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ПРИКЛАДНА ЕКОНОМІКА В БІЗНЕС-АДМІНІСТРУВАННІ
ТА ПІДПРИЄМНИЦТВІ
APPLIED ECONOMICS OF BUSINESS ADMINISTRATION
AND ENTREPRENEURSHIP

Навчальний посібник

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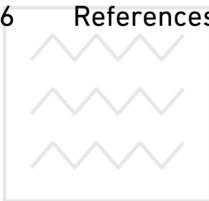
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INTRODUCTION

Specialty 076 "Entrepreneurship, trade and stock exchange activity" provides training of specialists in the field of business planning, conducting of business activities using both traditional and the most modern methods in the field of online and offline trade as well as in the field of stock, currency and commodity exchanges etc. Students study a range of disciplines in the sphere of business organization and management, trading and exchange activities. Graduates gain theoretical knowledge and practical skills to organize and effectively run their own business and business projects. The importance of the disciplines offered by the specialty and, accordingly, the knowledge and skills formed as a result of training, determine the demand for the specialty in the market of educational services.

Particular emphasis in the process of studying the disciplines is placed on the formation of knowledges in the field of business organization and management of enterprises on the following issues:

- Development and substantiation of business ideas;
- Legal support for setting up one's own business;
- Developing and applying new approaches to managing one's own business development;
 - Ensuring business efficiency through the use of innovation;
 - Analysis of commodity markets and competitiveness of products of different manufacturers;
- Work with suppliers;
- Formation of product assortment;
- Logistics operations and commodity marketing;
- Inventory management;
- Information and advertising support for business activities.



List of competences forming in the results of training:

knowledges:

- analysis, planning and organization of entrepreneurial and trading activities in modern conditions;
- forecasting, strategy development and business development in the areas of production, intermediation and service delivery;
- providing quality services and operating on commodity exchanges;

skills:

- to form and process the necessary information base on the external and internal environment for a certain type of economic activity;
- to identify personal, group and situational opportunities to exercise effective managerial influence in entrepreneurial activity;
- to conduct business negotiations and execute contracts;

practical skills:

- identifying and substantiating priority areas and organizing one's own business;
- making effective business decisions in the domestic and foreign markets;
- organization of trade and service activities;
- in the field of computer technologies to support decision making in the organization and planning one's own business;
- organization of stock exchange operations.



CHAPTER 1. ENTREPRENEURSHIP

Theme 1. Entrepreneurship: an overview

Content

- 1.1. Entrepreneurship, its definition and determining factors
- 1.2. Scope of entrepreneurship development
- 1.3. Definition, functions and types of an entrepreneurs

Key terms and concepts

- ✓ Entrepreneurship
- ✓ Managerial functions
- ✓ Initiative
- ✓ Super-growth
- ✓ Business ideas
- ✓ Stages of development

1.1. Entrepreneurship, its definition and determining factors

Entrepreneurship refers to all those activities which are to be carried out by a person to establish and to run the business enterprises in accordance with the changing social, political and economic environments.

Entrepreneurship includes activities relating to the anticipation of the consumers likes and dislikes, feelings and behaviors, tastes and fashions and the introduction of business ventures to meet out all these expectations of the consumers.

Entrepreneurship is considered as a 'new product' that would enable businessmen to develop new form of business organization and new business activities catering to the changing needs of the society. Entrepreneurship is the ability of entrepreneurs to assess the risks and establish businesses which are risky but at the same time suits perfectly to the changing scenarios of the economy.



Entrepreneurship as the function of seeking investment and production opportunity, organising an enterprise to undertake a new production process, rising capital, hiring labour, arranging the supply of materials, finding site, introducing new techniques and commodities, discovering new sources of raw materials and selecting top managers of day to day operations of the enterprise.

The two major factors determine the entrepreneurship developments are risk taking ability of entrepreneurs and power of achievement of entrepreneurs.

The other factors are:

- considering new factors of production, time, technology and quality for success;
- availing new sources of capital;
- performing functions of employer, master, merchant and undertaker;
- supply goods and services which are hitherto unknown to consumers;
- find a new market which is hitherto unexploited;
- seizing new opportunities for exploitation;
- developing the less developed countries and developing nations;
- decision making under uncertain situations.

Entrepreneurship development could be made through a collective approach of the qualified individuals and the entrepreneurial role played by the Government and other agencies. They strive for betterment and provide conducive infrastructure including the technology that is unheard and unthought so far.

1.2. Scope of entrepreneurship development

Entrepreneurship development could be made in all walks of the society and in all fields of activities. The scope of entrepreneurship development encompasses the following:

- 1) To identify entrepreneurial activities:



- to encourage the researchers of entrepreneurship development to find new opportunities for the business and industrial development;

- to identify the existing and the emerging economic, social and political crisis and find out a suitable remedial measure to overcome the crisis;

- to offer training to the first-generation entrepreneurs and encourage them to enter into new business ventures;

- to encourage the institutions engaged in the industrial development to find avenues for entrepreneurship development;

The institutions informing entrepreneurial opportunities are: the government's sponsored institutes; university departments and entrepreneurship development institutions; voluntary organisations and research agencies; the commercial banks and industrial development institutions.

2) Imparting training to develop entrepreneurial talents.

Entrepreneurs can be made by means of allowing them to undergo rigorous training. The level of entrepreneurship development especially in all underdeveloped countries depends upon the extent with which the aspiring men are given training. Through training, they can be able to improve their power of achievement and power of affiliation. Training of this type shall be given to the young pupil even at the school level.

The training enables entrepreneurs:

- to know as how to search the innovative business ideas;
- to know the various sources available for new business ideas;

- to process and find out the best ideas;

- to know the various input requirements for the proposed business;

- to find out the location for the proposed business;

- to know as how to fulfill the various legal formalities;

- to know as how best to make use of the existing infrastructural facilities;

- to know the various sources of finance available for the new business venture;



– to know as how best to overcome the resistance; to know as how to assess the market and future trend.

3) To develop infrastructural facilities (entrepreneurship development could be possible through the setting up of both social and economic infrastructural facilities for the aspiring entrepreneurs). The following infrastructural facilities are worth noting:

– impart entrepreneurship education to the pupils at the school level so as to enable them to develop the entrepreneurial talents;

– the existing financial institutions especially the commercial banks have to take utmost care in identifying the aspiring entrepreneurs and offer not only the required financial assistance but also the required managerial techniques so as to enable them to establish new business and withstand in the market;

– institutions which are engaged in the development of small industries have to do long range planning in developing entrepreneurial talents. They should monitor the changing industrial and business scenarios and determine the future course of actions to be taken to improve the entrepreneurship development;

– the role of research and development institutions is not only to innovate but also to inform the entrepreneurs as how best to make use of the innovation and apply in the manufacturing process;

– there must be an existence of the skilled labourers and experts who are able to make use of the latest technology. timely, adaptation of the new technology ensures entrepreneurship development, since there are chances for making use of the new technology for alternative purposes;

– entrepreneurship could be developed through an effective communication network. It avoids scarcity of information and ensures equilibrium in updating the knowledge of the people of the entire globe. It enables a uniform growth of the economy. The entire globe in these days is considered as a village owing



to the fast communication new work system.

4) Ascertain the demand and Supply of Entrepreneurs.

It is true that the economic growth depends upon the existence of the technical progress. The level of technical progress in turn depends upon the existence of the entrepreneurs. In other words, the economic growth is the resultant effect of the existing as well as future demand for and supply of entrepreneurs. Disequilibrium between these two affects the economic growth. Excess supply of entrepreneurs over demand leads to exploitation of natural resources beyond the required level. Of course, it leads to "super development". This is one side of argument. The other side of the argument is how to measure the excess supply. If the measure it with the help of the variable "development", one can say that excess supply is found in all the industrially advanced countries. In real life, what is advanced today in industrially advanced countries becomes a common phenomenon tomorrow in all other developing and less developed countries.

If such is the case, it is proved that excess supply of entrepreneurs is only an imagination and it will never become true. In other words, the demand for entrepreneur is a constant factor and is in existence for ever. The supply of entrepreneurs could be enhanced through motivation. As propounded by Mc Clelland, any society with generally high level of achievement will produce more real entrepreneurs who can accelerate the growth of the economy. Max Weber suggested that entrepreneurship is the outcome of the existing social conditions of the society. He was of the opinion that the entrepreneurs' personality has been determined and shaped by the existing social customs and values of the society. The living conditions of the society have been influenced by the existing cultural and religious norms, economic status of the people, their castes and inter group relations.

However, it has been observed from the history that achievement of individuals is always greater than the



achievement of groups. Entrepreneurship development too could be achieved more by individuals.

1.3. Definition, functions and types of an entrepreneurs

An entrepreneur is one of the important segments of economic growth. Basically, an entrepreneur is a person who is responsible for setting up a business or an enterprise. In fact, he is one who has the initiative, skill for innovation and looks for high achievements. He is a catalytic agent of change and works for the welfare of people.

The entrepreneur is a critical factor in the socio-economic change.

He is the key man who envisages new opportunities, new techniques, new lines of production, new products and coordinates all other activities.

Entrepreneur is one who innovates, raises money, assembles inputs, chooses managers and sets the organisation going with his ability to identify them and opportunities which others are not able to identify and is able to fulfill such economic opportunities.

Innovation occurs through: introduction of a new quality in a product; new product; discovery of fresh demand and fresh sources of supply; change in the organisation and management.

An entrepreneur is expected to perform the following functions:

1. risk absorption – the entrepreneur assumes all possible risks of business. A business risk also involves the risk due to the possibility of changes in the tastes of consumers, techniques of consumers, techniques of production and new inventions. Such risks are not insurable. If they materialise, the entrepreneur has to bear the loss himself. Thus, risk-bearing or uncertainty-bearing still remains the most function of an entrepreneur. An entrepreneur tries to reduce the uncertainties by his initiative, skill and good judgment;



2. formulate strategic business decisions – the entrepreneur has to decide the nature and type of goods to be produced. He enters the particular industry which offers the best prospects and produces whatever commodities he thinks will pay him the most, employs those methods of production which seem to him the most profitable. He effects suitable changes in the size of the business, its location techniques of production and does everything that is needed for the development of his business;

3. execute managerial functions – the entrepreneur performs the managerial functions though the managerial functions are different from entrepreneurial functions. He formulates production plans, arranges finance, purchased, raw material, provides, production facilities, organises sales an assumes the task of personnel management. In a large establishment these management functions are delegated to the paid managerial personnel.

4. adopt innovation function – an important function of an entrepreneur is “innovation”. He conceives the idea for the improvement in the quality of production line. He considers the economic inability and technological feasibility in bringing about improve quality. The introduction of different kinds of electronic gadgets is an example of such an innovation of new products. Innovation is an ongoing function rather than once for all, or possibly intermittent activity.

Entrepreneurs are classified as under different heads as given below. This helps the potential entrepreneurs to choose his own nature and style of entrepreneurship. Entrepreneurs are found in various types of business occupations of varying size.

According to the type of business they may be broadly classified as follows:

1) business entrepreneur are individuals who conceive an idea for a new product or service and then create a business to materialize their idea into reality. They tap both production and marketing resources in their search to develop a new business



opportunity. They may set up a big establishment or a small business unit. Trading entrepreneur is one who undertakes trading activities and is not concerned with the manufacturing work. He identifies potential markets, stimulates demand for his product line and creates a desire and interest among buyers to go in for his product. He is engaged in both domestic and overseas trade;

2) industrial entrepreneur is essentially a manufacturer who identifies the potential needs of customers and tailors product or service to meet the marketing needs. He is a product-oriented man who starts in an industrial unit because of the possibility of making some new product;

3) corporate entrepreneur is a person who demonstrates his innovative skill in organising and managing a corporate undertaking. A corporate undertaking is a form of business organisation which is registered under some statute or act which gives it a separate legal entity;

4) agricultural entrepreneurs are those entrepreneurs who undertake such agricultural activities as raising and marketing of crops, fertilizers and other inputs of agriculture;

5) a technical entrepreneur is essentially an entrepreneur of "craftsman type". He develops a new and improved quality of goods because of his craftsmanship. He concentrates more on production than marketing. He does not care much to generate sales by applying various sales promotional techniques. He demonstrates his innovative capabilities in matters of production of goods and rendering services;

6) non-technical entrepreneurs are those who are not concerned with the technical aspects of the product in which they deal. They are concerned only with developing alternative marketing and distribution strategies to promote their business;

7) professional entrepreneur is a person who is interested in establishing a business but does not have interest in managing or operating it once it is established.

Motivation is the force that influences the efforts of the entrepreneur to achieve his objectives. An entrepreneur is



motivated to achieve or prove his excellence in job performance. He is also motivated to influence others by demonstrating his power thus satisfying his ego.

According to motivation entrepreneurs may be classified as follows:

1) A pure entrepreneur – an individual who is motivated by psychological and economic rewards. He undertakes an entrepreneurial activity for his personal satisfaction in work, ego or status;

2) Induced entrepreneur – one who is being induced to take up an entrepreneurial task due to the policy measures of the government that provides assistance, incentives, concessions and necessary overhead facilities to start a venture. Most of the entrepreneurs are induced entrepreneurs who enter business due to financial, technical and several other several other provided to them by the state agencies to promote entrepreneurship;

3) motivated entrepreneur – new entrepreneurs are motivated by the desire for self-fulfillment. They come into being because of the possibility of making and marketing some new product for the use of consumers. If the product is developed to a saleable stage, the entrepreneur is further motivated by reward in terms of profit and enlarged customer network;

4) spontaneous entrepreneur – these entrepreneurs start their business out of their natural talents and instinct. They are persons with initiative, boldness and confidence in their ability which motivate them to undertake entrepreneurial activity;

5) growth entrepreneurs – those who necessarily take up a high growth industry. These entrepreneurs choose an industry which has substantial growth prospects;

6) super-growth entrepreneurs – those who have shown enormous growth of performance in their venture. The growth performance is identified by the liquidity of funds, profitability and gearing.



According to stages of development entrepreneurs may be classified as follows:

1) a modern entrepreneur – one who undertakes those ventures which go well along with the changing demand in the market. They undertake those ventures which suit the current marketing needs;

2) a classical entrepreneur – one who is concerned with the customers and marketing needs through the development of a self-supporting venture. He is a stereotype entrepreneur whose aim is to maximize his economic returns at a level consistent with the survival of the firm with or without an element of growth;

3) innovating entrepreneurship is characterized by aggressive

assemblage of information and analysis of results, deriving from a novel combination of factors. Men/women in this group are generally aggressive in experimentation who exhibit cleverness in putting attractive possibilities into practice. One need not invent but convert even old established products or services, by changing their utility, their value, their economic characteristics, into something new, attractive and utilitarian. Therein lies the key to their phenomenal success. Such an entrepreneur is one who sees the opportunity for introducing a new technique of production process or a new commodity or a new market or a new service or even reorganization of an existing enterprise;

4) fabian entrepreneurs are basically running their venture on the basis of conventions and customary practices. They don't want to introduce change and not interested in coping with changes in environment. They have all sorts of inhibitions, shyness and lethargic attitude. They are basically risk aversor and more cautious in their approach;

5) forced entrepreneurs – sometimes, circumstances made many persons to become entrepreneurs. They do not have any plan, forward looking and business aptitude. To mitigate the situational problem, they are forced to plunge into



entrepreneurial venture. Most of them may not be successful in this category due to lack of training and exposure.

Theme 2. Entrepreneurial environment, culture and innovation

Content

- 1.4. Entrepreneurial environment
- 1.5. Entrepreneurial culture
- 1.6. Entrepreneurial motivation
- 1.7. Innovation and entrepreneurship

Key terms and concepts

- | | |
|------------------------------|----------------------------|
| ✓ Environment | ✓ Profitability |
| ✓ Competitive infrastructure | ✓ Market leader |
| ✓ Motivation | ✓ Entrepreneurial strategy |
| ✓ Global market | ✓ Innovation |

1.4. Entrepreneurial environment

Environment refers to the totality of all factors which are external and beyond the control of the business enterprise. It determines how entrepreneurship control and manage the unit. The entrepreneurial performance of an enterprise is influenced by the value system of the society, the rules and regulations made by the government, the monetary policies of the capital market, foreign investments etc. If environment changes there will be a change in the entrepreneurial performance also. Thus, the healthy environment promotes the entrepreneurship in a larger scale by facilitating the business operations thereby contributing to the growth of the unit.

Environmental factors are mostly dynamic in nature except few factors which are of static nature. Mostly these factors can be conceptualized and quantified. Sometimes they could be mentioned only in qualitative terms.



On the basis of decision-making situation, it may be classified into market and non-market environment. If the business decisions of a business unit are influenced by the market factors such as, demand, supply, competition, price etc. the environment is said to be market environment. On the other hand, when the government, law and social customs and conventions dominate entrepreneurial decisions it is said to be non-market environment.

Environment may be grouped in to two, viz, economic and non-economic environment. Environment formed by the economic factors like fiscal policy, industrial policy, physical control of price-income, the economic system that operates, the stage of economic development refers to economic environment. Then the non-economic environment refers to social, political, legal, educational and cultural factors pertaining to business operations.

It is true that the entrepreneurs must have come from diverse economic, social and geographical backgrounds which interlace influence entrepreneurial spirits. This will enhance the entrepreneurial performance. The various factors which influences the entrepreneurship may be categorized into two, viz, Internal and External environment factors.

The internal environmental factors are mainly the environment in which entrepreneurs are born and brought up and work. Internal factors are those which will stimulate the entrepreneurs from within to take up entrepreneurial venture (strong desire of entrepreneurs to do something independently in life; technical know-how or manufacturing experiences acquired by them; business experience in the same or related line; family background including size, type and economic status of family; occupational origins of the entrepreneurs).

The success of entrepreneurship in a region at any point of time depends on the very many external environmental factors. These factors influence the entrepreneurial operations and ultimately determine the effectiveness of entrepreneurial



performance also. These environmental factors can be grouped into:

1) economic environment – the different economic environmental factors which influence the entrepreneurship are: structure of the economy, industrial policy, agricultural policy, growth pattern of national income, GDP, savings and capital formation in the country. Besides that, balance of trade and balance of payments, trade and tariff policy etc.;

2) legal environment – entrepreneur should know what the prevailing legal environment is by knowing the latest position in legal enactments relating to various aspects of entrepreneurial venture. such as formation of the unit, collaboration, foreign exchange, industrial dispute, labour management, social security benefits, consumer protection etc.;

3) political environment – the working political system in a country influences the entrepreneurial growth by designing and implementing various policy matters pertaining to promotion of entrepreneurship. Hence entrepreneurs and industrialists should have representatives on various government bodies at all levels of policy formulation and planning;

4) socio-cultural environment – in the modern days a suitable entrepreneurial culture must be created by developing healthy work environment and modern attitudes towards work giving social recognition etc. these factors will give psychological stimulus which in turn promotes innovation, inspiration, ethics and values which are very essential for a successful entrepreneur.

The external environmental factors are: financial assistance from institutional sources; accommodation in industrial estates; provision of consultancy to services on technical; market and financial aspects; provision of subsidies of different kinds; arranging the institutional support for marketing the products/services; attitude of the government to help new units; encouraging the co-ordination between larger and smaller firms; providing necessary infrastructural facilities continuously.



External environment determines the entrepreneurship in many occasions. Hence presence of conducive business environmental climate is imperative for entrepreneurship growth. External environment facilitates various functional areas of business enterprise thereby promote entrepreneurship.

The various factors that impede the growth entrepreneurship arose mainly due to external environment. Some of them are:

- changes in governmental policy;
- political instability or hostile government attitude;
- improper co-ordination among different government agencies;
- poor-infrastructural facilities such as supply of power, materials, finance etc.;
- rise in cost of inputs; unfavourable market fluctuations etc.

1.5. Entrepreneurial culture

Entrepreneurial culture implies a set of values, norms and traits that are conducive to the growth of entrepreneurship. It is the corporate culture that focuses on the emergence of new opportunities, the means of capitalizing of them, and the creation of the structure appropriate for pursuing them. Entrepreneurial culture should be differentiated from administrative culture. Administrative culture is the corporate culture which focuses on existing opportunities, organizational structures and control procedures. An ideal administrator would ask such questions as "what resources do I control? What structure determines our organisation's relationship to its market? How can I minimize the impact of others on my ability to perform? What opportunity is appropriate?" On the contrary an ideal entrepreneur would ask very different questions such as 'Where is the opportunity? How do I capitalize on It? What resources do I need? How do I gain control over them? What structure is best?'



According to Stevenson and Gumpert companies must often contain both entrepreneurial and administrative cultures because they consist of both entrepreneurial and established units. There are two dimensions of conflicting cultures. In the first dimension, entrepreneurial manager will be driven by “perception of opportunity”. They experience pressures such as diminishing opportunities, changes in consumer economics, political rules, social values and the technology they cannot understand. On the other hand, the administrative managers are driven by controlled resources. The pressures upon them include social contacts with colleagues and subordinates, performance measures, planning systems and cycles.

Innovation and entrepreneurship are thus needed in society as much as in the economy, in public-service institutions as much as in businesses. What is needed is an entrepreneurial society in which innovation and entrepreneurship are normal, steady, and continuous. Just as management has become the specific organ of all contemporary institutions. And the integrating organ of our society of organisations, so innovation and entrepreneurship have to become an integral life-sustaining activity in our organizations, our economy, our society.

The prerequisite for an entrepreneurial culture is a massive reorientation in policies and attitudes, and above all, in priorities. We need to encourage habits of flexibility, of continuous learning, and of acceptance of change as normal and as opportunity – for institutions as well as for individuals. Tax policy is one area – important both for its impact on behaviour and as a symbol of society's values and priorities. What is needed in an entrepreneurial society is a tax system that encourages moving capital from yesterday into tomorrow rather than one that, like our present one, prevents and penalizes it. Just as important as tax and fiscal policies that encourage entrepreneurship – or at least do not penalize it – is protection of the new venture against the growing burden of governmental regulations, restrictions, reports, and paperwork.



Management counseling for entrepreneurial development may be understood as a 'counseling process for the institutions to promote the entrepreneurs in the given locality'. It encompasses broad counseling activities, by the institutions focused on the counseling approach for the development of entrepreneurs.

Counseling can be both of directive and non-directive in nature. The non-directive counseling is largely client oriented where counselor listens and records what he listens and uses the information he gets to help dispel anxieties. He does not discipline client in order to control him. Instead the approach is non-paternalistic and counselee centered. As a matter of act counseling for entrepreneurs has largely to be of non-directive nature. This avoids over dependence of entrepreneurs on agencies.

In essence, the non-directive approach in counseling is designed to provide opportunity for the counselee to work through his problems to his own satisfaction without being given advice or guidance.

In essence, the non-directive approach in counseling is designed to provide opportunity for the counselee to work through his problems to his own satisfaction without being given advice or guidance. The entrepreneurs often require the following kinds of counseling: the entrepreneur develops an understanding about the environment; the entrepreneur sets directions for his business growth; the entrepreneur develops a plan of action, and implements it at his own etc.

1.6. Entrepreneurial motivation

Entrepreneurial behaviour is the result of entrepreneurial motivation Motivation refers to the inner urge that ignites and sustains behaviour to satisfy need. Motivation has been derived from the word motive which implies the inner state of mind that activates provokes and directs our behaviour towards the goal.



Need is the starting point of motivation. A satisfied need does not motivate an individual. It is only the unsatisfied need which creates tension and stimulates drives within the individuals for the satisfaction of the need and reduction of tension.

Several studies have been undertaken to identify the factors that motivate people to start their own enterprises. P.N. Sharma has identified nine motivating factors which are as under:

- Educational background;
- Occupational experience;
- Desire to do work independently;
- Desire to branch out to manufacturing;
- Family background;
- Assistance from government;
- Assistance from financial institutions;
- Availability of technology/raw material;
- Other factors (demand of the particular product, utilisation of excess money, start of manufacturing to facilitate trading/ distribution business since the product was in short supply etc.).

The above nine factors were grouped into two major categories internal and external. First five motivating factors were termed as internal and the last four factors as external. The internal motivating factors like education, occupational experience, family background, the desire to do something independently together make the personality of the entrepreneur. These factors generate an inclination to adopt entrepreneurial activity. The presence of internal factor is a necessary condition for the entrepreneurial activity to take place. But entrepreneurial ideas cannot fructify or take real shape without a proper or conducive environment which provide support in terms of financial assistance, technology and raw material and infrastructural facilities. These facilities form external motivating factors and serve as a spark in igniting the



entrepreneurial idea. These factors give a boost to the entrepreneurial activities.

It is clear from the above that majority of the new entrepreneurs were tempted to enter industry because of three main factors viz.

- They had strong desire to do something independent in life;
- They were having technical knowledge or manufacturing experience;
- Availability of governmental and non-governmental assistance.

1.7. Innovation and entrepreneurship

Entrepreneurial innovation deals with the introduction of new concept, a new way of doing things, or a new approach. Innovation can also be in terms of new technology, new techniques of production, new sources and types of raw materials, novel machinery, new labour saving devices, new packaging techniques and packaging materials, new way of advertising, product development, new application of existing product and even developing a new market.

Innovation refers to the process of bringing new, problem solving ideas into use. The ideas may be related to reorganizing, cutting costs, establishing new budgeting system, improving communication etc., Comprehensively speaking, innovation involves generation, acceptance and implementation of new ideas, processes, products or services. It embodies the capacity to change or adapt. Innovations are new ways to achieve tasks. Innovations respond to the needs and constraints and conditions. Inventors and researchers put effort in solving burning problems; these efforts lead to innovations. For example, labour shortages led to mechanized equipment, drought conditions led to improved irrigation, energy crises led to higher efficiency cars, farmers' cooperatives were established during periods of excessive low farm prices,



environmental regulations trigger cleaner technologies, a tax on carbon will lead to improved stoves and power plants.

Innovation is the essential for entrepreneurial motivation. Innovation gives money. Innovation must be knowledge based. Scientific knowledge is the base for innovation. However, innovation is also due to the convergence of different kinds of innovation.

Sometimes, there is a need to combine the innovative works of similar other scientists. Though their works were different in intent and content, by combing their works together, there is a chance for developing new products.

An innovative entrepreneur becomes a market leader. His market share and profitability increase till the competitors catch that innovation and imitate it by bringing out similar product in the market. The innovative entrepreneur hits the market with another innovation to retain his market leadership and high profit margin. The history of entrepreneurial development itself is a reflection of the innovativeness of entrepreneurs.

Peter Drucker says that innovation is an important tool of an entrepreneur, as he perceives new opportunity; convert this opportunity into attractive projects and become market leader. Innovation is the conversion of new knowledge into new products and services. Innovation is about creating value and increasing productivity, and therefore, making your business grow.

Just as management has become the specific organ of all contemporary institutions, and the integrating agent of our society of organisation, so innovation and entrepreneurship have to become an integral life-sustaining activity in our organisations, our economy and our society.

According to Drucker, the principles of innovation require a few “dos” and a few “don’ts”. He also enumerates what he calls “conditions”.

The “Dos”:



- purposeful, systematic innovation begins with an analysis of opportunities. It begins with thinking through what he has called the sources of innovative principles;

- innovation is both conceptual and perceptual. The second imperative of innovation is to go out to look, to ask, and to listen;

- an innovation to be effective has to be simple and it has to be focused. It should do only one thing, otherwise it confuses. If it is not simple, it won't work;

- effective innovations start small. They are not grandiose. They try to do one specific thing;

- a successful innovation aims at leadership.

The Don'ts":

- The first is simply not to try to be clever. Innovations have to be handled by ordinary human beings. In other words, anything too clever, whether in design or in execution, is almost bound to fail;

- do not diversify innovations "that stray from a core are likely to become diffuse". They remain ideas and do not become innovations;

- do not try to innovate for the future. Innovate for the present.

According to Drucker, three conditions have to be fulfilled, all three are obvious, but often go disregarded:

- innovation is work. It requires knowledge. It often requires great ingenuity. When all is said and done, innovation becomes hard, focused on purposeful work, making very great demands on diligence, on persistence, and on commitment;

- to succeed, innovation must build on their strengths;

- innovation always has to be close to the market, focused on the market, indeed market-driven.

Product (service) innovation is the result of bringing to life a new way to solve customer's problem through a new product of service development that benefits both the customer and sponsoring company.



Process innovation increases bottom line profitability, reduces costs, improves efficiency and raises productivity, and increases employees' job satisfaction. It also delivers enhanced value of the product or service to customers. For manufacturing companies, process innovation includes such things as integrating new production methods and technologies that lead to improved efficiency, quality, or time-to-market and services that are sold with those products. For service companies, process innovations enable them to introduce "front office" customer service improvement and add on services.

Business innovation involves a wide spectrum of original concepts, including development of new business models, organizational innovation, business application of technology and communications, new management techniques, environmental efficiency, new forms of stakeholder participation, transport and finance. These consist of new business models, new management models, new approaches to value chain management, new approaches to information, idea and knowledge management, new forms of strategic partnerships, new forms of selling and customer service.

