21 percent), lower prices (16 percent), more options (12 percent), not having to use a credit card online (11 percent), and “other” (0.6 percent). Finally, 1 percent of respondents reported that they did not like shopping in a store.



(Number of respondents: 1,307)

(Number of responses: 5,050)

Figure 96. What Respondents Like about Shopping In-Store.

Figure 97 shows what respondents reported disliking about shopping in stores. Respondents were allowed to choose all options that applied. Most respondents (64 percent) disliked “having to go out of your way to go to the store” (traveling to the store). This was followed by time spent in the store (46 percent of respondents), having fewer options (39 percent), higher prices (34 percent), interacting with salespeople (31 percent), the environment in the store (27 percent), and the difficulty of comparing items (25 percent). Additionally, 5 percent of the respondents reported “none of the above.” Another 4 percent of respondents replied “other.” Common write-in responses for the “other” category were having to wait in lines, the inconvenience of traveling with children, and having to interact with other people.

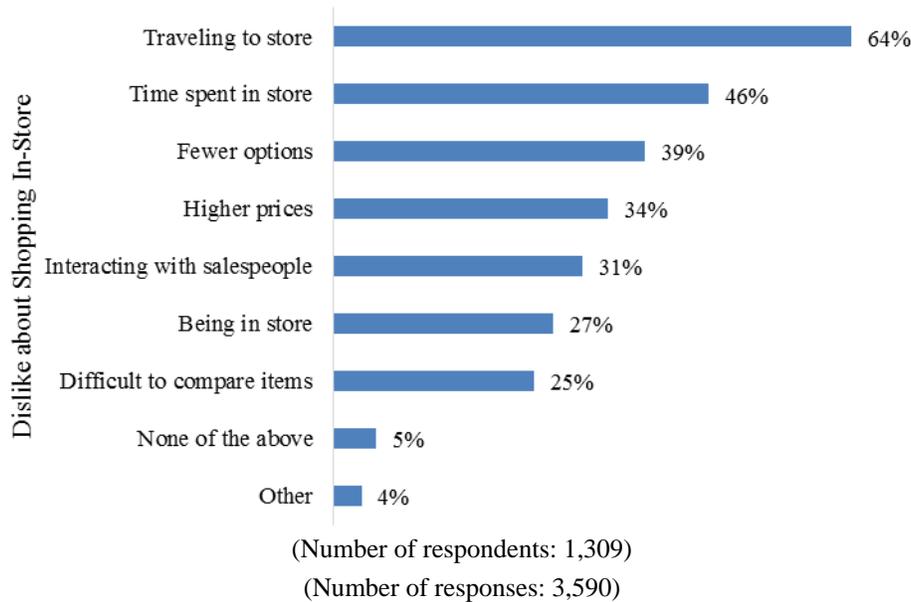
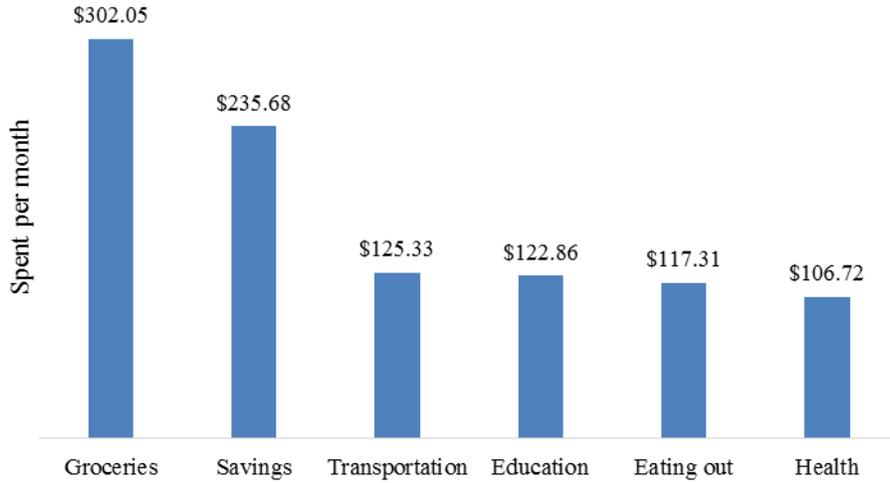


Figure 97. What Respondents Dislike about Shopping In-Store.

