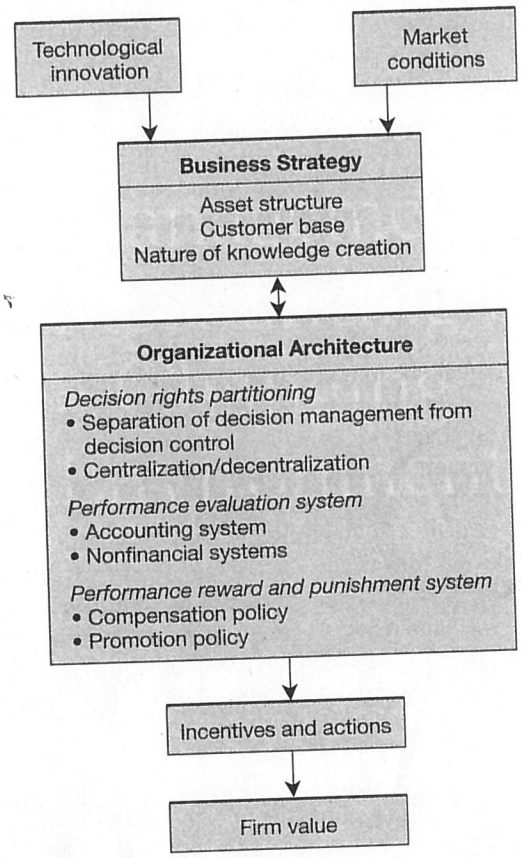

FIGURE 14–1
The determinants of business strategy, organizational architecture, and firm value

architecture to provide incentives for managers and employees. These incentives affect the actions taken, which in turn affect the value of the firm. Thus, Figure 14–1 emphasizes that external factors like technology and market conditions affect investments, organizational architecture, incentives, actions, and ultimately the value of the firm.

1. Organizational Architecture

The box labeled organizational architecture in Figure 14–1 outlines the three major elements of the firm's organizational architecture described in Chapter 4. The first element, decision rights partitioning, consists in part of separating decision management from control. In particular, each decision is decomposed into the following sequence of requests and approvals:

Decision Step	*Control or Management*
1. Decision initiation	Management
2. Decision ratification	Control
3. Decision implementation	Management
4. Decision monitoring	Control

The individual with the decision rights for decision management usually does not have the decision rights for control. This separation of decision management from control -reduces the agency problem in organizations. For example, as described in Chapter 12,

standard-setting usually requires input from individuals who will have their performance judged, at least in part, by these standards. Therefore, the decision rights to set or change the standards are not all vested in the same people who will be judged by the standards. The cost accounting department, industrial engineering, and senior management retain the decision control rights to ratify and monitor the standard costs.

In order to make decisions (for either decision management or control), managers require information. One would expect the information used for ratifying and monitoring (control) to be qualitatively different from the information used in initiation and implementation (management). Decision control information is likely to be more aggregate, less detailed, less timely, and less under the control of the manager being monitored than is decision management information. In particular, the manager being monitored should have less discretion to alter the information system being used for control than the manager using the information for decision management.

Another aspect of decision rights partitioning is deciding what part of the organization should make a particular decision; this is often referred to as the centralization–decentralization question. The location of decision rights affects the structure of the firm—whether the firm is organized functionally by marketing, manufacturing, and distribution or else by lines of business. In all cases, decision rights must be linked with the knowledge needed for decision making.

The second component of a firm's organizational architecture in Figure 14–1 is the performance evaluation system, which includes the accounting system. Besides using accounting-based measures of performance, firms also develop nonaccounting-based measures: the firm's stock price, customer complaints, quality, and percentage of deliveries on time.

The third component of a firm's organizational architecture is the performance reward system. This consists of the firm's compensation and promotion policies. If performance can be measured easily and with little error, such as by counting the number of units produced by the employee, then more of the employee's pay varies directly with performance (piece rate). Otherwise, more of the employee's compensation is relatively fixed and is not tied directly to measured performance.

2. Business Strategy

Why do firms have different organizational architectures, including different accounting systems? What factors cause firms to modify their organizational architectures? The top three boxes in Figure 14–1, labeled technological innovation, market conditions, and business strategy, outline the factors affecting a firm's organizational architecture.

Each firm faces different investment opportunities, which are the investment projects available to the firm today and in the future.[1] The investment projects available to and selected by the firm comprise its **business strategy**. Some firms, such as consumer electronics firms, have large R&D programs that create many new product ideas, some of which are profitable. Other firms, such as utilities, have very few new investment projects; regulatory agencies limit the types of services they can provide, and their investment opportunities consist of maintaining their current power-generating capacity. Public utilities rely on increases in consumer demand for electricity and heat to grow the utility's business, and most of their value derives from their existing assets in place (power plants and distribution

[1]The following papers present evidence regarding the interdependencies among organizational architecture, capital structure, and accounting choice outlined in this section and summarized in Figure 14–1. C Smith and R Watts, "The Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies," *Journal of Financial Economics* 32 (1992). Also see J Brickley, C Smith, and J Zimmerman, *Managerial Economics and Organizational (Architecture),* 5th ed. (New York: McGraw-Hill/Irwin, 2009).

