

UNIT I

METHODOLOGICAL PRELIMINARIES

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QUALITATIVE FUNDAMENTALS

1.1 ECONOMIC THEORY AND MANAGERIAL ECONOMICS

The concept of **economic scarcity** epitomizes the paradox of the finite nature of resources and the infinite nature of human needs and wants. This inherent structural contradiction in our life is not only what characterizes our societies' natural and human resources in contrast to their needs, but also what stands as the very phenomenon that necessitates choices and, therefore, bears the responsibility for the existence of prices. It is also the best reason that signifies the concept of **opportunity cost**, which is one of the central premises in economic theory, where economists consider all costs as opportunity costs in the final analysis, for they are nothing more than the foregone opportunities of some other alternatives. The opportunity cost amplifies the economic notion that for any gain there has to be some loss, for any benefit there is some cost, and for any reward there is a sacrifice. It is because of this logic that economics has been described as the science to study and analyze human choices, subject to their constraints.

The **macroeconomics** side of the theory is concerned with the “whole” versus the “parts.” It studies the entire economic system and considers the society's aggregate nationwide parameters such as national income and national debt, economic growth, fluctuation of interest and inflation rates, employment, national budget, and international trade. The other side of the theory is **microeconomics**, where the main focus is on the “parts,” or the components and the comprising agents of that whole system. It considers the behavior of individuals, families, and firms as they seek to maximize their economic utility. Microeconomics considers consumers' optimization of their own utility, firms' maximization of their profits and minimization of cost, and all of what entails, such as economic efficiency, market structure, capital budgeting, production, distribution, marketing,

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pricing, revenues, and sales. It is, therefore, the right domain and proper atmosphere to see where managerial economics stands, for it is how managers can function and make their business decisions.

Microeconomics is capable of identifying the nature of economic problems, understanding their logic, laying out their structure, and specifying their functions and conditions. However, since all of that cannot be done only verbally or in a qualitatively descriptive manner, there has been a growing need to quantify the ranges, estimate the parameters, analyze and assess the changes, and hence, the need to employ mathematical and statistical methods within microeconomics. **Managerial economics** is, therefore, an application of microeconomics and its supportive quantitative methods (drawn from mathematics and statistics) in the decision-making process for managers who are in pursuit of recognizing and utilizing the optimal treatments and solutions to managerial problems and issues in order to reach a certain level of efficiency in achieving the firm's objectives.

Managerial economics is concerned with both effectiveness and efficiency of the decisions made by managers and **management** teams regarding the economic function of the firm in its utilization of scarce resources. This multifaceted task includes organizational design, management strategies, finances and accounting of capital management, and economic analysis of production, distribution, marketing, pricing, consumer demands for output, controlling the supply of input, monitoring markets and reacting to competition. The major thrust in undertaking these functions is to identify the general and specific problems, analyze the opportunities, and evaluate the alternatives in preparation for making the final choices.

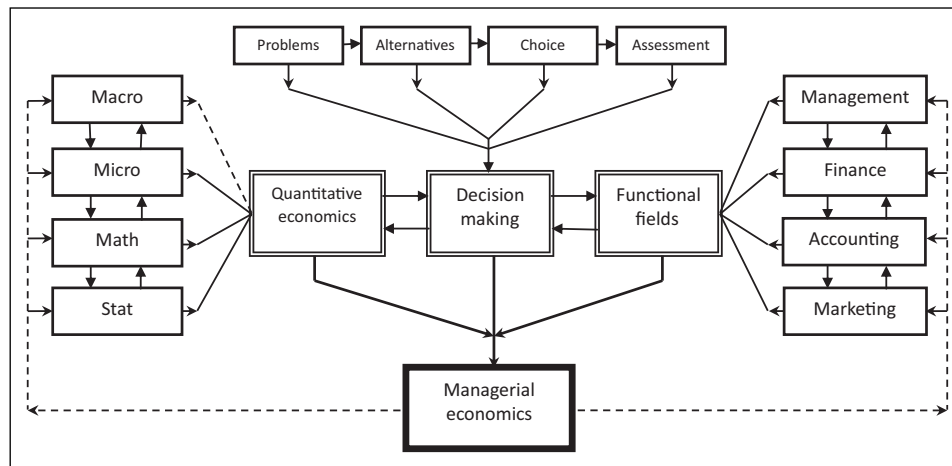


FIGURE 1.1

Figure 1.1 shows how managerial economics acquires its essential identity through the contributions of three components: (1) quantitative economics, (2) the scientific procedure of decision making, and (3) the related functional fields. Economic theory, especially microeconomics, provides the foundation for marginal analysis, theory of consumer choice, theory of the firm, industrial organization and behavior, and theory of public choice and policy. The quantitative approach would provide many technical tools such as numerical