Spending

Respondents were asked to report how much money they spend per month on a variety of categories. Figure 98 shows that the highest expense reported was on groceries at an average of \$302 a month. The second highest expense category was savings at an average of \$236 a month. Spending on transportation, education, eating out, and health were similar, ranging between an average of \$106 and \$125 per month.

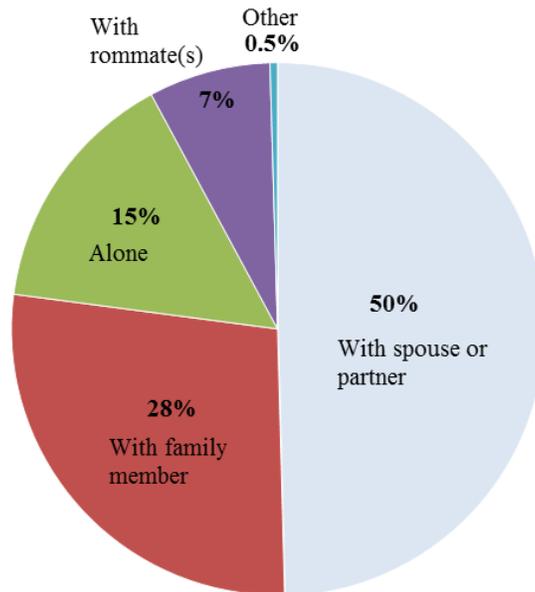


(Number of respondents: 1,296)

Figure 98. Average Monthly Spending in Various Categories.

Housing

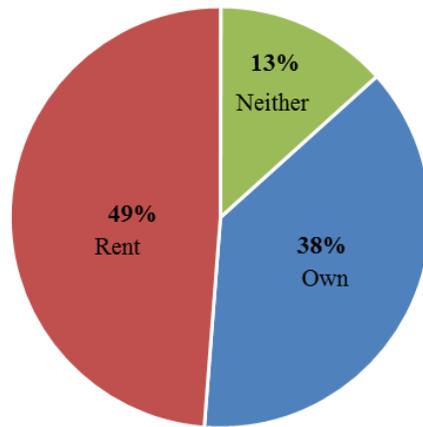
Respondents were asked several questions about their living arrangements. Figure 99 shows that when asked who they lived with, the most common response was with a spouse or partner (50 percent of the respondents). This was followed by a family member other than a spouse or a partner (28 percent), living alone (15 percent), living with roommates (7 percent), and “other” (0.5 percent). Respondents were able to write in responses for the “other” category. Frequent responses included “with kids and spouse” and “with extended family.”



(Number of respondents: 1,309)

Figure 99. Who Respondents Live With.

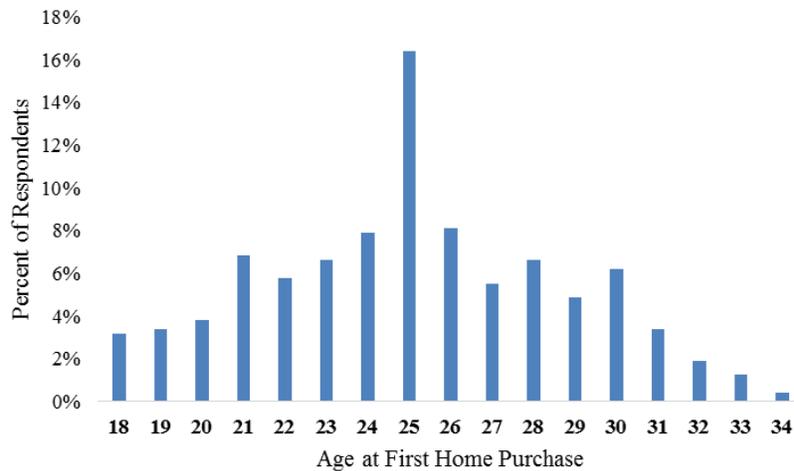
Figure 100 shows that 49 percent of respondents rented, 38 percent owned their home, and 13 percent replied neither.