More efficient innovation metric, associated with organizational innovation, reflects the recognition that new ways of organizing work in areas such as work force management through employee empowerment, new people partnership, or positive action to involve all employees in order to make organization of work a collective resource for innovation, knowledge management, value chain management, customer partnership, distribution, finance, manufacturing can improve competitiveness. Organizational innovation also includes business model innovation.

Technological innovation covers innovation derived from research and development of technology, that is independent of product and service initiative.

Innovative distribution and customer service methods are an inseparable part. It helps a company to develop new value-added services, enter new markets, and create new market



segments (categories), new distribution methods, and new forms of customer service and customer partnership. Marketing communication can also be more effective with innovative strategies.

It consists of reinvented strategy of the enterprise, innovative corporate growth strategies, improved competitive strategies. It is about challenging existing methods of industry of creating value for customer in order to meet newly emerging customer needs, add additional value, and create new markets and new customer groups for the sponsoring company.

Theme 3. Entrepreneurship development

Content

- 1.8. Importance of entrepreneurship development
- 1.9. Strategy for entrepreneurship development
- 1.10. Entrepreneurship development process

Key terms and concepts

- ✓ Economic growth
- ✓ Standards of living
- ✓ Research and development institutions
- ✓ Utilisation of resources
- ✓ Global market
- ✓ Balanced socio-economic development

1.8. Importance of entrepreneurship development

Entrepreneurship development depends upon the prevailing economic system. The existing socio-political set up and the prevailing economic policies of the government determine the economic system. The entrepreneurship development is mainly due to the existence of such economic system. It is the entrepreneurship development that acts as a fillip to new, rebuilding the structure of the economy and



implementing the economic reforms too. The economic system differs from country to country and hence the process of entrepreneurship development differs.

The mixed economic system has been found in existence in all developing countries. Under this system both the government and individual entrepreneurs play an equal role in the entrepreneurship development. The government undertakes those activities which are vital for further economic advancement.

In a mixed economy though there are ample opportunities for the entrepreneurship development with the help of the government support, entrepreneurship development is hindered by the deep-rooted evils like religious conflicts, political instability and unethical practices like smuggling, corruption and adulteration.

The need for entrepreneurship development was not felt by the classical economists like Adam Smith and David Ricardo. They thought that capital formation led to economic development.

But according to Schumpeter, the rate of economic growth depends upon the number of innovations introduced by the entrepreneurs and the extent with which the financial institutions come forward to finance the new venture businesses which are associated with high risks. He considered the fact that, the prevailing entrepreneurship development determines the economic growth and innovation itself is of no use unless it is made available to the public through new product and the activities involved in such processes are called as "entrepreneurship".

According to Schumpeter innovative entrepreneurs are essential for industrialisation, though imitative entrepreneurs are also equally playing their role in industrialisation. Japan is the best example for industrialization with the imitative entrepreneurs.

The entrepreneurship development is needed on the following grounds:



- optimum utilisation of resources – natural resources are getting depleted over a period of time. Some of the resources are almost scarce and it is the responsibility of the entrepreneurs to identify the alternative sources of supply of resources and also to make use of the existing resources without doing much harm to the environment;

- improved standard of living – the living conditions of the people could be improved through planned entrepreneurship development programme. Entrepreneurs use the latest technology and manufacture those products which are essential to all people at the lowest cost and thereby try to improve the living standards of the people;

- ensure industrialisation – a country is said to be advanced if there is an existence of adequate industrial units of big and small in size. The existing entrepreneurship development programmes create a congenial atmosphere for the aspiring and young entrepreneurs to come forward to set up industrial units especially in the industrially backward regions;

- innovation is the gateway – innovation takes place in all fields of activities. The application of computers enables businessmen and government to expedite their business activities. Marked improvement has been taken place in the field of communication due to the application of innovative technology;

- allow global market entry – entrepreneurship development enables the manufactures to manufacture products of international quality and thereby try to enter into the global market and compete with the products of other nations.

Development does not mean the setting up of large-scale industrial units. The settings up of a small-scale industrial unit also play an equivalent role in the economic development.

Pre-requisites for entrepreneurship development are:

- incubator facilities – “incubators” have been used in the US to develop entrepreneurs for small scale industries. It enables them to translate their laboratory research into commercial products and thereby help consumers to enjoy the



benefits of the recently found technology. Venture capital financing firms in these days come forward to provide incubator facilities to the entrepreneurs. These firms select viable projects and extend not only their financial assistance but also their managerial and marketing experiences so as to enable them to stand on their own legs;

- linkage of research and development – entrepreneurship development depends upon a perfect linkage between the entrepreneurs and research and development institutions. The very objective of setting up of science park is to enable the entrepreneurs to acquaint themselves with the latest research developments. It helps them to establish suitable small-scale industries and thereby improve the economic standards;

- cultural behaviour – the existing cultural value is such that entrepreneurs find it difficult to change the living style of the people. There is a wide gap between the educated and the uneducated, rural masses and urban masses, indigeneous method of production and industrial method of production and the like. Because of these variations the entrepreneurship development is said to be sluggish;

- cumbersome formalities – entrepreneurial growth is affected by strict government's control on prices, foreign competition, poor infrastructure, inadequate training facilities, including education, cumbersome formalities to be fulfilled at the time of setting up of industrial units. Besides, often there is no adequate investment for training, ambiguity in the entrepreneurship development programmes and entrepreneurial information system;

- other obstacles – inadequate marketing information, frequent change of government and its economic policies, inadequate monetary incentives that commensurate with the risks, absence of data banks etc.



1.9. Strategy for entrepreneurship development

The existing large-scale industrial undertakings shall meet at a common place and streamline their research and development efforts in such a way that would enable them to minimise the time and cost overrun incurred on research and development activities.

There is a need for the setting up of entrepreneurial development institutions either at the state or at the region level so that the “would be” entrepreneurs may get more opportunities for acquiring skill for establishing new business units.

Managerial ability of the entrepreneurs should be improved through conducting management training courses with the help of educational institutions.

Entrepreneurship development could be improved through the setting up of small-scale industrial units especially in the distant regions. The existing unemployed graduates shall be given training as how to establish small scale industries and make use of the local people and materials.

The government should ensure that there is a stable foreign exchange rate and controlled inflation which are supposed as favourable climate for entrepreneurship development.

There is a need for the setting up specialized entrepreneurship information and service department so that the entrepreneurs could be able to fulfil all the formalities in a most efficient way. This would enable them to safeguard their precious time and money.

Finance should not be a limiting factor for the emerging entrepreneurs. Venture capital firms have to be started at various places so that the entrepreneurs could get not only finance but also the rich experiences of the venture capital firms.



1.10. Entrepreneurship development process

It starts from identifying the potential and right candidates, linkage suitable project with each one, training and developing the managerial and entrepreneurial capabilities, counselling and motivating the entrepreneur and providing the required follow-up support to help the entrepreneurs in establishing venture. The task of developing entrepreneurs consists of the following activities:

- identifying and carefully selecting those who could be trained as entrepreneurs;
- developing their entrepreneurial capabilities;
- ensuring that each potential entrepreneur has a viable industrial project;
- equipping the entrepreneurs with basic managerial understanding;
- helping them to secure necessary financial, infrastructural and other assistance so that an industrial venture materialises within the shortest possible time.

The need for a broad-based entrepreneurial class in the country arises from the need to speed up the process of activating the factors of production, leading to a higher rate of economic growth, dispersal of economic activities, development rural areas, creation of employment opportunities, improvement in the standard of living of the weaker sections of the society etc.

Besides that, many employees in industry and commerce, workers, supervisors, merchants and salesmen and number of young engineers and graduates had latent entrepreneurial skills and a desire or capacity to be self-employed. Many lacked self-confidence to come forward for their own ventures. So, developing a programme to identify these people and give them counselling and continuous training will help to generate successful entrepreneurs in a large scale.

The inputs of identification and selection must be appropriately and comprehensively blended as per the



requirement and needs of the locality and the objectives set by the collaborating agencies for entrepreneurial development programme. An integrated approach of entrepreneurial identification and selection involves several functions at different stages. This multi-stage identification process helps to discriminate the potential person from the universe against the non-potential candidates at different stages.

After identifying the basic requisites of entrepreneurs in terms of their qualities and skills, it is essential to adopt a selection process for choosing at persons who are having real entrepreneurial aptitude. This task of selection work helps to develop them in the proper perspective and develop them as li successful entrepreneurs.

The selection process usually consists of there stages, viz, preliminary screening of applications, assessment of candidates' entrepreneurial abilities, ascertainment of the need for training.

In this selection process, persons possessing a minimum level of entrepreneurial traits and having experience in or familiarity with commercial or industrial activity could be getting the opportunity of being selected. Technically qualified candidates having no work experience may be selected if their entrepreneurial capacity is adequate and if they are ready to undertake smaller, simpler projects consistent with their overall background and know-now.

Then, the next step in the selection process is selecting the candidates for training who without comprehensive training inputs could not set up independent units. This helps to assess the need for training, developing training method period etc. This type of selection is considered mainly to avoid wastage of resources and to optimally utilise the limited training and development facilities.

Interviewing by itself is a delicate process. Therefore, greater care must be taken in its conduct. Interviewing procedure necessarily aim at confirming the personality, data indicated by the candidate during the pre-selection and



selection stage. Interview can also include certain simulation games and activities test to understand the candidates better. This requires the formation of expert group with different specialisation viz, entrepreneurial studies and behavioural science, from industrial departments, development authority, from commercial and development banks etc. This gives a base for integration of various functional input in discrimination and development of entrepreneurs from the initial stage itself.

Thus, in the selection process, persons possessing a minimum level of entrepreneurial traits (normally decided by a cut-off point in the scores) and having experience in or familiarity with commercial or industrial activity stand a better chance of being selected. After the selection process is over, those entrepreneurs possessing concrete project proposals and needing only procedural information guidance must be encouraged to directly seek financial assistance and set-up industries. Those candidates who needed strengthening of entrepreneurial and managerial capabilities may be admitted into training programme.

Imparting training is the key component in any entrepreneurial development programme. Entrepreneurs are not just born but are developed and trained to assume entrepreneurial venture boldly. The selected candidates with basic entrepreneurial traits and keen to enter into the venture are selected to impart training. It gives proper orientation and exposure to the trainees and motivate the potential entrepreneurs to take-up and manage the commercial venture successfully. The main objective of entrepreneurial training is to develop motivation and competence necessary for successful launching, management and growth of the enterprise. The training process can have an inbuilt design of discriminating or screening out the potential entrepreneurs. Hence, it is very much essential for the budding entrepreneurs to make use of the training opportunities.

To impart effective training, package has to be developed consisting of the following components: achievement



motivation; product selection and project report; business management guidance; practical training and work experience and validation of training inputs etc.

The inputs of training programme are as follows:

1. Achievement motivation – in the first phase, as intensive achievement motivation training, through a short period programme is given to develop the entrepreneurial traits such as need to achieve, risk taking, initiative, etc. The motivation inputs serve to increase the need for achievement, help participants realistically define their goals and work towards their achievement and heighten their self-awareness.

2. Product selection and project report – in the initial stage of the programme itself, guidance sessions are held on selecting an appropriate industrial opportunity for each trainee consistent with his experience, competence and overall capabilities. Perceiving a profitable opportunity for commercial exploitation is an essential quality of an entrepreneur. By providing inputs on various feasible industrial opportunities through a team of experts (successful industrialists, leading traders and merchants in manufactured commodities and technical advisers), the programme covers this precondition into an information input. Inadequate knowledge of an opportunity or a clear project proposal need not be a handicap in aspiring to be an owner entrepreneur. The training culminates in the completion of a project report by each trainee. It is found to expose the particulars to the thought process and field experience necessary for the rational choice of business, product-line market mix, etc., and determining their feasibility in light of environmental constraints opportunities. It also constitutes an instrument for raising finance for the project and thereby links up completion of training with the support of financial institutions for implementation.

3. Market survey – the participants should be given opportunity to actually conduct market surveys for their chosen projects. This would help to expose the trainees to the



marketing avenues available and could be followed by sessions on methods of dealing in the markets.

4. Business Management Guidance – the small-scale entrepreneur has to be a manager since he cannot employ specialists to look after the multiple business decision of sales, finance, purchase, personnel etc.

It is essential for better performance, the new (trainee) entrepreneur emerging from the ranks employees and fresh graduates usually possess familiarity and experience in only one-area, either of production, sales or supervision.

Knowledge of problem-solving through group discussions, syndicate presentation, case studies and business games may be given. Business inputs are given through specialists in different subjects drawn from professionals, business and industry executives, experts and small-scale entrepreneurs.

5. Practical training and work experience - field trips to selected industrial units have to be arranged to expose trainees to the operational conditions. For those lacking in industrial experience, a six hours day in-plant training could be arranged in relevant operating factories as long as required. A well-equipped technical training workshops have to be set up which develop industrial skills among fresh trainees and offers product development opportunities.

6. Validation of training inputs - tests of comparative performance of trained entrepreneurs under the programme who set up industries versus those who were rejected in the selection tests for the training but who nevertheless set up industrial units.

The success of any entrepreneurial development programme lies on the follow-up measures and continuous monitoring of the training institutions and agencies. Follow-up may be taken on all the three stages, viz., pre-training, training and post-training stages of entrepreneurship development programme.

Pre-training follow-up measures consists of evaluation of training infra-structure training, syllabus and entire training



schedule etc. Similarly, the post-training follow up measures have to be taken mainly for the purpose of helping the entrepreneurs to achieve technical, managerial, marketing and financial assistance from various supporting agencies without much difficulties.

The follow-up process consists of the following activities:

- preparation of history cards for each trainee with the details of biodata, performance on the tests and interviews, traits before and after the training;
- keeping in touch with each entrepreneur who have undergone training;
- regular system of reporting should be developed to get feedback on the performance of entrepreneurs;
- project leaders have to contact the entrepreneurs by personal visits periodically;
- convening follow-up meeting and maintaining follow-up records will ensure success of the entrepreneurial development programmes;
- continuous assessment of the impact of all developmental activities undertaken by the agencies based on certain criteria; they may be activity level of respondents, new business or activity started, fixed capital investment made, total investments made, number of people employed, number of jobs created, mean increase in profits, diversification, quicker repayment of loan, improvement in the quality of products etc.



Theme 4. Project identification

Content

- 1.11. Project ideas
- 1.12. Purpose and need for project identification
- 1.13. Methodology for project identification

Key terms and concepts

- ✓ Assessment
- ✓ Inputs and outputs
- ✓ Financial institutions
- ✓ Developmental agencies
- ✓ Investment
- ✓ Economic and social trends

1.11. Project ideas

It is the first and foremost task of an entrepreneur to find out suitable business which is feasible and promising and which merit further examination and appraisal. Therefore, he has to first search for a sound workable business idea and give a practical shape to his idea. While doing so, the entrepreneur has to tackle the various problems from time to time to achieve the ultimate success. Since the good project ideas are elusive, a variety of sources should be tapped to stimulate the generation of project ideas.

The sources of project ideas usually are:

- 1) success story of a friend/relatives;
- 2) experience of others in manufacture/sale of product;
- 3) examining the inputs and outputs of industries;
- 4) plan outlays and government guidelines;
- 5) suggestions of financial institutions and developmental agencies;
- 6) investigation of local materials and resources;
- 7) economic and social trend of the economy;
- 8) new technological developments;
- 9) project profiles and industrial potential surveys;



- 10) visits to trade fairs;
- 11) unfulfilled psychological needs;
- 12) possibility of reviving sick units.

A study of existing industries in terms of their profitability and capacity utilisation is helpful. The analysis of profitability and break-even level of various industries indicates promising investment opportunities. Opportunities which are profitable and relatively risk free. An examination of capacity utilisation of various industries provides information about the potential for further investment. Such a study becomes more useful if it is done region-wise, particularly for products which have high transportation costs.

An analysis of the inputs required for various industries may throw up project ideas. Opportunities exist when materials, purchased parts, or supplies are presently being procured from different sources with attendant time lag and transportation costs and several firms produce internally some components/parts which can be supplied at a lower cost by a single manufacture who can enjoy economies of scale.

A study of the output structure of existing industries may reveal opportunities for further processing of output or even processing of waste.

An analysis of import statistics for a period of five to seven years is helpful in understanding the trend of imports of various goods and the potential for import substitution. Indigenous manufacture of goods currently imported is advantageous for several reasons: it improves the balance of payments situation; it provides market for supporting industries and services; it generates employment.

Likewise, an examination of export statistics is useful in learning about the export possibilities of various products.

In a bid to promote development of industries in their respective states, financial corporations, industrial development corporations and other developmental bodies conduct studies, prepare feasibility reports and offer suggestions to potential



entrepreneur. The suggestions of these bodies are helpful in identifying promising projects.

A search for project ideas may begin with an investigation into local resources and skills, various ways of adding value to locally available materials may be examined. Similarly, the skills of local artisans may suggest products that may be profitably produced and marketed.

A study of economic and social trends is helpful in projecting demand for various goods and services. Changing economic conditions provide new business opportunities. A great awareness of the value of time is dawning on the public. Hence the demand for time saving products like prepared food items, ovens and powered vehicles has been increasing. Another change that we are witnessing is that the desire for leisure and recreational activities has been increasing. This has caused a growth in the market for recreational products and services.

For well established, multibrand product groups like bathing soaps, detergents, cosmetics and tooth pastes, the question to be asked is not whether there is an opportunity to manufacture something to satisfy an actual physical need but whether there are certain psychological needs of consumers which are presently unfulfilled. To find whether such an opportunity exists, the technique of spectrum analysis may be followed.

1.12. Purpose and need for project identification

The entire economic management planning is based on two fundamental assumptions. i.e. a) limited means and b) unlimited ends. A planner has to select few important needs to cut it into size of his/her means. This may be treated as fixing the priority is called identification of project. It helps in elimination process. Identification and selection of a project is a scientific process. This process is based on certain essential conditions. It may differ from project to project.



The essential conditions which should be taken into consideration for identification and selection of production projects are as follows: project should be in conformity with the economic needs of the area; it should take into account the depriving factors which might have adverse impact; the input-output ratio should be optimum; the purpose of the project is to increase the production and employment of the area.

Thus, the abovesaid conditions will differ due to resources availability, use pattern and other relevant conditions of the area. Besides that, project should also consider certain national priorities.

Project ideas are like other ideas which don't take concrete shape immediately. There are several stages of making propositions their considerations and scrutiny for their soundness.

An idea is first born, it is under incubation for some time and subsequently it begins to take some definite shape. The project ideas to develop take almost the same course. This project identification may be broadly divided into four stages:

1. Conceptual stage – where project ideas are generated;
2. Screening stage – at which unviable ideas are eliminated;
3. Identification stage – at which viable projects are selected;
4. Pre-feasibility stage – at which pre-feasibility studies are taking place.

A number of project ideas may be generated either by those officials or non-officials and entrepreneurs individually or collectively who are conversant with the area. In this context, one has to examine the potentialities of development and the problems, needs and aspirations of the people of the concerned area.

In the second stage project ideas generated above are screened in a preliminary exercise to weed out the bad or unviable ideas. All project ideas would not pass the screening



test. Some project ideas may be imaginary to warrant any serious consideration.

The third and fourth stages may be called as investment opportunity study. This study is necessarily preliminary and the broad one and has a limited objective of providing planners with a choice of projects from which they can make a selection. Pre-feasibility study is an intermediate stage between an investment opportunity study and a detailed feasibility study and these can be differentiated mainly on the basis of information required for respective stages.

After gathering the project ideas from the various sources as aforesaid, it is essential to eliminate ideas which prima facie are not promising. This process of eliminating the irrelevant and unviable ideas is called screening of project ideas. It can be done with the help of testing the following conditions of the propositions: compatibility with the promoter; consistency with governmental priorities; availability of inputs; adequacy of market; reasonableness of cost; acceptability of risk level etc.

The project idea must be compatible with interest personality and resources of the entrepreneur. It should be accessible to him and also it offers him the prospects of rapid growth and high return on invested capital. The project idea must satisfy or go along with the governmental priorities, national goals and governmental regulatory framework.

The resources and inputs required for the project must be reasonably assured. This feature of the project can be assessed with the help of determining the following points relating to a project: capital requirement within manageable limit; obtaining technical know-how; availability of raw materials at a reasonable cost; obtaining power supply.

Identifying the adequacy of market is the key factor to select, the viable project idea. To judge the adequacy of market the following factors have to be examined: total present domestic market; competitors and their market shares; export market; quality price profile of the product; sale and distribution system; projected increase in consumption; barriers to the entry



of new units; economic social and demographic trends favourable to increased consumption; patent protection.

Reasonableness of cost is another factor to screen the project ideas. The cost structure of the proposed project must enable it to realise an acceptable profit with a competitive price. The following cost factors must be carefully considered to design a viable cost structure: cost of material inputs, labour costs, factory overheads; general administration expenses, selling and distribution costs; service costs, economics of scale etc. Acceptability of risk level is another factor which helps to screen the project ideas and hence determine the desirability of a project.

1.13. Methodology for project identification

To make a viable project it should be linked with the actual circumstances prevailing in the area. Without knowing the basic information relating to socio-economic conditions of the area, it is difficult to draw a suitable project for the area. Development needs and potentials vary from area to area. For specific area, before drawing a project, local condition and other relevant factors must be taken into consideration. Most of the project fail because they were not based on local problems. Assumptions based on macro level information may fail to watch at micro level. Survey is a technique to unearth the hidden information which are vital to identify the basic requisites of project i.e. need, resources and priorities. It also helps in making right choice between different alternatives. Secondly it presents lot of information to be used as bench mark information which will help at the later stage for evaluation of the project.

Existing companies essentially large-scale company form of organisations are continuously developing various projects for their developmental purposes. While doing so, the existing company has to make a more intensive analysis of its resources and environment and conceive of projects on the basis of its existing activities. An existing company which seeks to identify



new project opportunities should undertake a “SWOT” analysis. It is an acronym of strengths and weaknesses and opportunities and threats. This analysis evaluates all these four characteristics of existing company.

A brief summary of the points required for SWOT analysis is given below:

- availability of internal financial reasons for new projects after taking into account the need for replacement expenditure, increase in working capital, repayment of borrowings and dividend payments;

- capability of raising external financial resources;

- availability of production facilities;

- technological capabilities of the company;

- availability of different sources of raw materials and its utilization;

- availability of infrastructural facilities;

- cost structure and profit margins of the company;

- distribution network of the company;

- market share of the company;

- capability of top management of the company;

- state of industrial relations in the company;

- impact of corporate laws on the growth of the company;

- likely changes in the governmental policies;

- possibility of evolving new technology and its impact on the cost structure of the company;

- existence and severity of competition;

- changes in the customers preferences, tastes etc.

By considering the abovesaid information keenly the SWOT analysis helps to provide the basis for the corporate strategy to be followed and indicate the major areas of thrust. These may include expansion of the capacity of existing product range, vertical integration, diversification in related areas and mergers etc.



Theme 5. Project formulation feasibility study

Content

- 1.14. Project formulation
- 1.15. Criteria in the project formulation
- 1.16. Feasibility study

Key terms and concepts

- ✓ Feasibility analysis
- ✓ Techno-economic analysis
- ✓ Forecasting
- ✓ Project design and network analysis
- ✓ Financial analysis
- ✓ Social cost-benefit analysis

1.14. Project formulation

Project formulation is an investigating process which precedes investment decision. The purpose is to present relevant facts before the decision-makers to enable them to decide as to whether to go ahead signal should be given for the project or not.

Formulation of projects involves scientific procedure. The task of any formidable project is too many. It has to present several information subjective and objective in nature. It explains the objectives, goals and justification for the acceptance of the project. The major task of a project is to assess the financial, technical and managerial involvement and its justification considering the resource constraint. The project formulation stage involves the identification of investment options by the enterprise.

Project formulation is designed to bring the project sponsoring authority and the agencies from whom it has to get concurrence, support etc., on one wavelength. Project formulation by providing a scientifically developed procedure for developing the content as well as the format of the



investment proposition, seeks to streamline the process of appraisal of project at government and the aiding agencies level. So, the project formulation is a process involving the joint effort of a team of experts including the economists, the financial analysts and specialists in various fields a well formulated project provides a medium which cut across scientific, social and positional prejudices and provides a common meeting ground for all those who have a contribution to make in successful implementation of a project.

The different stages in the project formulation process are briefly described as follows:

1. Feasibility analysis.
2. Techno-economic analysis.
3. Project design and network analysis.
4. Input analysis.
5. Financial analysis.
6. Social cost-benefit analysis.
7. Project appraisal.

Feasibility analysis is the first stage in the process of project development. The purpose of the analysis is to examine the desirability of investing in pre-investment studies. For this purpose, it is essential to examine project idea in the light of the available internal (inputs, resources and outputs) and external constraints (environment).

When a project idea is taken up for developmental three situations can arise: the project may appear to be feasible, project may turn out to be not feasible or the available data may not be adequate for arriving at reasonable decision regarding further investment.

In the last-mentioned case, investment in pre-investment studies will obviously have to be deferred till such time as adequate data regarding the project feasibility is available. The project sponsoring body will therefore have to invest in collecting additional data and refer the investment decision for the time being. In the second situation when the project is found to be not feasible, further investment in the project idea is



completely ruled out. In the third situation, when the project idea is found to be feasible, the decision makers can proceed to invest further resources in pre-investment studies and design development.

Techno-economic analysis is primarily concerned with the identification of project demand potential and the selection of the optimal technology which can be used to achieve the project objectives. The analysis provides necessary material on which the project design can be used. It also indicates whether the economy is in a position to absorb the output of the project or not.

Project design is the heart of the project entity. It defines the individual activities which go into the corpus of the project and their interrelationship with each other. It identifies the flow of events which must take place before a project can start yielding the results for which it has been set up. The inter-relationship between various constituent activities of a project is most conveniently expressed in the form of a network diagram.

Project design and network analysis are concerned primarily with the development of the detailed work plans of the project and its time profile, and the presentation of this plan is the form of a detailed network drawing. Project design and network analysis make available to the project formulation team a clear picture of the work elements of the project and also their sequential relationship.

The objective of input analysis is to identify and quantify the project inputs and to assess the feasibility of a sustained supply of these inputs all through the effective life span of the project. Resources are consumed in project constituent activities.

The best method of identifying the project inputs is therefore to identify these activities determine the resources which each activity will consume individual requirements. Input analysis uses the network plans for developing the input characteristics of the project. It thereafter proceeds to evaluate



the availability of the inputs both in quantitative as well as qualitative terms.

Resources required for a successful implementation of a project include not only the material inputs but also human resources which are necessary both for the setting up of the project as also its successful normalisation run. Resource requirements estimates form the basis of costs estimates of the project and are, therefore, essential for developing the financial profile and the cost-benefit profile of the project.

The objective of financial analysis is to develop the project from the financial angle and to identify these characteristics. Financial analysis concerns itself with the estimation of the project costs, estimation of project funds requirements. It also involves and appraisal of the financial characteristics of the project so as to establish the relative merits and demerits of the project as compared to other investment opportunities.

Financial analysis reduces investment proposition in diverse fields of human activity to one common scale, thereby simplifying the project is developing project financial forecasts.

In judging the overall worth of the project, the effect which the project will have on society as a whole is very material. While financial analysis evaluates a project from the profitability point of view, social cost benefit analysis views it from the point of view of rational viability, the cost-benefit analysis however takes into account not only the direct costs and benefits which will accrue to the project implementing body but also total costs which all entities connected with the project will have to bear and the benefits which will be enjoyed by all such entities. The idea here is to evaluate the project in terms of absolute costs and benefits rather than in terms apparent costs and benefits.

Pre-investment appraisal is the process of consolidating the results of feasibility analysis, the techno-economic analysis, the design and network analysis, the input analysis, the financial analysis and the cost benefit analysis, so as to give the investment proposition a final and formal shape.



It naturally involves selection of appraisal format, the material which should go into pre-investment report and the form of presentation of various conclusions. The sum total of the pre-investment appraisal is to present the project idea in a form in which the project sponsoring body, the project implementing body and the outside agencies can take investment decision regarding the proposals.

1.15. Criteria in the project formulation

The main criteria in the project formulation process are:

- forecasting – understanding and precisely identifying the objectives/needs/goals (regional/ state/ national/ international) of the unit/society/economy on a sustained basis;
- setting up priorities and choosing the goals that are more urgent;
- searching for alternations and carrying out feasibility studies to pick up projects that appear most beneficial and desirable;
- carrying out detailed studies of the project so selected;
- estimating the needed resources (human and physical) and finding the yearly cost and benefit of project;
- arranging funds – both approval and allocation. The successful implementation of any project depends upon the timely availability of the required resources as per projections;
- preparing of time schedule for all jobs so that the physical and financial targets of the projects are phased appropriately;
- distributing the works to various departments or agencies having the appropriate technical expertise;
- execution and controlling the project. This requires frequent reviewing, updating and constant action to restore the operation to its planned characteristics;
- evaluating the performance of each project to ensure the worth of good or service for each rupee to be spent.



