PEST analysis

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Definition and Scope

PEST is an acronym for four sources of change: political, economic, social, and technological. PEST analysis is a powerful and widely used tool for understanding strategic risk. It identifies the changes and the effects of the external macro environment on a firm's competitive position.

The external environment consists of variables that are beyond the control of a firm, but require analysis to realign corporate strategy to shifting business environments. Firms operate as part of a larger ecosystem. They are vulnerable to a variety of exogenous factors, which can have a major impact on the firm's competitive positioning. Strategists seek to understand external factors and evaluate how business models will have to evolve to adapt to their environment. The impacts of external factors are mitigated through preemptive strategy, and opportunities are exploited in the wake of new competitive positions that may be created in the process.

Conceptual Overview

Variations of the PEST analysis tool are PESTEL or PESTLE (which adds environmental and legal components), STEEPLE (which takes on a corporate social responsibility perspective by adding on the ethics dimension) and STEEPLED (which adds the analysis of demographic factors). The increase in awareness of environmental or ecological issues has encouraged the implementation of another version of the PEST framework, particularly the STEER analytical tool, which incorporates regulatory factors.

PEST analysis and its variations form part of the "evaluation stage" in the strategic management process. The process starts with an in-depth analysis of the firm's environments. The external environmental analysis constitutes the "OT" part of SWOT analysis (internal strengths and weaknesses, external opportunities and threats). The benefits of combining PEST and SWOT are enhanced further when using them in conjunction with Porter's five forces model (encompassing the external effects of suppliers, consumer demand, new entrants, substitute product, and competitive rivalry).

A PEST analysis comprises components that could be of great fundamental value to a firm. The analysis can be conducted for the entire firm, for its business units, for the respective products, or for a new venture or partnership.

Figure 1 summarizes the components of a PEST analysis, when it is used, and the strategic tools which are employed in conjunction with it during the strategic management process.

Political factors. The extent to which policy makers are likely to intervene in the commercial environment is a crucial factor in a PEST analysis. Trade, taxation, labor, and environmental legislation are factors to be taken into account. Commercial restrictions and political stability are also imperative factors that could determine the success or failure of a business. The banning of tobacco advertising in the European Union, for instance, had spelt disaster for the Formula One Industry, which in turn sought refuge in other parts of the world including Dubai and Abu Dhabi. Google had to pull out of China because of censorship restrictions. The Arab Spring culminating in a widespread revolution has caused many firms to rethink their strategy to penetrate markets in the Middle East and North Africa. The British prime minister's proposal to hold a referendum on retaining or exiting the European Union has significant implications on investors who in the past have relied on the freedom of movement principles on which their investment decisions had been made.

Political factors are categorized at three main levels: the supranational, the national, and the subnational strata. As the business activities become more globalized, the supranational level is gaining more importance. In recent years, the world has seen an evolution of countries organizing themselves into economic blocks, moving progressively toward becoming a political union partly at the expense of their sovereignty. The United States of America is a case in point. To a lesser extent, the European Union has progressively sought to take on more powers and decision-making authority from its member states. The ASEAN block is seeking to gain a more sound footing by courting South East Asian giants, Japan and China, to join. As

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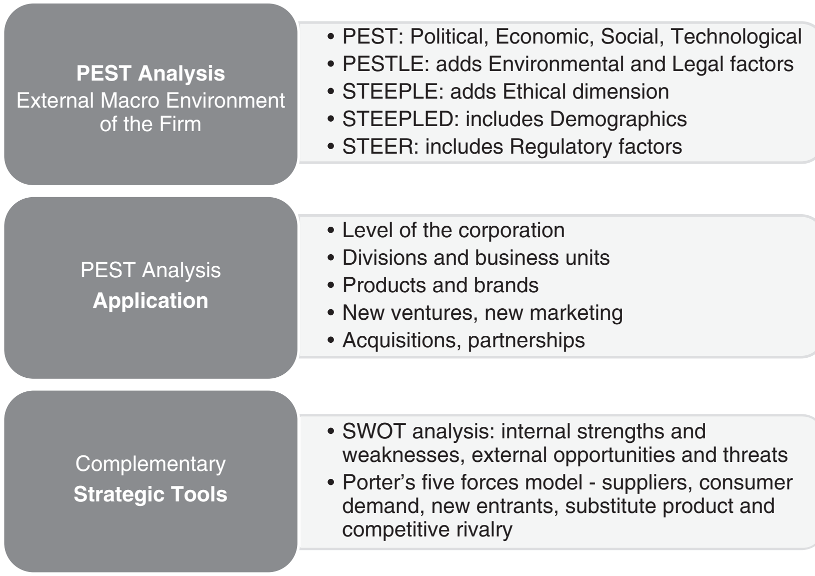