(Number of respondents: 1,309)

Figure 100. Percentage of Respondents Who Rent or Own Their Home.

Figure 101 shows the age when respondents reported buying their first home. The most frequent response to this question was age 25 (16 percent of respondents). Thirty-eight percent of respondents bought their first home between the ages of 18 and 24, and 55 percent of respondents bought their first home between 25 and 34.¹⁶



(Number of respondents: 469)

Figure 101. Age When Respondents Bought Their First Home.

¹⁶ Not included in Figure 101 are the 7.3 percent of respondents who reported buying their first home under the age of 18, and the 0.4 percent of respondents who reported buying their first home over the age of 34. These responses were excluded from analysis because they fall outside the age range of interest (18 to 34 years). There was also a concern that respondents who replied that they bought their first home under the age of 18 misinterpreted the question. For example, a number of respondents reported buying a home under the age of 10.

If respondents reported owning a home, they were asked how much they paid in mortgage every month. If they reported renting a home, they were asked how much they paid in rent per month. Figure 102 shows the average amount spent on rent was \$798 per month. The average amount spent on mortgage per month was \$1,088.¹⁷

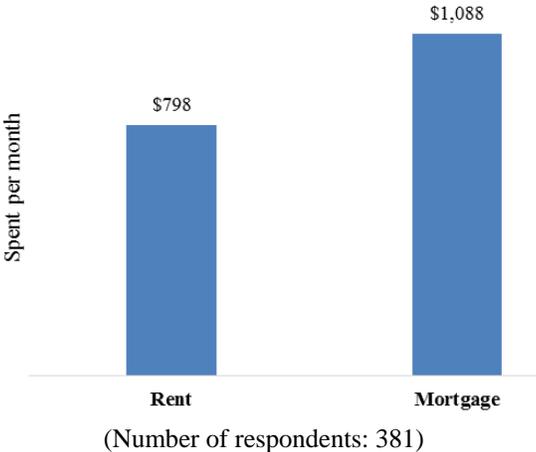
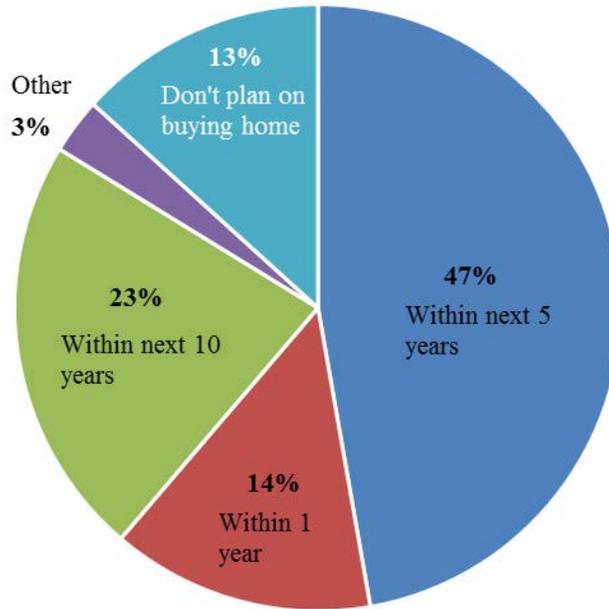


Figure 102. Average Monthly Expenditure on Mortgage and Rent.