1.16. Feasibility study

A feasibility report is an investment proposal based on certain information and factual data appraising the project. This type of feasibility study may be required by the financing institutions, project sponsor, project owner.

The feasibility report enables the project holder to know the inputs required and if rightly prepared confirms to the convictions that he is proceeding in the right direction. In other words, a project needs to be fully defined in order to provide terms of reference for the management of the project.

A project can be considered to have been fully established when the following conditions are fulfilled:

- the technical configuration of the project has been fully defined;
- the performance requirement for the various technical system and the key equipment have been specified;
- cost estimate for the project is frozen;
- techno-economic viability of the project has been examined, appraised and approved;
- an overall schedule for implementation of the project has been drawn-up.

The feasibility report is prepared during the definition phase of a project. It lies in between project formulation stage and appraisal and sanction stage. It is prepared to present an in-depth techno-commercial analysis carried out on the project idea for consideration of the financial institutions and other authorities empowered to take the investment decision.

Project feasibility study comprises of market analysis, technical analysis, financial analysis, and social profitability analysis. The analysis is mainly interested only in the commercial profitability and thus examining only the market, technical and financial aspects of the project. But, generally the gamut of feasibility of a project covers the following areas: 1) commercial and economic feasibility; 2) technical feasibility; 3) financial feasibility; 4) managerial feasibility; 5) social feasibility



or acceptability.

The economic feasibility aspect of a project relates to the earning capacity of the project. Earnings of the project depends on the volume of sales. Here, the following important indicators have to be taken into consideration:

- present demand of the goods produced through the project. i.e. market facility (or) getting a feel of the market.
- future demand – a projection may be made about the future demand. The period normally depends upon the scale of investment.
- determining the extent of supply to meet the expected demand and arriving at the gap.
- deciding in what way the project under consideration will have a reasonable chance to share the market.
- anticipated rate of return on investment. If it is positive the project justifies the economic norm in the relationship between cost and demand.

Future demand can be estimated after taking into consideration the potentialities of the export market, the changes in the income and prices, the multiples use of the product, the probable expansion of industries and the growth of new industries. The share of the proposed project in the market could be identified by considering the factors affecting the supply position such as competitive position of the unit, existing and potential competitors, the extent of capacity utilisation, units' costs advantages and disadvantages, structural changes and technological innovations bringing substitute into the market.

The commercial feasibility of a project involves a study of the proposed arrangements for the purchase of raw materials and sale of finished products etc. This study comprises the following two aspects:

- arriving at the physical requirement of production input such as raw materials, power, labour etc., at various level of output and converting them into cost. In other words, deciding costing pattern;



- matching costs with revenues with a view to estimating the profitability of the project and the break-even point. The possibility ultimately decides whether the project will be a feasible proposition.

The examination of technical feasibility requires a thorough assessment of the various requirements of the actual production process and includes a detailed estimate of the goods and services needed for the project. So, the feasibility report should give a description of the project in terms of technology to be used, requirement of equipment, labour and other inputs.

Location of the project should be given special attention in relevance to technical feasibility. Another important feature of technical feasibility relates the types of technology to be adopted for the project. The exercise of technical feasibility is not done in isolation. The scheme has also to be viewed from economic considerations; otherwise, it may not be a practical proposition however sound technically it may be.

The promoters of the project can approach the problem of preparation of technical feasibility studies in the following order:

- undertaking a preliminary study of technical requirements to have a quick evaluation;
- if preliminary investigation indicates favourable prospects working out further details of the project. The exercise begins with engineering and technical specifications and covers the requirements of the proposed project as to quality, quantity and specification type of components of plant and machinery, accessories, raw materials, labour, fuel, power, water, effluent disposal transportation etc.

Thus, the technical feasibility analysis is an attempt to study the project basically from a technician's angle. The main aspects to be considered under this study are: technology of the project, size of the plant, location of the project, pollution caused by the project production capacity of the project, strength of the project. Emergency or stand-by facilities required by the project sophistication such as automation, mechanical handling etc.,



required collaboration agreements, production inputs and implementation of the project.

The main objective of financial feasibility study is to assess the financial viability of the project. Here, the main emphasis is in the preparation of financial statement, so that the project can be evaluated in terms of various measures of commercial profitability and the magnitude of financing required can be determined. The decision about the financial feasibility of a project should be arrived and based on the following consideration:

- for existing companies, audited financial statements such as balance sheets, income statements and cash flow statements;
- for projects that involve new companies, statements of total project cost, initial capital requirements, and cash flow relative to the projective time table;
- financial projections for future time periods, including income statements, cash flows and balance sheets;
- supporting schedules for financial projections stating assumptions used as to collection period of sales, inventory levels, payment period of purchases and expenses and elements of production cost, selling administrative and financial expenses;
- financial analysis showing return on investment return on equity, break-even volume and price analysis;
- if necessary, sensibility analysis to identify items that have a large impact on profitability or possibly a risk analysis.

Managerial feasibility - the success or failure of a project largely depends upon the ability of the project holder to manage the project. Project is a bundle of activities and each activity has its own role. For the success of a project, a project holder has to co-ordinate all the activities in such a way that the additive impact of different inputs can produce the desired result.

The ability to manage and organise all such inter related activities come within the concept of management. If the person incharge of the project, has the ability, has the ability to manage all such activities, the desired result can be anticipated.



There are three ways to measure the managerial efficiency: heredity skill; skill acquired through training; skill acquired in course of work.

Social feasibility - a project may cross all the above barriers mentioned above and found very suitable but it will lose its entire creditability, if it has no social acceptance. Though some factors may create hindrance for development of a project it should nevertheless avoid all such social conflicts which will stand on the successful implementation of the project.

Considering the interests of the general public, projects which offer large employment potential often create income for less developed areas and stimulate small industries.

In a nut shell, the feasibility report should highlight on these five testing stones before it can be declared as complete and only after judging through these indicators a project can be declared as viable and can be submitted for finance or any other assistance from any institutions.

Theme 6. Project appraisal

Content

- 1.17. Appraisal process
- 1.18. Reasonableness of cost of project
- 1.19. Financial projections

Key terms and concepts

- | | |
|-------------------------------|----------------------------|
| ✓ Loan safety ratio | ✓ Break-even point |
| ✓ Current ratio | ✓ Pay back method |
| ✓ Debt service coverage ratio | ✓ Average rate of return |
| ✓ Margin of security | ✓ Net present value method |
| | ✓ Internal rate of return |



1.17. Appraisal process

Project appraisal is a scientific tool. It follows specific pattern. This process usually involves six areas of appraisal such as market appraisal, technical appraisal, financial appraisal, profitability appraisal, managerial, and social appraisal.

Appraisal of commercial viability means assessment of marketability of the end-product. Therefore, at the time of assessment of commercial viability, the following points require careful consideration:

- size and prospective growth of the market which the unit is required to cater like nature of population, their purchasing power, their educational background, fashion etc.;
- demand and supply position of the product in the national and international market;
- nature of competition;
- pricing policy including prospective prices vis-a-vis the quality of the product;
- marketing strategy and selling arrangements made by the unit adequacy of sales;
- export potential etc.

A project is considered to be technically feasible, if it is found to be “sound” from technical and engineering point of view. It is an attempt to find out how well the technical requirements of the unit can be met, which location would be most suitable and what the size of plant and machinery should be.

The fundamental objective of appraising a project from the technology point of view is to justify the present choice and provide an insight into future technological developments. Other objectives are: to justify the goal compatibility of a project with the preferred technology; to seek a better available alternative technology which is both cost effective and efficiently manageable; to seek such a technology that can go with existing skill levels of team members or requires little orientation and



training programmes; to seek a better technology that is not detrimental to the overall environment.

The technology that is used in projects can be classified on the basis of:

- purpose for which it is applied;
- level at which it is used;
- nature of skills applied while using the technology.

On the basis of purpose, the technology can be:

- manufacturing technology which is generally used in manufacturing industries like textiles industries like textile industries, steel industries, etc.,

- extraction technology which is used in extraction of basic raw materials such as oils, petroleum products, coal and pig iron, etc.,

- conversion technology which is used in process industries like cement, sugar, etc.

- pre-fabricated technology which is used in construction industries like roads, bridges, and buildings, sheds etc.

On the basis of the level at which technology is used the classification is as follows:

- core technology which is a base for any industrial activity like basic plant and machinery that is erected;

- engineering and design technology which supports the core technology by providing basic layouts and helps in erecting the plant at the required site;

- intermediate technology which supports both core technology and engineering and design program with sufficient intermediaries such as heavy machine tools and devices to mobilize input and output and output of firm and continue to operate the machinery;

- component technology which is labelled as supplied or consumable for the core, engineering and even intermediate technology.

This is the most difficult job to evaluate the managerial competence behind the project. It has been the practical experience of the bank/financial institutions that even the most



technically feasible and financially/commercially viable project has been a total failure because of lack of management experience. The problem may become all the more serious if the management is dishonest/delinquent rather than inefficient and ineffective. Unfortunately, there is no scientific yardstick by which managerial competence can be judged objectively. For an established group of industrialists floating a new company unit, the banker can have at least, an idea of the background of the promoters. In case of a new promoter floating a new project, the problem of judging managerial competence induces some kind of subjectivity in the decision of the banks/financial institutions. In appraisal parlance, such evaluation is known as “principle of three Cs” i.e. character, capacity and credit worthiness.

The basic purpose of financial appraisal is to assess whether the unit will generate sufficient surplus so as to meet the outside obligations.

Financial appraisal usually examines two aspects of finance:

- the cost of the project i.e. the amount required to complete the project and bring it to normal operation;
- the means of financing the cost i.e. the sources from which the required funds are to be raised.

1.18. Reasonableness of cost of project

The project cost should be reasonable: However, assessing reasonableness of the project cost is a very difficult and delicate task. Here, generally, the technique of inter-firm comparison is used which compares the project cost estimates with the cost of comparable units in the same industry.

Debt-equity ratio is a very important consideration as there should not be mismatch between the external debt (long-term) and the equity of the enterprise.

Sensitivity study is carried out to see that the unit would be able to serve its debts and give reasonable return under less optimistic conditions. For determining, profitability of the project



generally projections are obtained over the entire repayment period (say 7 to 10 years) in the following functional areas:

- cost of production;
- profitability;
- cash flow;
- debt service coverage ratio;
- break-even point.

The appraiser should satisfy himself about the reasonableness of the basic assumption on which the above projections are made.

The important assumptions generally looked into are:

- capacity build up;
- cost of raw materials;
- estimates of salaries and wages;
- estimates of administrative expenses;
- expected selling price;
- provisions made for depreciation;
- provisions for various taxation liabilities.

The assumptions should be reasonable and realistic. In case, the assumption is not pragmatic, it can be changed by the bank and fresh figures can be compiled. But the basic consideration the banker should have it that the cash generation position of the unit should be quite comfortable throughout the repayment period. An ideal debt service coverage aimed at is 2:1.

1.19. Financial projections

The financial projection such as profitability estimates, cash flow estimates and projected balance sheets are the basis for assessing the viability of the project. Therefore, verification of profitability estimates is highly important for the proper appraisal of a term loan proposal.

The profitability estimate should always accompany the assumptions based on which the profitability estimates have been prepared.



Ratio Analysis

Many important parameters such as sales, operating profit, net profit, equity, debt, current assets, current liabilities, etc. do not give much information if figure is studied in isolation. If a ratio is calculated between related items, the ratio indicates the relationship between two or more than two variables, thus giving meaningful information for taking decision. Some of the ratio useful for banks are discussed below.

1) Loan safety ratio – indicates the relationship between term liabilities and owned funds and helps in assessing the capital gearing. The debt shall include long term loans, debentures, deferred payment preference shares due for redemption between 1 to 3 years. The equity includes ordinary share capital, preference share capital due for redemption after 3 years, investment subsidy, unsecured loans subordinated to the term loan, internal accruals, non-refundable deposits in the case of cooperatives.

2) Current ratio (current assets to current liabilities) – indicates the liquidity position of the company. Current assets should be more than current liabilities. The acceptable ratio should be between 1.5 to 2.1. The ratio beyond 2.1 will indicate that either the inventories are stocked unnecessarily or the products produced are not sold.

3) Debt service coverage ratio (dscr) – indicates the capacity of the unit to repay the term loan liabilities and interest thereon. It is important ratio for lending institution as the repayment period has to be suitably fixed based on this ratio. This ratio indicates the cash generation the term liabilities to be paid out of this and balance left for the company's use. Repayment of term loan without generating sufficient cash will lead to reduction in working in the working capital, tight liquidity position and further deterioration in the working of the unit. The acceptable ratio should not be less than 1.5:1.

4) Margin of security – the term loans are generally sanctioned against the security of fixed assets. The excess of fixed assets over the term loans provides margin for the term



loans.

Productivity ratio are: capital employed to value of output sales; capital employed to net value added; investment per worker; productivity per worker.

Profitability ratio are: percentage of raw material to value of output; percentage of wages and salaries to value of output; percentage of interest to value of output; percentage of operating profit to sales; percentage of profit after tax equity.

Break-even point (BEP)

The manufacturing cost consists of two costs viz. fixed costs and variable costs. Certain type costs viz. depreciation, interest on term loan, repair and maintenance, rent and insurance, wages and salaries, administrative expenses etc. has to be incurred by the unit irrespective of the level of operation. This cost will not change with the level of operation and they are called fixed costs. All the other costs viz. cost of raw material consumables, power, water, stores, packing charges, selling expenses etc. which vary with the level of operation is called variable cost. The BEP is the level at which the unit should operate to meet the fixed costs. It is level of operation, where there is no profit or loss for the unit.

Discounted Cash Flow Techniques

A project should earn sufficient return which should be at least equal to the cost of capital invested in it. The following evaluation techniques helps to identify the best investment proposal amongst the available.

1) Pay back method – the period required for recovering the entire investment made the project is calculated. The shorter is the period better return. The cash flow (operating profit + depreciation + other non-cash write off-tax) is accumulated year by year until it equals the original investment. However, this method ignores the cash inflow received after crossing the pay back period. This method is best suited where the emphasis is on avoidance of long-term risk.

2) Average rate of return – unlike the pay back period method, the entire life of the project is taken into account. The



average annual net operating profit (after depreciation) for the entire life of the project is calculated and the rate of return of original investment in a year is calculated by taking the average of opening and closing book values of the investment in the year. The grand average of such average investment of all years is obtained to know the average investment of the project gives the average rate of return. This method does not give any importance to the time value of the money and also the life differential of the projects.

3) Net present value method (NPV) – pay back method and average rate of return method does not give importance to the time value of money. The money invested today will not be equal to the money received in the future. Therefore, the time value of the money also should be taken into account while determining the return for the present investment.

Under this method, the future cash flow of all the years during the expected life of the project are discounted at a predetermined cut-off rate and the net present value is obtained. The cut-off rate should be either equal to or more than the cost of the funds. The present investment is an outflow of funds and hence treated as having minus value. If the difference between the present investment and the net present value of cash inflow is positive than it indicates that the profit is greater than the cost of the capital.

4) Internal rate of return (IRR) – rate of discount which would equate the present value of investments to the present value of future benefits over the life of the projects.

Thus, the project has to be appraised to ensure that the project will generate sufficient return on the resources invested in it. The viability of the project depends on technical feasibility, marketability of the products at a profitable price, availability of financial resources in time and proper management of the unit.



CONTROL TEST PROGRAM

1. What is entrepreneurship?
 - a. A special type of economic activity characterized by the freedom and autonomy of the decisions of its subjects, personal economic interest and responsibility, innovative nature of activity, presence of a risk factor
 - b. Any human activity
 - c. What we do every day
 - d. A special type of business activity for which the end result is not necessarily an economic profit
 - e. There is no right answer

2. Commercial business activities that are carried out to achieve economic and social results and for profit are called...
 - a. Entrepreneurship
 - b. Business
 - c. Market
 - d. Insurance
 - e. Another answer

3. Independence, initiative, systematic, own risk, focus on economic and social results and profit – are:
 - a. Signs of entrepreneurship
 - b. Entrepreneurship
 - c. Entrepreneur
 - d. The purpose of entrepreneurship
 - e. Entrepreneurship objectives

4. Who are the entrepreneurs?
 - a. Natural or legal persons engaged in business activities
 - b. Persons producing goods and services for their own consumption
 - c. Persons who purchase goods and services for their own consumption
 - d. Each of us is an entrepreneur
 - e. All answers are correct



5. What is the scope of entrepreneurship?

- a. Small, medium and large businesses
- b. Small business only
- c. Medium only
- d. Only big business
- e. Small and medium business only

6. The purpose of entrepreneurial activity is:

- a. Achieve economic and social results and profit
- b. Systematic work
- c. Independence
- d. Initiative
- e. Another answer

7. Free choice of types of entrepreneurial activity, independent formation of the program of activity by an entrepreneur, free hiring of workers by the entrepreneur, free disposal of profit, independent realization by an entrepreneur of foreign economic activity are:

- a. Principles of business activity
- b. Signs of entrepreneurial activity
- c. Entrepreneurship objectives
- d. Entrepreneurial activity
- e. Business object

8. When concluding an employment contract, the entrepreneur is obliged to:

- a. Provide social guarantees for employees
- b. Provide high wages
- c. Provide convenient but not necessarily safe working conditions

- d. All answers are correct
- e. Another answer

9. Joint-stock companies are:

- a. Business associations
- b. Associative societies



- c. Private enterprises
- d. Privatized enterprises
- e. Corporate enterprises

10. Barter is:

- a. An agreement to exchange a certain quantity of one product for an equivalent amount of another
- b. The operation of exchanging a certain quantity of one good for a certain quantity of another good of the same quality
- c. Counter-supply operation
- d. Request for delivery of goods
- e. Another answer

11. The influence of the state activity of business entities in order to ensure the legal, economic and organizational conditions for the formation and development of entrepreneurship is:

- a. State regulation of entrepreneurship
- b. Characteristics of the innovative function of entrepreneurship
- c. Characteristics of the resource function of entrepreneurship
- d. Characteristics of small and medium-sized businesses
- e. Another answer

12. State regulation of entrepreneurship is:

- a. The influence of the state on the activity of business entities in order to ensure the legal, economic and organizational conditions for the establishment and development of entrepreneurs
- b. A set of measures that are taking place in the sphere of monetary circulation in order to ensure its sustainability, contain inflation, flexible money supply of the sphere of circulation; is an integral part of the monetary policy of the state
- c. Activities undertaken to implement economic, scientific, technical and social policies.
- d. The regulation is aimed at ensuring the formation and



development of an effective functioning insurance market, creating the necessary conditions for the activities of insurers of various organizational and legal forms, preventing speculative and fictitious companies that may cause damage to both the insurance business and property on the insurance market. interests of insurers, and compliance with the requirements of the legislation on insurance.

e. Another answer

13. Foreigners and stateless persons in carrying out business activities:

- a. Enjoy the same rights and responsibilities as citizens
- b. They cannot carry on business
- c. Have a limited range of activities to engage in
- d. May be engaged in business for up to 3 years
- e. Another answer

14. The instruments of state regulation of entrepreneurship include:

- a. Fiscal, monetary, price and foreign economic regulation
- b. Income redistribution and social protection
- c. Supporting and developing competition
- d. Maintain proportionality of production and consumption
- e. Another answer

15. Fiscal, monetary, price and foreign economic regulation are:

- a. Instruments of state regulation
- b. Signs of state regulation
- c. Methods of state regulation
- d. Economic rules
- e. Another answer

16. Maintaining the proportionality of production and consumption, supporting and developing competition, redistributing income and social protection for entrepreneurs and consumers are:



- a. Functions of state regulation
- b. Government regulation instruments
- c. Signs of state regulation
- d. Methods of state regulation
- e. Another answer

17. A prerequisite for a formal, legitimate business activity is:

- a. State registration
- b. Legal entity formation (enterprise)
- c. Attracting hired labor
- d. All answers are correct
- e. Another answer

18. The state policy of enterprise support is:

a. A set of priority national economic approaches and decisions that determine the main directions and forms of legal, economic and organizational assistance to the development of entrepreneurship, taking into account the interests of the state and economic entities.

b. Activities undertaken to implement economic, scientific, technical and social policies

c. A set of measures that take place in the sphere of monetary circulation in order to ensure its sustainability, contain inflation, and flexibly provide money for the needs of the sphere of circulation.

d. The regulation is aimed at ensuring the formation and development of an effective functioning insurance market, creating the necessary conditions for the activities of insurers of various organizational and legal forms, preventing speculative and fictitious companies that may cause damage to both the insurance business and property on the insurance market. interests of insurers, and compliance with the requirements of the legislation on insurance.

- e. Another answer



19. What includes the following actions: issuing, reissuing and revoking licenses, issuing duplicate licenses, conducting licensing cases and registries, etc.?

- a. Licensing
- b. Patenting
- c. Licensee
- d. Employment contract
- e. Another answer

20. An entity that has been licensed to carry out a certain type of economic activity to be licensed is:

- a. Licensee
- b. Entrepreneur
- c. Government bodies
- d. Patent
- e. Another answer

21. The license is:

- a. Document, which certifies the licensee's right to carry out the type of economic activity specified in it within the specified term, subject to the fulfillment of the license conditions
- b. Comprehensive list of organizational, qualification and other special requirements, which are obligatory to be fulfilled in carrying out economic activities subject to licensing, established in accordance with the requirements of the laws
- c. An entity that has been licensed to carry out a certain type of economic activity to be licensed
- d. Document certifying the authorship of the invention and the exclusive right to use it for a specified period
- e. Another answer

22. The licensee is:

- a. An entity that has been licensed to carry out a certain type of economic activity to be licensed
- b. Document certifying the authorship of the invention and the exclusive right to use it for a specified period



c. Comprehensive list of organizational, qualification and other special requirements, which are obligatory to be fulfilled in carrying out economic activities subject to licensing, established in accordance with the requirements of the laws

d. Document of the state model, certifying the licensee's right to carry out the type of economic activity specified in it within the specified term, subject to the fulfillment of the license conditions

e. Another answer

23. The license terms are:

a. An exhaustive list of organizational, qualification and other special requirements required to be fulfilled in the conduct of licensed economic activities established in accordance with the laws

b. Another answer

c. Document certifying the authorship of the invention and the exclusive right to use it for a specified period

d. An entity that has been licensed to carry out a certain type of economic activity to be licensed

e. Document of the state model, certifying the licensee's right to carry out the type of economic activity specified in it within the specified term, subject to the fulfillment of the license conditions

24. A trade patent is:

a. A state certificate certifying the entity's right to engage in certain types of business for a specified period

b. State certificate certifying the economic entity's right to a special tax procedure in accordance with the law

c. Document of the state model, certifying the licensee's right to carry out the type of economic activity specified in it within the specified term, subject to the fulfillment of the license conditions

d. Comprehensive list of organizational, qualification and other special requirements, which are obligatory to be fulfilled



in carrying out economic activities subject to licensing, established in accordance with the requirements of the laws

e. Another answer

25. The purpose of business is:

- a. Achieve economic and social results and profit
- b. Systematic trade
- c. Independence
- d. Initiative
- e. Another answer

26. Commercial business activities carried out to achieve economic and social results and for profit are called...

- a. Entrepreneurship
- b. Business
- c. Market
- d. Insurance
- e. Another answer

27. What are the main types of entrepreneurship:

- a. Production, trade, financial
- b. Private, public
- c. Public, joint stock
- d. Physical, legal
- e. There is no correct answer

28. Commercial business is:

- a. Commodity turnover activities aimed at the sale of products, as well as ancillary activities that ensure its realization through the provision of appropriate services
- b. Cost-related
- c. The aggregate of all production units that carry out mainly the same or similar activities
- d. The most important structural element of the economic complex
- e. A technological process that changes the shape, properties or composition of raw materials to produce new



products

29. The branch is:

- a. The aggregate of all production units that carry out predominantly the same or similar activities
- b. Structural element of the economic complex
- c. A technological process that changes the shape, properties or composition of raw materials to produce new products
- d. Commodity turnover activities aimed at the sale of products, as well as ancillary activities that ensure its implementation through the provision of appropriate services
- e. Cost-related

30. Industry is:

- a. The most important structural element of the economic complex
- b. A technological process that changes the shape, properties or composition of raw materials to produce new products
- c. Commodity turnover activities aimed at the sale of products, as well as ancillary activities that ensure its implementation through the provision of appropriate services
- d. Cost-related
- e. The aggregate of all production units that carry out mainly the same or similar activities

31. Innovative activities in the field of management are:

- a. Activities of participants of economic relations carried out on the basis of realization of investments for the purpose of implementation of long-term scientific and technical programs
- b. Improving production of products
- c. Improving product sales
- d. Meeting the needs of consumers
- e. There is no correct answer

32. The commercial enterprise conducts:

- a. Commodity and trade operations



- b. Production operations
- c. Commodity transactions only
- d. Trade and trading operations only
- e. There is no correct answer

33. The subjects of a commercial enterprise are:

- a. Shops, markets, exchanges, auctions, fairs
- b. Consumers
- c. Manufacturers
- d. Intermediary companies
- e. All answers are correct

34. Commercial intermediation (agency activity) is an entrepreneurial activity that:

- a. Provides services to commercial entities by commercial agents
- b. Carried out under storage contract
- c. It follows from the storage of goods under a storage contract
- d. Stores goods and provides storage related services on a business basis
- e. All answers are correct

35. The essence of financial entrepreneurship is that:

- a. Entrepreneur acquires the main factor of entrepreneurship in the form of different cash for cash from the owners of cash
- b. Provides commercial agents with services to business entities
- c. Carried out under storage contract
- d. It follows from the storage of goods under a storage contract
- e. Stores goods and provides storage related services on a business basis

36. Financial entrepreneurship refers to:

- a. The most complex types of business activity



- b. The simplest types of business activity
- c. Not related to business activities
- d. All answers are correct
- e. There is no correct answer

37. A commercial bank is:

- a. Joint-stock financial institution, which pays on a paid basis mainly to commercial organizations, which accepts cash deposits and other settlement operations on behalf of clients
- b. Activities of participants of economic relations carried out on the basis of realization of investments with the purpose of implementation of long-term scientific and technical programs
- c. Improving production of products
- d. Improving product sales
- e. Meeting the needs of consumers

38. Commercial bank operations are divided into groups:

- a. Passive, active, commission-intermediary
- b. Savings, investment
- c. Universal, specialized
- d. Savings, versatile
- e. Mortgage, settlement

39. Banks are created in the form of:

- a. Public joint-stock company or cooperative bank
- b. Private enterprise
- c. Individual entrepreneur
- d. Limited liability companies
- e. Unlimited liability companies

40. Credits provided by banks differ in:

- a. Terms of use, method of provision, degree of risk, methods of granting, terms of maturity
- b. the terms of the contract
- c. The amount



- d. Consumer profits
- e. All answers are correct

41. What are the types of insurance:

- a. Life, property, liability insurance
- b. Simple, complicated
- c. External, internal
- d. Universal, specialized
- e. All answers are correct

42. Engineering is:

- a. Provision of industrial, commercial, scientific and technical and other services by specialized engineering consulting firms, industrial, construction and other companies
- b. Collection, processing, analysis, classification and preparation of various financial documentation
- c. Services related to transportation of finished goods, raw materials and semi-finished products from places of production to points of consumption or further processing
- d. Commercial, representative activities of individuals and legal entities on the implementation of separate stages of trade on a contractual basis
- e. Services for granting the right to use the invention or other technical achievement

43. Freight transport services are:

- a. Services related to transportation of finished goods, raw materials and semi-finished products from places of production to points of consumption or further processing
- b. Commercial, representative activities of individuals and legal entities on the implementation of separate stages of trade on a contractual basis
- c. Services for granting the right to use the invention or other technical achievement
- d. Provision of industrial, commercial, scientific and technical and other services by specialized engineering



consulting firms, industrial, construction and other companies

e. Collection, processing, analysis, classification and preparation of various financial documentation

44. Brokerage services are:

a. Commercial, representative activities of individuals and legal entities in carrying out separate stages of trade on a contractual basis

b. Services for granting the right to use the invention or other technical achievement

c. Provision of industrial, commercial, scientific and technical and other services by specialized engineering consulting firms, industrial, construction and other companies

d. Collection, processing, analysis, classification and preparation of various financial documentation

e. Services related to transportation of finished goods, raw materials and semi-finished products from places of production to points of consumption or further processing

45. Licensing services are:

a. Services for granting the right to use the invention or other technical achievement

b. Provision of industrial, commercial, scientific and technical and other services by specialized engineering consulting firms, industrial, construction and other companies

c. Collection, processing, analysis, classification and preparation of various financial documentation

d. Services related to transportation of finished goods, raw materials and semi-finished products from places of production to points of consumption or further processing

e. Commercial, representative activities of individuals and legal entities on the implementation of separate stages of trade on a contractual basis

46. Financial services are:

a. Services provided by financial institutions for



replenishment of working capital, provision of investment and other programs of subjects of economic, commercial and other activity

b. Provision of industrial, commercial, scientific and technical and other services by specialized engineering consulting firms, industrial, construction and other companies

c. Collection, processing, analysis, classification and preparation of various financial documentation

d. Services related to transportation of finished goods, raw materials and semi-finished products from places of production to points of consumption or further processing

e. Commercial, representative activities of individuals and legal entities on the implementation of separate stages of trade on a contractual basis

47. Consulting is:

a. Activities of specialized companies to provide intellectual, information services to market players on various production, organizational, legal, marketing, financial and other issues

b. The type of activity of business entities to meet the individual consumer's specific household needs

c. Services aimed at meeting the social problems of the population

d. Activities related to the provision of sanitary-hygienic, energy, transport and communal, hotel needs of the population

e. Space and time travel services for industrial or private purposes

48. Domestic services are:

a. The type of activity of business entities to meet the individual consumer's specific household needs

b. Services aimed at meeting the social problems of the population

c. Activities related to the provision of sanitary-hygienic, energy, transport and communal, hotel needs of the population



d. Space and time travel services for industrial or private purposes

e. Activities of specialized companies to provide intellectual, information services to market players on various production, organizational, legal, marketing, financial and other issues

49. Socio-cultural services are:

a. Services aimed at meeting the social problems of the population

b. Activities related to the provision of sanitary-hygienic, energy, transport and communal, hotel needs of the population

c. Space and time travel services for industrial or private purposes

d. Activities of specialized companies to provide intellectual, information services to market players on various production, organizational, legal, marketing, financial and other issues

e. The type of activity of business entities to meet the individual consumer's specific household needs

50. Housing and communal services are:

a. Activities related to the provision of sanitary, energy, transport, communal and hotel needs of the population

b. Space and time travel services for industrial or private purposes

c. Activities of specialized companies to provide intellectual, information services to market players on various production, organizational, legal, marketing, financial and other issues

d. The type of activity of business entities to meet the individual consumer's specific household needs

e. Services aimed at meeting the social problems of the population

51. Passenger transport services are:

a. Travel and space travel services for industrial or private



purposes

b. Activities of specialized companies to provide intellectual, information services to market players on various production, organizational, legal, marketing, financial and other issues

c. The type of activity of business entities to meet the individual consumer's specific household needs

d. Services aimed at meeting the social problems of the population

e. Activities related to the provision of sanitary, energy, transport, communal and hotel needs of the population

52. Communication services are:

a. Activities related to the installation and operation of telephone communications, radio points, street speakers, maintenance of broadcast networks, leasing of tracts, channels, communication lines and subscriber devices

b. Various types of useful activities that additionally provide trade enterprises to buyers in the process of purchasing or consuming goods

c. Space and time travel services for industrial or private purposes

d. Activities of specialized companies to provide intellectual, information services to market players on various production, organizational, legal, marketing, financial and other issues

e. The type of activity of business entities to meet the individual consumer's specific household needs

53. Activities for the production of goods and services of a material nature are:

a. Industrial entrepreneurship

b. Commercial entrepreneurship

c. Financial entrepreneurship

d. Industry

e. There is no correct answer

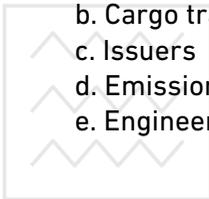


54. Product marketing activities aimed at the sale of products, as well as ancillary activities that ensure its implementation through the provision of appropriate services are:

- a. Commercial entrepreneurship
- b. Financial entrepreneurship
- c. Industry
- d. There is no correct answer
- e. Production entrepreneurship

55. The various types of beneficial actions that additional trading enterprises provide to buyers in the process of purchasing or consuming goods are:

- a. Trading services
- b. Cargo transportation services
- c. Issuers
- d. Emission
- e. Engineering



EXERCISES

Exercise 1

The total capital of the company is 200 thousand monetary units. There are three founders in the partnership: partner L. with 50% equity, partner K. – 30%, the rest – partner M. Profit in the amount of 85 thousand monetary units is distributed between partners as follows: 10% on equity, the rest of the profit in the ratio of 1:2:1. Determine the change in the capital structure if half of the profit goes to the capital increase of the company.

