



# Service Employment Trends And Stock Price Movements: The Consumer Staples and Consumer Discretionary Sectors, 2009-2016

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### Study Objective:

- Determine if service employment predicts excess returns in consumer staples (XLP) and consumer discretionary (XLY) sectors

### Research Design #1

- Regress service employment on top ten stocks in XLP and XLY
- TimePeriod:2009-2016
- Time Frequency: Monthly Data
- Model Specifications

$$P_i = A + B(S) + e$$

$P_i$  = Price of stock i

A, B = Equation Parameters

S = Service Employment

E = Error Term

i = i<sup>th</sup> stock (10)

### Research Design: Portfolio Construction Model

$$W_i = B_i / (\sum B_i)$$

$$D_i = W_i \times 1,000,000$$

$$Shr_i(t) = D_i(t) / P_i(t)$$

$$MV_i(t+1) = SHR_i(t) * P_i(t+1)$$

$$Port(t+1) = \sum MV_i(t+1)$$

## Table 1 Cumulative Return XLP

Year	XLP	SPY	Alpha
2009	19.18%	24.79%	-5.62%
2010	40.66%	52.47%	-11.81%
2011	62.47%	58.86%	3.61%
2012	101.12%	85.11%	16.01%
2013	129.46%	124.78%	4.68%
2014	195.30%	156.53%	38.77%
2015	223.14%	154.30%	68.84%
2016	236.66%	198.75%	37.91%

## Conclusion:

- XLP outperforms SPY
- XLY outperforms SPY
- XLP excess return 38%
- XLY excess return 951%
- XLY outperforms XLP

## Table 2 Cumulative Return XLY

Year	XLY	SPY	Alpha
2009	72.24%	24.79%	47.45%
2010	222.64%	52.47%	170.17%
2011	294.43%	58.86%	235.56%
2012	415.96%	85.11%	330.85%
2013	712.78%	124.78%	588.00%
2014	657.54%	156.53%	501.01%
2015	771.67%	154.30%	617.37%
2016	1150.01%	198.75%	951.26%