Figure 103 shows that when respondents were asked what their timeline for buying a home was, 47 percent replied within the next five years, followed by 23 percent who replied within the next 10 years. This was followed by 14 percent who said their home buying timeline was within the next year. Thirteen percent of respondents said that they did not plan on purchasing a home, and 3 percent replied “other.” Among the most frequent write-in responses for the “other” category were in 20 years, in 15 years, and living with a spouse or inherited a home.

¹⁷ Some outliers were removed. Outliers for rent were less than \$100 and one observation of \$150,000. Outliers for mortgage were less than \$200 and more than \$19,000.

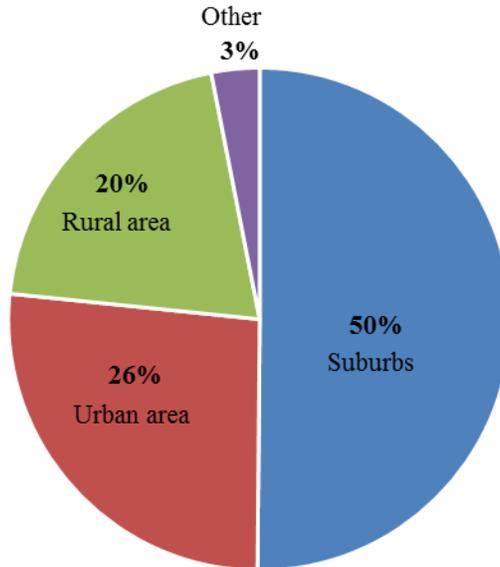


(Number of respondents: 813)

Figure 103. Timeline for Buying a Home.

Figure 104 shows where respondents reported they would like to purchase a home.¹⁸ Unless respondents indicated that they did not plan on purchasing a home, they were asked where they would like to purchase a home. Half of the respondents indicated that they would like to purchase a home in a suburban area, followed by 26 percent who indicated that they would like to buy in an urban area. Twenty percent of respondents indicated that they would like to buy in a rural area, and 3 percent replied “other.” Some of the write-in answers for the “other” category included “in the countryside,” “near a city,” and “depends on quality of home and location of job.”

¹⁸ Participants were not provided with a definition of urban, suburban, or rural area. Therefore, the responses to this question reflect how participants themselves define those areas. Participants’ perceptions of what an urban, suburban, or rural area is may differ from how the study team categorized zip codes as urban, suburban, or rural (based largely on housing density).

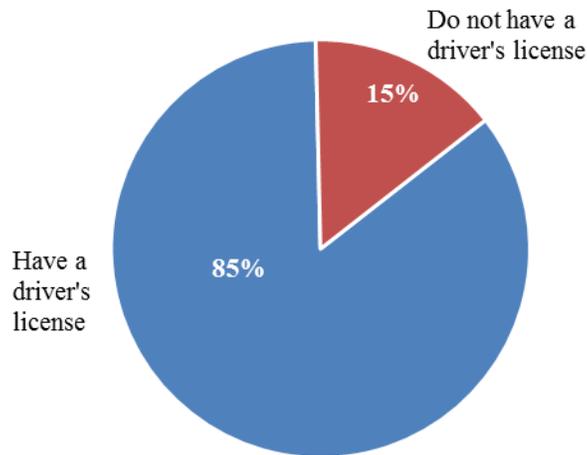


(Number of respondents: 716)

Figure 104. Where Respondents Want to Buy a Home.

Driving

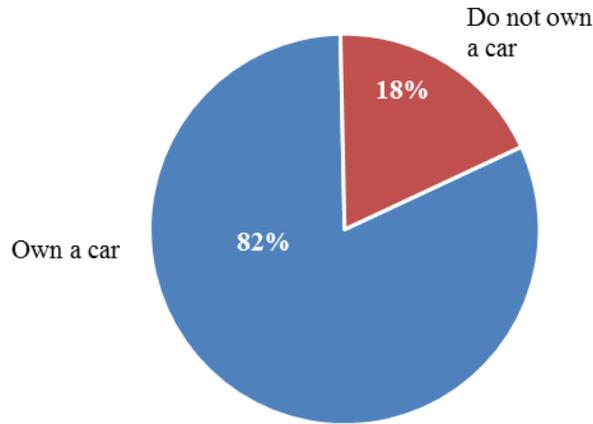
Figure 105 shows that the vast majority of respondents (85 percent) reported having a driver's license. Only 15 percent of the respondents reported not having a driver's license.