Exercise 2

The coefficients of the actual effectiveness of the scientific and technical activities of the two organizations are respectively 0.6 and 0.5. Determine the chance of the investor financing the



creation of new products.

Exercise 3

Which project is more effective under the NPV criteria if the discount rate for project A is 20% per annum and project B is 15%?

Projects	Revenues by years, ths. monetary units			Capital expenditures by years, ths. monetary units			Current expenses by years, ths. monetary units		
	n-1	n	n+1	n-1	n	n+1	n-1	n	n+1
Project A	260	360	350	300	50	50	130	130	130
Project B	280	510	510	180	270	300	120	140	140

Exercise 4

Determine the par value and the market value of a stock if it is known that the company has issued a total of 100,000 shares. The dividend amount is 20%. The total value of the property of the enterprise is: the value of fixed assets – 1000000 monetary units; the value of working capital – 200000 monetary units; intangible assets value – 50000 monetary units. Accounts receivable – 40000 monetary units, accounts payable – 25000 monetary units. Banking interest is 12%.

Exercise 5

Determine the average annual profitability of the most effective according to this project criterion, if the discount rate for project A – 20% per annum, for project B – 30%.



Projects	Revenues by years, ths. monetary units			Capital expenditures by years, ths. monetary units			Current expenses by years, ths. monetary units		
	n-1	n	n+1	n-1	n	n+1	n-1	n	n+1
Project A	260	360	350	300	50	50	130	130	130
Project B	280	510	510	180	270	300	120	140	140

Exercise 6

The entrepreneur analyzes the performance of a particular business operation under different scenarios of market events. If the market situation remains unchanged, then the market demand for its innovative products will be 4000 units. If a favorable situation arises in the market, then demand will be 5000 units, if unfavorable - 3000 units. The entrepreneur estimates the probability of the mentioned scenarios as 0.5, 0.2 and 0.3 respectively. Break-even will be provided with a sales volume of at least 3800 units of the product. It is necessary to evaluate the feasibility of performing this business transaction.

Exercise 7

Which project is more effective under the criterion of the profitability index if the discount rate for project A is 25% per annum and project B is 35%?

Projects	Revenues by years, ths. monetary units			Capital expenditures by years, ths. monetary units			Current expenses by years, ths. monetary units		
	n-1	n	n+1	n-1	n	n+1	n-1	n	n+1
Project A	260	360	350	300	50	50	130	130	130
Project B	280	510	510	180	270	300	120	140	140



Exercise 8

The coefficients of the actual effectiveness of the scientific and technical activities of the two organizations are respectively 0.4, 0.5 and 0.6. Determine the chance of the investor financing the creation of new products.

Exercise 9

Determine the payback period of the most effective project according to this criterion, if the discount rate for project A - 30% per annum, for project B - 40%.

Projects	Revenues by years, ths. monetary units			Capital expenditures by years, ths. monetary units			Current expenses by years, ths. monetary units		
	n-1	n	n+1	n-1	n	n+1	n-1	n	n+1
Project A	260	360	350	300	50	50	130	130	130
Project B	280	510	510	180	270	300	120	140	140

Exercise 10

Determine the sum of dividends on ordinary shares if the known part of the profit that will go to pay dividends – 2400 monetary units. The total number of shares is 10000, of which 1000 are preferred with a fixed dividend amount of 30%. Nominal value of one share – 2 monetary units.



CHAPTER 2. ECONOMIC MANAGEMENT OF THE ENTERPRISE

Theme 1. Introduction to the discipline "Economic Enterprise Management"

Content

- 2.1. Enterprise as an organizational entity
- 2.2. Forms of business
- 2.3. Main activities of the company
- 2.4. Company management

Key terms and concepts

- ✓ Company
- ✓ Liquidation
- ✓ Types of companies
- ✓ Capital and accounting
- ✓ Management

2.1. Enterprise as an organizational entity

A business (also known as an enterprise, a company or a firm) is an organizational entity and legal entity made up of an association of people, be they natural, legal, or a mixture of both who share a common purpose and unite in order to focus their various talents and organize their collectively available skills or resources to achieve specific declared goals and are involved in the provision of goods and services to consumers.

A company or association of persons can be created at law as legal person so that the company in itself can accept limited liability for civil responsibility and taxation.

Because companies are legal persons, they also may associate and register themselves as companies – often known as a corporate group. When the company closes it may need a "death certificate" (liquidation) to avoid further legal obligations.



Businesses serve as conductors of economic activity, and are prevalent in capitalist economies, where most of them are privately owned and provide goods and services allocated through a market to consumers and customers in exchange for other goods, services, money, or other forms of exchange.

Businesses may also be social non-profit enterprises or state-owned public enterprises operated by governments with specific social and economic objectives.

A business owned by multiple private individuals may form as an incorporated company or jointly organize as a partnership. Countries have different laws that may ascribe different rights to the various business entities.

The word "business" can refer to a particular organization or to an entire market sector (for example, "the finance business" is "the financial sector") or to all economic sectors collectively ("the business sector"). Compound forms such as "agribusiness" represent subsets of the concept's broader meaning, which encompasses all activity by suppliers of goods and services.

Typically private-sector businesses aim to maximize their profit, although in some contexts they may aim to maximize their sales revenue or their market share. Government-run businesses may aim to maximize some measure of social welfare.

The English word company has its origins in the Old French military term *compaignie* (first recorded in 1150), meaning a "body of soldiers", and originally from the Late Latin word *companiono* "companion, one who eats bread with you. By 1303, the word referred to trade guilds. Usage of company to mean "business association" was first recorded in 1553, and the abbreviation "co." dates from 1769.

2.2. Forms of business

Forms of business ownership vary by jurisdiction, but several common entities exist:



Sole proprietorship: A sole proprietorship, also known as a sole trader, is owned by one person and operates for their benefit. The owner operates the business alone and may hire employees. A sole proprietor has unlimited liability for all obligations incurred by the business, whether from operating costs or judgements against the business. All assets of the business belong to a sole proprietor, including, for example, computer infrastructure, any inventory, manufacturing equipment, or retail fixtures, as well as any real property owned by the sole proprietor.

Partnership: A partnership is a business owned by two or more people. In most forms of partnerships, each partner has unlimited liability for the debts incurred by the business. The three most prevalent types of for-profit partnerships are: general partnerships, limited partnerships, and limited liability partnerships.

Corporation: The owners of a corporation have limited liability and the business has a separate legal personality from its owners. Corporations can be either government-owned or privately owned. They can organize either for profit or as nonprofit organizations. A privately owned, for-profit corporation is owned by its shareholders, who elect a board of directors to direct the corporation and hire its managerial staff. A privately owned, for-profit corporation can be either privately held by a small group of individuals, or publicly held, with publicly traded shares listed on a stock exchange.

Cooperative: Often referred to as a "co-op", a cooperative is a limited-liability business that can organize as for-profit or not-for-profit. A cooperative differs from a corporation in that it has members, not shareholders, and they share decision-making authority. Cooperatives are typically classified as either consumer cooperatives or worker cooperatives. Cooperatives are fundamental to the ideology of economic democracy.

Limited liability companies (LLC), limited liability partnerships, and other specific types of business organization protect their owners or shareholders from business failure by



doing business under a separate legal entity with certain legal protections. In contrast, unincorporated businesses or persons working on their own are usually not as protected.

Franchises: A franchise is a system in which entrepreneurs purchase the rights to open and run a business from a larger corporation. Franchising in the United States is widespread and is a major economic powerhouse. One out of twelve retail businesses in the United States are franchised and 8 million people are employed in a franchised business.

A company limited by guarantee. Commonly used where companies are formed for non-commercial purposes, such as clubs or charities. The members guarantee the payment of certain (usually nominal) amounts if the company goes into insolvent liquidation, but otherwise they have no economic rights in relation to the company. This type of company is common in England. A company limited by guarantee may be with or without having share capital.

A company limited by shares. The most common form of company used for business ventures. Specifically, a limited company is a "company in which the liability of each shareholder is limited to the amount individually invested" with corporations being "the most common example of a limited company." This type of company is common in England and many English-speaking countries. A company limited by shares may be a publicly traded company or a privately held company.

A company limited by guarantee with a share capital. A hybrid entity, usually used where the company is formed for non-commercial purposes, but the activities of the company are partly funded by investors who expect a return. This type of company may no longer be formed in the UK, although provisions still exist in law for them to exist.

A limited liability company. "A company—statutorily authorized in certain states—that is characterized by limited liability, management by members or managers, and limitations on ownership transfer", i.e., L.L.C. LLC structure has been called "hybrid" in that it "combines the characteristics of a corporation



and of a partnership or sole proprietorship". Like a corporation, it has limited liability for members of the company, and like a partnership it has "flow-through taxation to the members" and must be "dissolved upon the death or bankruptcy of a member".

An unlimited company with or without a share capital. A hybrid entity, a company where the liability of members or shareholders for the debts (if any) of the company are not limited. In this case doctrine of veil of incorporation does not apply.

Less common types of companies are:

Companies formed by letters patent. Most corporations by letters patent are corporations sole and not companies as the term is commonly understood today.

Charter corporations. Before the passing of modern companies legislation, these were the only types of companies. Now they are relatively rare, except for very old companies that still survive (of which there are still many, particularly many British banks), or modern societies that fulfill a quasi-regulatory function (for example, the Bank of England is a corporation formed by a modern charter).

Statutory companies. Relatively rare today, certain companies have been formed by a private statute passed in the relevant jurisdiction.

Note that "Ltd after the company's name signifies limited company, and PLC (public limited company) indicates that its shares are widely held.

In legal parlance, the owners of a company are normally referred to as the "members". In a company limited or unlimited by shares (formed or incorporated with a share capital), this will be the shareholders. In a company limited by guarantee, this will be the guarantors.

There are, however, many, many sub-categories of types of company that can be formed in the world.

Companies are also sometimes distinguished for legal and regulatory purposes between public companies and private companies. Public companies are companies whose shares can



be publicly traded, often (although not always) on a stock exchange which imposes listing requirements/Listing Rules as to the issued shares, the trading of shares and future issue of shares to help bolster the reputation of the exchange or particular market of an exchange. Private companies do not have publicly traded shares, and often contain restrictions on transfers of shares. In some jurisdictions, private companies have maximum numbers of shareholders.

A parent company is a company that owns enough voting stock in another firm to control management and operations by influencing or electing its board of directors; the second company being deemed as a subsidiary of the parent company. The definition of a parent company differs by jurisdiction, with the definition normally being defined by way of laws dealing with companies in that jurisdiction.

Agriculture such as the domestication of fish, animals and livestock, as well as lumber, oil and mining businesses that extract natural resources and raw materials, such as wood, petroleum, natural gas, ores, plants or minerals.

Financial services businesses include banks, brokerage firms, credit unions, credit cards, insurance companies, asset and investment companies such as private equity firms, real estate investment trusts, sovereign wealth funds, pension funds, mutual funds, index funds, and hedge funds, stock exchanges, and other companies that generate profits through investment and management of capital.

Entertainment and mass media companies generate profits primarily from the sale of intellectual property – they include film studios and production houses, mass media companies such as cable television networks, online digital media agencies, mobile media outlets, newspapers, book and magazine publishing houses.

Industrial manufacturers produce products, either from raw materials or from component parts, then export the finished products at a profit – they include tangible goods such as cars, glass, or aircraft.



Real estate businesses sell, invest, construct and develop properties – including land, residential homes, and other buildings.

Retailers, wholesalers, and distributors act as middlemen and get goods produced by manufacturers to the intended consumers; they make their profits by marking up their prices. Most stores and catalog companies are distributors or retailers.

Transportation businesses such as railways, airlines, shipping companies that deliver goods and individuals to their destinations for a fee.

Energy, Utilities produce public services such as water, electricity, waste management or sewage treatment, usually under the charge of a government.

Service businesses offer intangible goods or services and typically charge for labor or other services provided to government, to consumers, or to other businesses. Interior decorators, hairstylists, tanning salons, laundromats, and pest controllers are service businesses.

2.3. Main activities of the company

Accounting

Accounting is the measurement, processing and communication of financial information about economic entities such as businesses and corporations. The modern field was established by the Italian mathematician Luca Pacioli in 1494. Accounting, which has been called the "language of business", measures the results of an organization's economic activities and conveys this information to a variety of users, including investors, creditors, management, and regulators. Practitioners of accounting are known as accountants. The terms "accounting" and "financial reporting" are often used as synonyms.

Luca Pacioli dramatically affected the practice of accounting by describing the double-entry accounting method used in parts of Italy. This revolutionized how businesses oversaw their operations, enabling improved efficiency and



profitability. The Summa's section on accounting was used internationally as an accounting textbook up to the mid-16th century. The essentials of double-entry accounting have for the most part remain unchanged for over 500 years. "Accounting practitioners in public accounting, industry, and not-for-profit organizations, as well as investors, lending institutions, business firms, and all other users for financial information are indebted to Luca Pacioli for his monumental role in the development of accounting."

Finance

Finance is a field that deals with the study of investments. It includes the dynamics of assets and liabilities over time under conditions of different degrees of uncertainty and risk. Finance can also be defined as the science of money management. Finance aims to price assets based on their risk level and their expected rate of return. Finance can be broken into three different sub-categories: public finance, corporate finance and personal finance.

Manufacturing

Manufacturing is the production of merchandise for use or sale using labour and machines, tools, chemical and biological processing, or formulation. The term may refer to a range of human activity, from handicraft to high tech, but is most commonly applied to industrial production, in which raw materials are transformed into finished goods on a large scale.

Marketing

Marketing is defined by the American Marketing Association as "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large." The term developed from the original meaning which referred literally to going to a market to buy or sell goods or services. Marketing tactics include advertising as well as determining product pricing.

Research and development

Research and development refers to activities in



connection with corporate or government innovation. Research and development constitutes the first stage of development of a potential new service or product. Research and development are very difficult to manage, since the defining feature of research is that the researchers do not know in advance exactly how to accomplish the desired result.

Sales

Sales is activity related to selling or the amount of goods or services sold in a given time period.

Capital

Mexican Stock Exchange in Paseo de la Reforma, Mexico City

When businesses need to raise money (called capital), they sometimes offer securities for sale.

Capital may be raised through private means, by an initial public offering or IPO on a stock exchange, or in other ways.

Major stock exchanges include the Shanghai Stock Exchange, Singapore Exchange, Hong Kong Stock Exchange, New York Stock Exchange and NASDAQ (USA), the London Stock Exchange (UK), the Tokyo Stock Exchange (Japan), and Bombay Stock Exchange (India). Most countries with capital markets have at least one.

Other types of capital sourcing includes crowd sourcing on the Internet, venture capital, bank loans, and debentures.

Intellectual property

Businesses often have important "intellectual property" that needs protection from competitors for the company to stay profitable. This could require patents, copyrights, trademarks, or preservation of trade secrets. Most businesses have names, logos, and similar branding techniques that could benefit from trademarking. Patents and copyrights in the United States are largely governed by federal law, while trade secrets and trademarking are mostly a matter of state law. Because of the nature of intellectual property, a business needs protection in every jurisdiction in which they are concerned about competitors. Many countries are signatories to international



treaties concerning intellectual property, and thus companies registered in these countries are subject to national laws bound by these treaties. In order to protect trade secrets, companies may require employees to sign non-compete clauses which will impose limitations on an employee's interactions with stakeholders, and competitors.

2.4. Company management

The efficient and effective operation of a business, and study of this subject, is called management. The major branches of management are financial management, marketing management, human resource management, strategic management, production management, operations management, service management, and information technology management.

Owners may manage their businesses themselves, or employ managers to do so for them. Whether they are owners or employees, managers administer three primary components of the business' value: financial resources, capital (tangible resources), and human resources. These resources are administered in at least five functional areas: legal contracting, manufacturing or service production, marketing, accounting, financing, and human resources.

Organization and regulation

Most legal jurisdictions specify the forms of ownership that a business can take, creating a body of commercial law for each type.

The major factors affecting how a business is organized are usually:

The size and scope of the business firm and its structure, management, and ownership, broadly analyzed in the theory of the firm. Generally, a smaller business is more flexible, while larger businesses, or those with wider ownership or more formal structures, will usually tend to be organized as corporations or (less often) partnerships. In addition, a business



that wishes to raise money on a stock market or to be owned by a wide range of people will often be required to adopt a specific legal form to do so.

The sector and country. Private profit-making businesses are different from government-owned bodies. In some countries, certain businesses are legally obliged to be organized in certain ways.

Tax advantages. Different structures are treated differently in tax law, and may have advantages for this reason.

Disclosure and compliance requirements. Different business structures may be required to make less or more information public (or report it to relevant authorities), and may be bound to comply with different rules and regulations.

Larger organizations generally have three levels of managers, which are typically organized in a hierarchical, pyramid structure:

Senior managers, such as members of a Board of Directors, a Chief Executive Officer (CEO) or a President of an organization, set the strategic goals of the organization and make decisions on how the overall organization will operate. Senior managers provide direction to the middle managers who report to them.

Middle managers, examples of which would include branch managers, regional managers and section managers, provide direction to front-line managers. Middle managers communicate the strategic goals of senior management to the front-line managers.

Lower managers, such as supervisors and front-line team leaders, oversee the work of regular employees (or volunteers, in some voluntary organizations) and provide direction on their work.

Henri Fayol (1841–1925) considers management to consist of six functions:

- forecasting
- planning
- organizing



- commanding
- coordinating
- controlling.

(Henri Fayol was one of the most influential contributors to modern concepts of management.

Towards the end of the 20th century, business management came to consist of six separate branches, namely:

- financial management
- human resource management
- information technology management (responsible for management information systems)
- marketing management
- operations management and production management
- strategic management

Theme 2. The Manufacturing and Productive capacity

Content

- 2.5. The term of manufacturing
- 2.6. Manufacturing process and productive capacity
- 2.7. Manufacturing process management

Key terms and concepts

- ✓ Manufacturing process
- ✓ Costs on manufacturing
- ✓ Productive capacity
- ✓ Manufacturing process management
- ✓ Cost-of-production theory

2.5. The term of manufacturing

Manufacturing is the production of merchandise for use or sale using labour and machines, tools, chemical and biological processing, or formulation. The term may refer to a range of human activity, from handicraft to high tech, but is most



commonly applied to industrial production, in which raw materials are transformed into finished goods on a large scale.

Such finished goods may be sold to other manufacturers for the production of other, more complex products, such as aircraft, household appliances, furniture, sports equipment or automobiles, or sold to wholesalers, who in turn sell them to retailers, who then sell them to end users and consumers.

2.6. Manufacturing process and productive capacity

Manufacturing engineering or manufacturing process are the steps through which raw materials are transformed into a final product. The manufacturing process begins with the product design, and materials specification from which the product is made. These materials are then modified through manufacturing processes to become the required part.

Modern manufacturing includes all intermediate processes required in the production and integration of a product's components. Some industries, such as semiconductor and steel manufacturers use the term fabrication instead.

In its earliest form, manufacturing was usually carried out by a single skilled artisan with assistants. Training was by apprenticeship. In much of the pre-industrial world, the guild system protected the privileges and trade secrets of urban artisans.

Before the Industrial Revolution, most manufacturing occurred in rural areas, where household-based manufacturing served as a supplemental subsistence strategy to agriculture (and continues to do so in places). Entrepreneurs organized a number of manufacturing households into a single enterprise through the putting-out system.

Toll manufacturing is an arrangement whereby a first firm with specialized equipment processes raw materials or semi-finished goods for a second firm.

Emerging technologies have provided some new growth in advanced manufacturing employment opportunities.



Manufacturing provides important material support for national infrastructure and for national defense.

On the other hand, most manufacturing may involve significant social and environmental costs. The clean-up costs of hazardous waste, for example, may outweigh the benefits of a product that creates it. Hazardous materials may expose workers to health risks. These costs are now well known and there is effort to address them by improving efficiency, reducing waste, using industrial symbiosis, and eliminating harmful chemicals.

The negative costs of manufacturing can also be addressed legally. Developed countries regulate manufacturing activity with labor laws and environmental laws. Across the globe, manufacturers can be subject to regulations and pollution taxes to offset the environmental costs of manufacturing activities. Labor unions and craft guilds have played a historic role in the negotiation of worker rights and wages. Environment laws and labor protections that are available in developed nations may not be available in the third world. Tort law and product liability impose additional costs on manufacturing. These are significant dynamics in the ongoing process, occurring over the last few decades, of manufacture-based industries relocating operations to "developing-world" economies where the costs of production are significantly lower than in "developed-world" economies.

Productive capacity is the maximum possible output of an economy (e.g. including agriculture, industry, and services). According to the United Nations Conference on Trade and Development (UNCTAD), no agreed-upon definition of maximum output exists. UNCTAD itself proposes: "the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of a country to produce goods and services." The term may also be applied to individual resources or assets; for instance the productive capacity of an area of farmland.



Output in economics is the "quantity of goods or services produced in a given time period, by a firm, industry, or country", whether consumed or used for further production. The concept of national output is essential in the field of macroeconomics. It is national output that makes a country rich, not large amounts of money.

2.7. Manufacturing process management

Manufacturing process management (MPM) is a collection of technologies and methods used to define how products are to be manufactured. MPM differs from ERP/MRP which is used to plan the ordering of materials and other resources, set manufacturing schedules, and compile cost data.

A cornerstone of MPM is the central repository for the integration of all these tools and activities aids in the exploration of alternative production line scenarios; making assembly lines more efficient with the aim of reduced lead time to product launch, shorter product times and reduced work in progress (WIP) inventories as well as allowing rapid response to product or product changes.

The result of an economic process that has used inputs to produce a product or service that is available for sale or use somewhere else.

Net output, sometimes called netput is a quantity, in the context of production, that is positive if the quantity is output by the production process and negative if it is an input to the production process.

In economics, the cost-of-production theory of value is the theory that the price of an object or condition is determined by the sum of the cost of the resources that went into making it. The cost can comprise any of the factors of production (including labor, capital, or land) and taxation.

The theory makes the most sense under assumptions of constant returns to scale and the existence of just one non-



produced factor of production. These are the assumptions of the so-called non-substitution theorem.

Under these assumptions, the long-run price of a commodity is equal to the sum of the cost of the inputs into that commodity, including interest charges.

Historically, the best-known proponent of such theories is probably Adam Smith. Piero Sraffa, in his introduction to the first volume of the "Collected Works of David Ricardo", referred to Smith's "adding-up" theory. Smith contrasted natural prices with market price. Smith theorized that market prices would tend toward natural prices, where outputs would stand at what he characterized as the "level of effectual demand". At this level, Smith's natural prices of commodities are the sum of the natural rates of wages, profits, and rent that must be paid for inputs into production. (Smith is ambiguous about whether rent is price determining or price determined. The latter view is the consensus of later classical economists, with the Ricardo-Malthus-West theory of rent.)

David Ricardo mixed this cost-of-production theory of prices with the labor theory of value, as that latter theory was understood by Eugen von Böhm-Bawerk and others. This is the theory that prices tend toward proportionality to the socially necessary labor embodied in a commodity. Ricardo sets this theory at the start of the first chapter of his Principles of Political Economy and Taxation. He also refutes the labor theory of value in later sections of that chapter. Taknaga advances a new interpretation that Ricardo had cost-of-production theory of value from the start and presents a more coherent interpretation based on texts of Principles of Political Economy and Taxation. This alleged refutation leads to what later became known as the transformation problem. Karl Marx later takes up that theory in the first volume of Capital, while indicating that he is quite aware that the theory is untrue at lower levels of abstraction. This has led to all sorts of arguments over what both David Ricardo and Karl Marx "really meant". Nevertheless,



it seems undeniable that all the major classical economics and Marx explicitly rejected the labor theory of price

Theme 3. Fixed Assets of the enterprise

Content

- 2.8. Economic meaning and types of fixed assets
- 2.9. Depreciation and repair
- 2.10. Indices of Fixed Assets efficiency

Key terms and concepts

- ✓ Fixed assets value
- ✓ Depreciation
- ✓ Depreciation to Fixed Assets Ratio
- ✓ Repair costs
- ✓ Return on capital investment

2.8. Economic meaning and types of fixed assets

A fixed asset is a long-term tangible piece of property that a firm owns and uses in its operations to generate income. Fixed assets are not expected to be consumed or converted into cash within a year. Fixed assets are known as property, plant, and equipment (PP&E). They are also referred to as capital assets

When a company acquires or disposes of a fixed asset, this is recorded on the cash flow statement under the cash flow from investing activities. The purchase of fixed assets represents a cash outflow to the company, while a sale is a cash inflow. If the value of the asset falls below its net book value, the asset is subject to an impairment write-down. This means that its recorded value on the balance sheet is adjusted downward to reflect that its overvalued compared to the market value.

When a fixed asset has reached the end of its useful life, it is usually disposed of by selling it for a salvage value, which is the estimated value of the asset if it was broken down and sold in parts.



Fixed assets can include buildings, computer equipment, software, furniture, land, machinery and vehicles. For example, if a company sells produce, its delivery trucks are fixed assets

Fixed Asset Classifications If an expenditure qualifies as a fixed asset, then you need to decide what its proper account classification should be. Account classifications are used to aggregate fixed assets into groups, so that you can apply the same depreciation methods and useful lives to them. What is a Useful Life? A useful life is the estimated lifespan of a depreciable fixed asset, during which it can be expected to contribute to company operations.

