Retail Occupations: Few Signs of Employment Decline but Increasing Precarity

One in eleven U.S. workers work in retail jobs, close to 13 million workers in 2014-16. Occupations in the retail sector include Retail Salespersons, Cashiers, and Stock Clerks and Order Fillers, but also Advertising Agents, Telemarketers, and Models and Product Promoters. Retail is a typical first job for many people. While retail occupations employ many women, they also employ many men; women make up 52 percent of workers (IWPR Future of Work Database). This parity in numbers conceals substantial job segregation, however. Women are much more likely than men to work as Cashiers; men are more likely to work as Stock Clerks and Order Fillers, and Parts Salespersons. And women and men tend to work in different parts of the industry. Women are more likely to work in clothing and cosmetic sales; men are more likely to sell cars, computers, or DYI goods. Working in different segments of the retail sector explains partly why men's median annual earnings for full-time work as a Retail Salesperson are so much higher than women's ($38,000 compared with $26,000; Tables 2a and b); it also means that their job prospects may be affected differently as different segments of the retail sector are affected differently by technological change and changes in consumer preferences.

Women and men tend to work in different parts of the retail sector which partly explains why men's median annual earnings for full-time work as a retail salesperson are much higher than women's: $38,000 compared with $26,000.

The majority of occupations in retail have a high risk of technological substitution, according to Frey and Osborne (2013). The two largest retail occupations, Retail Salespersons and Cashiers, and seven smaller retail occupations, have an automation risk higher than 90 percent, according to their study. Potentially, according to this assessment, technology could replace 5.1 million jobs now held by women and 4.2 million jobs now held by men (Table 5). The third largest occupation, First-Line Supervisors of Retail Sales Workers, has a very low risk of technological substitution according to Frey and Osborne (although of course the demand for supervisors will decline if the number of workers to supervise declines).

The retail industry has been the subject of major changes in the past few years, reflecting technological innovation and other factors. Retail productivity nearly doubled from 1987 to 2015 (Mandel 2017). The growth of e-commerce has contributed to a decline in department stores, by 25 percent between 2002 to 2016 (Gebeloff and Russell 2017); and according to Deloitte between 2015 and 2018, the share of in-store spending dropped from 46 to 36 percent of all purchases (Deloitte 2018).

Industry studies also put the retail sector at high risk of automation. The World Economic Forum (2017) identifies eight new technologies that are already at least partially employed in the sector — Internet of Things, Autonomous Vehicles and Drones, AI, Robotics, Digital Traceability, 3D Printing, VR, and Blockchain. These technologies are reducing the need for labor; for instance,

the Internet of Things allows for automated ordering, autonomous vehicles/drones are starting to be employed in warehouses, AI allows for product customization and also for the greater automation of invoicing and ordering processes (World Economic Forum 2017). Thirty to fifty percent of retail jobs may be at risk (Shavel, Vanderzeil, and Curier, 2017). According to Bain Consulting (Harris et al. 2018), productivity gains from automation in the retail sector between 2015 and 2030 could be as high as 49 percent (depending on the pace of implementation). The same report states "The migration to e-commerce is just automating retail services—replacing an entire suite of human functions from the floor salesperson or cashier with a web-based storefront and a payments-processing app."

Amazon is reportedly considering the opening of 3000 cashless stores by 2021 and opened its first cashless store in Seattle in September 2018 where the costs of purchases are automatically deducted from shoppers' accounts as they leave the store (*Supermarket News* 2018). As a recent analysis of trends in the grocery store sector by McKinsey & Company puts it, Amazon is "asking the right question" because instead of focusing on replacing Cashiers with cashless checkout terminals (still requiring labor, and irritating customers), it is trying to do away completely with the checkout process (Toriello 2017). Cashiers account for approximately 30 percent of labor in the sector, according to McKinsey. Cashiers do not only take money, they also are part of theft control in stores. A *New York Times* investigation highlights emerging approaches to theft control that go beyond the electronic reading of price labels and automatic deduction from customers' accounts by focusing on electronic surveillance and analysis of body language to control theft (*New York Times* 2018). While the function of the cashier would be replaced in this approach, it would require a new function of theft control, responding to electronically generated warnings of suspicious behavior from customers.