Figure 1 Summary of PEST components, application, and complementary strategic tools.

geo-political forces are consolidating into major political blocks, a political analysis of the country in which a firm is operating provides, at best, a myopic view. Business firms may need to expand their horizons and look beyond their shores to remain vigilant at what is happening at a supranational level. In the first instance, business firms may join lobby groups to influence policy making to their advantage. Even if limited influence may be exerted, political surveillance at a supranational level provides the required business intelligence to develop the right strategies for adapting to changes in the political environment that are faced in the foreseeable future.

Areas of national policy that may have a significant impact on the strategy of a firm include fiscal policy, national incentives for enterprise, planning and permitting, procedures for licensing and approval of new products, processes and services, perceived level of corruption and transparency, government priorities for supporting defined sectors in the economy amongst others (see Figure 2).

Although most of the world economies have embraced the free market model, significant interventions are made by national governments in areas with market imperfections. Specific political interventions in the market are most likely to happen in branches that affect certain aspects of the economy. A country's infrastructure is still provided by the government directly or through public-private partnerships. While a number of operators traditionally owned by governments have been privatized, they continue to operate in highly regulated markets. Telecoms, utilities, and financial institutions are good examples.

When the above political factors are considered, it becomes evident that firms would benefit from scrutinizing and evaluating the political environment in which they are or will be operating in the future. Constant monitoring of some or all of the above factors becomes vital in ensuring that a firm's strategy is in tune with the policy environment. Major changes in the political climate may bring about major changes in the structure and operations of a market or industry.

Economic factors. Economic factors have the most obvious impact on the profitability and overall attractiveness of a market or industry (see Figure 3).

The most popular indicator of economic performance for a national economy or a specific industry sector that is used is the Gross

Figure 2 Political factors in PEST analysis.

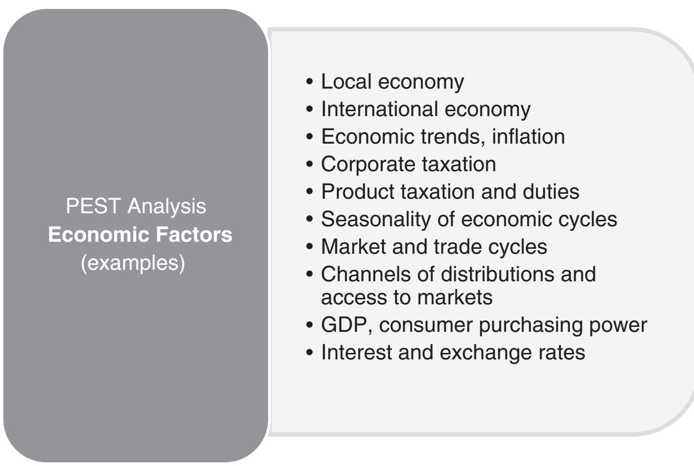

Figure 3 Economic factors in PEST analysis.

Domestic Product (GDP) per capita. This is frequently measured at Purchasing Power Parity (PPP) to enable equitable comparisons amongst various countries. Typically, time series and multilinear regression analysis techniques are applied to project expected developments in performance over a defined period in the future. GDP per capita is a particularly useful indicator especially for those industries, which are highly income elastic. Examples of such industries would include jewelry, construction, entertainment, tourism, betting, cosmetics, and various luxury items amongst others. In some other industries, demand remains more resilient to fluctuations in GDP. These would typically include staple foods, health services, and basic commodities.