Here are the most common classification used:

- **Buildings.** This account may include the cost of acquiring a building, or the cost of constructing one (in which case it is transferred from the Construction in Progress classification, described below). If the purchase price of a building includes the cost of land, then apportion some of the cost to the Land account (which is not depreciated).
- **Computer equipment.** This classification can include a broad array of computer equipment, such as routers, servers, and backup power generators. It is useful to set the capitalization limit higher than the cost of desktop and laptop computers, so that you do not have to track these items as assets.
- **Construction in progress.** This account is a temporary one, and is intended to store the ongoing cost of constructing a building; once completed, you shift the balance in this account to the Buildings account, and then start depreciating it. Besides the materials and labor required for construction, you can also store in this account architecture fees, the cost of building permits, and so forth.
- **Equipment.** This category includes production equipment, materials handling equipment, molds, the more expensive tools, and similar items.



- **Furniture and fixtures.** This is one of the broadest categories of fixed assets, since it can include such diverse assets as warehouse storage racks, office cubicles, and desks.
- **Intangible assets.** This is a non-physical asset, examples of which are trademarks, customer lists, literary works, broad cast rights, and patented technology.
- **Land.** This is the only asset that is not depreciated, because it is considered to have an indeterminate useful life. Include in this category all expenditures to prepare the land for its intended purpose, such as demolishing an existing building, or grading the land.
- **Land improvements.** Include any expenditures that add functionality to a parcel of land, such as irrigation systems, fencing, and landscaping.
- **Leasehold improvements.** These are improvements to leased space that are made by the tenant, and typically include office space, air conditioning, telephone wiring, and related permanent fixtures.
- **Office equipment.** This account contains such equipment as copiers, printers, and video equipment. Some companies elect to merge this classification into the furniture and fixtures classification, especially if they have few office equipment items.
- **Software.** Includes larger types of departmental or company-wide software, such as enterprise resources planning software or accounting software. Many desktop software packages are not sufficiently expensive to exceed the corporate capitalization limit.
- **Vehicles.** This account contains automobiles, tractors, trucks, and similar types of rolling stock. Net Book Value of an asset is basically the difference between the historical cost of that asset and its associated depreciation.

2.9. Depreciation and repair

In accountancy, depreciation refers to two aspects of the same concept: The decrease in value of assets (fair value



depreciation) The allocation of the cost of assets to periods in which the assets are used (depreciation with the matching principle).

Depreciation is a method of reallocating the cost of a tangible asset over its useful life span of it being in motion.

A fixed asset can be depreciated using the straight line method which is the most common form of depreciation.

Depreciation

In economics, depreciation is the gradual decrease in the economic value of the capital stock of a firm, nation or other entity, either through physical depreciation, obsolescence or changes in the demand for the services of the capital in question.

Here are most used Depreciation Methods:

Straight Line Depreciation Method

Depreciation = (Cost - Residual value) / Useful life

Declining Balance Depreciation Method

Depreciation = Book value x Depreciation rate

Book value = Cost – Accumulated depreciation

Depreciation rate for double declining balance method =

Straight line depreciation rate x 200%

Depreciation rate for 150% declining balance method = Straight line depreciation rate x 150%

Sum-of-the-years'-digits method

Depreciation expense = (Cost - Salvage value) x Fraction

Fraction for the first year = $n / (1+2+3+...+ n)$

Fraction for the second year = $(n-1) / (1+2+3+...+ n)$

Fraction for the third year = $(n-2) / (1+2+3+...+ n)$...

Fraction for the last year = $1 / (1+2+3+...+ n)$

n represents the number of years for useful life.

Activity Method of Depreciation



2.10. Indices of Fixed Assets efficiency

The depreciation to fixed assets ratios often gives important clues on how quickly a company is replacing its fixed assets. Here is how to interpret and apply this ratio.

Fixed Assets, including machinery, buildings and automobiles, are essential to the business model of many companies. Unfortunately, these assets lose value over time and will need to be replaced. To account for the loss, a business must write off portions of the asset's value as depreciation. The depreciation to fixed assets ratio measures just how quickly a company is writing off those assets and may give clues on how fixed assets are being managed.

Depreciation is one of those expenses that doesn't take cash out of the business. It really is an acknowledgment, by the business, that it has lost some value from the aging, wear, and tear or obsolescence of its fixed assets, therefore, a portion of the gross income is set aside to cover this phantom expense.

Depreciation to Fixed Assets Ratio

$$\text{Depreciation to Fixed Assets Ratio} = \text{Depreciation} / (\text{Tangible Fixed Assets} - \text{Land})$$

A high depreciation to fixed assets ratio may suggest that a business is writing off old equipment to make way for newer ones.

Ordinary versus major and extraordinary repair costs

Subsequent to the acquisition of fixed assets, a company may accrue costs for additions, improvements and replacements, rearrangements and reinstallations, maintenance and repairs of these assets. The accounting for the above-listed costs may be different. Let us look at the accounting practices for such costs.

The accounting for maintenance and repair expenditures depends on the nature of the repairs: whether such repairs are ordinary, major, or extraordinary. Ordinary repairs are performed to maintain fixed assets in operating condition. Ordinary repairs usually benefit only the period when such



repairs are done. As the result, ordinary repairs are expensed in the period incurred. Ordinary repairs represent revenue expenditures. Examples of ordinary maintenance and repair activities include painting, repairing plumbing, adjusting and cleaning equipment, lubricating machines, replacing minor parts, putting in fuel, and so on.

Major and extraordinary repairs are the repairs that benefit more than one year or operating cycle, whichever is longer. Extraordinary repairs occur rarely, require large amounts of money, and increase the economic life of the asset. Because major and extraordinary repairs benefit multiple future periods, they are accounted for as additions, improvements, or replacements. In other words, major and extraordinary repairs represent capital expenditures. Hence, such repairs may be capitalized. Note, however, that even when a company can estimate its future major repairs, the company cannot accrue in advance for such repairs.

Fixed assets often comprise a significant portion of the total assets of an enterprise, and therefore secure an important position on the Balance sheets. The very fact that they are not liquid probably explains why most companies lose control of these assets.

Here you can find 8 ways to manage fixed assets efficiently.

1. Accountability and safe custody of assets
2. Tracking assets information
3. Asset life cycle management with robust audit trail and history.
4. Tagging physical assets
5. Conduct physical asset verification
6. Meet compliances and consolidating information
7. Establish Standard Operating Practices and strong internal control
8. Asset analysis and ROI scrutiny

Analysis would surface whether:

1. fixed assets are being used efficiently at full capacity;



2. additional capacity building or upgradation is required;
3. any idle assets in possession which can be put to use without any additional costs;
4. assets require maintenance or replacement reducing downtime or stopping production;
5. particular profit center is able to recover the ROI of the asset.

In conclusion

With 8 ways of improved asset management, organisations can:

1. maximize the return on capital investment;
2. reduces risks and increase efficiency of asset management, saving costs and administrative time;
3. improve the accuracy of both financial and tax reporting and compliances;
4. make effective decisions to improve overall organisational profitability and support growth.

Theme 4. Current Assets

Content

- 2.11. Term and economic sense of current assets
- 2.12. Uses of Current Assets
- 2.13. Return on Investment

Key terms and concepts

- ✓ Current assets
- ✓ Current ratio
- ✓ Quick Ratio
- ✓ Cash ratio
- ✓ Return on inventory

2.11. Term and economic sense of current assets

The term current assets represents all the assets of a



company that are expected to be conveniently sold, consumed, utilized or exhausted through the standard business operations which can lead to their conversion to a cash value over the next one year. Since current assets is a standard item appearing in the balance sheet, the time horizon represents one year from the date shown in the heading of the company's balance sheet. Current assets include cash, cash equivalents, accounts receivable, stock inventory, marketable securities, pre-paid liabilities and other liquid assets.

Current assets are important to businesses because they can be used to fund day-to-day business operations and to pay for the ongoing operating expenses. Since the term is reported as a money value of all the assets and resources which can be easily converted to cash in a short period of time, it also represents a company's liquid assets.

Key Components of Current Assets

Cash, cash equivalents and liquid investments in marketable securities.

Accounts receivable, which represents the money due to a company for goods or services delivered or used but not yet paid for by customers, are considered current assets as long as they can be expected to be paid within a year.

Inventory, which represents raw materials, components and finished products, is included as current assets.

Prepaid expenses, which represent advance payments made by a company for goods and services to be received in the future.

Current Assets Formula and Example

The current assets formula is a simple summation of all the assets that can be converted to cash within one year:

$$\begin{aligned} \text{Current Assets} = & \text{Cash} + \text{Cash Equivalents} + \text{Inventory} + \\ & \text{Accounts Receivables} + \text{Marketable Securities} + \text{Prepaid Expenses} \\ & + \text{Other Liquid Assets} \end{aligned}$$



2.12. Uses of Current Assets

Current assets figure is of prime importance to the company management with regards to the daily operations of a business. As payments towards bills and loans become due at regular frequency (like, at the end of each month), the management must be able to arrange for the necessary cash in time to pay its obligations.

The following ratios are commonly used to measure a company's liquidity position with each one using a different number of asset components against the current liabilities of a company.

The current ratio measures a company's ability to pay short-term and long-term obligations and takes into account the current total assets (both liquid and illiquid) of a company relative to the current liabilities. The current ratio is also known as the working capital ratio.

The formula for calculating a company's current ratio is as follows:

$$\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities.}$$

A ratio under 1 indicates that the company's debts that will need to be paid in a year or less are greater than its assets (either cash or expected to be converted to cash within a year or less.) A current ratio less than one would not be concerning if the company has a much higher receivables turnover than payables turnover. In theory, the higher the current ratio, the more capable the company is of paying its obligations because it has a larger proportion of short-term asset value relative to the value of its short-term liabilities. However, a high ratio (over 3) could indicate the company is not using its current assets efficiently, is not securing financing very well, or is not managing its working capital.

The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. It considers cash and equivalents, marketable securities and accounts receivable (but not the inventory) against the current liabilities.



Compares a company's easily liquidated assets (including cash, accounts receivable and short-term investments, excluding inventory and prepaids) to its current liabilities.

Mathematically, quick ratio is calculated as follows:

$$\text{Quick Ratio} = \text{Liquid Assets} / \text{Current Liabilities, or} \\ \text{Quick Ratio} = (\text{Cash and Equivalents} + \text{Marketable Securities} + \\ \text{Accounts Receivable}) / \text{Current Liabilities.}$$

Interpreting Quick Ratio

A figure of 1 is considered to be the normal quick ratio, as it indicates that the company is fully equipped with sufficient assets that can be instantly liquidated to pay off its current liabilities. A company that has a quick ratio of less than 1 may not be able to fully pay off its current liabilities in the short term, while a company having a quick ratio higher than 1 can instantly get rid of its current liabilities.

The cash ratio measures the ability of a company to pay off all of its short-term liabilities immediately, and is calculated by dividing the cash and cash equivalents by current liabilities. Cash asset ratio (or cash ratio): Compares only a company's marketable securities and cash to its current liabilities.

The cash ratio is the ratio of a company's total cash and cash equivalents (CCE) to its current liabilities. The metric calculates a company's ability to repay its short-term debt; this information is useful to creditors when deciding how much debt, if any, they would be willing to extend to the asking party. The cash ratio is generally a more conservative look at a company's ability to cover its liabilities than many other liquidity ratios because other assets, including accounts receivable, are left out of the equation.

The cash ratio is most commonly used as a measure of company's liquidity. The metric calculates a company's ability to pay current liabilities using only cash and cash equivalents on hand. If the company is forced to pay all current liabilities immediately, this metric shows the company's ability to do so without having to sell or liquidate other assets. If a company's cash ratio is equal to 1, the company has exactly the same



amount of current liabilities as it does cash and cash equivalents to pay off those debts.

If a company's cash ratio is less than 1, there are more current liabilities than cash and cash equivalents. In this situation, there is insufficient cash on hand to pay off short-term debt.

If a company's cash ratio is greater than 1, the company has more cash and cash equivalents than current liabilities. In this situation, the company has the ability to cover all short-term debt and still have cash remaining. However, this may also indicate that a company is not using its capital for its best use, since it could be invested in a profitable project instead of earning the risk-free rate of interest.

The cash ratio is more useful when it is compared with industry averages and competitor averages, or when looking at changes in the same company's cash ratio over time.

Working capital

Working capital, also known as net working capital, is the difference between a company's current assets, like cash, accounts receivable (customers' unpaid bills) and inventories of raw materials and finished goods, and its current liabilities, like accounts payable.

$$\text{Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

Working capital is a measure of both a company's operational efficiency and its short-term financial health. The working capital ratio (current assets/current liabilities), or current ratio, indicates whether a company has enough short-term assets to cover its short-term debt. A good working capital ratio is considered anything between 1.2 and 2.0. A ratio of less than 1.0 indicates negative working capital, with potential liquidity problems, while a ratio above 2.0 might indicate that a company is not using its excess assets effectively to generate maximum possible revenue.

A company has negative working capital if the ratio of current assets to liabilities is less than one.



A high working capital ratio isn't always a good thing. It might indicate that the business has too much inventory or is not investing its excess cash.

Ready to take your knowledge of Working Capital to the next level? Read — [The Working Capital Position and Evaluating A Company's Capital Structure](#).

2.13. Return on Investment

A gross margin return on investment is an inventory profitability evaluation ratio that analyzes a firm's ability to turn inventory into cash above the cost of the inventory. It is calculated by dividing the gross margin by the average inventory cost and is used often in the retail industry.

To calculate the gross margin return on inventory, two metrics must be known: the gross margin and the average inventory. The gross profit is calculated by subtracting a company's cost of goods sold (COGS) from its revenue. The difference is then divided by its revenue. The average inventory is calculated by summing the ending inventory over a specified period and then dividing the sum by the number of periods.

The return on investment is a useful measure as it helps the investor or manager see the average amount that the inventory returns above its cost. A ratio higher than 1 means the firm is selling the merchandise for more than what it costs the firm to acquire it and shows that the business has a good balance between its sales, margin, and cost of inventory.

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The return on investment shows how much profit inventory sales produce after covering inventory costs.

A higher return on investment is generally better, as it means each unit of inventory is generating a higher profit.

The return on investment can vary greatly depending on market segmentation, time period, type of item, and other factors.

Theme 5. Expenses

Content

- 2.14. Definition and types of expenses
- 2.15. Crisis management strategy development
- 2.16. Cost accounting and reduction

Key terms and concepts

- ✓ Expense / expenditure / cost
- ✓ Liabilities
- ✓ Direct and Indirect cost
- ✓ Break-even point
- ✓ Income statement

2.14. Definition and types of expenses

In common usage, an expense or expenditure is an outflow of money to another person or group to pay for an item or service, or for a category of costs.

Expenses – decreases in economic benefits or service potential during the reporting period in the form of:

- Outflows; or



- **Consumptions of assets; or Incurrences of liabilities that result in decreases in net assets.**

Liabilities = present obligations arising from past events, the settlement of which is expected to result in an outflow of resources embodying economic benefits or service potential.

In production, research, retail, and accounting, a cost is the value of money that has been used up to produce something or deliver a service, and hence is not available for use anymore.

In business, the cost may be one of acquisition, in which case the amount of money expended to acquire it is counted as cost. In this case, money is the input that is gone in order to acquire the thing.

In accounting, costs are the monetary value of expenditures for supplies, services, labor, products, equipment and other items purchased for use by a business or other accounting entity. It is the amount denoted on invoices as the price and recorded in bookkeeping records as an expense or asset cost basis.

Ways of classification of costs on the basis of their common characteristics:

1. By nature or element: material costs, labour costs, Depreciation, Other costs

2. By functions: production costs, selling costs, distribution costs, administrative costs, research costs, development costs, pre-production costs, conversion costs, product costs.

3. By identifiability: direct costs, indirect costs.

4. By variability: fixed cost, variable cost, semi-variable cost, step cost.

5. By controllability.

6. By normality.

7. Other costs.

Manufacturing costs are those costs that are directly involved in manufacturing of products. Examples of manufacturing costs include raw materials costs and charges related to workers. Manufacturing cost is divided into three



broad categories:

- Direct materials cost.
- Direct labor cost.
- Manufacturing overhead cost.

Non-manufacturing costs are those costs that are not directly incurred in manufacturing a product. Examples of such costs are salary of sales personnel and advertising expenses. Generally non-manufacturing costs are further classified into two categories:

- Selling and distribution costs.
- Administrative costs.

2.15. Cost curve

In economics, a cost curve is a graph of the costs of production as a function of total quantity produced.

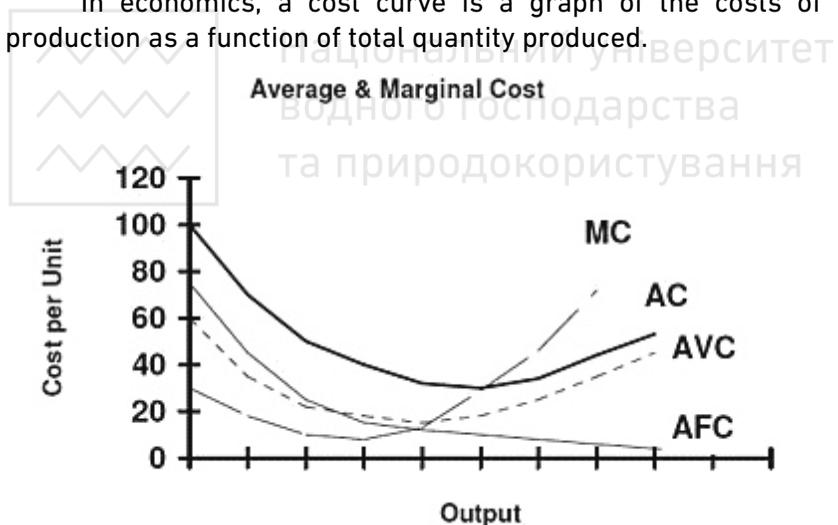


Fig. 2.1. Cost curve

In economics, marginal cost is the change in the opportunity cost that arises when the quantity produced is incremented by one unit, that is, it is the cost of producing one more unit of a good.



The marginal cost can be a function of quantity if the cost function is non-linear. If the cost function is not differentiable, the marginal cost can be expressed as follows.

A U shaped short run Average Cost(AC) curve. AVC is the Average Variable Cost, AFC the Average Fixed Cost, MC the marginal cost crossing the minimum of the Average Cost curve.

In economics and cost accounting, total cost (TC) describes the total economic cost of production and is made up of variable costs, which vary according to the quantity of a good produced and include inputs such as labor and raw materials, plus fixed costs, which are independent of the quantity of a good produced and include inputs (capital) that cannot be varied in the short term, such as buildings and machinery.

Total cost in economics includes the total opportunity cost of each factor of production as part of its fixed or variable costs.

The rate at which total cost changes as the amount produced changes is called marginal cost. This is also known as the marginal unit variable cost.

The break-even point (BEP) in economics, business—and specifically cost accounting—is the point at which total cost and total revenue are equal. There is no net loss or gain, and one has "broken even," though opportunity costs have been paid and capital has received the risk-adjusted, expected return. In short, all costs that must be paid are paid, and there is neither profit nor loss.

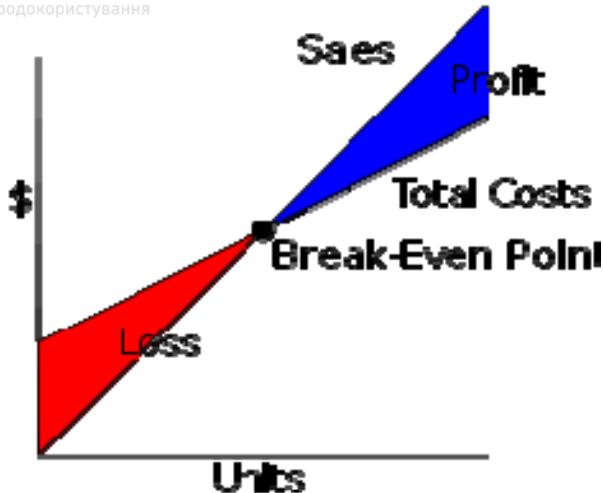


Fig. 2.2. The break-even point

The break-even point (BEP) or break-even level represents the sales amount—in either unit (quantity) or revenue (sales) terms—that is required to cover total costs, consisting of both fixed and variable costs to the company. Total profit at the break-even point is zero. It is only possible for a firm to Break-even, if the dollar value of sales is higher than the variable cost per unit. This means that the selling price of the good must be higher than what the company paid for the good or its components for them to cover the initial price they paid (variable costs). Once they surpass the break-even price, the company can start making a profit.

The break-even point is one of the most commonly used concepts of financial analysis, and is not only limited to economic use, but can also be used by entrepreneurs, accountants, financial planners, managers and even marketers. Break-even points can be useful to all avenues of a business, as it allows employees to identify required outputs and work towards meeting these.



2.16. Cost accounting and reduction

An income statement or profit and loss account (also referred to as a profit and loss statement (P&L), statement of profit or loss, revenue statement, statement of financial performance, earnings statement, operating statement, or statement of operations) is one of the financial statements of a company and shows the company's revenues and expenses during a particular period. It indicates how the revenues (money received from the sale of products and services before expenses are taken out, also known as the "top line") are transformed into the net income (the result after all revenues and expenses have been accounted for, also known as "net profit" or the "bottom line"). The purpose of the income statement is to show managers and investors whether the company made or lost money during the period being reported.

The income statement can be prepared in one of two methods. The Single Step income statement takes the simpler approach, totaling revenues and subtracting expenses to find the bottom line. The more complex Multi-Step income statement (as the name implies) takes several steps to find the bottom line, starting with the gross profit. It then calculates operating expenses and, when deducted from the gross profit, yields income from operations. Adding to income from operations is the difference of other revenues and other expenses. When combined with income from operations, this yields income before taxes. The final step is to deduct taxes, which finally produces the net income for the period measured.

Revenue – Cash inflows or other enhancements of assets (including accounts receivable) of an entity during a period from delivering or producing goods, rendering services, or other activities. It is usually presented as sales minus sales discounts, returns, and allowances.

Expenses – Cash outflows or other using-up of assets or incurrence of liabilities (including accounts payable) during a period from delivering or producing goods, rendering services,



or carrying out other activities that constitute the entity's ongoing major operations.

Cost of Goods Sold (COGS) / Cost of Sales – represents the direct costs attributable to goods produced and sold by a business. It includes material costs, direct labour, and overhead costs, and excludes operating costs (period costs) such as selling, administrative, advertising or R&D, etc.

Selling, General and Administrative expenses (SG&A or SGA).

Selling expenses – represent expenses needed to sell products (e.g., salaries of sales people, commissions and travel expenses, advertising, freight, shipping, depreciation of sales store buildings and equipment, etc.).

General and Administrative (G&A) expenses – represent expenses to manage the business (salaries of officers / executives, legal and professional fees, utilities, insurance, depreciation of office building and equipment, office rents, office supplies, etc.).

Depreciation / Amortization – the charge with respect to fixed assets / intangible assets that have been capitalised on the balance sheet for a specific (accounting) period.

Research & Development (R&D) expenses – represent expenses included in research and development.

Expenses recognised in the income statement should be analysed either by nature (raw materials, transport costs, staffing costs, depreciation, employee benefit etc.) or by function (cost of sales, selling, administrative, etc.).

Cost reduction is the process used by companies to reduce their costs and increase their profits. Depending on a company's services or product, the strategies can vary. Every decision in the product development process affects cost.

Companies typically launch a new product without focusing too much on cost. Cost becomes more important when competition increases and price becomes a differentiator in the market.

Cost reduction strategies:



- Supplier consolidation.
- Component consolidations.
- Low-cost country sourcing.
- Request for quotations (RFQ).
- Supplier cost breakdown analysis.
- Function cost analysis / Value analysis / Value engineering.
- Design for manufacture / Design for assembly.
- Reverse costing.
- Cost driver analysis.
- Product benchmarking.
- Design to cost.
- Design workshops with suppliers.
- Competitor benchmarking.



Theme 6. Income and Profit

Content

- 2.17. Profit in economic and accounting sense
- 2.18. Measures of profit
- 2.19. Marginal profit and rate of return

Key terms and concepts

- ✓ Revenue
- ✓ Opportunity costs
- ✓ Net profit
- ✓ Marginal profit
- ✓ Rate of return

2.17. Profit in economic and accounting sense

In economics, profit in the accounting sense of the excess of revenue over cost is the sum of two components: normal profit and economic profit. Normal profit is the profit that is necessary to just cover the opportunity costs of the owner-manager or of the firm's investors. In the absence of this much



profit, these parties would withdraw their time and funds from the firm and use them to better advantage elsewhere. In contrast, economic profit, sometimes called excess profit, is profit in excess of what is required to cover the opportunity costs.

Economic profit does not occur in perfect competition in long run equilibrium; if it did, there would be an incentive for new firms to enter the industry, aided by a lack of barriers to entry until there was no longer any economic profit. As new firms enter the industry, they increase the supply of the product available in the market, and these new firms are forced to charge a lower price to entice consumers to buy the additional supply these new firms are supplying as the firms all compete for customers.

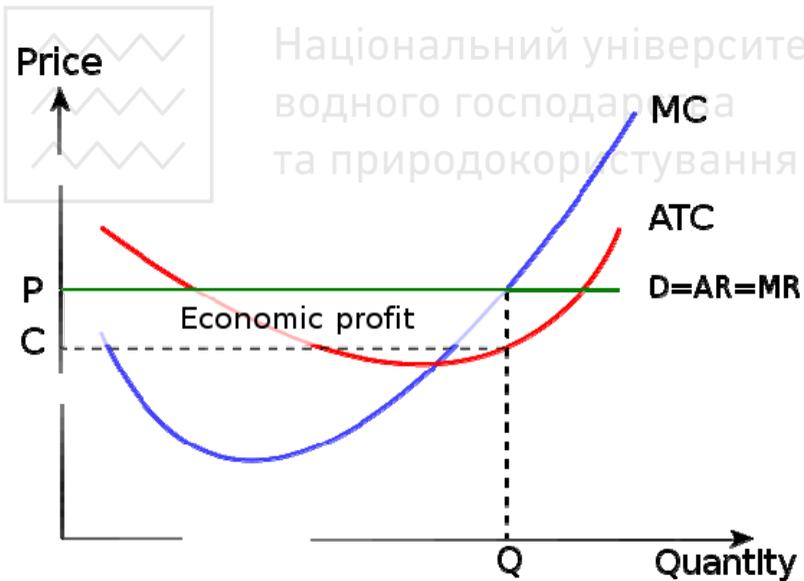


Fig. 2.3. Economic profit in competitive market

Economic profit is, however, much more prevalent in uncompetitive markets such as in a perfect monopoly or oligopoly situation. In these scenarios, individual firms have



some element of market power: Though monopolists are constrained by consumer demand, they are not price takers, but instead either price-setters or quantity setters. This allows the firm to set a price which is higher than that which would be found in a similar but more competitive industry, allowing them economic profit in both the long and short run.

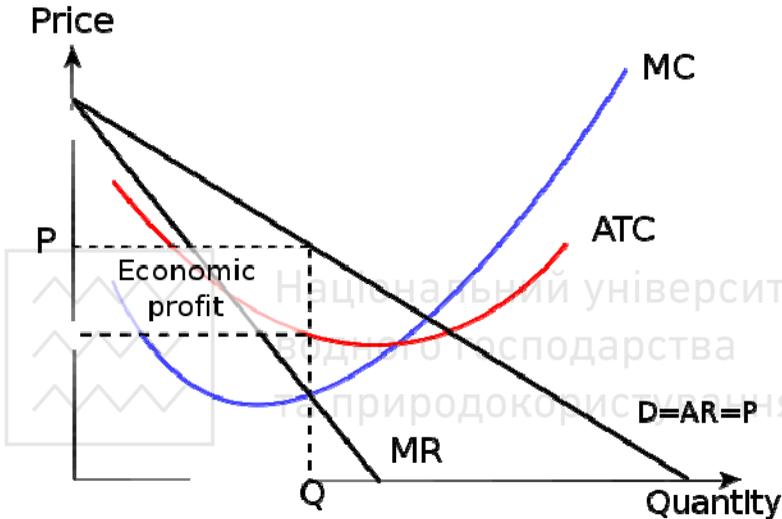


Fig. 2.4. Economic profit in uncompetitive markets

It is a standard economic assumption (though not necessarily a perfect one in the real world) that, other things being equal, a firm will attempt to maximize its profits. Given that profit is defined as the difference in total revenue and total cost, a firm achieves a maximum by operating at the point where the difference between the two is at its greatest. In markets which do not show interdependence, this point can either be found by looking at these two curves directly, or by finding and selecting the best of the points where the gradients of the two curves (marginal revenue and marginal cost



respectively) are equal. In interdependent markets, game theory must be used to derive a profit maximising solution.