(Number of respondents: 1,310)

Figure 105. Percentage of Respondents with a Driver's License.

Figure 106 shows that the vast majority of respondents (82 percent) own a car.



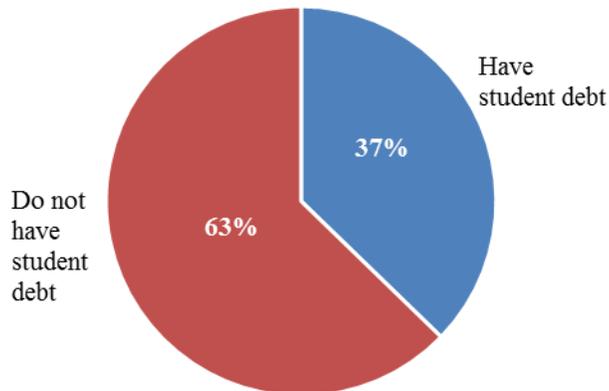
(Number of respondents: 1,310)

Figure 106. Percentage of Respondents Who Own a Car.

Debt

The survey included questions about three different types of debt: student debt, credit card debt, and other debt.

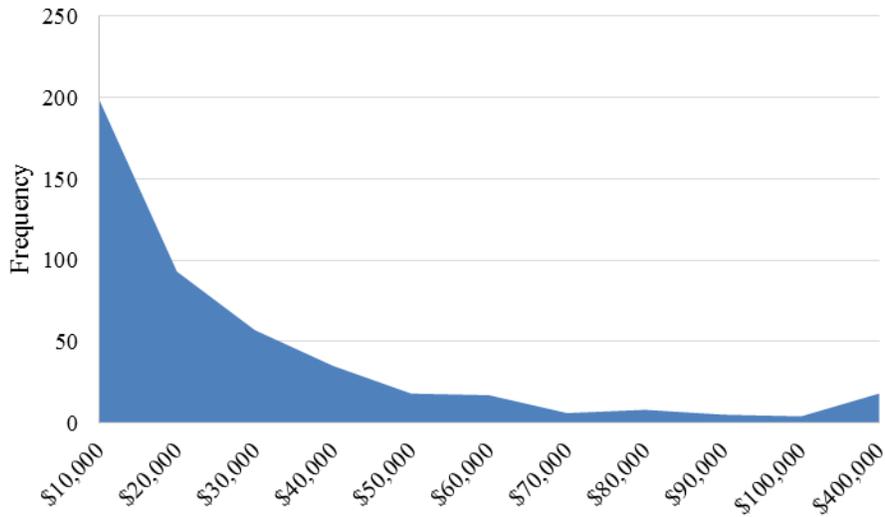
Figure 107 shows the percentage of respondents who have student debt that they are personally responsible for repaying. Figure 107 shows that 37 percent of respondents indicated that they had student debt, and 63 percent indicated that they did not.



(Number of respondents: 1,310)

Figure 107. Percentage of Respondents with Student Debt.

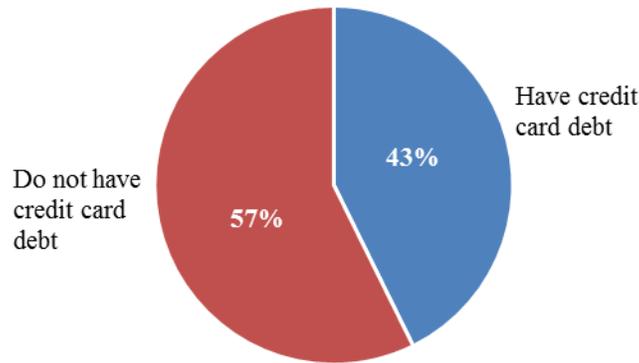
If respondents indicated that they had student debt, they were asked the amount of debt owed. Figure 108 shows that a majority of respondents (63 percent) had under \$20,000 in student debt. The maximum debt amount was \$400,000, and the average debt was \$25,875.



