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Research Article

Retailers' Investment in Technology: An Industry Perspective

A Special Report for Digital Signage Connection

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About Platt Retail Institute

Platt Retail Institute (PRI) is an internationally recognized consulting and research firm that focuses on the use of technology to impact the customer experience. In an omni-channel environment, PRI works with its clients to develop marketing strategies to integrate various customer-facing technologies. PRI clients include retailers, media companies, financial institutions, hardware and software companies, educational institutions, and other businesses. In addition to its global consulting expertise, PRI also publishes the quarterly *Journal of Retail Analytics*, the *North American Digital Signage Index*, and other pioneering industry research.



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Technology touches almost every aspect of commercial activity. And with the rapid pace of technological innovation, its impact on business enterprise will only increase in the future. Like many other industries retailers are being impacted by technology advancements, as well as changing shopping habits.

Technology is being embraced by retailers to realize operational improvements, and also in response to changing consumer behavior. The list of technology imperatives faced by retailers is lengthy. These include social, mobile, cost containment, Omni-channel initiatives, security, among many others. Today, customers experience a brand, rather than a specific shopping channel. This fragmentation in shopping channels away from brick and mortar stores is forcing retailers to meet consumers on their terms, which is causing a lot of upheaval in the retail business and further fueling the drive toward technological innovation.

Notwithstanding these challenges and opportunities, it has been advanced that retailers, as an industry, underinvest in technology. For example, CompTIA's 2012 *Retail Sector Technology Adoption Trends* report, states "... relative to the size of the retail sector and compared to other industries, retailers are underinvested in information technology."¹ CompTIA is not the first firm to advance this position. In a 2008 study by Accenture, it was noted that "Retailing has historically invested lower percentages of revenue compared to other industries. Typically, IT spending represents 1 to 15 percent of a company's revenue...The financial sector is on the high end of the spectrum, while retailing is near the bottom."² The same Accenture report found that "According to the last several years of the *R/S/Gartner Retail Tech Trends Study*, retailers allocate less than 2 percent of revenue to their IT budgets. This figure ... is two or three times lower than other industries."

In this Research Article, we look at published data, and also compile Census Bureau data, to consider the level of technology investment being made by retailers. In general, we find that the published data does not support the proposition that the retail industry underinvests in technology. Looking at Census Bureau data does, however, present a much different perspective that supports the conclusion that the industry generally underinvests in technology.

Trends in Retail Technology Spending

Retailers understand the importance of technology adoption. CompTIA,³ for example, found that 72 percent of retailers believe that technology is important to their business success. This is expected to reach 83 percent by 2014 (see Chart 1).



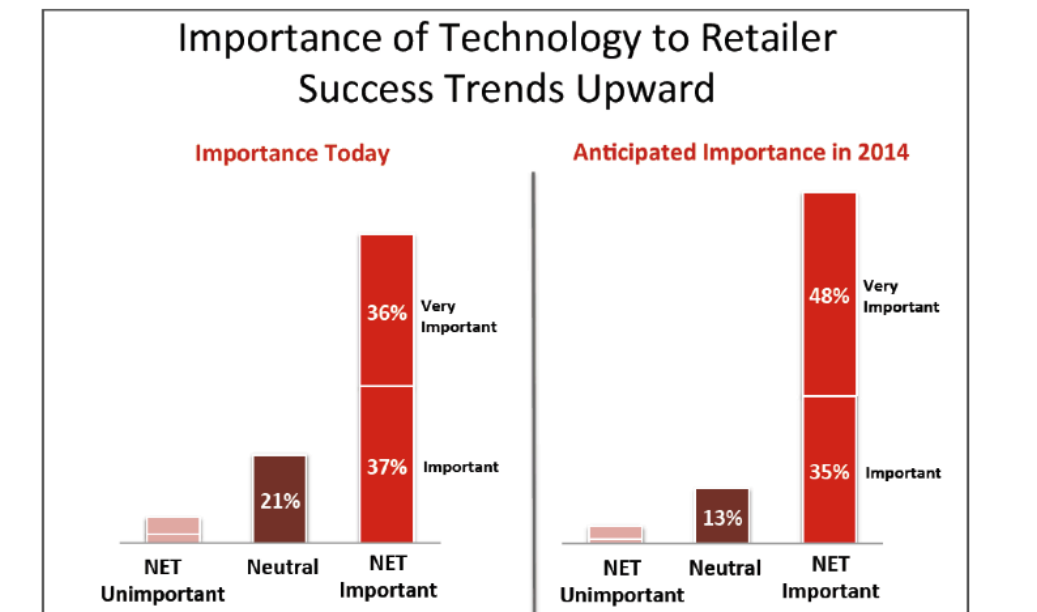
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¹ "Retail Sector Technology Adoption Trends," CompTIA June 2012, page 9.