2.18. Measures of profit

Profit, in accounting, is an income distributed to the owner in a profitable market production process (business). Profit is a measure of profitability which is the owner's major interest in income formation process of market production. There are several profit measures in common use.

Income formation in market production is always a balance between income generation and income distribution. The income generated is always distributed to the stakeholders of production as economic value within the review period. The profit is the share of income formation the owner is able to keep to himself in the income distribution process. Profit is one of the major sources of economic well-being because it means incomes and opportunities to develop production. The words income, profit and earnings are substitutes in this context.

There are several important profit measures in common use. Note that the words earnings, profit and income are used as substitutes in some of these terms.

Gross profit equals sales revenue minus cost of goods sold (COGS), thus removing only the part of expenses that can be traced directly to the production or purchase of the goods. Gross profit still includes general (overhead) expenses like R&D, S&M, G&A, also interest expense, taxes and extraordinary items.

Earnings before interest, taxes, depreciation, and amortization (EBITDA) equals sales revenue minus cost of goods sold and all expenses except for interest, amortization, depreciation and taxes. It measures the cash earnings that can be used to pay interest and repay the principal. Since the interest is paid before income tax is calculated, the debt holder can ignore taxes.

Earnings before interest and taxes (EBIT) or operating profit equals sales revenue minus cost of goods sold and all



expenses except for interest and taxes. This is the surplus generated by operations. It is also known as Operating Profit Before Interest and Taxes (OPBIT) or simply Profit Before Interest and Taxes (PBIT).

Earnings before taxes (EBT) or net profit before tax equals sales revenue minus cost of goods sold and all expenses except for taxes. It is also known as pre-tax book income (PTBI), net operating income before taxes or simply pre-tax income.

Net income or earnings after tax or net profit after tax equals sales revenue after deducting all expenses, including taxes (unless some distinction about the treatment of extraordinary expenses is made). In the US, the term net income is commonly used. Income before extraordinary expenses represents the same but before adjusting for extraordinary items.

Retained earnings equals earnings after tax minus payable dividends.

We can construct the basic model of profit calculation as follow:

$$\text{Net sales} = \text{gross sales} - (\text{customer discounts, returns, and allowances})$$

$$\text{Gross profit} = \text{net sales} - \text{cost of goods sold}$$

$$\text{Operating profit} = \text{gross profit} - \text{total operating expenses}$$

$$\text{Net profit} = \text{operating profit} - \text{taxes} - \text{interest}$$

$$\text{Net profit} = \text{net sales} - \text{cost of goods sold} - \text{operating expense} - \text{taxes} - \text{interest.}$$

2.19. Marginal profit and rate of return

In microeconomics, marginal profit is the difference between the marginal revenue and the marginal cost. Under the marginal approach to profit maximization, to maximize profits, a firm should continue to produce a good or service up to the point where marginal profit is zero.

Contribution margin (CM), or dollar contribution per unit, is the selling price per unit minus the variable cost per unit.



"Contribution" represents the portion of sales revenue that is not consumed by variable costs and so contributes to the coverage of fixed costs. This concept is one of the key building blocks of break-even analysis.

In cost-volume-profit analysis, a form of management accounting, contribution margin—the marginal profit per unit sale—is a useful quantity in carrying out various calculations, and can be used as a measure of operating leverage. Typically, low contribution margins are prevalent in the labor-intensive tertiary sector while high contribution margins are prevalent in the capital-intensive industrial sector.

In finance, return is a profit on an investment. It comprises any change in value and interest or dividends or other such cash flows which the investor receives from the investment. It may be measured either in absolute terms (e.g., dollars) or as a percentage of the amount invested.

A loss instead of a profit is described as a negative return.

The return over a single period is:

$$r = \frac{V_f - V_i}{V_i},$$

where V_f – final value, including dividends and interest, V_i – initial value.

For example, if you hold 100 shares, with a starting price of 10, then the starting value is $100 \times 10 = 1,000$. If you then collect 0.50 per share in cash dividends, and the ending share price is 9.80, then at the end you have $100 \times 0.50 = 50$ in cash, plus $100 \times 9.80 = 980$ in shares, totalling a final value of 1,030. The change in value is $1,030 - 1,000 = 30$, so the return is $30 / 1,000 = 3\%$.



CONTROL TEST PROGRAM

1. What are fixed assets?
 - A. Items that a business owns that are tangible and often held on a long-term basis.
 - B. Assets that have a fixed price and do not change.
 - C. Assets that are cemented into the ground and do not move.
 - D. Assets that are owned by consumer type businesses.

2. How do fixed assets vary between businesses?
 - A. All businesses own the same fixed assets.
 - B. Only corporations own fixed assets.
 - C. Based on the type of business a company is engaged in, they may own more or fewer fixed assets.
 - D. Businesses must own a minimum number of fixed assets for accounting reasons.

3. What happens to fixed assets on the financial statements if no fixed assets are purchased or sold?
 - A. They remain relatively stable, with a consistent balance.
 - B. They generally double annually.
 - C. They are sold regularly, so it changes the balance consistently.
 - D. They are included as an inventory item.

4. What is the purpose of making a provision for depreciation in the accounts?
 - A. To make a provision for repairs.
 - B. To make cash available to replace fixed assets.
 - C. To show the current market value of fixed asset.
 - D. To charge the cost of fixed assets against profits.

5. What is depreciation?
 - A. The residual value of a fixed asset plus its original cost.
 - B. The cost of a replacement for a fixed asset.
 - C. The cost of an asset wearing away.



D. The part of the cost of the fixed asset consumed during the period of use by the business.

6. What is ignored in the computation of depreciation of a fixed asset?

- A. Its length of expected useful economic life to the business
- B. Its cost.
- C. Its cost of repairs.
- D. Its estimated residual value at the end of its useful life in the business.

7. In the accounting records, the fixed assets are normally recorded.

- A. At cost.
- B. At book value.
- C. At scrap value.
- D. At replacement value.

8. Salvage value means.

- A. Cash to be paid when asset is disposed off.
- B. Estimated disposal value.
- C. Definite sale price of the asset.
- D. Cash to be received when life of the asset ends.

9. Which item may be included in a Balance Sheet at more than historical cost.

- A. Work-in-progress.
- B. Goodwill.
- C. Research expenditure.
- D. Land and Building.

10. In Straight line method of depreciation, which is excluded.

- A. Useful life of the assets.
- B. Cost of the assets.
- C. Annual cost of repairs.
- D. Expected salvage value.



11. A motor van was bought for \$20,000 on 1 September 2005 with a residual value of \$2,000. Depreciation was charged at 20% by the reducing balance method on yearly basis. It was sold for \$18,000 after three years of use on 30 September 2008. Compute the profit on sale of asset.

- A. \$7,760.
- B. \$505.
- C. \$5,201.
- D. \$990.

12. A machine was bought for \$100,000. Its estimated useful life is four years with a residual value of \$10,000. Depreciation is charged on the straight line method. What is the percentage of depreciation rate on an annual basis?

- A. 15%.
- B. 22.50%.
- C. 35%.
- D. 25%.

13. A fixed asset cost \$12,000 and sold for \$5,000. At the date of disposal, its net book value is \$2,000. So what is the profit or loss on disposal of this fixed asset?

- A. \$2,000(loss).
- B. \$3,000(loss).
- C. \$2,000(profit).
- D. \$3,000(profit).

14. Which of the following is not a current asset?

- A. Inventory.
- B. Prepaid Insurance.
- C. Fixtures.

15. Current asset minus current liabilities is the

- A. Current Ratio.
- B. Net Worth.
- C. Working Capital.



16. Current assets divided by current liabilities is the
- A. Current Ratio.
 - B. Net Worth Ratio.
 - C. Working Capital.

17. The quick ratio excludes which of the following?
- A. Accounts Receivable.
 - B. Inventory.
 - C. Cash.

18. At December 31 a company's records show the following information:

Cash	\$ 10,000
Accounts Receivable	30,000
Inventory	80,000
Prepaid Insurance	6,000
Long-term Assets	200,000
Accounts Payable	30,000
Notes Payable due in 10 months	25,000
Wages Payable	5,000
Long-term Liabilities	70,000
Stockholders' (Owner's) Equity	196,000

19. The company's working capital is
- A. \$60,000.
 - B. \$66,000.
 - C. \$196,000.

20. At December 31 a company's records show the following information:

Cash	\$ 10,000
Accounts Receivable	30,000
Inventory	80,000
Prepaid Insurance	6,000
Long-term Assets	200,000
Accounts Payable	30,000
Notes Payable due in 10 months	25,000
Wages Payable	5,000
Long-term Liabilities	70,000
Stockholders' (Owner's) Equity	196,000



The company's current ratio is

- A. 1.0 : 1.
- B. 2.0 : 1.
- C. 2.1 : 1.

21. At December 31 a company's records show the following information:

Cash	\$ 10,000
Accounts Receivable	30,000
Inventory	80,000
Prepaid Insurance	6,000
Long-term Assets	200,000
Accounts Payable	30,000
Notes Payable due in 10 months	25,000
Wages Payable	5,000
Long-term Liabilities	70,000
Stockholders' (Owner's) Equity	196,000

The company's quick ratio is

- A. 0.7 : 1.
- B. 1.0 : 1.
- C. 2.0 : 1.

22. For its most recent year a company had Sales (all on credit) of \$830,000 and Cost of Goods Sold of \$525,000. At the beginning of the year its Accounts Receivable were \$80,000 and its Inventory was \$100,000. At the end of the year its Accounts Receivable were \$86,000 and its Inventory was \$110,000.

The inventory turnover ratio for the year was

- A. 4.8.
- B. 5.0.
- C. 7.9.

23. For its most recent year a company had Sales (all on credit) of \$830,000 and Cost of Goods Sold of \$525,000. At the beginning of the year its Accounts Receivable were \$80,000 and its Inventory was \$100,000. At the end of the year its Accounts



Receivable were \$86,000 and its Inventory was \$110,000. The accounts receivable turnover ratio for the year was

- A. 6.3.
- B. 7.5.
- C. 10.0.

24. For its most recent year a company had Sales (all on credit) of \$830,000 and Cost of Goods Sold of \$525,000. At the beginning of the year its Accounts Receivable were \$80,000 and its Inventory was \$100,000. At the end of the year its Accounts Receivable were \$86,000 and its Inventory was \$110,000. On average how many days of sales were in Accounts Receivable during the year?

- A. 27.
- B. 37.
- C. 49.

25. For its most recent year a company had Sales (all on credit) of \$830,000 and Cost of Goods Sold of \$525,000. At the beginning of the year its Accounts Receivable were \$80,000 and its Inventory was \$100,000. At the end of the year its Accounts Receivable were \$86,000 and its Inventory was \$110,000. On average how many days of sales were in Inventory during the year?

- A. 14.
- B. 46.
- C. 73.

26. Which of the following are likely to have the reported amounts on the balance sheet being close to their current value?

- A. Current Assets.
- B. Long-term Assets.
- C. Stockholders' Equity.



27. A corporation's excellent reputation will be listed among the corporation's assets on its balance sheet.

- A. True.
- B. False.
- C. Maybe.

28. The current market value of a corporation is approximately the amount reported on the balance sheet as stockholders' equity.

- A. True.
- B. False.
- C. Maybe.

29. Quick assets ...

- A. Include those current assets that presumably can be quickly converted to cash at close to their book values.
- B. Include cash and cash equivalents
- C. Include all current assets

30. The purpose of depreciation is to have the balance sheet report the current value of an asset.

- A. True.
- B. False.
- C. I don't know.

31. Depreciation Expense through the straight-line-method reflects an allocation of an asset's original cost rather than an allocation based on the economic value that is being consumed.

- A. True.
- B. False.
- C. Not always.

32. An asset's useful life is the same as its physical life?

- A. True.
- B. False.
- C. Not always.



33. One company might depreciate a new computer over three years while another company might depreciate the same model computer over five years...and both companies are right.

- A. True
- B. False
- C. Not always

34. If a company continues to use equipment past the useful life that was assumed in determining the depreciation, there will be no Depreciation Expense in those additional years.

- A. True
- B. False
- C. Not always

35. A company may depreciate equipment over 10 years on a straight-line basis for its financial statements, but might use an accelerated method of depreciation over a shorter time period?

- A. True
- B. False
- C. Not always

36. Depreciation Expense is sometimes referred to as a noncash expense.

- A. True
- B. False
- C. Not always

37. Both Land and Land Improvements will generally be depreciated.

- A. True
- B. False
- C. Not always

38. Amortization of intangible assets and depletion of natural resources is conceptually similar to depreciation of constructed assets.

- A. True



- B. False
- C. Not always

39. Over the life of an asset subject to depreciation, the accelerated method will result in more Depreciation Expense in total than the total Depreciation Expense using the straight-line method.

- A. True
- B. False
- C. Not always

40. Which of the following depreciation methods cannot be an accelerated method?

- A. Double-declining Balance
- B. Straight-line
- C. Activity method
- D. Sum-of-the-years' Digits

41. The book value of an asset is defined as

- A. Cost Minus Salvage Value
- B. Cost Minus Accumulated Depreciation.
- C. Cost Minus Salvage Value Minus Accumulated Depreciation.
- D. Estimated Fair Market Value.

42. When a company purchases a 10-acre parcel of land and a building located on the land, the company will depreciate the entire cost over the useful life of the building.

- A. True
- B. False
- C. Not always

43. The book value of an asset indicates the asset's fair market value at that time.

- A. True
- B. False
- C. Not always



44. If a company revises the estimated useful life of one of its assets being depreciated, the company will need to reissue its earlier financial statements as the earlier depreciation was incorrect.

- A. True
- B. False
- C. Not always

45. Which of the following is not a non-current/fixed asset? A. A public monument owned by government B. Goods bought for resale C. A submarine D. A long-term investment

46. Which of the following could be defined as 'specific principles applied by an entity in preparing financial statements'? A. Liabilities B. Estimates C. Disclosures D. Policies

47. Which of the following is the correct calculation of cost of sales of a trade company? A. Opening stock + purchases + closing stock B. Opening stock + purchases – closing stock C. Opening stock – purchases – closing stock D. Opening stock – purchases + closing stock

48. The financial statement that reports the revenues and expenses for a period of time such as a year or a month is the

- A. Balance Sheet
- B. Income Statement
- C. Statement of Cash Flows

49. The financial statement that reports the assets, liabilities, and stockholders' (owner's) equity at a specific date is the

- A. Balance Sheet
- B. Income Statement
- C. Statement Of Cash Flows

50. Assets are usually reported on the balance sheet at which amount?



- A. Cost
- B. Current market value
- C. Expecting selling price

51. A measure of profitability is the

- a. current ratio.
- b. debt to total assets ratio.
- c. return on assets ratio.
- d. working capital.
- e. none of the options listed

52. Working capital is a measure of

- a. consistency.
- b. liquidity.
- c. profitability.
- d. solvency.
- e. none of the options listed

53. The difference between the balance of a plant asset account and the related accumulated depreciation account is termed

- a. market value.
- b. contra asset.
- c. book value.
- d. liability.
- e. none of the options listed

EXERCISES

Exercise 1

A company purchases equipment for \$30,000 on July 1, 2017. It estimates that the equipment will have a salvage value of \$2,000 and its useful life will be 7 years. Assuming that the company's accounting year ends on December 31 of each year, what will be the Depreciation Expense for the years 2017 and 2018 assuming straight-line depreciation?



Exercise 2

On January 1, 2013 an asset was acquired for \$30,000. Its useful life was expected to be 10 years and the salvage value is expected to be \$0. After four years of use, the company realized the asset would be useful for only three more years. (In other words, the total useful life of the asset will be seven years instead of the original 10 years.) The company uses the straight-line method of depreciation. The Depreciation Expense in each of the years 2017, 2018, and 2019 will be \$

Exercise 3

A company engaged in the following three independent transactions:

Merchandise purchased on account, \$ 2,400,000.

Machinery purchased for cash, \$ 2,400,000.

Capital stock issued for cash, \$ 2,400,000.

Compute the current ratio after each of these transactions assuming current assets were \$ 3,200,000 and the current ratio was 1:1 before the transactions occurred.

Exercise 4

Eastern, Inc., had net sales of \$ 3,520,000, gross margin of \$ 1,496,000, and operating expenses of \$ 904,000. Total assets (all operating) were \$ 3,080,000. Compute Eastern's rate of return on operating assets

Exercise 5

A company is exploring the impact of the two method of depreciation. On 1 January, it bought a machinery for \$15,000. The methods are (i) straight line where useful life is 4 years and residual value is \$2,000 and (ii) Reducing balance method -at the rate of 20% per annum. Show how the company's profit be affected if the straight line method is used rather than the reducing method?



Exercise 6

The cost of the fixed asset is \$100,000, provision for depreciation is \$10,000, depreciation charge for the year are \$2,000. Show the net book value of the fixed asset in the Balance sheet

Exercise 7

A machine was bought for \$100,000. Its estimated useful life is four years with a residual value of \$10,000. Depreciation is charged on the straight line method. What is the percentage of depreciation rate on an annual basis?

Exercise 8

A fixed asset cost \$12,000 and sold for \$5,000. At the date of disposal, its net book value is \$2,000. So what is the profit or loss on disposal of this fixed asset?

Exercise 9

A machine which was bought for \$180,000 on 30 April 2008. The residual value was \$5,000 and depreciation rate was 25%. Depreciation is to be charged under the reducing balance method on month to month basis. Compute the depreciation at 31st December 2008

Exercise 10

Company XYZ uses the straight line method of depreciation for all its fixed assets. On 1 January it bought a machine on hire purchase. The cash price was \$150,000 and the interest for the year is %16,500. The estimated useful life of the machine is five years with no residual value. What is the charge for depreciation for the year ended 31 December?



Exercise 11

The trial balance of Hussain manufacturing company shows the following assets at the end of December 2013:

Cash: \$380,000

Prepaid insurance: \$82,000

Raw materials: \$670,000

Equipment: \$2,200,000

Accounts receivable: \$800,000

Work-in-process (WIP): \$400,000

Finished goods: \$150,000

Patents: \$220,000

Required:

Prepare current assets section of the **balance sheet** of Hussain company.

Exercise 12

The Delta company uses a **periodic inventory system**. The beginning balance of inventory and purchases made by the company during the month of July, 2016 are given below:

July 01: Beginning inventory, 500 units @ \$20 per unit.

July 18: Inventory purchased, 800 units @ \$24 per unit.

July 25: Inventory purchased, 700 units @ \$26 per unit.

The Delta company sold 1,400 units during the month of July.

Required: Compute inventory on July 31, 2016

Exercise 13

The Alpha merchandising company purchases product DX-5 directly from manufacturers and sells it to small retailers as well as customers. The following transactions occurred during the last month of 2016:

Dec. 01: 800 units on hand @ \$40 each.

Dec. 08: 600 units sold @ \$76 each.

Dec. 14: 1,200 units purchased @ \$50 each.

Dec. 18: 1,080 units sold @ \$76 each.



Dec. 30: 800 units purchased @ \$60 each.

Required:

Assuming the Alpha merchandising company uses periodic inventory method, compute.

Number of units on December 31, 2016.

Exercise 14

Please compute how decreasing Inventory Turn-Days influence the total sales.

N	incoming data	Unit	2017	2018
1.	Sales	USD		
2.	Average inventory	USD		
	including : raw materials			
	work in process			
	finished goods			
3.	Decrease of raw materials period due to better inventory management	%		
4.	Work-in-process period decrease due to faster merchandising	%		
5.	Shortening of finished goods duration after Marketing improvement	%		
	Inventory Turnover	ratio		
	raw materials period	ratio		
	Work-in-process period	ratio		
	finished goods duration	ratio		
	Inventory Turn-Days	days		
	raw materials period	days		
	Work-in-process period	days		
	finished goods duration	days		
	Sales	thou. USD		



CHAPTER 3. COMPETITIVENESS OF THE ENTERPRISE

CONTENT MODULE 1. THEORETICAL PRINCIPLES OF FORMATION OF ENTERPRISE COMPETITIVENESS

Theme 1. Competitiveness as an economic category

Content

- 3.1. The essence and types of economic competition
- 3.2. Market as a community of competing companies
- 3.3. Competitiveness and its main features

Key terms and concepts

- ✓ Competition
- ✓ Perfect Competition
- ✓ market system types
- ✓ Fair competition
- ✓ Seller – Buyer – Relationship

3.1. The essence and types of economic competition

Competition is an elementary, universal and impersonal form of social interaction. It is elementary in the sense that it is basic to all other forms of interaction. Each individual is involved in countless ways of which he is generally unaware in a vast web of competitive relationships.

This lack of awareness on the part of the competing units gives competition its impersonal character. Of the various concrete expressions, the most obvious is struggle for existence. Every form of life is in constant struggle for life with the impersonal forces of nature that exist everywhere in the natural world.

There is an endless struggle between each form and its foes. In human society, the struggle of existence is seldom a brute struggle for the means of life as we find in the animal



world. The typical struggle in human society is for livelihood rather than for the means of existence. The human struggle is for economic security and for place, power and status. It is present almost in every walk of life.

Competition is the struggle for possession of rewards which are in limited supply—money, goods, status, power, love—anything (Horton and Hunt, 1964). It is a process of seeking to obtain a reward by surpassing all rivals.

In the words of Biesanz and Biesanz (1964), “competition is the striving of two or more persons or groups for the same goal which is limited so that all cannot share it”. According to Sutherland, Woodward and Maxwell (1961), “competition is an impersonal, unconscious, continuous struggle between individuals or groups for satisfaction which, because of their limited supply, all may not have”.

Regarding competition one important point to be kept in mind is that the attention of the competitors is always focused on the goal or reward and not on themselves. When there is a shift in interest or focus from the objects of competition to the competitors themselves, it becomes rivalry which may sometimes lead to conflict in hard cases.

3.2. Market as a community of competing companies

A market is a medium that allows buyers and sellers of a specific good or service to interact in order to facilitate an exchange. This type of market may either be a physical marketplace where people come together to exchange goods and services in person, as in a bazaar or shopping center, or a virtual market where buyers and sellers do not interact, as in an online market. Market can also refer to the general market where securities are traded. This form of the term may also refer to specific securities markets and may take place in person or online. The term "market" can also refer to people with the desire and ability to buy a specific product or service.



In market economies, there are a variety of different market systems that exist, depending on the industry and the companies within that industry. It is important for small business owners to understand what type of market system they are operating in when making pricing and production decisions, or when determining whether to enter or leave a particular industry.

The five major market system types are Perfect Competition, Monopoly, Oligopoly, Monopolistic Competition and Monopsony.

Perfect Competition

Perfect competition is a market system characterized by many different buyers and sellers. In the classic theoretical definition of perfect competition, there are an infinite number of buyers and sellers. With so many market players, it is impossible for any one participant to alter the prevailing price in the market. If they attempt to do so, buyers and sellers have infinite alternatives to pursue.

Monopoly

A monopoly is the exact opposite form of market system as perfect competition. In a pure monopoly, there is only one producer of a particular good or service, and generally no reasonable substitute. In such a market system, the monopolist is able to charge whatever price they wish due to the absence of competition, but their overall revenue will be limited by the ability or willingness of customers to pay their price.

Oligopoly

An oligopoly is similar in many ways to a monopoly. The primary difference is that rather than having only one producer of a good or service, there are a handful of producers, or at least a handful of producers that make up a dominant majority of the production in the market system. While oligopolists do not have the same pricing power as monopolists, it is possible, without diligent government regulation, that oligopolists will collude with one another to set prices in the same way a monopolist would.



Monopolistic Competition

Monopolistic competition is a type of market system combining elements of a monopoly and perfect competition. Like a perfectly competitive market system, there are numerous competitors in the market. The difference is that each competitor is sufficiently differentiated from the others that some can charge greater prices than a perfectly competitive firm. An example of monopolistic competition is the market for music. While there are many artists, each artist is different and is not perfectly substitutable with another artist.

Monopsony

Market systems are not only differentiated according to the number of suppliers in the market. They may also be differentiated according to the number of buyers. Whereas a perfectly competitive market theoretically has an infinite number of buyers and sellers, a monopsony has only one buyer for a particular good or service, giving that buyer significant power in determining the price of the products produced.

Perfect competition: An example of perfect competition is the plant market. Many greenhouses and home stores sell similar plants. If one shop prices their plants too high, consumers will go to the competition. Unless the type of plant is rare and difficult to find, there is no reason for a consumer to pay \$10 for a small lavender plant when they could pay \$3 at the greenhouse next door. Again, perfect competition is not a reality in most markets, because marketing and differentiation often comes into play. If the lavender plant is a rare type, or organic and food grade, consumers might be willing to pay a little more.

Monopolistic competition: A good example of monopolistic competition can be seen in clothing stores. Each store sells clothing, which creates competition. But there are many differences in styles and offerings from store to store. Since there are abundant clothing retail options, each store must be mindful of competition when setting prices. Most consumers will not be willing to pay \$200 for a plain black T-shirt, especially if the shop across the street is selling them for \$20. Of course, in



the retail clothing market, marketing and product differentiation is key. Some luxury brands do, in fact, convince consumers to spend \$200 on a black T-shirt, thanks to stellar marketing. However, most lower and midpriced brands will have to compete for consumers who have many choices.

Oligopoly: The commercial airline market often shows signs of oligopoly. Airlines use dynamic pricing, meaning their prices change constantly. Sometimes, airline prices will change multiple times per day. It is well-known that airlines often put flights on sale on Tuesday mornings. They do this to move seats for flights that are selling slowly. Usually, these seats are attractively priced, perhaps even at a loss for the company. As a result of the sale, an all-day price war ensues, with competing airlines slashing prices to keep up with the competition. By late Tuesday afternoon, the airlines have sold all of the cheap seats they intend to move and raise prices once again. All of the other airlines follow the price leader and raise their prices, too.

Monopoly: One example of a monopoly is when there is only one electric company in your geographic area. This company can set prices however it wants and you are unable to go to the competition.

3.3. Competitiveness and its main features

Competition in economics happens when a market has a sufficient number of buyers and sellers so that prices remain low. When there are a large number of sellers, consumers have many options, which means companies have to compete to offer the best prices, value and service. Otherwise, consumers will go to the competition. When consumers enjoy many choices, businesses must remain on their toes and continue to offer the best prices. In this way, competition self-regulates the supply and demand of markets, keeping goods affordable for consumers. This is called the invisible hand theory.

Under a truly competitive market, no one company is able to exploit prices because consumers always have a choice to go



somewhere else. There must be a healthy amount of competition in a market for this to work. Certain markets may not have as much competition, thus driving up prices.

What is the difference between perfect and imperfect competition?

Perfect competition is a microeconomics concept that describes a market structure controlled entirely by market forces. In a perfectly competitive market, all firms sell identical products and services, firms cannot control prevailing market prices, market share per firm is small, firms and customers have perfect knowledge about the industry, and no barriers to entry or exit exist. If any of these conditions are not met, a market is not perfectly competitive.

Perfect competition is an abstract concept that occurs in economics textbooks, but not in the real world. Imperfect competition, in which a competitive market does not meet the above conditions, is very common. Examples of imperfect competition include oligopoly, monopolistic competition, monopsony and oligopsony.

Theme 2. The competitive environment of the enterprise

Content

- 3.4. The main components of a competitive environment
- 3.5. State competition policy
- 3.6. The driving force of the market and the intensity of competition
- 3.7. Analysis of competitors' activities

Key terms and concepts

- ✓ Competitive environment
- ✓ Direct competitors
- ✓ Competition policy
- ✓ Concentration ratio
- ✓ The Herfindahl-Hirschman index



3.4. The main components of a competitive environment

A competitive environment is the dynamic external system in which a business competes and functions. The more sellers of a similar product or service, the more competitive the environment in which you compete. Look at fast food restaurants - there are so many to choose from; the competition is high. However, if you look at airlines servicing Hawaii, very few actually fly to the islands.

Direct competitors are businesses that are selling the same type of product or service as you. For example, McDonalds is a direct competitor with Burger King. Indirect competitors are businesses that still compete even though they sell a different service or product. The products or services offered by indirect competitors tend to be those that can be substituted for one another. Again, considering travel, you have the option to travel by plane, train, or car. Therefore, airlines are also competing with train lines and buses (assuming the travel does not go overseas).

Regulatory and Licensing Demands

A small business's ability to compete and the environment in which it attempts to make a profit can be greatly affected by government regulations and professional licensing demands. For example, a spa's competitive environment can be altered if a state enacts regulations stating that all massage therapists must meet the same licensing demands as a cosmetologist. Likewise, the competitive environment of an insurance company can be altered significantly if the state passes no-fault reform laws. While ideally all competitors in the environment are subject to the same regulations, the regulations may create a greater cost burden or benefit to a smaller business.

Effect of Direct Competitors

In a healthy market economy, the competitive environment is filled with direct competitors. These include everyone who is in the same business. Within an industry, all businesses that offer the same products and services are in direct competition.



For example, anyone who sells electronics is a direct competitor with other sellers of electronics. All media consulting firms are in direct competition with each other.