Although being a useful indicator, GDP per capita provides only a partial view of the economic factors that might have a bearing on a firm. Inflation not only erodes the purchasing power of consumer but it also has an adverse impact on the prices of raw materials and other inputs that need to be used by a firm in providing products or services. Conversely, fluctuations in rates of exchange may translate into higher or lower prices for the purchase or sale of products and services. Higher taxes have a negative impact on the disposable income of consumers. A high unemployment rate from an investor's perspective is a double-edged sword as on the one hand, it erodes disposable income of families but on the other hand, it provides access to a cheaper labor market. Moreover, increases in bank interest rates have an impact on both consumers and investors alike. In the former case, consumers are more likely to save part of their discretionary income than to spend it on consumer goods when bank interest rates increase. They are also likely to borrow less from banks and financial institutions to buy capital goods such as cars, immovable property, and appliances. Investors are also likely to borrow less and redirect part of their speculative income into guilt-edged securities rather than in further growth of their firm. This is mainly because of an increase in their cost of capital.

Changes in economic factors will affect different industries in different ways. It is imperative for firms to discern a clear behavioral pattern between economic and industry dynamics. In some cases, there are clear interdependencies not only between industries but also between the economic performances of different countries. In recent years, the European Union has faced a series of ailing economies queuing up for bail outs, as a viral recession progressively spread across all European shores with Cyprus, Greece, Ireland, Portugal, and Spain being the main victims. The domino effect has also left its marks on other countries. For instance, following the news that Cyprus has become the fifth Eurozone country to seek assistance, the London FTSE 100 index, French CAC, and German Dax lost 63, 64, and 112 points respectively. In Milan and Madrid, the drop was significantly steeper with the former losing 549 points and the latter 252 points.

Some industries also exhibit positive correlations in performance between each other and would therefore need to be monitored concurrently. For example, a decline in the tourist industry would typically have an immediate impact on the entertainment industry and a long-term impact on the construction industry. An ailing manufacturing sector would send shockwaves across the transport and logistics sector. Problems in the financial services sector are likely to have a ripple effect on most industries and economies around the world. The effects were evident in the recession, which culminated in 2008. The recession was intricately linked to the bursting of the US housing bubble as housing prices plummeted to unprecedented levels damaging financial institutions around the world.

All these economic factors demonstrate the importance of the need for continuous surveillance of the key economic factors that have a bearing on an industry. It is not an easy task to walk through the economic maze and to make sense of how events are likely to unfold. In this context, firms may wish to restrict themselves to analyze only those factors, which have a critical bearing on their operation rather than the broader spectrum.

Social factors. Social trends dictate work patterns and attitudes, consumer tastes and preferences, and the particular type, form, and volume of demand for a product or service. The monitoring of social trends enables a firm to reposition its products or services to fit the changing expectations of customers. Figure 4 provides a list of examples of social factors, which have an effect on a firm's competitive position.

In the previous century, air travel was typically associated with high-income consumers who value comfort and premium service. Today, air travel has become a commodity openly accessible to all social classes. Ryanair has challenged the traditional view and has repackaged air travel into a no frills offering, reflecting the basic need of customers to safely and conveniently travel from one point to another. Meanwhile, by monitoring changes in their customers' tastes, Plasmon have modified their products and produced a variant of the Plasmon Biscuits targeting adults. Increased health consciousness of customers across the developed world has created a market for healthy food.

Higher levels of education have, on the one hand, provided employers with a healthier pipeline of potential employees; however, they now also have a pool of more demanding customers. Telecom and banking firms have realized that customer preferences and needs have

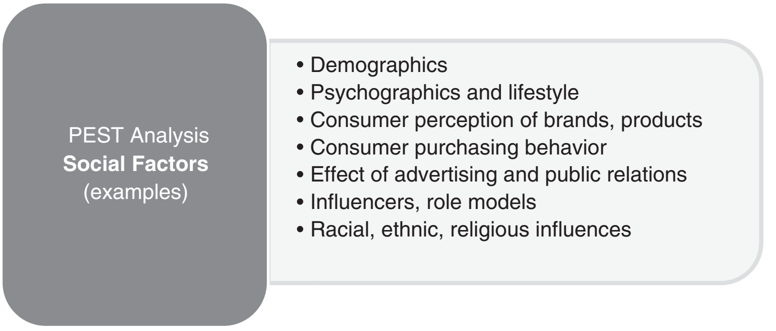

Figure 4 Social factors in PEST analysis.

become more diversified. Firms have restructured their business model from a product orientation to a consumer orientation. Indeed, customer centricity is progressively diffusing across a range of industries. Market segmentation is progressively moving away from traditional demographics to focus more on lifestyle.