² See "U.S. Tech Spending Lags, Retail Spending Lags Further," Retail Info Systems News, March 8, 2008.

³ See "Retail Sector Technology Adoption Trends," CompTIA June 2012.

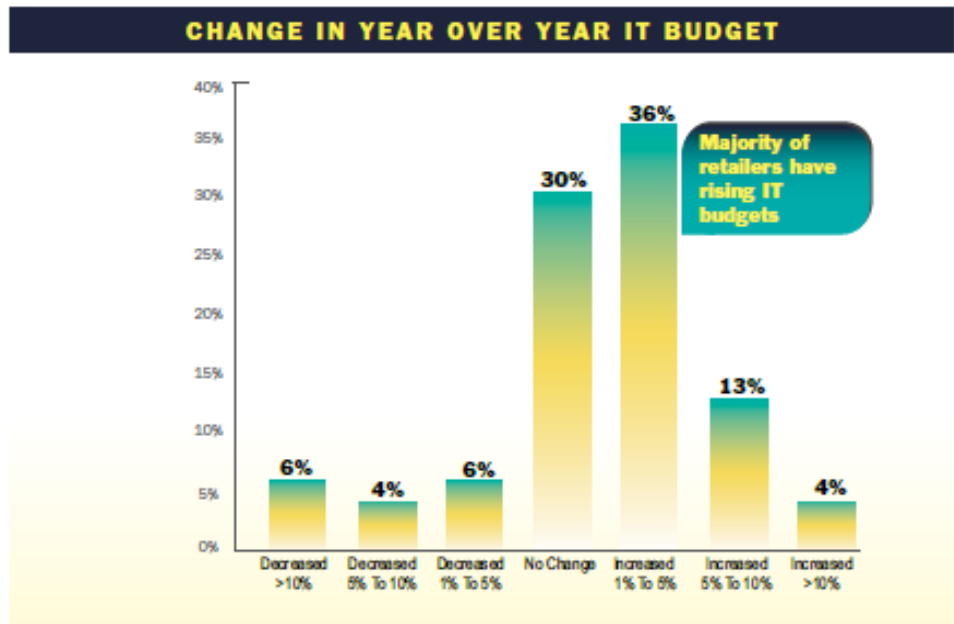
Chart 1.



Source: CompTIA

Retailers understand the importance of technology to their business, and trends in their IT budgets support this. Research indicates that retailers plan to increase their IT spending during 2012 and beyond. For example, RIS/Gartner found that 53 percent of retailers plan on increasing IT budgets (see Chart 2).⁴ This is consistent with the findings of another study, which found that 58 percent of retailers expect capital spending to increase, and that 51 percent of this will be invested in IT.⁵

Chart 2.



Source: RIS/Gartner



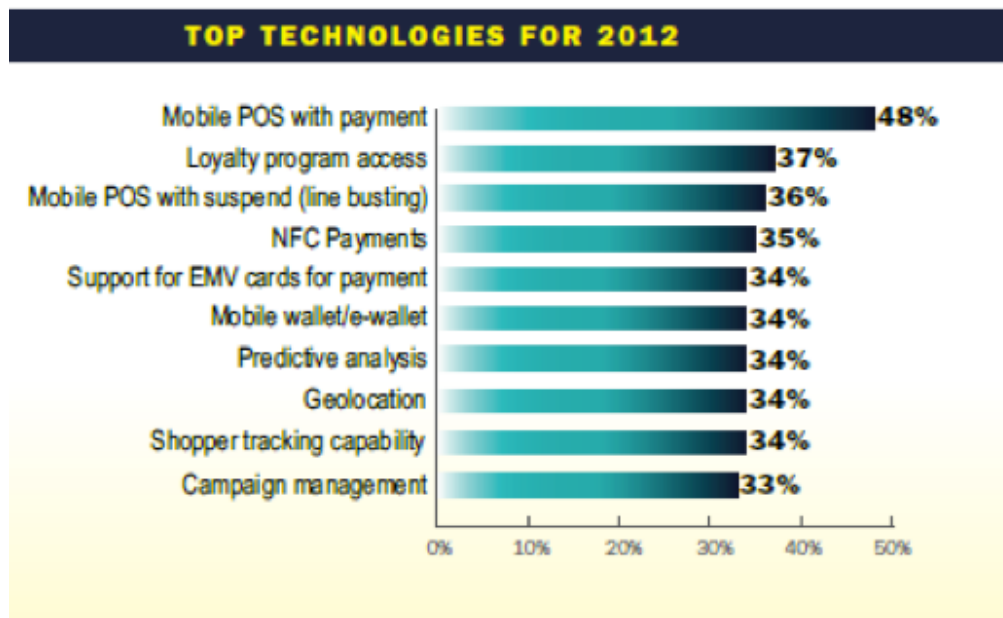
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⁴ See "22nd Annual Retail Technology Study," RIS/Gartner, April 2012.