(Number of respondents: 460)

Figure 108. Amount of Student Debt Owed.

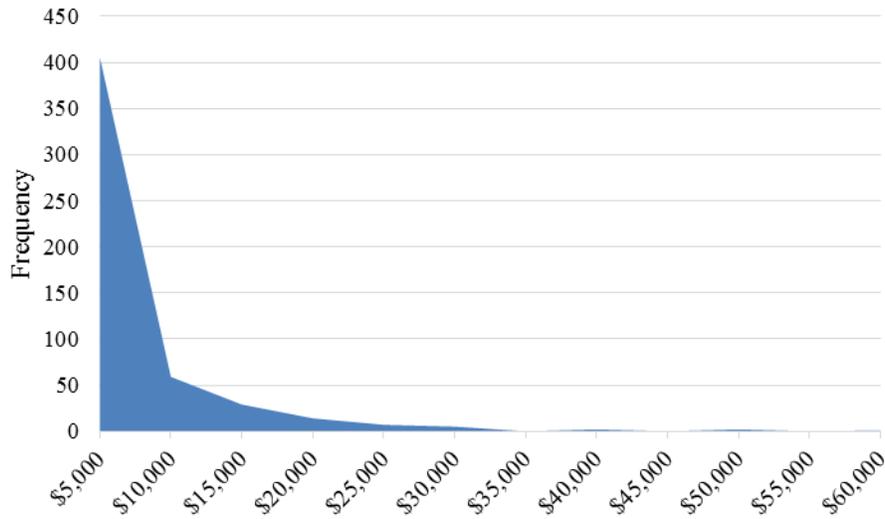
Figure 109 shows the percentage of respondents with credit card debt. Respondents were asked if they currently had any credit card debt that they were personally responsible for repaying. Figure 109 shows that 43 percent indicated that they had credit card debt, and 57 percent did not.



(Number of respondents: 1,307)

Figure 109. Percentage of Respondents with Credit Card Debt.

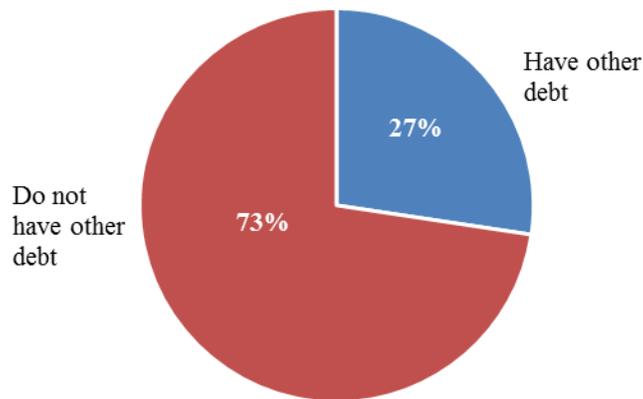
If respondents stated that they had credit card debt, they were asked the amount of debt owed. Figure 110 shows that over half of respondents (54 percent) reported credit card debt between \$1 and \$2,000. The maximum debt amount was \$60,000, and the average debt was \$4,566.



(Number of respondents: 524)

Figure 110. Amount of Credit Card Debt Owed.

Figure 111 shows the percentage of respondents who indicated that they had another type of debt (excluding student or credit card debt) that they were personally responsible for repaying. Figure 111 shows that 27 percent of respondents had other debt, and 73 percent did not.