3.5. State competition policy

Competition policy, public policy aimed at ensuring that competition is not restricted or undermined in ways that are detrimental to the economy and society. It is predicated upon the idea that competitive markets are central to investment, efficiency, innovation, and growth.

Competition policy emerged in the United States in the late 19th century, when it became apparent that competition was prompting larger firms to try to lessen competitive pressures through the formation of cartels, with detrimental effects on smaller firms and consumers. Consequently, in the United States it is more usually referred to as antitrust policy. Since the 1990s, competition policy's importance has increased, both in its spread to ever more segments of the economy and in its prominence as a policy tool.

There are three main areas traditionally covered by competition policy: restrictive practices, monopolies, and mergers. Restrictive practices—for instance, collusion by competitor firms to fix prices—are generally prohibited under competition policy, though this is not the case with all collaboration. It is increasingly common for even the largest multinational firms to collaborate with competitors in areas such as research and development. With monopolies, it is the abuse of a monopoly position, rather than its existence per se, that is addressed through policy. The regulation of privatized utilities illustrates this point clearly. The transfer of large numbers of state-owned utilities into the private sector necessitated regulatory strategies to maintain the benefits of economies of scale associated with a monopoly network provider, while combining this with the introduction of competition where possible. Mergers have traditionally been the



most controversial, and consequently, the most politicized, of the areas of competition policy, not least because the judgment required as to whether a particular merger will result in a damaging reduction in competition that outweighs any potential benefits is, frequently, debatable.

A notable development in competition policy is the trend toward devolving responsibility for its implementation to independent agencies, at arm's length from government (though the degree of independence varies considerably). This is perhaps best explained as an attempt to “depoliticize” competition policy—to make it, or at least to make it appear, neutral, predictable, and rules-based and not subject to the short-term concerns of elected politicians. However, it has also increased the influence that those agencies have on the development of policy and its implementation as their expertise has grown.

Where once competition policy was contrasted with regulation—the idea of the promotion of competition was diametrically opposed to regulation in the eyes of many—the distinction is now less clear-cut. As the example of the privatized utilities shows, there is no strict boundary between the two. However, competition agencies can be distinguished from industry-specific regulators. The former are responsible for policy throughout the entire economy, setting overall policy, and normally have a reactive role in responding to suspected breaches; industry regulators have a far-narrower scope but greater powers to establish preventive rules. This prompted the distinction between regulation of competition and regulation for competition.

3.6. The driving force of the market and the intensity of competition

The model of the Five Competitive Forces was developed by Michael E. Porter in the 1980 s. Since that time it has become an important tool for analysing an organisation's industry



structure in strategic processes. Porter's model is based on the insight that a corporate strategy should meet the opportunities and threats in the organisation's external environment. Especially, competitive strategy should be based on an understanding of industry structures and the way they change. Porter has identified five competitive forces that shape every industry and every market. These forces determine the intensity of competition and hence, the profitability and attractiveness of an industry. The objective of corporate strategy should be to modify these competitive forces in a way that improves the position of the organisation. Porter's model supports analysis of the driving forces in an industry. Based on the information derived from the Five Forces Analysis, management can decide how to influence or to exploit particular characteristics of their industry. The Five Forces Analysis provides insights on profitability. Thus, it supports decisions about entry to, or exit from, an industry or a market segment. It can also be used to compare the impact of competitive forces on your own organisation, with the impact on competitors. Remember that competitors may have different options to react to changes in competitive forces from their different resources and competencies. This may influence the structure of the whole industry. When used in conjunction with a macro environmental analysis (external factors), which reveals drivers for change in an industry, Five Forces Analysis can reveal insights about the potential future attractiveness of the industry.

Concentration Ratio:

Concentration ratio refers to the fraction of total market sales controlled by the largest group of sellers.

The inclusion of the market shares of several firms in the concentration ratio rests upon the possibility that large firms will adopt a common price- output policy which may not be very different from the one they would adopt if they were under unified management.



CR shows the combined market share of the N largest firms in the market. The most common concentration ratios are the CR₄ and the CR₈.

Concentration ratios range from 0 to 100 percent. The levels reach from no, low or medium to high to "total" concentration.

Perfect competition. If there are N firms in an industry and we are looking at the top n of them, equal market share for all of them means that CR_n = n/N. All other possible values will be greater than this.

No concentration if CR_n is close to 0%, (which is only possible for quite a large number of firms in the industry N) this means perfect competition or at the very least monopolistic competition. If for example CR₄=0 %, the four largest firm in the industry would not have any significant market share.

Low concentration 0% to 40% [5]. This category ranges from perfect competition to an oligopoly.

Medium concentration 40% to 70% [5]. An industry in this range is likely an oligopoly.

High concentration 70% to 100% [5]. This category ranges from an oligopoly to monopoly.

Total concentration 100% means an extremely concentrated oligopoly. If for example CR₁= 100%, there is a monopoly.

Herfindahl-Hirshman index

$$HHI = s_1^2 + s_2^2 + s_3^2 + \dots + s_n^2.$$

The Herfindahl-Hirschman index (HHI) is a common measure of market concentration, and is used to determine market competitiveness.

The Herfindahl-Hirschman index (HHI) is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers. It can range from



close to zero to 10,000. The U.S. Department of Justice uses the HHI for evaluating potential mergers issues.

The closer a market is to a monopoly, the higher the market's concentration (and the lower its competition). If, for example, there were only one firm in an industry, that firm would have 100% market share, and the Herfindahl-Hirschman index (HHI) would equal 10,000, indicating a monopoly. If, there were thousands of firms competing, each would have nearly 0% market share, and the HHI would be close to zero, indicating nearly perfect competition.

The U.S. Department of Justice considers a market with an HHI of less than 1,500 to be a competitive marketplace, an HHI of 1,500 to 2,500 to be a moderately concentrated marketplace, and an HHI of 2,500 or greater to be a highly concentrated marketplace. As a general rule, mergers that increase the HHI by more than 200 points in highly concentrated markets raise antitrust concerns, as they are assumed to enhance market power under the section 5.3 of the Horizontal Merger Guidelines jointly issued by the department and the Federal Trade Commission (FTC).

By high profits, economists mean returns sufficiently in excess of all opportunity costs which potential new entrants desire for entering the industry.

Profit-Rate as a Measure of concentration

The size of super-normal profits which a firm is able to earn is an indication of its monopoly power. In perfect competition, a firm earns only normal profits. In monopoly, new entrants will not normally compete away monopoly profits. But there will be some level of profits at which new firms will find it worth taking the risk of trying to break the monopoly

Lerner's Measure

It is the oldest measure and is based on the difference between the price charged by the monopolist and his marginal cost. Bober gives the formula $1/E$. Thus, degree of monopoly power varies inversely with the elasticity of demand for the commodity.



However, the more commonly used formula is:

$$\text{Degree of monopoly power} = (P - MC) / P$$

Where P is price charged by the monopolist and MC his marginal cost.

3.7. Analysis of competitors' activities

One common and useful technique is constructing a competitor array.

Define the industry – scope and nature of the industry.

Determine who the competitors are.

Determine who the customers are and what benefits they expect.

Determine the key strengths – for example price, service, convenience, inventory, etc.

Rank the key success factors by giving each one a weighting – The sum of all the weightings must add up to one.

Rate each competitor on each of the key success factors.

Multiply each cell in the matrix by the factor weighting.

Find Your Competitors

There are many ways to identify key competitors in your industry, but Google and Amazon will likely be where you do most of your legwork.

Start with a simple search for your business name, product ideas and overarching business idea.

From there, check out different social media channels, organizations and online communities.

Other resources you can use to dig up information on your competitors include Alexa, Keyword Spy, Hoovers, Ahrefs and Reference USA.

Your ultimate goal at this stage should be to cast a wide net and get a comprehensive view of the competitive landscape.

Categorize Your Competitors

Primary Competition: These are your direct competitors, which means they're either targeting the same audience or have a similar product — or both.



Secondary Competition: These competitors may offer a high- or low-end version of your product, or sell something similar to a completely different audience. If you're selling Timex watches, a secondary competitor might be a Rolex retailer.

Tertiary Competition: This category includes businesses that are tangentially related to yours, and really comes in handy when you're looking to expand your product catalog. These could be related products and services that are trending, as well as businesses that may be beneficial to partner with further down the line. For instance, if you sell jewelry, a tertiary competitor may sell gems and stones.

Examine your competitor's website & customer experience

To start, take a close look at the following items:

How solid is their product photography? How do they display their products and help communicate details?

How detailed are their product descriptions? What information do they include? What information is missing?

Where are their calls to action throughout the online shopping experience? Are they obvious or do they get lost due to a poor color scheme or positioning?

Are they trying to build an email list with a newsletter sign-up prompt? How prominent is it?

Where are their social media icons positioned?

Do they have a blog? How frequently do they post? What type of information do they tackle?

Is their site optimized for mobile?

What methods for contact do they offer? Do they have limited hours for phone support?

How long does it take them to respond to email, live chat and contact form submissions?

Do they have an abandoned cart saver feature? If so, at what cadence do they send the emails and what messaging is included?



What information is included in their marketing banners and callouts? This may help you start uncovering their competitive positioning within the market.

Identify your competitor's market positioning

Take a look at their website and marketing messaging and ask the following:

What are customers really buying from them? Are they going for price? Experience?

How are they differentiating their product from their competition? What features and benefits do they highlight the most in their marketing copy?

What makes their product or service unique (according to them)?

The Lorenz Curve

The Lorenz Curve (the actual distribution of income curve), a graphical distribution of wealth developed by Max Lorenz in 1906, shows the proportion of income earned by any given percentage of the population. The line at the 45° angle shows perfectly equal income distribution, while the other line shows the actual distribution of income. The further away from the diagonal, the more unequal the size of distribution of income.

Gini index

The Gini index or Gini coefficient is a statistical measure of distribution which was developed by the Italian statistician Corrado Gini in 1912. It is used as a gauge of economic inequality, measuring income distribution among a population.

The coefficient ranges from 0 (or 0%) to 1 (or 100%), with 0 representing perfect equality and 1 representing perfect inequality. Values over 1 are not practically possible as we don't take into account the negative incomes. (Income can be 0 at its lowest but not negative)



Theme 3. The concept and economic value of competitive advantage

Content

- 3.8. The essence and correlation of the concepts "market success factors", "key competences", "competitive advantages"
- 3.9. Characteristics of competitive advantage
- 3.10. Formation and realization of competitive advantages
- 3.11. Types and sources of competitive advantage formation

Key terms and concepts

- ✓ an absolute advantage
- ✓ Production Possibility Frontier
- ✓ the Comparative Advantage theory
- ✓ Assumptions in Comparative Advantage
- ✓ Porter's "diamond model"

3.8. The essence and correlation of the concepts "market success factors", "key competences", "competitive advantages"

According to Adam Smith, who is regarded as the father of modern economics, countries should only produce goods that they have an absolute advantage in.

A country is said to have an absolute advantage if the country can produce a good at a lower cost than another. Furthermore, this means that fewer resources are needed to provide the same amount of goods as compared to the other country. This efficiency in production creates "an absolute advantage," which allows for beneficial trade.

1. Lack of Mobility for Factors of Production

Adam Smith assumes that factors of production cannot move between countries. This assumption also implies that the



Production Possibility Frontier of each country will not change after the trade.

2. Trade Barriers

There are no barriers to trade for the exchange of good. Governments implement trade barriers to restrict or discourage the importation or exportation of a particular good.

3. Trade Balance

Smith assumes that exports must be equal to imports. This assumption means that we cannot have trade imbalances, trade deficits or surpluses. A trade imbalance occurs when exports are higher than imports or vice versa.

4. Constant Returns to Scale

Adam Smith assumes that we will get constant returns as production scales, meaning there are no economies of scale. For example, if it takes 2 hours to make one loaf of bread in country A, then it should take 4 hours to produce two loaves of bread. Consequently, it would take 8 hours to produce four loaves of bread.

However, if there were economies of scale, then it would become cheaper for countries to keep producing the same good as it produced more of the same good.

As opposed to the Absolute Advantage Theory, the Comparative Advantage theory was developed by David Ricardo, argues that a country doesn't have to have an absolute advantage for beneficial trade to occur

Adam Smith had advocated the theory of Absolute Advantage, where he argued that a country should produce a good if it can produce more of the good with the same or fewer resources than another country. This theory is different from Comparative Advantage.

David Ricardo, another Economist, suggested that a country only needs to have Comparative Advantage. He published this theory in 1817 in his book titled, "On the Principles of Political Economy and Taxation."

The definition of Comparative Advantage is when a country may produce goods at a lower opportunity cost, but not



necessarily have an absolute advantage in. This simply means that a country can produce a good at a lower cost than another country.

3.9. Characteristics of competitive advantage

Factors Affecting Comparative Advantage

1. Factors of Production

A major factor that affects comparative advantage is the country's quality and quantity of the factors of production. For example, the natural availability of mineral resources like iron, gold, and copper is not something a country can change.

2. Exchange Rate

Movements in exchange rates affect the prices of imported and exported goods. For example, if your home currency depreciates which means foreign currency can buy more of your home currency, then your exports will increase as your goods are cheaper relative to others.

3. Inflation

An increase in the rate of inflation would make exported goods more expensive and imported goods cheaper.

4. Trade Barriers

Subsidies and taxes that can be implemented by the government to create an artificial comparative advantage. A subsidy would make exports more competitive and a tax would discourage imports.

Assumptions in Comparative Advantage.

1. Constant Returns to Scale

The theory of Comparative Advantage assumes that the costs remain constant for producing any number of goods. This means that if you require 2 hours to make one shirt, then you will spend 10 hours to make five shirts, 20 hours to make ten shirts, etc. In reality, costs will go down because of economies of scale.

2. Mobility

There is perfect mobility of the factors of production. This



means that we assume that we can move any factor of production to any part of the country at any time. In reality, we cannot move factors of production easily.

3. Costs

There are no transportation costs, i.e. it does not cost anything to move goods from one place to another.

4. Free Trade

Free trade exists between the two countries. This means there are no barriers to trade

John S. Mill was an English economist, (1806-1873), son of the also economist James Mill, who gave him a rigorous education. His "Principles of Political Economy", which is considered one of the most important contributions made by the Classical school of economics, did not think of prices from a Theory of value perspective, but as a result of the intersection of supply and demand, with references to international trade concepts, such as reciprocal demand and the terms of international exchange, or as we know the term nowadays, terms of trade. In fact, it was Mill's work on "International values" which made possible further graphical analysis

3.10. Formation and realization of competitive advantages

Approaches are used to evaluate competitiveness

1. Comparison of trade indices of agricultural sector over the years

2. Porter's "diamond model"

3. Cost-ratio indicators

A second approach is a famous Porter's "diamond model". Porter (1990) was one of the first to underline the importance of firms' strategy and structure in developing their competitiveness. The author proposed the so-called "diamond model" according to which nations succeed in industries for which the national diamond is the most favourable. The four corners of the diamond are: I) factor conditions; II) demand



conditions; III) presence of related and supporting industries; and, IV) firm strategy, structure and rivalry. In this framework, competitiveness is revealed by performance indicators such as cost superiority, profitability, productivity, and efficiency.

According to Porter's model, nations have the best possible competitiveness in sectors where the diamond model shows the most favourable results. According to Porter (1990) XXVI, the following factor conditions have to be considered: raw materials, human resources, knowledge resources, physical resources, technological recourses, capital resources, infrastructure, innovation power and managers capabilities. In this research only the most essential factors, namely labour and land, will be discussed.

The demand conditions refer to the nature of home-market demand for agricultural products. The Ukrainian consumption is important to know and understand according to Porter's model. Countries where the domestic buyers are the world's most sophisticated and demanding, companies are forced to meet high standards, to upgrade, and to respond to tough challenges.

The presence of related and supporting industries is beneficial for the competitiveness of the sector according to Porter (1998). The usage of innovation, shared technology and shared information can create advantages for the whole industry. High productivity is essential for being competitive and can therefore be seen as a competitive advantage.

The fourth dimension of Porter's Diamond model is the firm strategy, structure, and rivalry. 'National context and national circumstances strongly influence how companies are created, organised and managed and the nature of domestic rivalry.

In addition to these four dimensions, Porter's diamond model includes two external factors: chance and government. Chance events just happen; however, the nation with the most favourable "diamond" will most likely convert chance events into competitive advantage.



3.11. Types and sources of competitive advantage formation

Four factors help to explain patterns in the evolution of industries:

- Changing industry dimensions;
- Shared norms held by managers of firms in an industry;
- Managers' cognitive limitations; and
- First-mover advantages

Traditional models suggest that entry of new rival will be countered quickly by incumbents.

Several factors prevent effective retaliation:

Managers of incumbent firms may fail to “see” the entrant.

Even after new entrant is detected, many managers may assume that niches occupied by new entrants are not important enough to be of concern (see examples of Western Union and emergence of natural cereals).

Theme 4. Developing a competitive strategy

Content

3.12. The system of competitive strategies of the enterprise

3.13. Competitive Advantage Strategies (General Competition Strategies)

3.14. Strategies of competitive behavior of the enterprise

3.15. Competitiveness strategy as a comprehensive strategy

Key terms and concepts

- ✓ A competitiveness strategy
- ✓ Cost Leadership
- ✓ Differentiation
- ✓ Focusing strategy



3.12. The system of competitive strategies of the enterprise

A firm's relative position within its industry determines whether a firm's profitability is above or below the industry average. The fundamental basis of above average profitability in the long run is sustainable competitive advantage. There are two basic types of competitive advantage a firm can possess: low cost or differentiation. The two basic types of competitive advantage combined with the scope of activities for which a firm seeks to achieve them, lead to three generic strategies for achieving above average performance in an industry: cost leadership, differentiation, and focus. The focus strategy has two variants, cost focus and differentiation focus.

Designing a competitiveness strategy is the third of the five phases of the project cycle. A competitiveness strategy is a plan for moving the industry toward sustained growth. Industry competitiveness, as opposed to firm competitiveness, is systemic, the result of complex and dynamic interactions between national-level social and economic factors. An industry's competitiveness depends on the ability of firms and other actors in the chain to anticipate and meet buyer demands, take advantage of end-market opportunities, and respond to or influence changes in market demand. An industry can enhance its ability to compete by improving product differentiation, operations or branding. Though firm-level interventions may improve the competitiveness of individual enterprises in the short term, if industry-wide constraints such as a difficult policy and legal business environment or a lack of supporting markets are not addressed, impact is likely to be limited and of short duration.

A firm has a competitive advantage when it delivers products or services at a lower cost or higher quality than that of its competitors, or when it has unique characteristics that



cannot easily be replicated elsewhere (such as off-season vegetables or Blue Mountain coffee). How a firm is organized and how it uses its resources and capabilities to create unique, better or lower cost products or services determines its ability to develop a competitive advantage, become an industry leader and create excellent value for its customers and higher profits for itself.

A competitiveness strategy provides a roadmap for moving an industry toward higher, sustained rates of growth—it is not just a plan for helping individual firms become more profitable. However, implementing a competitiveness strategy could require working first with a limited number of firms that are willing to invest in order to create a demonstration effect for other firms. This was the case with the GMED project in India where initially one wholesaler was willing to buy from smallholders and enter into a partnership with the project. In the case of Cambodia, improved competitiveness depended on better use of inputs, but suppliers were unwilling to work with poor farmers. However, once they realized that training farmers could lead to a substantial increase in sales for their businesses, input suppliers were eager to improve farmer (and, therefore, value chain) productivity. The challenges to developing a coherent strategy—one that stakeholders are willing to buy into—can be met by forging a shared vision of a competitive industry and developing a plan that benefits everyone, including MSEs.

3.13. Competitive Advantage Strategies (General Competition Strategies)

Cost Leadership

In cost leadership, a firm sets out to become the low cost producer in its industry. The sources of cost advantage are varied and depend on the structure of the industry. They may include the pursuit of economies of scale, proprietary technology, preferential access to raw materials and other



factors. A low cost producer must find and exploit all sources of cost advantage. If a firm can achieve and sustain overall cost leadership, then it will be an above average performer in its industry, provided it can command prices at or near the industry average.

Differentiation

In a differentiation strategy a firm seeks to be unique in its industry along some dimensions that are widely valued by buyers. It selects one or more attributes that many buyers in an industry perceive as important, and uniquely positions itself to meet those needs. It is rewarded for its uniqueness with a premium price.

Focus

The generic strategy of focus rests on the choice of a narrow competitive scope within an industry. The focuser selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others.

The focus strategy has two variants.

In cost focus a firm seeks a cost advantage in its target segment, while in (b) differentiation focus a firm seeks differentiation in its target segment. Both variants of the focus strategy rest on differences between a focuser's target segment and other segments in the industry. The target segments must either have buyers with unusual needs or else the production and delivery system that best serves the target segment must differ from that of other industry segments. Cost focus exploits differences in cost behaviour in some segments, while differentiation focus exploits the special needs of buyers in certain segments.

3.14. Strategies of competitive behavior of the enterprise

In many markets, competition is the driving force of change. Without competition, companies satisfice. They provide satisfactory levels of service but fail to excel. Where there is a conflict between improving customer satisfaction and costs, the



latter often takes priority since companies feel that such cost cuts do not affect customer services, and it also produces tangible results foster. Competition, then, is good for the customer as it means that companies have to try harder to satisfy customers or lose their customer base.

When developing marketing strategy, companies need to be aware of their own strengths and weaknesses, customer needs and the competition. To be successful it is no longer sufficient to be good at satisfying consumer's needs-companies need to be better than competition in doing so.

Competitive Behavior can take Five Forms:

Conflict

Conflict is characterized by aggressive competitors where the objective is to drive out competitors from the marketplace, say by price cutting.

An industry is likely to face a conflict situation if a player/s have extremely high stakes to dominate the industry. Players that have large market shares (dominant players), companies are not diversified (businesses confined to one industry), those that have invested a disproportionate amount of assets in building their business in this industry, are likely to be extremely aggressive. This situation can be aggravated by a threat of strong imminent competition, or a declining market growth.

Some industries are very sensitive to volumes. If a company in such a industry is able to build high market share by grabbing market share of competitors, the cost of production goes down significantly, thus raising the company's profitability. But for most industries, it is not a good idea to drive out competitors. This is especially true for the lead players of the industry.

Competitors play a very important role in raising the 'noise levels' (for instance, through advertising) and thus, help in expansion of the category/industry. Since the lead players have more market share than the fringe players, they get more share



of the expansion in the category. And good competitors are always a great help in improving the functioning of a company.

Competition

The objective is not to eliminate competitors but to perform better than them. This may take the form of trying to achieve faster sales, profit growth, larger size or higher market share. Competitive behavior recognizes limits of aggression. Competitor reaction will be an important consideration when setting strategy. Players will avoid spoiling the underlying industry structure which has an important bearing on overall profitability. For example, price wars will be avoided if competitors believe that their long term effect will be to reduce industry profitability.

Co-existence

Co-existence may occur due to several reasons. It may arise because firms do not recognize their competitors owing to difficulties in defining market boundaries. For instance, a manufacturer of fountain pens may ignore competition from jewellery companies since its definition may be product based than market centered (gift market).

Firms may not recognize other companies which they believe are operating in a separate market segment. Third, firms may choose to acknowledge the territories of their competitors (geography, market segment, product technology) in order to avoid harmful head-to-head competition.

Cooperation

This involves the pooling of skills and resources of two or more firms to overcome problems and take advantage of new opportunities. A growing trend is towards strategic alliances where firms join together through a joint venture, licensing agreements or joint R&D contracts to build a long term competitive advantage. In today's global markets where size is the key source of advantage, cooperation is a major type of competitive behavior.

Collusion

Firms come to some arrangement that inhibits



competition in a market. Prices are fixed in order to discourage customers from shopping around to find the cheapest deal. Collusion is likely when there are a small number of suppliers in each market, price of product is a small proportion of buyer costs, where cross national trade is restricted by tariff barriers or prohibitive transportation cost and where buyers can pass on high prices to their customers.

3.15. Competitiveness strategy as a comprehensive strategy

The design of a competitiveness strategy should follow the selection and analysis of those value chains having the greatest potential to contribute to sustainable economic growth. Value chain analysis is a crucial step in the project design process that identifies end-market opportunities and the constraints that affect industry competitiveness. The competitiveness strategy includes a prioritization of constraints to taking advantage of selected opportunities. Based on this exercise, a plan is developed to address these constraints.

Situational design of competitive strategy

USAID/E3 applies the value chain approach to drive economic growth with poverty reduction through the integration of large numbers of micro- and small enterprises (MSEs) into increasingly competitive value chains. By influencing the structures, systems and relationships that define the value chain, USAID helps MSEs to improve (or upgrade) their products and processes, and thereby contribute to and benefit from the chain's competitiveness. Through this approach USAID enables MSEs—including small-scale farmers—to create wealth and escape poverty.

The value chain approach has distinctive features in terms of both i) the scope used in analyzing an industry and ii) the tangible and non-tangible considerations used in designing and implementing interventions. The features discussed here are



not necessarily unique to the value chain approach; but few, if any, other economic development approaches simultaneously emphasize all of these features:

- A market system perspective

- A focus on end markets

- Understanding the role of value chain governance

- Recognition of the importance of relationships

- Facilitating changes in firm behavior

- Transforming relationships

- Targeting leverage points

- Empowering the private sector

Value chains are situated within broader economic systems. For a model that expresses the context for value chains, see the inclusive market systems framework here.

The value chain approach is one of several market systems approaches to development. In recent years this type of methodology has seen a surge in popularity among a variety of donors in a diversity of contexts. While they differ in their terminology, frameworks, principles and even definitions of a system, what these types of approaches have in common is the foundational belief that the poor and their economic opportunities are profoundly influenced by the dynamic systems in which they participate.



CONTENT MODULE 2. QUALITY MANAGEMENT IN THE SYSTEM OF ACHIEVING COMPETITIVENESS

Theme 5. Concepts and methods of assessing the competitiveness of products, businesses and industries

Content

3.16. Factors, factors and criteria for product competitiveness

3.17. Methods for assessing the competitiveness of products

3.18. Methods of assessing the Company Competitiveness

3.19. Methods for assessing industry competitiveness

Key terms and concepts

- ✓ Quality and technical level of the product
- ✓ Quantitative assessment
- ✓ Group index
- ✓ Comparison of trade indices
- ✓ Cost-ratio indicators

3.16. Factors, factors and criteria for product competitiveness

Product competitiveness is the most important concern for industry and is decided by the interaction of engineering activity with the market environment. This paper describes the characteristics of technological product competitiveness in the market, by use of an ordinal scaling method based on rivalry comparison. The analysis was made for actual data extracted from data on consumer electrical products evaluated over a long period of time. Four methods were examined to quantify ordinal data for competitive evaluation elements. The maximum correlation ratio method was proved to be most reasonable for extracting detailed characteristics regarding product



competitiveness in the market. It was also confirmed how the highest and lowest rankings in some element influence total competitiveness. The most competitive product in the electrical consumer market gets the highest ranking in performance evaluation, first or second ranking in timing, and above average ranking in cost, with no major setback in reliability.

Competitive advantage of a company's product can be represented in many ways, but mostly it consists in characteristics or attributes of the product not noticed by the competitors. Competitiveness is the parameter that indicates presence of such peculiarities and allows forecasting the future success of marketing activities of a company related to the product. Usually, the notion of product competitiveness is related to consumer and defined as the level of attractiveness of a certain product for an actual consumer. Therefore the customer's requirements to the product are the key ones. Besides, competitiveness is often related to such notions as quality, cost and quality level. Quality and technical level of the product are to some extent constants related to the product's peculiar characteristics and the level of scientific and technical development of the studied market. The parameter of competitiveness is a much wider notion, it may significantly vary for the same product quality depending on the market state, competitors' activities, their marketing strategies, appearance of new products in the studied product group. Nevertheless, quality and technical level of the product are inherent parts of competitiveness and shall be accounted in its evaluation; however, the overall product attractiveness is defined by the customer.

3.17. Methods for assessing the competitiveness of products

All methods applied for comparing the samples can be categorized by the parameter of qualitative or quantitative evaluation of competitiveness. The so-called mixed or combined



evaluation methods are represented by assessments (obtained by means of surveying experts and customers) transformed into quantitative parameters using some mathematical tools. Quantitative assessment is usually performed by calculating single, group and integral indices. Single index is defined by the formula

$$g = \frac{P}{P_{100}} \times 100,$$

where g – single parameter index; P – parameter level for the studied product; P_{100} – parameter level for the reference product sample which 100% satisfies the need.

After finding single parameter indices a group parameter GG can be calculated by the formula which enables to integrate single indices for a uniform group of parameters – economic, standard, technical, operational, ergonomic and aesthetic. Single indices can be integrated using weight factor set during expert survey.

$$G = \sum a_i \times g_i,$$

where a_i – weight factor; g_i – single index.

Integral index is usually calculated in the format "selected group of parameters / economic parameters", which in fact provides the parameter evaluation in relation to its cost characteristics.

$$I = \frac{G_{techn}}{G_{econ}},$$

where G_{techn} – group index for group of technical parameters; G_{econ} – group index for group of economic parameters.