⁵ See "Retail Industry Outlook Survey," KPMG 2012.

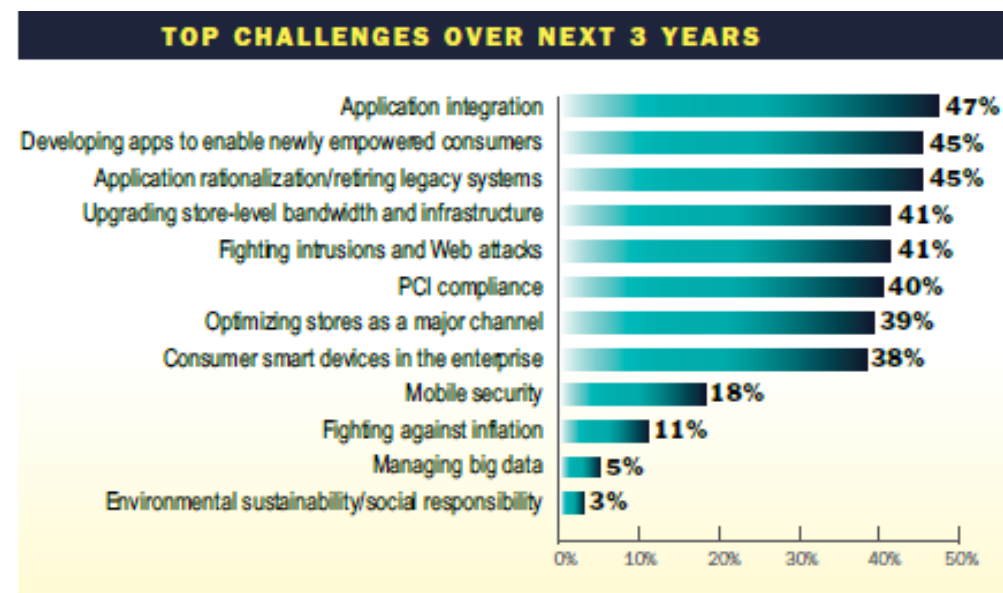
According to RIS/Gartner research, mobile payment is high on the technology priority list for 2012 (see Chart 3). Looking out over the next three years, mobile continues to be a major focus, as are the systems required to support and integrate mobile with legacy systems (see Chart 4).

Chart 3.



Source: RIS/Gartner

Chart 4.



Source: RIS/Gartner

Research firm IDC puts the global IT industry at \$3.2 trillion in 2011, with the U.S. IT market at \$900 billion.⁶ CompTIA estimates the global IT industry will grow by 4.5 percent, while the U.S. market's projected growth is 4.0 percent.

⁶ In the U.S. Census Bureau's 2010 Information and Communication Technology Survey, it was found that U.S. spending on information and communication technology equipment and software totaled \$263 billion in 2010. An explanation of the differences between IDC's and the Census Bureau's findings is beyond the scope of this Research Article.



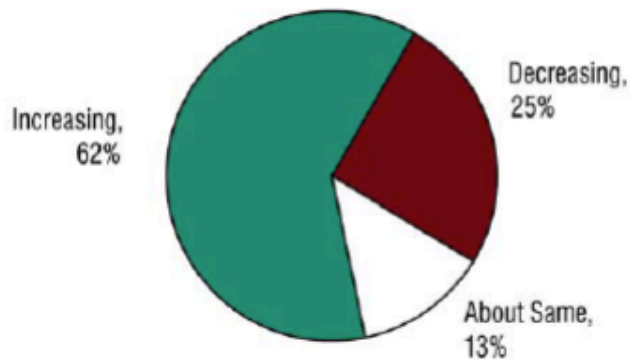
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Retail IT Spending Compared with General Industry Trends

According to Computer Economics,⁷ 62 percent of firms are increasing IT spending in 2012 (see Chart 5). Information Week found that 56 percent of IT professionals surveyed planned to increase spending in 2012.⁸ This compares to RIS/Gartner's 53 percent of retailers, as shown on Chart 2. However, Computer Economics found that retailers' budgets for IT in 2012 are slightly ahead of the industry average (see Chart 6). Based on these data points, it is reasonable to conclude that retailers generally plan to increase IT spending in line with other U.S. industries during 2012.

