External Analysis

Economics predicts that all firms should obtain similar results after adjusting for their costs of capital. Yet clearly firm performance varies tremendously. Why?

Naturally, firms do not exist in isolation and their performance can vary because of their external environment. For analysis purposes we'll break the external environment up into the broad macro environment and a more narrow industry environment. As their names suggest, both of these environments are outside the firm and generally beyond the firm's control, at least in the near term.

The Macro-environment

The macro environment consists of the broad trends and patterns in the nation and world beyond the firm. These patterns and trends highly influence customer needs and firm options. For purpose of analysis, the use of five aspects of the environment will provide reasonable coverage.[1] The five-macro environments are economic, political/legal, technological, socio-cultural, and demographic. Each environment's impact on a firm can range from favorable to unfavorable. Generally, these environments are analyzed at the level of the nation; however, it may be advisable to look at them more broadly or more narrowly depending on the scope of the firm's business. For example if you are examining a single restaurant then the local conditions are probably far more important than what's going on in the nation as a whole.

The economic environment refers to the broad economic conditions inside a country. Items such as changes in per capita income, interest rates, foreign exchange and inflation are all common measures of the economic environment. For most (but not all) firms a growing economy is favorable for business.

The political/legal environment refers to a society's formal rules (i.e. enforced by state sanction) for determining who gets and does what. This can include the political system, economic system, as well as wide range of laws concerning behavior, e.g. speed limits. In the simplest of terms political systems are the ways the members of a group determine who gets what. We most often think in terms of countries but political systems operate in smaller groups such as organizations and families. Economic systems determine how scarce resources are allocated. Capitalism is an economic system predicated on freedom , and ironically, mutual exploitation, that has been shown to be incredibly effective in allocating resources.

The technological environment refers to how work is done. Technology influences the transformation of inputs into outputs. For example, how information is encoded on a page by an ink pen, a typewriter, or a computer is an issue of technology. However, the work itself, encoding information, is independent of the technology.

[1] Many different numbers and types of categories can be considered. These five are a good starting place, you should feel free to add as you see fit for the analysis you are conducting. This is often referred to as PESTL analysis.

The socio-cultural environment refers to the shared norms and values of a group that generally lead to tacit expectations of behavior. While usually thought of as a national culture, it can also be important within ethnic groups, industries, and organizations as well as nation states. What is favorable in one culture may not be favorable in another. This frequently shows up in marketing - a slogan that connotes one thing in one culture may not convey the same meaning in another. The socio-cultural environment occupies a preeminent position (though legal and economic are also very important) when discussing the challenges of international business.

Finally, the demographic environment refers to the size and composition of the nation's population. This can often reveal important population segments for commercial attention such as the baby boom generation in the United States.

Industry Analysis[2]

In addition to the broad macro environment, another reason why firm performance varies so much is easily attributable to what industry they are in. An industry can be defined as a group of producers of close substitutes. Substitutes are products or services that serve the same function or purpose for consumers. A watch is a product that keeps track of time, but all watchmakers may not be in the same industry, for example a Rolex serves a purpose going beyond just the function of timekeeping.

Standard Industrial Classification Codes
A Formal Designation of Industries

Most nations keep detailed statistics on their industries. For many years the United States used Standard Industrial Classification (SIC) codes to designate industries. An SIC code had up to 7 digits to specify an industry and its group. The first two digits corresponded to a firm's major group with the additional digits progressively refining the classification with a four digit code indicating a firm's industry.

In 2000 the U.S. replaced the SIC code system with the North American Industrial Classification System (NAICS). The NAICS embodies the exact same ideas as the SIC system but is designed to facilitate compatibility with other nations' systems.

The idea of industry analysis was developed from early industrial economics models.[3] Popularized by Michael Porter in 1980 the present application of this system is called the five forces model. The five forces model is a way to characterize industry structure in order to arrive at INDUSTRY performance. The five forces model does not directly address firm performance. Rather it helps firms identify opportunities and threats as well as Key Success Factors (KSF) in their industry.