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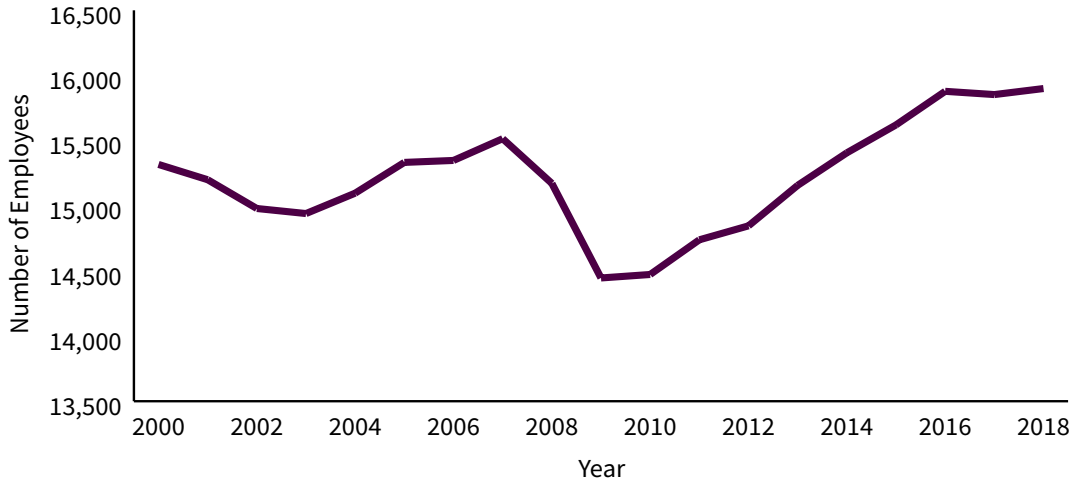
Yet, even though the growth of e-commerce has been very rapid, its share of overall employment in the retail sector remains at less than four percent (authors' calculations based on U.S. Bureau of Labor Statistics 2018h). And whatever the technological potential, so far there are few signs that retail employment is falling, except for declines in the Great Recession (Figure 3).

FIGURE 3 Data Do Not Indicate that Retail Employment is Falling

Trends in Retail Sector Employment 2000 to 2018 (in thousands)

Notes: Median annual full-time year-round earnings for women in the largest 20 occupations for all women workers.



Notes: Data are for September of each year.

Source: IWPR compilation based on BLS Current Employment Statistics survey Employment, Hours, and Earnings from the series CES4200000001.

While there has been a decline in employment between 2000 and 2014-16 in several of the smaller retail occupations which Frey and Osborne's study (2013) puts at high risk of automation, the four largest occupations—Retail Salespersons, Cashiers, and First-line Supervisors of Retail Sales Workers, and Stock Clerks and Order Fillers—experienced substantial growth over the period (Table 5).

The growth in retail employment overall, however, masks a trend towards part-time work (IWPR Future of Work Database, not shown elsewhere). Full-time work for Cashiers declined from 54 to 39 percent for women Cashiers, from 64 to 56 percent for women Retail Salespersons; and from 73 to 64 percent for women Stock Clerks and Order Fillers. Full-time work for male Cashiers is even lower, at 43 percent in 2016, but male Retail Salespersons are much more likely to work full-time than women, even though full-time employment fell among men too (from 78 to 69 percent of workers; IWPR Future of Work Database, data not shown elsewhere). Many workers, moreover, have fluctuating and unpredictable schedules, making it difficult to plan their lives (see Chapter 4 for a more detailed discussion).

Looking ahead, the BLS projects substantial overall growth in employment in retail occupations between 2016 and 2026, even if at a much slower pace than overall projected workforce growth (Table 5). The occupation that is projected

to add the most jobs is Stock Clerk and Order Fillers; BLS projects a decline (although by less than 1 percent of current levels) in the number of Cashiers and several smaller occupations for a loss of 38,404 jobs. Overall BLS expects retail to remain a substantial sector of employment through at least 2026.

In the coming years, as new technologies are introduced in retail, overcoming gender differences will remain a challenge. As discussed above, the retail sector includes many different occupations, with differing opportunities for good earnings and jobs. Full-time year-round earnings for Retail Sales Workers range from $20,000 or less for workers in the bottom 20 percent of the earnings distribution to $60,000 or more for the top 20 percent (IWPR Future of Work Database, data not shown elsewhere). Gender earnings differentials are very substantial for this occupation, and progress towards narrowing them has been slow (in 2000, the gender earnings ratio was 63 percent, compared with 68 percent for 2014-16). Additionally, women are much less likely than men to work full-time year-round, with little change between 2000 and 2014-16; IWPR Future of Work Database, data not shown elsewhere). As workers will need new skills and training to work with new technologies and become more digitally competent, there should also be scope for ensuring that women's share of more responsible positions, from first-line supervisor to higher levels of management, more closely reflects women's share of the workforce. There are some signs of progress. Women's share of First Line Supervisors of Retail Sales Workers, for example, increased from 41.5 to 45.5 percent between 2000 and 2014-16 (Table 5).