analysis, statistical estimation, mathematical optimization, econometrical **models**, forecasting procedures, game-theoretic scenarios and simulations, information system schemes, and linear programming. The **scientific approach** to decision making requires four sequenced and integrated steps:

1. Identifying and clearly defining the problems and their contexts, as well as setting clear and feasible objectives to deal with those problems.
2. Exploring all possible ranges of alternatives and their constraints, and evaluating them comparatively.
3. Deciding on the best choice among the deliberated alternatives.
4. Assessing the final choice as it is put to test in order to move to the next step, which is benefiting from the entire experience. This step also includes running some sensitivity analysis in which the chosen best alternative is examined against the possibility of changing the conditions and circumstances around it.

1.2 SOME METHODOLOGICAL FALLACIES

As stated earlier, managerial economics connects primarily to microeconomics because of its domain that is more relevant to managers and their business decisions. This does not mean a total disconnection from macroeconomics. It is more appropriate to say that the relevance of managerial economics to macroeconomics is not as certain and strong as it is to microeconomics. In some cases, there will be clear evidence of the connection, and in other cases, there would be none. Managers make many important decisions that may have implications for public policy and have to conform to state and federal rules and regulations, and abide by the local government codes. Also, many firm-specific decisions may be made in strong connection to macro parameters such as inflation and employment levels. The point here is that understanding the nature and level of connection with micro- or macroeconomics requires the problems in question to be well defined, their context to be well set, and the objectives to be correctly placed. Suffice it to say that borrowing the philosophical logic of size fallacies may help here. This fallacy is methodological in nature and is about the possibility of separating the “whole” from the “parts” (its components) and making them independent entities. Such entities may have their own characteristics, which may or may not be associated with each other. What has come to be known as the **fallacy of division** is about refuting the common logic that whatever is considered true of the “whole” is also true of the “parts.” It is a fallacy because it is misleading. It may or may not be correct. Consider, for example, a well-known brand name of a product that has been dominating the market for a long time, and has acquired strong consumer loyalty. It is possible that one or more of its specific product lines may not live up to that whole good reputation and may fail in the market. On the other hand, the reversed fallacy is the **fallacy of composition**, which also refutes the statement that whatever is true of the parts is also true of the whole because it may not necessarily be correct. Consider one or a few brilliant graduates who went on to become renowned scientists, poets, or artists, but their success and fame may not necessarily mean that the department or school they graduated from is as accomplished, successful, or famous as they are.

Another common methodological fallacy that should be well understood is the **fallacy of causation and correlation**. It simply refers to the fact that correlated events may

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not necessarily stand as causes for each other, since the correlation may only mean that they happen to occur at the same time or in the same place, but cause-and-effect relation requires a much deeper organic connection and more complicated structural ties. Consider, for example, that in inner large cities, there would be a high correlation between high-rise buildings and crime rates but, of course, it would seem preposterous to suggest that the existence of skyscrapers increases crime (!) or a high crime rate in inner cities motivates developers to build high-rise constructions (!!). A similar discussion would hold for the reverse statement that events known to be a cause or effect to each other may not necessarily be found correlated at certain circumstances such as in the case when they just happen to be there for different independent reasons. An example would be about the well-known fact that Lyme disease is caused by being bitten by a deer tick carrying the bacteria, but it is highly possible to find none or a weak correlation between being bitten by ticks and having the disease simply because it is estimated that the chances of contracting the disease after being bitten by a tick is only 1%.