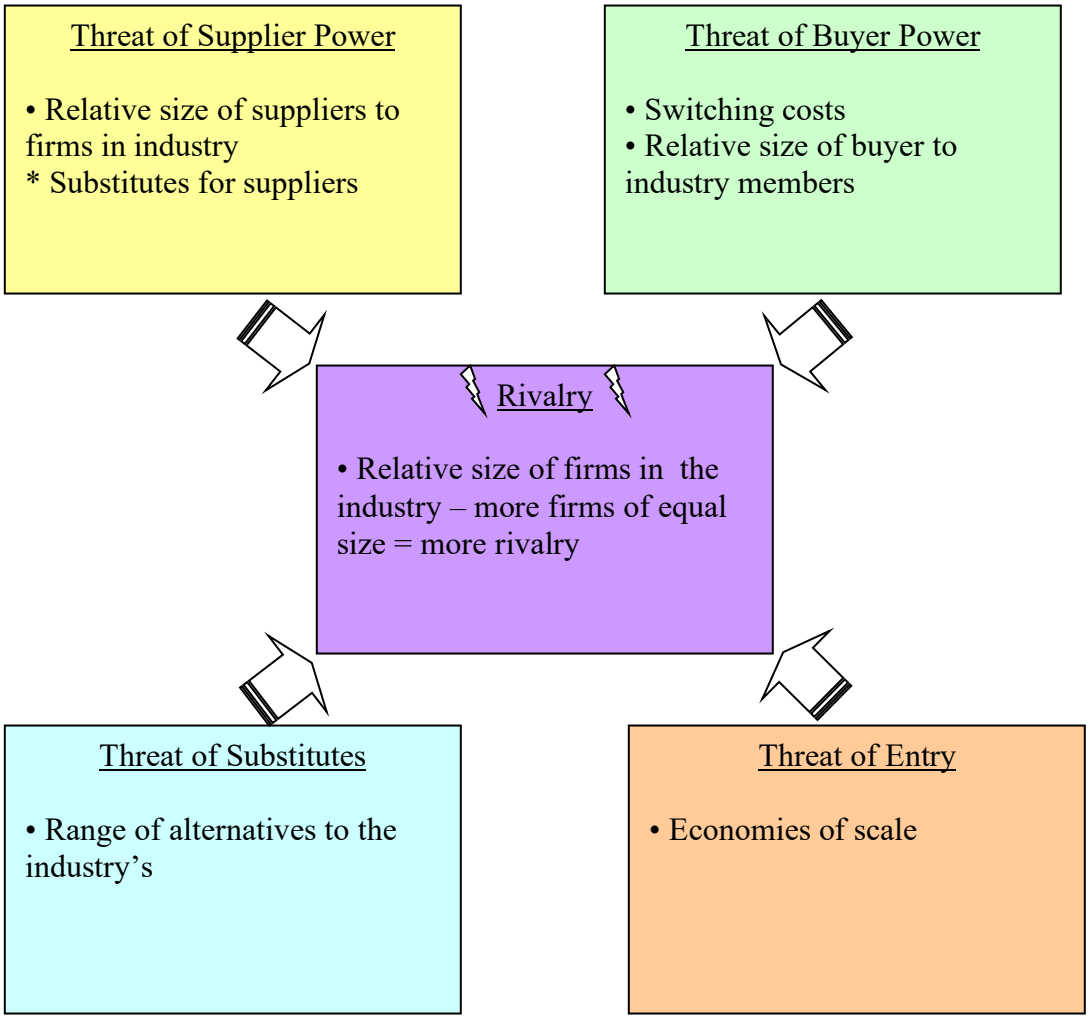
Key success factors are derived from industry analysis and are simply what are the critical things firms must do in order to compete in a market. Having high economies of scale, or good

[2] This entire section and school of analysis was well laid out in Porter, M.E. (1980). *Competitive Strategy*. New York: The Free Press.

[3] While trying to explain the cause of the great depression, Bain and Mason developed models labeled Structure Conduct Performance (SCP) that argued the firm's conduct was determined by industry structure and therefore industry structure directly determined firm performance.

distribution networks are examples of KSFs.

Usually, the most difficult task in performing a five forces analysis is pin pointing the firm's industry. This must be done carefully. Failing to define the industry is the number one mistake people make in trying to apply industry analysis. In thinking about the industry, consider the idea of what are the alternatives for the good or service you are analyzing. Generally, as long as you clearly delineate your industry your analysis will be okay, it will make it easy to separate rivals from substitutes. Also, please keep in mind that if a firm is active in multiple industries, MULTIPLE industry analyses must be conducted.



In no particular order the five forces are:

Suppliers are those who provide inputs for the industry. Labor is almost always a supplier to an industry. Generally the larger the suppliers are relative to the industry and the fewer the substitutes for the inputs they provide, the more powerful they will become. For example, Microsoft is an incredibly powerful supplier to the personal computer industry. Higher supplier power leads to lower industry performance and vice versa.

