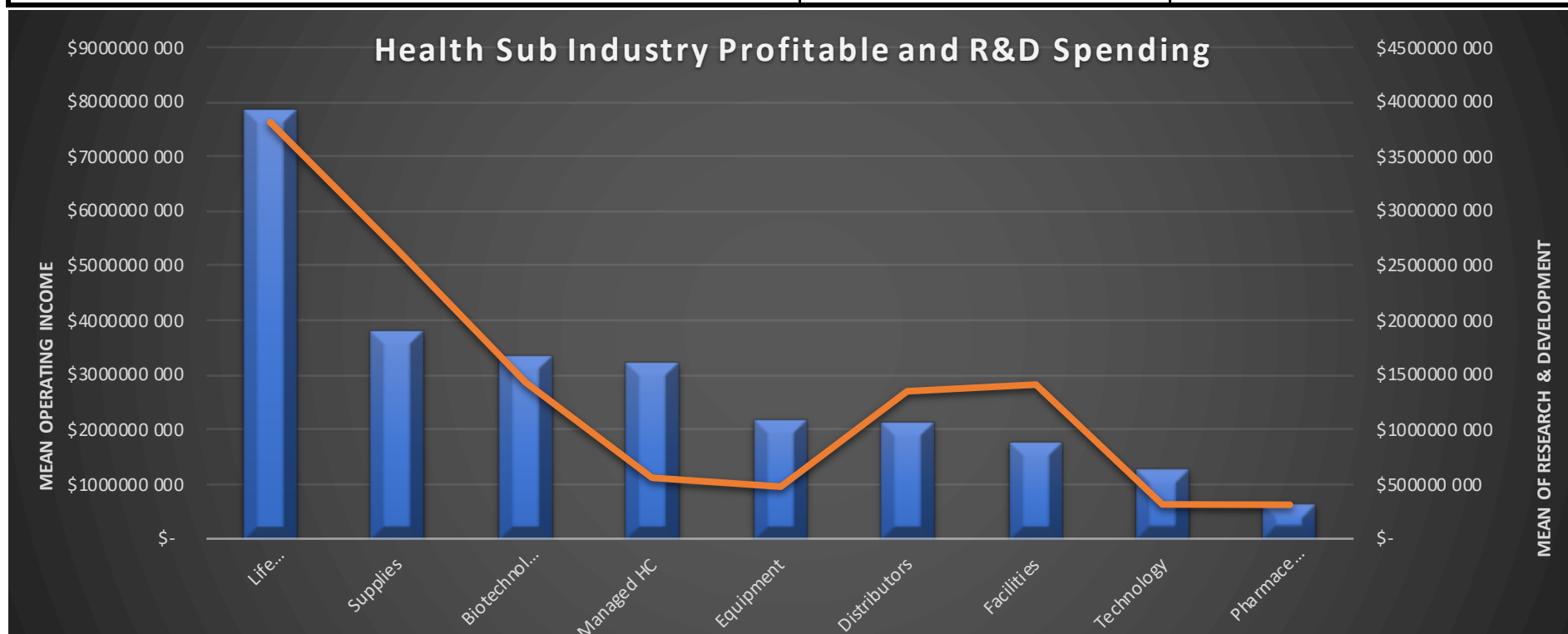
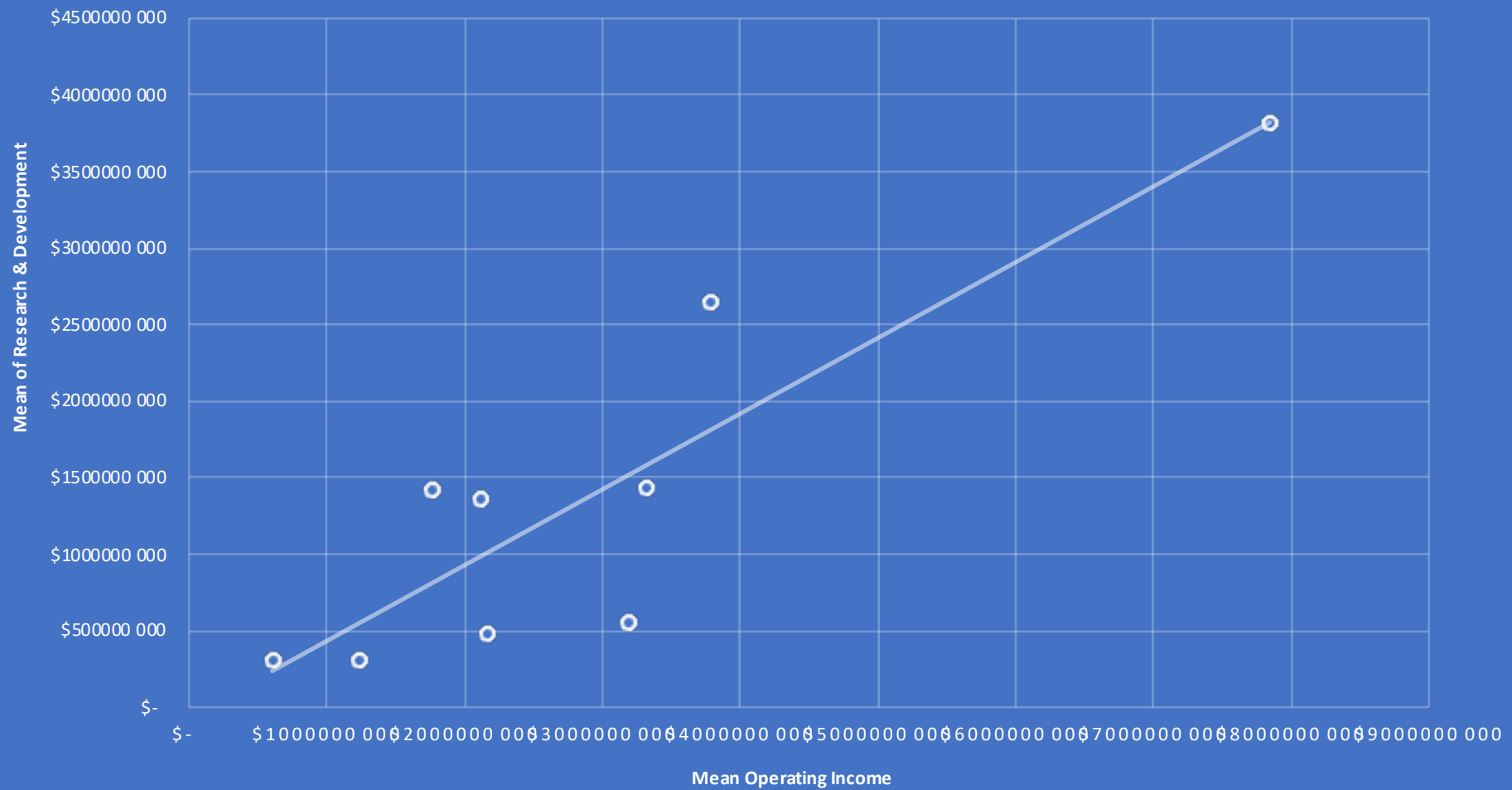