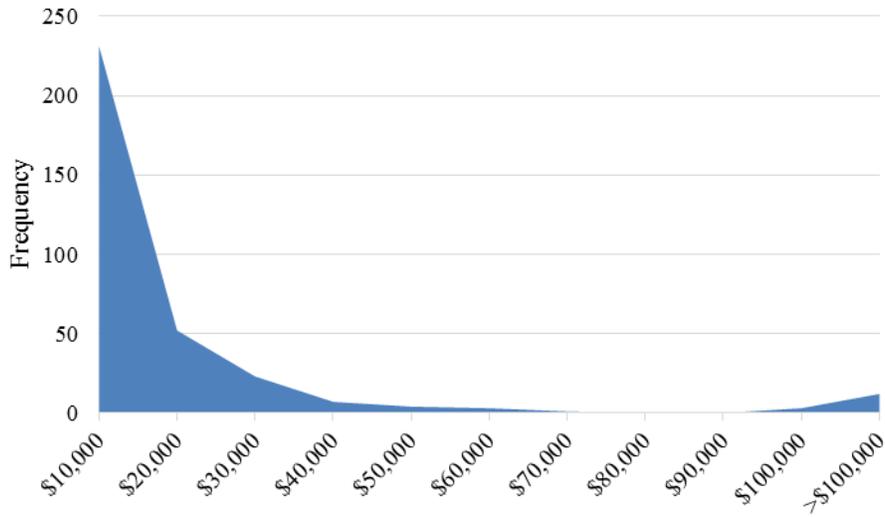


(Number of respondents: 1,304)

Figure 111. Percentage of Respondents with Other Debt.

If respondents said that they had other debt, they were asked the amount of debt owed. Figure 112 shows that most respondents (63 percent) reported other debt below \$10,000. The maximum debt reported was \$600,000, and average debt was \$19,762.¹⁹

¹⁹ An outlier of \$100,000,000 was excluded.



(Number of respondents: 337)

Figure 112. Amount of Other Debt Owed.

Figure 113 shows the average amount respondents owed by type of debt. Student debt (\$25,875 on average) was the highest amount that millennials were responsible for repaying, followed by other debt (\$19,762) and credit card debt (\$4,566).

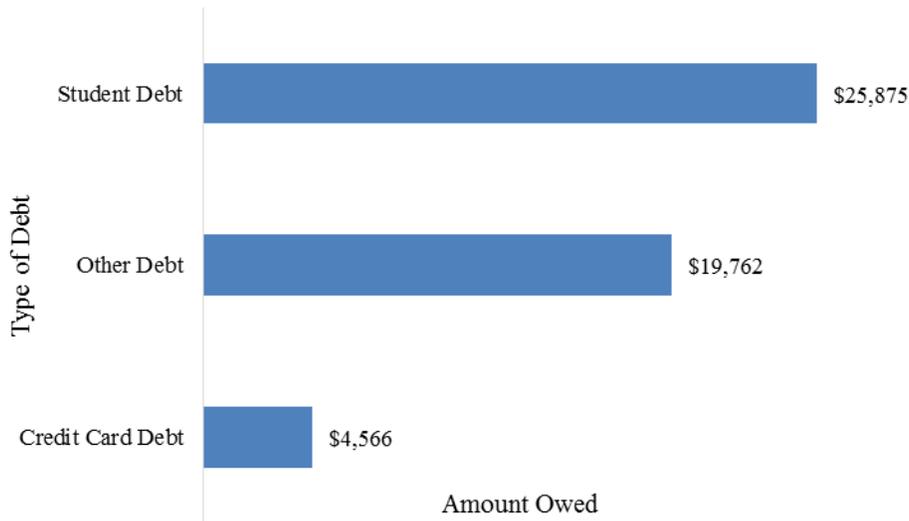


Figure 113. Average Amount of Debt Respondents Owed.

References

- 1 U.S. Census Bureau. *Geographic Areas Reference Manual*. November 1994. <https://www.census.gov/geo/reference/garm.html>. Accessed June 2016.