Chart 5.

Percentage of Organizations Changing IT Operational Spending: All Sectors



Source: Computer Economics



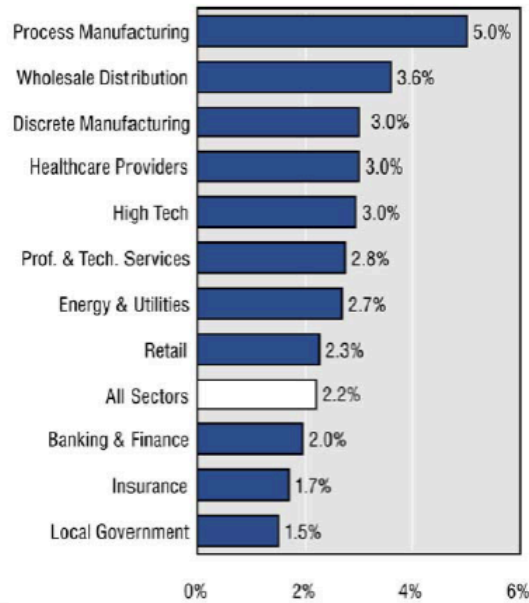
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⁷ See "2012/2013 IT Spending & Staffing Benchmarks," Computer Economics 2012.

⁸ See "Outlook 2012," Information Week, December 2011.

Chart 6.

Change from Prior Year in Median IT Operational Budget, by Sector



Source: Computer Economics, 2012

Fig

Source: Computer Economics

Next, looking at the IT investment perspective, a broadly accepted way to measure IT spending is as a percent of sales. According to Computer Economics, U.S. industries will generally spend 1.6 percent of revenue on IT in 2012 (see Chart 7). Computer Economics put retailer IT spending at 1.5 percent, slightly below the average of the industries polled. This 1.5 percent spend is consistent with other research into estimates of retail IT spending. To illustrate, in 2010, it was estimated that general merchandisers spent 1.7 percent of revenue on IT.⁹ In 2008, IT retail spending was pegged at 1.62 percent of revenue; in 2007, it was 1.5 percent.¹⁰ Again, based on these data points, it is reasonable to conclude that the amount retailers generally spend on IT is in line with other U.S. industries.



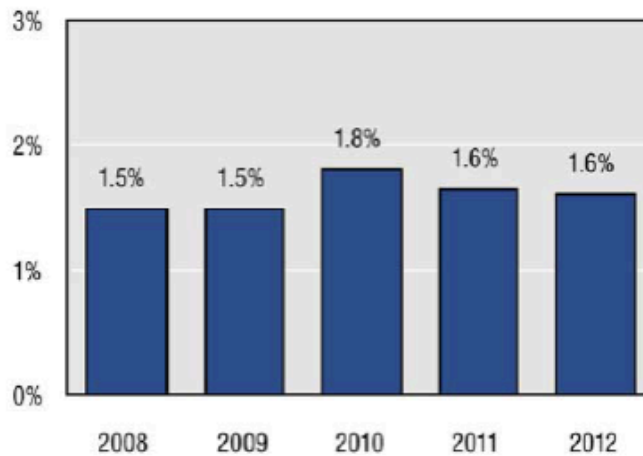
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⁹ See "InformationWeek 500 Industry Snapshot: General Retail Merchandising," 2010.

¹⁰ See "Retail IT Budget Benchmarking Study, 2007-2008," AMR Research 2008.

Chart 7.

IT Operational Budget as Percentage of Revenue: 2008-2012



Source: *Computer Economics, 2012*

Census Bureau Data

The above data indicates that, as an industry, retailers both plan to spend and do spend amounts on IT that would place the industry on average with U.S. industries generally.

On the point of retail IT spend in comparison to other industries; we also considered data supplied by the U.S. Census Bureau. This data presents a much different picture than that presented above. That is, based on Census Bureau data, it appears that retailers do, in fact, substantially underinvest compared to other service industries when considering both total spending and spending as a percentage of revenue.

U.S. spending on information and communication technology equipment and software (ICTS) totaled \$263 billion in 2010, up 3.1 percent versus 2009.¹¹ We compared retail ICTS spending with 11 other service industries. As Chart 8 illustrates, retailers spend less on ICTS than service industries such as the Information Sector (i.e., publishing, broadcasting, telecom, etc.), Finance/Insurance, Health Care/Social Assistance, and Professional, Scientific/Technical (legal, accounting, management, etc.).



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¹¹ U.S. Census Bureau 2010 Information and Communication Technology Survey.

Chart 8.