Considering these fallacies, and going by the logic of scrutinizing the generalized statements would eliminate the stereotypical conclusions and allow a more careful analysis. The connection of all elements in the economy and their intermingled relations are always there, but they occur in different degrees and priorities, which need to be tracked down and investigated. Consider, for instance, a macroeconomic decision by the federal or state government to increase taxes on consumption and its implications at micro levels on consumer demand on one hand and on the firm's managerial decisions on the other. Also consider the feedback of the firm's policies on consumers and the effects of both, firms and consumers, on the public policies in regard to inflation and employment.

1.3 PARADIGMS, MODELS, AND THE SCIENTIFIC METHOD

The overarching paradigm in economics pivots around three major assumptions on market participants, who are the main constituents in the economic activity (consumers, households, firms, and other economic agents). The first assumption is that they are goal-oriented, who tend to engage in a reasonably clear and purposeful participation, centered on the participants' own interest. The second assumption is that they have stable and well-defined preferences, which enable them to make rational choices that would ultimately maximize their gain, and to a certain degree, minimize their loss. The third assumption is that those participants operate in the reality of the scarce resources, which is exemplified by the resources' inability to satisfy all people's ever-increasing and changing needs and wants. In their own right, and as bold assertions as they are about the economic system, those assumptions serve as the foundation to build our economic models, which are supposed to depict the essential state of the economic system and the way it works. As basic and fundamental representation of reality, theoretical models are often simplistic, abstract, conditioned, and may very well seem unrealistic in their abstraction and intangible depiction. However, simplicity and abstraction are necessary characteristics to make models understandable, as well as make them subject to logical manipulation. Furthermore, such characteristics have to be reasonable and close enough to reality in order to be credible and capable of producing meaningful outcomes.

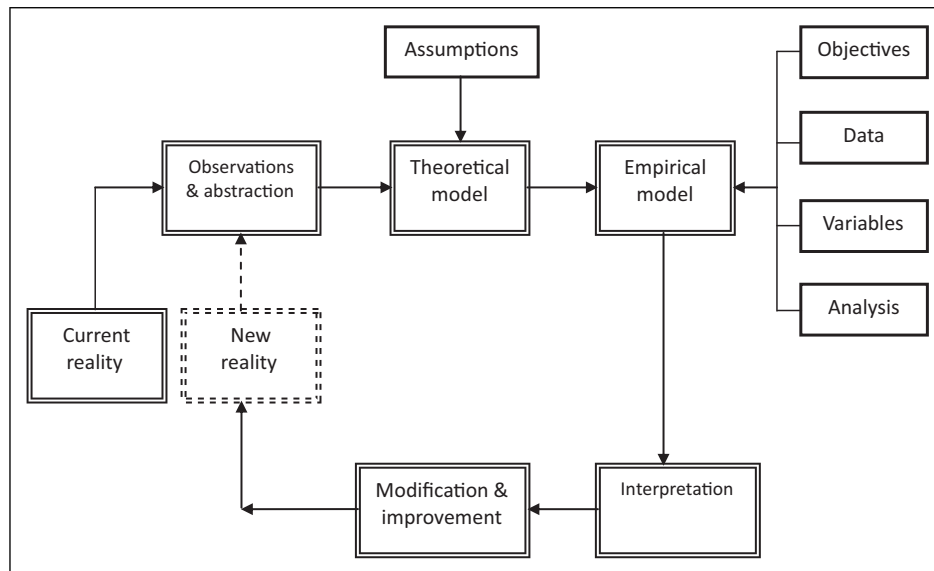


FIGURE 1.2

Figure 1.2 shows the flow of the scientific method by which observations on reality lead to theories and models, which may transfer to empirical models that can be tested, not only to validate the logic of the theoretical models but also to improve on them and take the improvements forward to modify the current realities, and create new realities so that the whole pattern would be repeated in a continuous cycle of progression.

By this **scientific process**, we would be sure to get an abstraction of reality that is objective, consistent, nonarbitrary, and reliable. It would make it possible to devise a set of testable hypotheses in order to explain, predict, and control that reality for

- (a) achieving a higher performance in the current time;
- (b) achieving the highest possible level of efficiency in a foreseeable future time. Relying on objectivity and nonarbitrariness as crucial characteristics of the scientific method is to prevent all sorts of possible personal, cultural, and spiritual beliefs from interfering with the interpretation of reality. It is also to allow the process to undergo evaluation in order to check for its degree of closeness to reality and eliminate the possibility of holding the “absolute” truth.