Which industry of the Health Sector are most profitable and how does it correlate to the R&D expencses?

GICS Sub Industry	Mean Operating Income	Mean of Research & Development
Life Sciences Tools & Services	\$ 7 845 308 125	\$ 3 813 404 375
Supplies	\$ 3 788 095 000	\$ 2 642 307 250
Biotechnology	\$ 3 319 783 500	\$ 1 437 860 464
Managed HC	\$ 3 193 173 600	\$ 556 977 450
Equipment	\$ 2 162 427 857	\$ 485 977 768
Distributors	\$ 2 126 525 000	\$ 1 354 429 167
Facilities	\$ 1 761 628 250	\$ 1 418 302 500
Technology	\$ 1 243 366 500	\$ 313 425 000
Pharmaceuticals	\$ 603 570 727	\$ 310 942 773



CORRELATION BETWEEN OPERATING INCOME AND R&D EXPENSES



Here are the histogram and scatter plot for the Operating Income for the industries of Health Care sector and R&D expenses. The distribution is right-skewed - the mean is higher than median. The minimal mean Operating Income (\$603 507 727) is for Pharmaceuticals. The mean Operating Income in Life Science Tools & Services industry (\$ 7 845 308 125) was higher than for other industries in the same sector. We can see this in the histogram.

The scatter plot - Correlation between Operating Income and R&D expenses - shows that we have the correlation (NOT causation, surely) with positive line trend. It means that the industries with higher Operating Income (Life Sciences Tools & Services and Health Care Supplies (\$3 813 404 375 and \$1 942 875 967 respectively) spend more in average than other industries.

Consider the Life Science Tools & Services industry for further analysis.

There are the Standard deviations show the amount of variance of the Operating Income spread around their mean in my descriptive statistics. For the companies of Life Science Tools & Services this statistic (\$7 751 129 467,2) was 2.2 times higher than the standard deviation of Operating Income for whole Healthcare Sector (\$3 460 128 873,8). That's mean a higher variability of profitable in the Life Science Tools & Services industry compared to the whole Healthcare sector.

The Range in this descriptive statistics is difference between high and low Operating Income. It is higher for the Health Care sector (\$22.8 Billion) than the Range of the same financial metric in the Life Science Tools & Services industry (\$ 16.9 Billion). It looks like companies in the whole Health Care sector have more significant variability in the profitable because their range is more spread out.