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Technology is already changing the way work is done in retail, including a growing need to work with computers and digital technology (albeit from a moderate bases; Muro et al. 2017). The work of Zeynep Ton (2014) has shown that there is no one best (or worst) business model for retail, and that retail businesses can be both profitable and use good employment practices. Other case studies highlight such choices in the implementation of retail technology, with one store using the move to labor-saving ordering technologies to cut back labor hours, and another instead redeploying workers to focus on display and customer acquisition and satisfaction (Voss-Dahm 2009). The Gap Store's experiment with scheduling technologies provides another example for the potentially positive impact of employing new technologies in ways that can enhance both employer and worker satisfaction (see Chapter 4 for a more detailed discussion). Technological change provides opportunities to craft better jobs in retail for both women and men; gender segregation and low levels of earnings for many in the sector provide the imperative for taking up those opportunities.

TABLE 5 Retail Occupations and Women's Employment 2000-2026: Different Measures of Potential Job Change

Retail Occupations	All Workers, 2000		All Workers, 2014-2016		Employment Change 2000 to 2014-2016		BLS Projected Employment Change, 2016-2026				Frey and Osborne Projected Automation Impact		
	Number	Percent Women	Number	Percent Women	Number	Percent	Number	Percent	Men	Women	Automation Probability	Men	Women
Retail salespersons	3,205,964	51.8%	3,440,490	50.7%	234,526	7.3%	79,700	1.7%	39,278	40,422	0.92	(1,559,913)	(1,605,337)
Cashiers	2,269,850	76.7%	3,096,980	74.3%	827,130	36.4%	(30,000)	(0.8%)	(7,723)	(22,277)	0.97	(772,598)	(2,228,638)
First-line supervisors of retail sales workers	2,754,392	41.5%	3,079,223	45.5%	324,831	11.8%	57,700	3.8%	31,452	26,248	0.28	(469,978)	(392,204)
Stock clerks and order fillers	1,140,882	36.9%	1,622,128	34.8%	481,246	42.2%	100,900	5.0%	65,737	35,163	0.64	(676,372)	(361,790)
Shipping, receiving, and traffic clerks	628,158	29.8%	609,930	30.3%	(18,228)	(2.9%)	100	0.0%	70	30	0.98	(416,906)	(180,826)
Advertising sales agents	206,822	52.1%	173,126	51.1%	(33,696)	(16.3%)	(5,400)	(3.6%)	(2,642)	(2,758)	0.54	(45,743)	(47,745)
Door-to-door sales workers, news and street vendors, and related workers	172,237	54.8%	145,100	59.2%	(27,137)	(15.8%)	100	0.1%	41	59	0.94	(55,663)	(80,731)
Correspondence clerks and order clerks	172,197	64.8%	135,235	58.4%	(36,962)	(21.5%)	(3,500)	(1.9%)	(1,456)	(2,044)	0.98	(54,888)	(77,014)
Parts salespersons	124,721	10.5%	113,890	12.9%	(10,831)	(8.7%)	12,700	5.0%	11,057	1,643	0.98	(97,174)	(14,438)
Counter and rental clerks	137,604	58.9%	90,793	51.9%	(46,811)	(34.0%)	25,000	5.5%	12,022	12,978	0.97	(42,350)	(45,719)
Telemarketers	213,994	64.3%	78,302	63.3%	(135,692)	(63.4%)	-	0.0%	-	-	0.99	(28,445)	(49,074)
Models, demonstrators, and product promoters	51,079	79.4%	59,156	73.2%	8,077	15.8%	6,200	6.2%	1,663	4,537	0.53	(8,451)	(23,060)
Procurement clerks	38,933	63.5%	30,793	57.0%	(8,140)	(20.9%)	(3,000)	(4.3%)	(1,289)	(1,711)	0.98	(12,964)	(17,213)
	11,116,833		12,675,146		1,558,313	14.0%	240,500	1.9%	148,210	51,868		(4,241,446)	(5,123,790)

Notes: Numbers employed are for all workers. Source: IWPR Future of Work Database; for methodology and sources see Methodological Appendix.