The quantitative approach to managerial economics, which may include optimization, statistical methods, geometrical depiction, game theory, and capital budgeting, is ultimately to derive optimal solutions to a wide variety of managerial problems. Proper solutions require the use of the scientific method to identify and quantify the changes among various important variables in the active domain of the business performance. The process would track down the interactions and recognize the major determinants and estimate their impact. Since the ultimate goal of any society is to reach the level of most efficient allocation of resources, the three classic **economizing** questions of what to produce, how much and how, and for whom, can effectively be answered with the help of economic theory and its

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quantitative models. It would remain true that the best models are those that can make good sense of a complex reality through an explanatory simplification and reliable prediction. The key to that is to construct positive and directional hypotheses that can be practically tested in order to delineate the map of causes and effects, determine how much and how crucial is the influence on each other, and predict what would happen to them under different circumstances. Beyond the practical benefits of the scientific process and the quantitative methods in the managerial world, the analytical approach in general is deemed to be crucial in modeling our thinking into more logical and structured patterns. It would help build higher conceptual mentalities and develop more critical thinking skills and fancier imagination, which would make it possible to creatively apply knowledge across boundaries of time and place and be better prepared for the real world beyond the present reality.

1.4 THE DESCRIPTIVE AND PRESCRIPTIVE TREATMENTS

The **descriptive approach** is concerned with positive economics. It is concerned with what was, is, and will be in actuality, with a certain degree of objectivity and regardless of any subjective positions. It considers the given conditions and circumstances, investigates any causes and effects, formulates theories and designs models, and predicts what might happen and what would change, and in what direction, all in a reasonable of neutral. On the other hand, the **prescriptive approach** adopts a normative stand. It is based on subjective views and value judgment. It is all about “what ought to be” from a certain perspective. Outcomes, therefore, are deemed to be presented as good or bad. Economics is basically considered a descriptive and positive science. It is for this reason that economists have been for long taking a defensive stand against the charge that their analyses are often cold and heartless.

Positive economic analyses of many contentious issues can appear to be harsh just because they are deliberately separated from any value judgment and sentimental consideration. Examples of these issues are rent control, minimum wage, welfare system, housing subsidies, comprehensive healthcare, and many more. Just like economics, managerial economics is essentially a positive science where managers are not suppose make their decisions on the basis of their sentiments. They are supposed to observe data and trends and use a scientific approach to predict consequences of their actions. The other dimension of their positive approach is that all decisions and actions can be tested empirically either by research or by plain experience. However, managerial economics does have its own prescriptive side too, especially when it comes to the issues in which managers and decision makers in general find themselves at a position in which they have to use their own value judgment and personal positions when only gut feelings can be the determinant.

1.5 THE PROFIT FUNCTION: ACCOUNTING VERSUS ECONOMICS

Seeking profit is a natural, human, and an essential self-interest motive. It is for this reason that making profit becomes a central characteristic of the for-profit firms in a free-market enterprise system. It can be stated further that, with bounded rationality and healthy conscience, making profits can elevate itself to be a virtue, especially if all standard business ethics are observed and honored. As firms pursue their self-interest, the mechanism of profit maximization works wonders for the efficient allocation of resources. It would constantly

move resources toward the production of goods and services that are most valued and demanded by consumers. Other firms may leave less profitable projects and enter more lucrative markets, and eventually, the aggregate welfare is served. Under this consideration, profit would represent the society's reward for the greatest efficiency, while the lack of profit motive, especially if it translates itself into losses, would signal the lack of efficiency in the utilization of resources and result in an aggregate detriment to the society.