Buyers are those that purchase the output of an industry. The more sources the buyer has (assuming low switching costs) of if the industry's product or service isn't very important to the buyer, the higher the buyer's power. For example, since it is a monopsony, the U.S. Department of Defense has considerable power over firms in the defense industry. The higher buyer power is, the lower industry performance will be. Keep in mind that there are often intermediaries between the producer and the final customer of a good or service. Wal-Mart is probably the most important buyer for many consumer industries.

Substitutes are alternatives consumers have to an industry's output. The greater alternatives people have to an industry's product the higher the power of substitutes will be. For example, bicycles are substitutes for automobiles. However, they have limited range, cargo capacity, and depend upon the user for motive power, therefore they are not very good substitutes. The greater the number of substitutes and how good they are the greater their threat resulting in lower industry performance.

The threat of entry refers to the ease at which a new firm may enter the industry. Barriers to entry, such as economies of scale and the minimum efficient scale, serve as impediments to entry (see below). Like with the earlier forces, the higher the threat of entry the lower industry performance. Note that the higher the barriers to entry the LOWER the threat of entry!

Entry can also be "lumpy." "Lumpy" refers to the manner in how capacity must be added to an industry, can it be added in a continuous manner or does it have to be added in relatively large bundles. For example, in the airline industry a firm cannot add just one or two seats to a route, it must add an entire airliner, or at the very least, a larger plane, to bring supply and demand into balance. Lumpy entry generally increases rivalry in an industry (see below) though it may actually serve as an early barrier to entry.

Rivalry lies at the center of the five forces model and can be defined as the intensity of competition (usually via prices) in an industry[4]. Generally, the greater the number of firms and the closer their relative size, the greater an industry's rivalry will be. It is influenced by each of the other four forces but even if the other forces are relatively mild, it can still be fierce.

How the Model Works. The five forces model assumes a zero-sum game in an industry over the near term. The idea is that as the power or threat of the various forces increases, they will appropriate, or capture, the returns the firms in the industry would otherwise earn. For example, consider an industry where there are strong unions, which greatly enhance supplier power. Firms in this industry will have trouble earning high returns because as soon as they appear profitable, the union will renegotiate their contract and increase the returns to labor (a supplier). So, for an industry like this a KSF may be how well a firm handles its labor relations.

[4] It may be helpful to think in terms of price/performance as in some industries rapid quality improvement occurs yet nominal prices remain stable, e.g. home video game players.

Strategic Groups. Occasionally in industry analysis people will use the term "strategic group." A strategic group is simply a further subdivision of the industry into distinct groups. For example, BMW and Volkswagen both make automobiles, but it may make sense to further subdivide the auto industry into "mass market" and "luxury" strategic groups. Each of the five forces could then be different for the firms.

Economies of Scale, Scope, and Minimum Efficient Scale

While part of the threat of entry these three terms are used frequently and (as we'll see) have important implications for firm performance beyond just industry analysis. Economies of scale refer to unit cost reductions as output for some period increases. An excellent example is computer software where the first copy costs a lot of money but each copy afterwards costs very little. Economies of scope refer to benefits arising from the breadth of products or services produced or provided. An excellent example might be Wal-Mart offering almost all products one person could need in one location. The idea of minimum efficient scale (MES) is less frequently talked about but it is directly related to economies of scale and is probably really the critical entry barrier for most industries. MES refers to the point at which all significant unit cost reductions from production increases have been realized. Therefore, customized products have lower MES than mass produced ones. Obviously, all thee of these change with technology.

The Industry Life Cycle

A final idea you hear associated with industry analysis is the Industry Life Cycle (ILC). The ILC is a common framework used in management and marketing. For explaining why firm performance differs the key thing to keep in mind is not the traditional progression of the ILC from growth to maturity to decline, those effects will show up in a five forces analysis, e.g. higher rivalry. Rather for our purposes the key issue is that the nature and benefits of technology for firms change over the history of the ILC. Early on developing new and unique products is a relatively important source of advantage for firms. However, later in the ILC developing new and improved processes for producing a good or providing a service becomes relatively more important.[5] However, keep in mind that new products are often ways to develop entirely new industries. For example, Apple Computer clearly lost out in the PC industry despite being a tremendous product innovator, however, this innovation appears to have paid off with the success of their iPod mp3 music player. The point is to use the ILC to think about industries in a more dynamic fashion.

[5] Utterback, J.M. and W.J. Abernathy (1975). "A dynamic model of process and product innovation." *Omega*, 3, pp. 639-656.