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Three Emerging Technologies to Drive Profitability

Rapidly evolving technologies create opportunities for profitable investments even in challenging markets. Three key emerging technologies expected to generate significant gains during this next decade are eCommerce, clean energy and biotechnology. Economic growth similarly occurred in certain sectors during the 1930s, namely in farm mechanization, refrigeration and rural electrification.

Growth Areas This Decade

Electronic technology has significantly increased automation and led to new skills in the labor force. For example, robotics technology has allowed manufacturers to automate warehouse distribution systems. In addition, developments in internet commerce and electronic payments have increased the pace of global trade.

Clean energy applications have become competitive in many traditional energy sectors as a result of technological improvements in solar power, wind power and hydrogen fuel cells. The economic advantages of these technologies, as well as the need for both a cleaner environment and more potable water, are driving a transformation in how the world sources basic human needs.

Developments in biotechnology are advancing the way in which drugs are delivered to specific diseased cells. Scientific discoveries are increasing success rates through improving the accuracy and efficacy in therapeutic target identification, drug design and drug development.

We expect that investors in these sectors will enjoy substantial economic rewards.

Sector	Prior State	Technology Emerges	Investment Growth
Trade	Brick and Mortar	eCommerce	Technology and Infrastructure Producers
Energy	Fossil Fuels	Clean Energy	Alternative Energy, Clean Transportation
Healthcare	Chemical Drugs	Biotechnology	Targeted Biological Drug Developers

Profitability in Perspective: Growth Sectors in the 1930s

In the 1930s, mechanized farming replaced the use of farm animal labor and improved productivity. The reduced labor costs benefited farmland owners, and the demand for mass food production generated gains for machinery producers.

Rural electrification was one of the government's major public works employment programs during the 1930s. It allowed the textile mills that relied on water power in the Northeast to move their operations to the South, near their sources of raw materials and inexpensive labor.

Refrigeration was a significant technological advancement in the 1930s because it allowed for frozen food and longer storage of perishable groceries, which could be sourced from greater distances. It was also the basis for the development of supermarkets.

These technological developments led to higher levels of unemployment during a period where growth was already slowed by overcapacity in traditional industries like automobile manufacturing. While many industries suffered significant declines in the 1930s, those that produced mechanized farming equipment and utilized electrification and refrigeration showed strong gains during the period. These technologies also led to a higher standard of living that many people continue to enjoy in the present day.

Sector	Prior State	Technology Emerges	Investment Growth
Agriculture	Farm Animals	Mechanization	Machinery Producers, Supermarkets
Food Storage	Short Shelf-Life	Refrigeration	Frozen Food Producers, Supermarkets
Rural Energy	Water Power	Rural Electrification	Textiles expand South near supplies

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