Insurance companies are developing segmented products for the busy professional, for the small business owner, and for families. Banks have customized products for students, employees, self-employed, and the high net worth individuals.

Changes in the demographic characteristics of a population can have an impact on many parts of the economy. Most developed countries are facing the challenges of an ageing population as baby boomers are now 60 years of age and over. An ageing population creates additional demand for medicines, healthcare, and support services and lowers demand for products associated with the younger generation (such as education). The older generation, generally, has more leisure time and is more financially stable thereby providing the right mix for consumer spending.

An evaluation of social factors enables a firm to predict what pressures are likely to be made by various stakeholders on policy decisions of government, which would in turn have an impact on the firm.

Technological factors. The rapid pace of technological change is driven through innovation, which is in turn created through entrepreneurs who seek to push the boundaries of present limitations. As new frontiers are broken, technology becomes obsolete and any competitive advantage is short-lived. Technological breakthroughs can either spell the demise of some industries or create opportunities for new ones. Figure 5 provides a list of examples of technological factors, which have an effect on a firm's competitive position.

The proliferation of the Internet and e-commerce has done away with many intermediaries. This has been referred to as disintermediation. In the travel industry, consumers have become their own travel agents. They plan and book their travel online, using business-to-consumer platforms that had been previously restricted to business-to-business members of the supply chain. Moreover, many retailers have found an increased intensity in competition as they are facing rivalry from online stores. On the other hand, technology has given birth to new forms of intermediaries. This is referred to as re-intermediation. Examples of new forms of intermediaries include Amazon, eBay, and Expedia to name just a few. They have the advantage of being effectively integrated within social networks, which provide new channels of marketing a product or service. Through these channels, consumers are able to publish their unbiased opinions on defined products or services. The opinions provide added value in the supply chain. They are highly valued by other potential customers and influence their decision-making process.

In some cases, a new technology has completely replaced an old one, sending its demand in free fall toward its demise. In other cases, technologies wage wars against each other in an effort to become the recognized standard. Microsoft is the standard for office software.

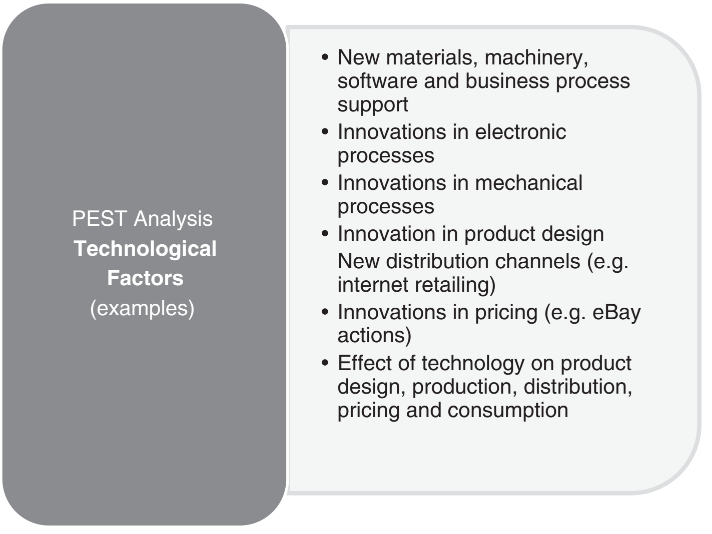

Figure 5 Technological factors in PEST analysis.

Blu-ray is the benchmark quality standard used for modern audiovisual home entertainment, although iPad is the current standard for tablets and currently under threat from Samsung.