Managerial Application: Business Strategy and Customer Base at Xerox

Xerox's traditional customer was the manager of the client's central reprographics department (CRD). Most large photocopier users had CRDs with high-volume, light-lens copiers. CRDs were pretty similar with operators feeding hard-copy originals and producing large copy volumes. But digital technology allows users to network computers directly to copiers that can produce both black and white and color prints. The customers of this digital technology are no longer CRD managers but computer centers and information technology managers. Xerox sales representatives now must have more technical expertise in computer systems and networking, and more specialized knowledge of the customer's business and document processing needs. Each Xerox device performs multiple functions (scanning, printing, finishing, and faxing). The changing nature of Xerox's customers and the increasing complexity of its products compelled Xerox to change how its sales force is organized. Instead of being organized geographically and by size of customer, the sales force is organized along industry lines and products. Some Xerox salespeople specialize by client industry (education, law firms, manufacturing) and others by product line (color specialists, high-volume specialists, and so forth).

Managerial Application: Technology and Banking

Secure Internet connections and computers have made possible automated teller machines (ATMs). ATM networks have reduced the need for numerous local branch banks. Economies of scale in ATM networks and hence the need for fewer branch banks were one of the reasons for the many U.S. bank mergers in the 1990s. A corporate merger is an example of how companies change their organizational architecture.

systems). Firms such as consumer electronics firms and pharmaceuticals, however, have significant amounts of future growth options because of their R&D investments.

One important existing asset that generates future investment opportunities is the firm's *brand-name capital,* which provides consumer name recognition that lowers the information costs of introducing new products. Pepsi is recognized worldwide. When Pepsi introduced Diet Pepsi, consumers already had an expectation of taste and quality before sampling the new product. Its existing brand-name capital gives Pepsi a cost advantage that new entrants do not have when introducing a new product. Thus, brand-name capital affects the types of new investments a firm will undertake.

Business strategy affects the firm's organizational architecture because it determines the firm's asset structure, its customer base, and the nature of knowledge creation and dissemination within the firm. Each of these in turn affects and is affected by the firm's organizational architecture. (Notice the two-way arrow in Figure 14–1.) Not only does the firm's business strategy affect how the firm is organized, the organizational architecture affects the ability of the firm to generate and implement new profitable investment opportunities and hence new business strategies. For example, Corning, a glass company primarily making dishes and glassware (Corning Ware and Pyrex) invented fiber optic cable active matrix LCDs and ceramic substrate for automobile catalytic converters. These innovations caused significant changes in Corning's organizational architecture. Likewise, successful organizational architecture generates new investment opportunities that can be commercially exploited.

Managerial Application: Evolving Role of Managerial Accounting in China

In 1979 China replaced its centrally planned economy with a market economy. Under the old system, the prices of companies' inputs and outputs, as well as their production targets, were set by the government. The cost of firms' inputs and the price of their outputs were fixed by the central government, and managers were measured on production. With a market economy, prices are set by markets and firms determine what to produce and in what quantities, and how to produce it in order to maximize profits.

Before 1979 management accounting did not exist in China. Under a planned economy, accountants were accumulators and reporters of financial data to government central planners who set production quotas and prices for each firm's output. Accountants were viewed as bookkeepers. Following the reforms, companies eliminated their accounting functions that reported financial data to central planners. Management accountants in China today resemble their Western counterparts. Chinese management accountants now describe their most important functions as providing financial information to other managers for decision making and cost management and control.

This example illustrates how changes in market conditions (replacing a centrally planned economy with a market economy) in Figure 14–1 cause firms to change their strategy (from maximizing output to maximizing profits) and also change their organizational architectures. The role of accountants changed in Chinese firms.

SOURCE: R Lawson, "Moving Ahead: The Evolving Role of the Finance and Accounting Function in China," *Strategic Finance*, March 2009, pp. 27–33.

Business strategy consists of the following:

1. *Asset structure.* The firm's business strategy determines its asset structure. Pharmaceutical company assets are primarily drug patents and brand-name drugs, whereas Internet provider assets are primarily fiber optic cable lines and servers. If the firm's assets consist of buildings and machinery, the performance evaluation systems are more likely based on accounting measures. If the firm's assets consist of future growth options, as in an oil and gas exploration firm, the firm is more likely to tie executives' compensation to market-based performance such as stock price.

2. *Customer base.* The business strategy determines the type of customer and the geographic dispersion of customers, which in turn affect how the firm is organized to service its customer base. For example, franchised retail stores like fast-food outlets are an alternative to company-owned stores when the customer base is geographically dispersed. The franchised store is operated by an independent owner who has more incentive to acquire specialized knowledge of the local market and to maximize profits than would an employee of the parent company. But to monitor the quality of the franchised outlets, the franchiser requires a field organization to inspect the outlets, which in turn dictates how the franchiser is organized (including performance evaluation and reward systems for the field group).

3. *Knowledge creation.* The nature of knowledge creation is determined by the business strategy selected. If the firm is in very stable markets in which knowledge is not created quickly, a more centralized organizational architecture can be adopted. Certain kinds of knowledge (like sales figures) can be converted to numerical representation that can easily be communicated to others in the firm. But other types of knowledge, such as customer preferences in particular markets, are more difficult to write down and convey to others. Easily communicated knowledge allows decision rights to be vested higher in the firm, meaning that lower-level performance evaluation and reward systems can be simpler.