(\$ in millions)

Service Industry	2010 ICTS Spending ¹²	2010 ICTS Percent Total ICTS Spending
Retail Trade	16,650	6.33
Wholesale Trade	8,909	3.39
Finance/Insurance	48,149	18.30
Health Care/Social Assistance	22,960	8.73
Professional, Scientific/Technical	22,699	8.63
Information Sector	71,287	27.09
Transportation/Warehousing	4,902	1.86
Utilities	5,994	2.28
Rental/Leasing	2,956	1.12
Educational	4,400	1.67
Arts, Entertainment/Recreational	1,543	0.59
Administrative, Support/Waste Management	6,516	2.48

Source: Platt Retail Institute

When ICTS spending is viewed as a percentage of revenue, Census Bureau data reveals that retailers spend less than all other service industries here compared, with the exception of Wholesale Trade (see Charts 9a and 9b).



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¹² U.S. Census Bureau 2010 Information and Communication Technology Survey.

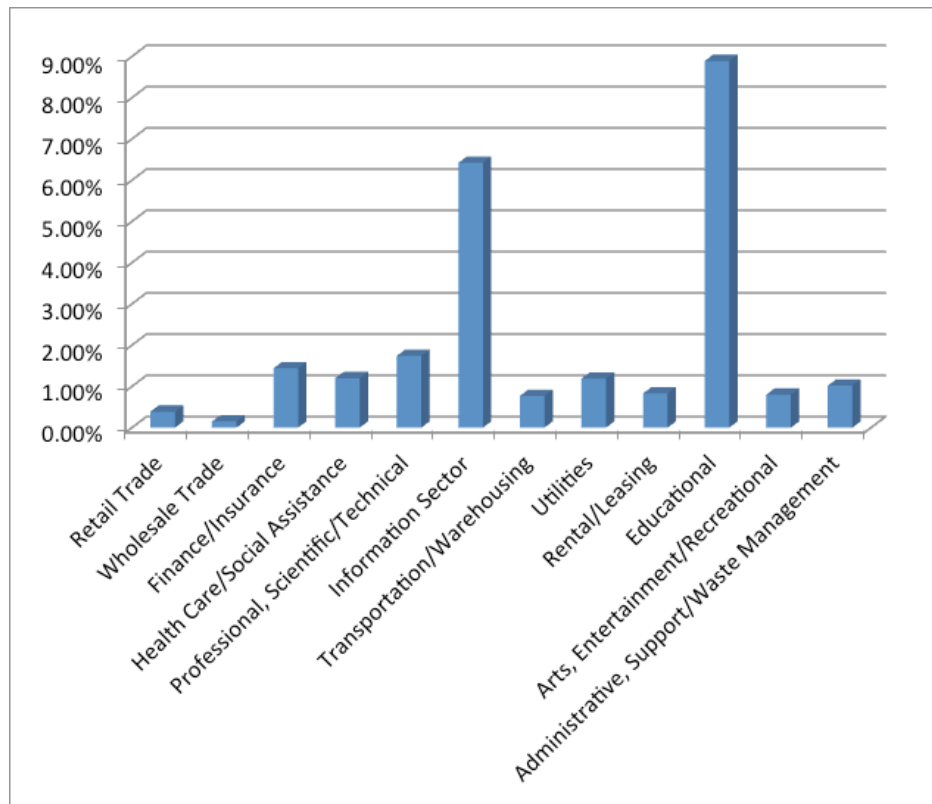
Chart 9a.

(\$ in millions)

Service Industry	2010 Industry Revenue ¹³	2010 ICTS Spending Percent Revenue
Retail Trade	4,307,531	0.39
Wholesale Trade	5,773,411	0.15
Finance/Insurance	3,345,367	1.44
Health Care/Social Assistance	1,917,183	1.20
Professional, Scientific/Technical	1,304,872	1.74
Information Sector	1,110,225	6.42
Transportation/Warehousing	640,168	0.77
Utilities	501,658	1.19
Rental/Leasing	356,013	0.83
Educational	49,491	8.89
Arts, Entertainment/Recreational	191,982	0.80
Administrative, Support/Waste Management	636,388	1.02

Source: Platt Retail Institute

Chart 9b.



Source: Platt Retail Institute



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¹³ U.S. Census Bureau 2010 Annual Services Report, Annual Retail Trade Survey, and Annual Wholesale Trade Report.

In this Research Article we considered whether retailers, in general, invest enough in IT to support their businesses. Current in-the-field data indicates that retailers are, in fact, spending on par with other industries. On the other hand, our review of Census Bureau data portrays a very different picture, and supports the conclusion that retailers are underinvesting in IT when compared to other industries.

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