From a business perspective, technology can be used to exploit a competitive advantage through a variety of factors. These could include cheaper production, improved access to customers, improved branding, product quality, and higher levels of business intelligence amongst others.

To thrive in a fast-paced technological change, a firm must remain vigilant. It has to be constantly updated on any technological developments in the industry, and aware of how they are likely to influence its future attractiveness and profitability.

Process of PEST Analysis

The process involved in exploring a firm's external macro environment involves five main stages listed as under (see Figure 6):

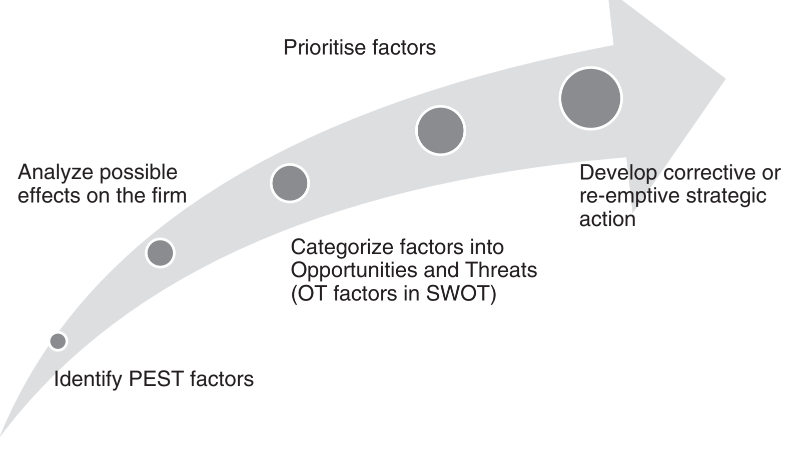

Figure 6 Process and stages of PEST analysis.

1. Identification of the current and future factors in the firm's external political, economic, social, and technological environments.
2. Analysis of the possible effects on the firm's competitive position of each factor.
3. Categorization of each factor into opportunities or threats for the firm.
4. Prioritization of the strategic importance of each set of PEST opportunities and threats. Ranking is based on the extent and the period of the impact on the firm.
5. Development of strategic action to correct or preempt negative effects and build on positive effects.

It is recommended that the environmental factors would be analyzed with respect to their effect on the firm's resources, capabilities, and core competences:

- Resources are the inputs required to produce a product or service. Examples of tangible resources are raw materials, premises, machinery, and equipment. Examples of intangible resources are financing, technology, human capital, supplier networks, sales force structure, distribution networks, patents, trademarks, established customer base, brand equity, and firm reputation. Resources can be combined and developed into capabilities, which in turn create core competences.
- Capabilities are the firm's capacity to make efficient use of its internal resources and the ability to combine them into competitive products and processes. Examples of strategic capabilities are: developing innovative technology products, reducing the time to market, creating more efficient distribution channels and retail outlets, capturing the consumer's attention through marketing, and managing customer relationships for long-term brand loyalty. Capabilities are developed from a complex set of internal resources and become embedded in a tacit manner into the firm's internal processes. They are difficult to document as procedures and therefore difficult to copy. Intangible resources tend to be the main source of inimitable strategic capabilities.

A PEST analysis seeks to provide strategists with a framework through which to increase their awareness of the external environment. However, it is not intended to constrain the analysis in a straitjacket. There are clear interdependencies amongst the various elements of the framework. For example, an increase in taxes by government is likely to erode the disposable income of consumers. On the other hand, the introduction of new incentives for industry is likely to attract further investment in a country thereby increasing employment and wealth.

Moreover, a growing environmental awareness from citizens is likely to push governments to legislate in favor of environmental conservation. Users of the framework are advised that if not used judiciously, a PEST analysis may become an endless evaluation of Political, Economic, Social, and Technological, which may result in an inconclusive analysis. The fundamental principle of the framework is that only those factors that have a direct bearing on the attractiveness of the industry and which are likely to change in the foreseeable future should be included. This would enable a firm to focus its effort solely on the factors that are pivotal for a firm's competitive position.

See also *R&D strategy*; *SWOT analysis*

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