Conceptually, **profit** refers to the difference between the total cost of production and the total revenue brought by the sale of the products. While the total revenue is a clear-cut concept (referring to the dollar value of the product sold, as generated by multiplying the product market price by the quantity sold), the concept the total cost introduces the divergence between business profit and **economic profit**. In the business culture, the total cost consists of all the explicit or out-of-pocket expenditures on the major factors of production such as land, capital, and labor. However, the economists tend to think of the opportunity cost of all these resources and include their foregone value as an implicit part of the total cost. For example, according to the economist's view, the total cost would include the income the entrepreneur would have earned had he been hired by another firm or the return on land had it been utilized in a different project. Therefore, the **business profit** or the **accountant's profit** (π_a) would be different from the **economist's profit** (π_e) by

$$\pi_a = TR - ETC,$$

$$\pi_e = TR - (ETC + ITC),$$

where the latter includes the implicit total cost (ITC) in addition to the explicit total cost (ETC), and TR is the total revenue. The business profit is a practical concept, especially for the purpose of calculating the book value, and considering the accounting and taxes, while the economist's concept of profit is important for a real understanding of the business decisions especially on investment, risk, and return.

1.6 ENTREPRENEURSHIP, MANAGEMENT, AND LEADERSHIP

Terms such as “entrepreneur” and “manager” or “owner-manager” are often used interchangeably, especially in the small business setting and entrepreneurship literature. For more accuracy, we can link these terms to the nature of activity of both entrepreneurship and management, as they are distinct phases of the production process. To a less extent, there has also been a certain mix-up between the management and leadership functions in the private and public administration process. Very early on, the French term **entrepreneur** meant the person who could organize and direct resources into a production process. At the start of the nineteenth century, Jean-Baptiste Say, a French economist and businessman, elaborated on the role of the entrepreneur in creating new values by simply knowing when and where to employ the economic resources and have them yield a higher return. In modern times, **entrepreneurship** is defined as the process of creating a new business by utilizing resources and taking them through the possible risk and bearing the responsibility for it. Accordingly, an entrepreneur is the person who has the vision for a business project and can start it up. That would be the individual who can assemble and combine the necessary economic resources for a project, employ them, and make a profit out of them. It takes

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a special personality with certain traits to become an efficient entrepreneur. Successful entrepreneurship requires the following:

- An ability to foresee the right opportunities and perceive their dynamics.
- A capacity to come up with innovative ideas that fit their time, place, and other circumstances.
- An attitude of courage, energy, and optimism to start up the project, go all the way with it, assume full responsibility for its ups and downs, and know and count for all risk involved.
- A spirit of commitment, flexibility, and tenacity, coupled with tolerance and ability and willingness to learn from mistakes.
- A natural talent for organizing the resources and utilizing them to achieve their highest yield.

The most important thing to realize here is that entrepreneurship is only the first phase of production, which is the innovative phase. This phase would end when the project can stand on its feet after starting production. Next, the project would enter the second phase of production and earning, which would need a different set of skills and a different process, and that would be the management phase. Here, the top performer is the manager and the required skills are managerial as opposed to entrepreneurial (Figure 1.3).

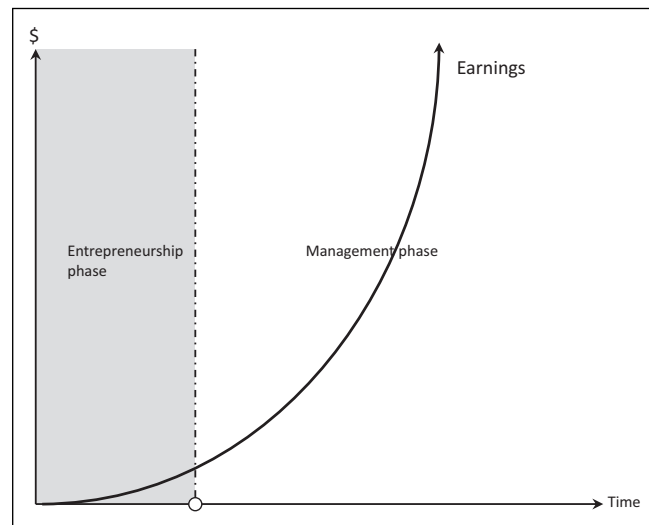


FIGURE 1.3

As for **management**, it is the effective and efficient use of resources to accomplish certain economic and administrative objectives for the managed unit. In the production phase and throughout the life of the project, management involves five integrative functions: planning, organizing, staffing, directing, and controlling. As for **leadership**, the focus is on the capacity and quality of making strategic decisions, oversee operations, and bring about changes. Leadership is not associated with a specific production phase. It can work anywhere and it may be required at all levels, any time, and under any circumstances.

SUMMARY

- The first unit of this book is dedicated to the fundamentals that would establish the approach and set the tone for the remaining four units. It is the springboard from which we leap, well equipped, to better understand the whole material on this subject matter.
- The unit includes two chapters. This first chapter is on the qualitative fundamentals. It started by defining economics and managerial economics and explained the link between them. It expanded the discussion to delineate the domains of micro- and macroeconomics and described the scientific approach to the process of decision making. In Section 1.2, the discussion moved to the most common methodological fallacies: the fallacy of division, which is about setting the logic that whatever might be considered correct on the “whole” may not necessarily be correct on the parts of that whole. The fallacy of composition would stand on the opposite side. Its logic suggests that whatever might be considered correct on the parts may not necessarily be correct on the whole. The third fallacy is of the causation and correlation. It refers to the fact that correlated events may not necessarily stand as causes for each other. The reason is that the correlation may only mean the events happen to occur at the same time, in same place, or under same circumstances, but the cause-and-effect relation requires a much deeper organic connection and more structural ties.
- More methodological clarification was presented in Section 1.3. The assumptions of the major paradigm in economic analysis were addressed, and they were all about the main economic players such as individual consumers, households, firms, and other constituents. Models were explained as basic and fundamental representation of reality, and the scientific method was presented in a descriptive and graphic way. It showed the flow from observations on reality to theoretical and, then, to empirical work that could be tested to either validate or refute the theoretical models.
- Positive and normative economics were discussed in terms of their descriptive and prescriptive approaches. The descriptive approach is concerned with what was, is, and will be in actuality with a certain degree of objectivity. The prescriptive approach is based on a subjective view and value judgment. It is more concerned with “what ought to be.” Managerial economics basically belongs to the positive approach although it may have some sides of the normative approach too.
- Profit is reviewed from two perspectives: the economic and the accounting perspective. While profit is the difference between the total revenue and the total cost, it is the multifaceted concept of cost that would cause the difference between the accounting, or business, profit and the economic profit. The economists tend to think of the opportunity cost of all the resources as an implicit part of the total cost. Accountants are concerned with the explicit or out-of-pocket cost.
- Section 1.6 covered the concepts of entrepreneurship, management, and leadership. Entrepreneurship refers to the process of creating a new business by utilizing resources and taking them through the possible risk and bearing all the responsibilities of the task. The requirements of successful entrepreneurship are addressed, and management is distinguished from entrepreneurship not only by the nature of function but also by the timing of their effectiveness in the life of business projects. Management is defined as the effective and efficient use of resources to accomplish certain economic and administrative objectives for the managed unit, while leadership focuses on

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the capacity and quality of making strategic decisions, oversee operations, and being about changes.

KEY TERMS

economic scarcity	macroeconomics	microeconomics
opportunity cost	managerial economics	scientific approach
scientific process	methodological fallacies	fallacy of division
fallacy of composition	fallacy of causation and correlation	paradigm
model	economizing	descriptive approach
prescriptive approach	positive analysis	normative analysis
accounting profit	economic profit	entrepreneurship
management	leadership	

EXERCISES

1. What are the qualitative fundamentals and why are they important to know for the study of managerial economics?
2. How different is managerial economics from economics and how is it related to both microeconomics and macroeconomics?
3. What is opportunity cost? Is it one of the important considerations for economists?
4. List and explain the four major steps of the decision-making process according to the scientific approach.
5. What are the major methodological fallacies and why should we be concerned about them? Try to provide an example of each fallacy, especially something that you may have already contemplated in your daily life.
6. What is paradigm and how is it different from theory? Can you provide an example to set the two apart?
7. What is the scientific method and how is it different from the nonscientific methods? Why is it important for students to know this kind of material? Does it really have any significance in real life? If so, try to provide an example.
8. What is the descriptive approach? How is it different from the prescriptive approach and where would managerial economics stand?
9. Explain the concept of profit from both accounting and economic perspectives. What would make the two different from each other? Will this difference have any practical mix-up when it comes to the managerial decision making?
10. Explain the concepts of entrepreneurship, management, and leadership and set the link between an entrepreneur, a manager, and a CEO of a firm. How do the three work to set the firm and optimize its efficiency?