Then, the conclusion is made: if $I < 1$, then, the studied product is inferior to the reference sample, in case of $I > 1$, the



reference sample has higher competitiveness. Significant drawback of such approach consists in the fact that only those parameters can be used for comparison, which have numerical value, i.e. physical parameters of a product.

3.18. Methods of assessing the Company Competitiveness

It is important to define what we mean by competitiveness, namely, the specific criteria that a competitive enterprise should meet. Business theories which are nothing but a carefully groomed corporate experience across a range of countries and time periods, do not provide a definite answer as to why a company will always be more competitive than others. It is only logical, because a company's competitiveness is affected not only by the specific factors, but also by the combination of these factors, which further depend on many other factors: such as the external environment, time, and success. Such combinations of factors, just like business processes in general, tend to be not only complex, but also not always logically explained.

Therefore competitiveness is not only hard to define, but also extremely difficult to measure: as is known, the know-how having brought success to some company might not be that useful to other companies due to various additional influential aspects. Business studies in various countries have identified a number of factors that, individually or by using different combinations, have the potential to promote a competitive business. These factors are summarized in Figure 1. The aim of this chart, like the aim of the study, is to identify the key factors in ensuring the competitiveness of enterprises. Presented in Figure 1, importance of the factors influencing the competitiveness may vary depending on, for example, the size or the field of activities of the enterprise. It is impossible to envelop assessment of all the factors listed in the Figure 1 in just one survey. The study analyzed the most relevant factors influencing competitiveness of Latvian enterprises: availability



and usage efficiency of resources including human resources, physical resources, and financial resources, corporate strategies, internal and external communication networks, external environment effect on competitiveness, as well as the company's financial performance over its competitors.

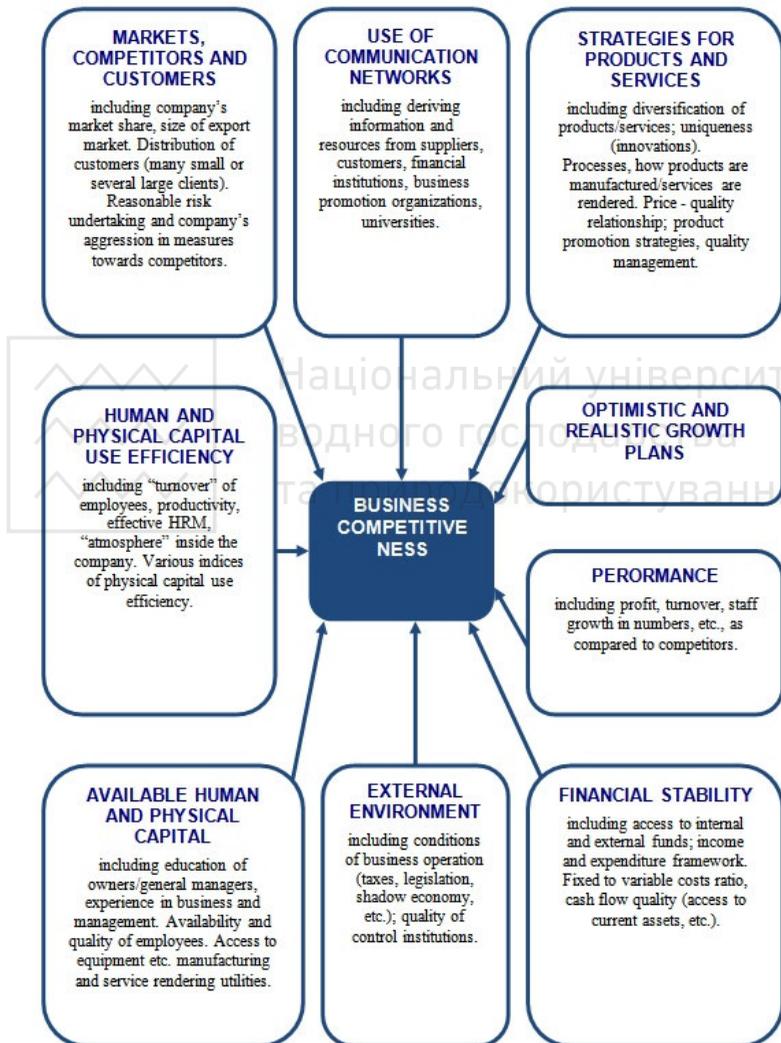


Fig. 3.1. Factors determining business competitiveness



The section one of the questionnaire consisted of several questions aimed at learning about quality of human resources available to a company, and the efficiency of how the company uses these resources to operate the business. Quality of human resources and usage efficiency thereof is, definitely, one of the most substantial factors in building competitiveness of any company. For example, a range of studies in various countries; indicate that competitiveness of business depends directly on productivity, motivation and loyalty of employees available to an enterprise. Generating of new ideas often coming also from the companies' employees is one of the factors improving business competitiveness through providing of innovations. Similarly, skills of employees in rendering high-quality service to clients, and ability to sell products or services have direct effect on financial performance of the company. Moreover, in order to ensure competitive business operations, especially for companies whose success is attributed to time-consuming and major investments in staff training, optimum employee rotation is fundamental. In the survey, general managers or owners of companies were offered to assess their employees on a 1-to-7 rating scale where "1" implied a very poor situation whereas "7" corresponded to a competitive company in terms of availability of human resources and efficient employment thereof. The section one of the questionnaire included also questions on staff training in the company, and we also asked general managers and owners of the companies to assess availability of other no less important resources, as well as information technologies and any technical equipment essential in ensuring the company's competitiveness. There is no doubt that people running the company, i.e. the owners and the managers, play a great role in ensuring of business competitiveness.

In order to better appreciate business competitiveness in relation to this aspect of human resources, a range of questions were included in the questionnaire to assess quality of the owners and the managers: degree of education, and the previous business experience. Many studies have revealed that



higher level of education, and long- standing business experience of owners and managers influence the company's performance and the company's competitiveness remarkably and positively.

The section two of the questionnaire addresses very important business processes ensuring business competitiveness, in a relative detail: corporate strategies. Based on competitive business theory of M.Porter, the questionnaire proposed company owners and managers to assess the corporate strategies regarding price leadership, distinction (i.e., offering of high value-added products or services) and focusing on specific target markets. Rating scale between 1 and 7 was used. The companies which appreciated their current business strategy toward the rating "7", as per the business theories, should be more competitive over the companies giving the rating closer to "1". The questions 5 to 7 of the survey questionnaire continue analysis of the corporate strategies from the so called aspect of business orientation being a research tool widely employed in literature. This instrument is used to assess three business strategy elements fundamental for a company's competitiveness: innovations, undertaking risks, and proactivity in measures aimed at competitors. As per earlier studies done in different countries, the companies having their business oriented to innovations, taking risks and proactivity feature higher competitiveness, on the whole.

When analyzing competitiveness of a company, not only current achievements should be taken into account, but also ability of general managers and owners of the companies to assess and prevent the possible bottlenecks in the business operations. The survey questionnaire included a question asking the respondents to assess business priorities in implementation of different processes substantial for business competitiveness. The survey questionnaire also included questions on the company's export volumes in order to explore the extent to which companies focus on domestic or foreign markets, which is another very important aspect of business competitiveness.



Beside the company's internal resources, a crucial role is played also by the extent to which the company is capable of outsourcing so that to implement a successful business strategy and thus raise competitiveness. As often as not, these are resources that are obtainable free of charge or through relatively little investment of funds and time. For example, such competitiveness-enhancing resources include information that companies can get from suppliers, customers, and competitors; cooperation with organizations engaged in promoting of business, such as generation of new contacts or entering new markets, collaboration with universities and research institutes for development of new, innovative products and services, etc. With a view to find out the extent to which Latvian companies use a variety of communication channels, which, in turn, eventually provide access to various resources enhancing competitiveness, the questionnaire included also a section: Communication Networks.

While highlighting the role of human resources, business strategy and communication networks, one should not forget one of the most important aspects to ensure any business activities and competitiveness – access to funds and efficiency of spending thereof. This factor of business competitiveness is analyzed in detail in the section four of the study questionnaire.

The section five of the questionnaire provides assessment of external environment factors affecting business competitiveness, namely, the extent to which business owners and managers consider that the markets in which the company is engaged are favourable for business activities. Whereas, in the section six, the company owners are asked to assess growth of the company: both from financial and social aspect, thus showing the extent to which the particular company has been able to create value for themselves and for environment by the current resources, and how good the company was in this field in comparison with competitors.



3.19. Methods for assessing industry competitiveness

The third approach is cost-ratio indicators. Some authors use profitability indicators, some others compute productivity and efficiency.

The concept that we use in our research is the domestic cost ratio. The domestic resource costs (DRC) ratio compares the opportunity costs of domestic production with the value added.

$$DRC_j = \frac{DC_j}{NVA_j},$$

where DC_j – domestic cost of production, NVA_j – value added at international prices.

As we can see DRC is calculated as the ratio between the total opportunity cost of primary factors and the value added to tradables. Primary factors are defined as goods that are not normally traded internationally (land, labor, water, and capital). Tradables are defined as goods that are or potentially could be traded internationally. The higher the value of the indicator, the smaller the competitive advantage.

Many approaches are used to evaluate competitiveness. The first approach is based on comparison of trade indices of agricultural sector over the years.

The most popular indices are the real exchange rate RER (the ratio of price index of tradable commodities and the price of non-tradable ones), the revealed comparative advantage RCA (the ratio of a country's export share of a commodity in the international market to the country's export share of all other commodities), the relative import advantage RMA (the same but for import share) and the net export index NEI (sector's exports less its imports divided by the total value of trade).

The RER is defined as follow:

$$RER = \frac{p^T}{p^{NT}},$$



where p^T is the price index of tradable commodities and p^{NT} is the price of non-tradable ones.

Revealed comparative advantage (RCA) was first formulated by Balassa (1965) and modified by Vollrath (1991) in order to avoid double counting between pairs of countries. RCA is sometimes called the Balassa index. This calculates the ratio of a country's export share of a commodity in the international market to the country's export share of all other commodities. For the i -th country and j -th commodity, the RCA is defined as follows:

$$RCA_{ij} = RXA_{ij} = \left(X_{ij} / X_{ik} \right) / \left(X_{nj} / X_{nk} \right),$$

where X are exports; k denotes all commodities other than j ; n denotes all countries other than i .

An RCA index greater than 1 indicates that the country has a comparative advantage in the commodity under consideration, since it has a strong export sector. It reveals higher competitiveness.

Other comparative advantage measures have been proposed. The relative import advantage (RMA) index is similar to the RXA, but relates to imports (M) rather than exports:

$$RTA_{ij} = RXA_{ij} - RMA_{ij},$$

A positive value of RTA is an indication of comparative advantage.

The export market shares (EMS) are a simple measure of competitiveness. EMS can be measured in terms of quantity or in terms of value. The net export index (NEI) is the country's or sector's exports less its imports divided by the total value of trade.

$$NEI_{ij} = \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}},$$



where X are exports; M are imports; j denotes a sector or product; i denotes the country considered. The NEI index lies between -1 (when a country imports only) and 1 (when a country exports only), with a value of 0 in the case of equality of imports and exports.

Theme 6. Measurement of product quality and basic approaches to competitiveness management

Content

3.20. Product quality is the main lever to ensure its competitiveness

3.21. Measurement of product quality

3.22. Basic Approaches to Managing Product Competitiveness

Key terms and concepts

- ✓ Buying experience
- ✓ Clarification chain
- ✓ Assessment of quality
- ✓ Product development
- ✓ Core Competencies

3.20. Product quality is the main lever to ensure its competitiveness

Most businesses operate in competitive markets: they have to 'take on' and 'see off' rivals. Each organisation must decide for itself how best to try and do this. Not all firms come up with the same answer and for good reason. Firstly, there are several different ways of gaining competitive advantage. Secondly, businesses need to play to their strengths and not all businesses have the same strengths. Thirdly, many markets are segmented and what is important to one set of customers may be less important to another set. So businesses need to decide



which segments of the market they are targeting. Ways of seeking to gain competitive advantage include:

- offering lower prices
- offering clearly superior products at above average prices
- delivering products more quickly
- offering superior customer service, including after sales service.

Quality is associated with consistency. A customer who is happy with the first buying experience needs and wants to be equally happy on each further occasion. Portakabin has the motto 'Quality – this time – next time – every time'.

Quality relates to 'appropriate use': how well a product does what it is intended to do.

- modern design
- high quality materials
- layout and fitting of the building to clients' requirements allied to :
- rapid construction
- to provide:
 - a smart modern working environment
 - an image that reflects the status of the client.

3.21. Measurement of product quality

Quality is a vague concept, which makes it hard to measure directly.

We don't measure a recipe; we measure each of its ingredients. And the ingredients will vary depending on the recipe and the tastes of the people who will be fed by it. Some ingredients need to be measured because they matter, while others don't (like lettuce in a salad, broth in a risotto, or decorations on a cake). A recipe is a concept and it's only the ingredients that can be measured meaningfully.

Because quality is a concept, and too vague to measure directly, to measure quality meaningfully, we have to unpack it



first. Inspired by Douglas Hubbard's clarification chain, from his brilliant book *How To Measure Anything* (and discussed in this article about measuring design success) is this basic guideline I use to make vague concepts measurable:

1. unpack the multi-focus concept into singular-focus attributes
2. reword the intangible concept into observable language.

Quality is both intangible and multi-focus. We can't meaningfully measure it until we make it unpack its attributes *and* make each attribute observable. Here's how...

What entity do you want to measure the quality of?

Quality relates to so many things. Fundamentally, quality is about how good something is. And even more specifically, it's about how good something is relative to how good it should be.

So it can be useful to measure the quality of all kinds of things we work on, like these:

- Data quality e.g. financial data or performance data or HR data
- Product quality e.g. a vacuum cleaner or gourmet chocolate
- Service quality (or customer experience) e.g. of a train trip or legal advice
- Software quality e.g. a meditation app or KPI dashboard app
- Process quality e.g. technical support process or delivery process or manufacturing process.

Our first step, then, is to clearly identify the entity we want to measure the quality of. What's yours?

Who defines the quality of that entity?

For the quality of your entity, you need to let the experts define the quality attributes. And often the experts are the end users, for example:

- Data quality might best be defined by data scientists or others who both analyse data and understand the structure of data



- Software quality might best be defined by the users of the software
 - Service quality is best defined by the customers that directly experience that service.

Who is the end user of the entity you want to define the quality of?

What's their overall assessment of quality?

Don't add up attributes to create an overall. This a composite measure or index and it's a very unreliable and inaccurate way to measure something. Especially when you can actually measure it directly. And often, we're too quick to assume we can't measure something directly, when in fact we can.

How could you get a direct measure of the overall quality of your entity?

Which specific attributes of quality matter most to them now?

What method could help you get an objective list of quality attributes for your entity?

Measure the most important 3 attributes.

When you have worked out which are the top 3 attributes of quality for your entity, and have made sure you express them measurably, you can go ahead and design your own performance measures of those quality attributes.

We highly recommend designing your own measures, rather than copy them from published lists of what others measure.

3.22. Basic Approaches to Managing Product Competitiveness

While product development is not the only contributing factor influencing a company's competitive position, the growth and profitability driven by products (or services) speaks volumes of an organization's prowess to meet customer "needs or wants". A well-crafted Product Development (PD) process



provides insight on how companies view and understand their internal and external competitive environment to ensure the right prioritized product mix is in place to remain competitive. The prioritization of products to be developed helps shape the future competitiveness of a company.

Prioritizing product development starts with the formation of comprehensive sets criteria including:

Strategic Alignment – Will this product enhance, support our strategic objectives? This is predicated on the company having a clear understanding of the markets they serve relative to the products they offer. Within the defined strategic timeframe of a company, not all markets are equal in business focus, resources allocation or the proposed introduction of new, improved or modified products. Strategic plans are about growing the company and profits sustainably. Proposed products are given higher emphasis “weight” if they align strategically to important markets areas.

Key Capabilities – What is the technical complexity required to develop this product? This is a critical question relative to the competitiveness of an organization. It is really inquiring about the people and process skills necessary to develop and produce this product: do they exist in the company or need to be developed/acquired? This creates a decision opportunity for management on how they will address and prepare for their future technical competitiveness.

Core Competencies – Does this product fit our core business competencies? Through the prism of customers, suppliers, or competitors, most leading organizations excel at some aspect of their business – innovative product engineering, low cost production, or product/customer service. It is what they do well, and it provides a competitive advantage. Management must determine if the product or service fits within their core competencies relative to the market, product realities, or seek ways to enhance their core competencies to be competitive.

Customer Relations – Does this product improve, maintain, or degrade relations with our customers? This is a



complex question that can best be answered relative to the particulars of the product being offered and who constitutes your customer base – general public, suppliers, government, etc. New products must be assessed through the eyes of the customer and on the existing strength of the relationship. For example, when Coca Cola introduced “New Coke” several years ago, they misunderstood the customer acceptance of the legendary Coke product being changed. When complaints poured in, the strength of the customer relationship afforded Coca Cola to quickly withdraw the product and avoid any negative competitive long-term impact to their business.

Costs – What is the investment and the ROI if this product is developed? This is the basic cost/benefit analysis expected of any new product. Again it is a direct link to the company’s strategic objectives relative to profitability and growth. In a world of competing resources, companies must prioritize the right products to develop in order to maximize their financial goals and avoid excessive operational costs that reduce their competitive standing.

Risks – What are the issues and concerns associated with developing (or not developing) this product? Aside from the normal legal, regulatory concerns that any new product may have, it is also the “lost opportunity” in sales or market entry that can directly impact a company’s competitiveness if the product is not developed. All risks need to be assessed with preventive and contingent actions be planned and applied to mitigate potential problems.

Theme 7. Quality management as a basis for competitiveness

Content

- 3.23. The ideology of quality management
- 3.24. Quality management tools
- 3.25. Quality management system
- 3.26. Ensuring the effective functioning of the quality management system



3.27. Quality is a global field of competition at the turn of the 21st century

Key terms and concepts

- ✓ Quality planning
- ✓ Quality assurance
- ✓ Quality control
- ✓ Pareto Chart
- ✓ Plan-Do-Check-Act

3.23. The ideology of quality management

Quality management has four components: quality planning, quality assurance, quality control and continual improvement. These include procedures, tools and techniques that are used to ensure that the outputs and benefits meet customer requirements.

The first component, quality planning, involves the preparation of a quality management plan that describes the processes and metrics that will be used. The quality management plan needs to be agreed with relevant stakeholders to ensure that their expectations for quality are correctly identified. The processes described in the quality management plan should conform to the processes, culture and values of the host organisation.

Quality assurance provides confidence to the host organisation that its projects, programmes and portfolios are being well managed. It validates the consistent use of procedures and standards, and ensures that staff has the correct knowledge, skills and attitudes to fulfil their project roles and responsibilities in a competent manner. Quality assurance must be independent of the project, programme or portfolio to which it applies.

The next component, quality control, consists of inspection, testing and measurement. It verifies that the



deliverables conform to specification, are fit for purpose and meet stakeholder expectations.

Quality control activities determine whether acceptance criteria have, or have not, been met. For this to be effective, specifications must be under strict configuration control. It is possible that, once agreed, the specification may need to be modified. Commonly this is to accommodate change requests or issues, while maintaining acceptable time and cost constraints. Any consequent changes to acceptance criteria should be approved and communicated.

The last component, continual improvement, is the generic term used by organisations to describe how information provided by quality assurance and quality control processes is used to drive improvements in efficiency and effectiveness. A P3 maturity model provides a framework against which continual improvement can be initiated and embedded in the organisation.

3.24. Quality management tools

Many organizations use quality tools to help monitor and manage their quality initiatives.

There are several types of tools that can be used. However, there are seven management tools for quality control that are the most common.

Different tools are used for different problem-solving opportunities, and many of the tools can be used in different ways.

The trick is to become familiar and comfortable with all of these quality tools so you can pull the appropriate one out of your toolbox when there is a problem that needs to be solved.

Flowchart

Most of us are familiar with flowcharts. You have seen flowcharts of reporting relationships in organizational structures.

Flowcharts are also used to document work process flows.



This tool is used when trying to determine where the bottlenecks or breakdowns are in work processes.

Flow-charting the steps of a process provides a picture of what the process looks like and can shed light on issues within the process.

Flowcharts are also used to show changes in a process when improvements are made or to show a new workflow process.

This example provides a picture so those checking children in will know the steps each takes depending on whether it is their first time or a child who has been there before.

Children's Ministry Drop-off Process



Fig. 3.2. Example Flowchart



Check Sheet

A check sheet is a basic quality tool that is used to collect data. A check sheet might be used to track the number of times a certain incident happens.

As an example, a human resource department may track the number of questions by employees, per category, per day.

In this particular check sheet the tool shows the total number of questions received by the human resources department.

This information helps that department identify opportunities to proactively share information with employees in an effort to reduce the numbers of questions asked.

Human Resource Questions						
	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Health Insurance	### //	### ###	////	### /	### ///	35
Disability Insurance	///	////	/	### /	//	16
Sick Time	###	### ///	///	///	###	25
Paid Time Off	######	######	### ///	### ///	### ///	47
Tuition Reimbursement	///	//	///	///	///	16
Payroll Error	//	/	///	/	//	9
Total	30	35	25	29	29	148

Fig. 3.3. Check Sheet

Cause and Effect (fish bone) Diagram

A cause and effect diagram, also known as a fish-bone diagram shows the many possible causes of a problem.

To use this tool, you need to first identify the problem you are trying to solve and simply write it in the box (head of the fish) to the right.

Next, you will list the major causes of the problem on the spine of the fish.

Causes are typically separated into categories of people, process, materials and equipment.

Causes are then identified through brainstorming with a group familiar with the problem.

Once all of the possible causes are identified, they can be used to develop an improvement plan to help resolve the identified problem.

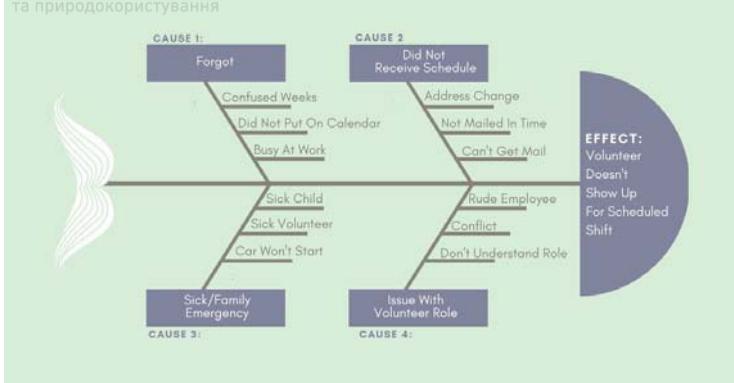


Fig. 3.4. Example Cause and Effect (Fish Bone) Diagram

Pareto Chart

A Pareto chart is a bar graph of data showing the largest number of frequencies to the smallest.

In this example, we are looking at the number of product defects in each of the listed categories.

When you look at the number of defects from the largest to the smallest occurrences, it is easy to see how to prioritize improvements efforts.

The most significant problems stand out and can be targeted first.

Number of Product Defects

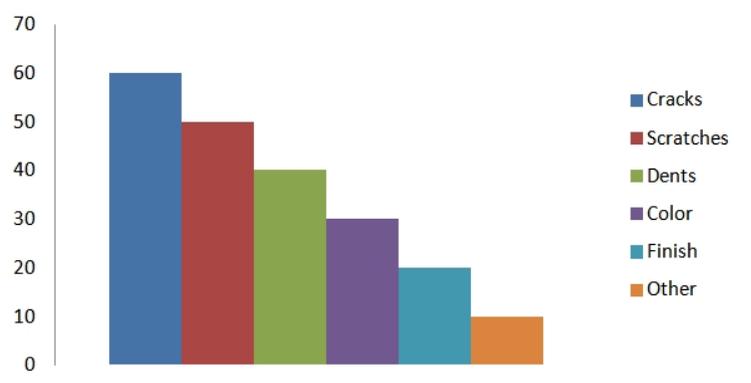


Fig. 3.5. Example Pareto Chart



Control Charts

Control charts or run charts are used to plot data points over time and give a picture of the movement of that data.

These charts demonstrate when data is consistent or when there are high or low outliers in the occurrences of data.

It focuses on monitoring performance over time by looking at the variation in data points. And it distinguishes between common cause and special cause variations. The Dow Jones Industrial Average is a good example of a control chart.



Fig. 3.6. Example Control (Run) Charts

Histograms

Histograms are bar chart pictures of data that shows patterns that fall within typical process conditions.

Changes in a process should trigger new collection of data.

A minimum of 50-75 data points should be gathered to ensure an adequate number of data points have been collected.

The patterns that are detected demonstrate an analysis that helps understand variation.

In this example, it shows that the receptionist received the most phone calls about contribution statements for that period.

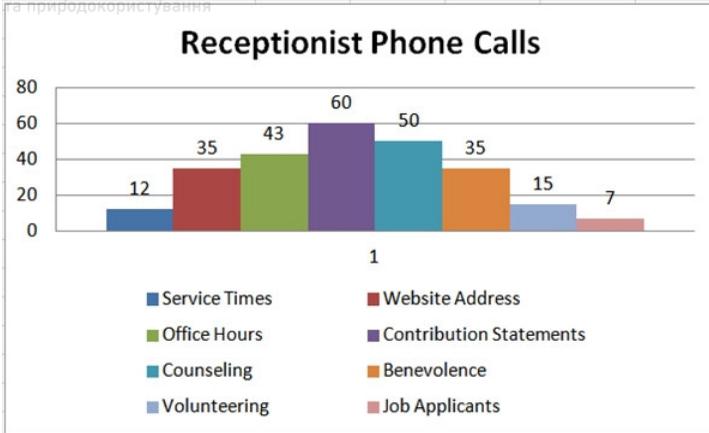


Fig. 3.7. Example Histogram

Scatter Diagrams

Scatter diagrams are graphs that show the relationship between variables. Variables often represent possible causes and effect.

As an example, a scatter diagram might show the relationship between how satisfied volunteers are that attend orientation training.

The diagram shows the relationship between volunteer satisfaction scores and volunteer orientation training.



Fig. 3.8. Example Scatter Diagram



Each of these quality tools has unique advantages for certain situations. And, not all tools are used for all problem-solving.

Once a tool is learned, it can be adapted to different problem-solving opportunities.

Additionally, as with anything else, using tools properly takes practice and experience. Simply start using each of the tools, and over time, you will become proficient and a great problem solver!

3.25. Quality management system

A quality management system (QMS) is defined as a formalized system that documents processes, procedures, and responsibilities for achieving quality policies and objectives. A QMS helps coordinate and direct an organization's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis.

ISO 9001:2015, the international standard specifying requirements for quality management systems, is the most prominent approach to quality management systems.

While some use the term "QMS" to describe the ISO 9001 standard or the group of documents detailing the QMS, it actually refers to the entirety of the system. The documents only serve to describe the system.

Quality management systems serve many purposes, including:

- Improving processes
- Reducing waste
- Lowering costs
- Facilitating and identifying training opportunities
- Engaging staff
- Setting organization-wide direction.

Implementing a quality management system affects every aspect of an organization's performance. Benefits of a documented quality management system include:

- Meeting the customer's requirements, which helps to



instill confidence in the organization, in turn leading to more customers, more sales, and more repeat business

- Meeting the organization's requirements, which ensures compliance with regulations and provision of products and services in the most cost- and resource-efficient manner, creating room for expansion, growth, and profit

These benefits offer additional advantages, such as helping to communicate a readiness to produce consistent results, preventing mistakes, reducing costs, ensuring that processes are defined and controlled, and continually improving the organization's offerings.

ISO 9001:2015 is the most recognized and implemented quality management system standard in the world. ISO 9001:2015 specifies the requirements for a QMS that organizations can use to develop their own programs.

Other standards related to quality management systems include the rest of the ISO 9000 series (including ISO 9000 and ISO 9004), the ISO 14000 series (environmental management systems), ISO 13485 (quality management systems for medical devices), ISO 19011 (auditing management systems), and ISO/TS 16949 (quality management systems for automotive-related products).

Each element of a quality management system helps achieve the overall goals of meeting the customers' and organization's requirements. Quality management systems should address an organization's unique needs; however, the elements all systems have in common include:

- The organization's quality policy and quality objectives
 - Quality manual
 - Procedures, instructions, and records
 - Data management
 - Internal processes
 - Customer satisfaction from product quality
 - Improvement opportunities
 - Quality analysis.



3.26. Ensuring the effective functioning of the quality management system

Before establishing a quality management system, your organization must identify and manage various connected, multi-functional processes to help ensure customer satisfaction. The QMS design should be influenced by the organization's varying objectives, needs, and products and services provided. This structure is based largely on the Plan-Do-Check-Act (PDCA) cycle and allows for continuous improvement to both the product and the QMS. The basic steps to implementing a quality management system are as follows:

1. Design
2. Build
3. Deploy
4. Control
5. Measure
6. Review
7. Improve

The design and build portions serve to develop the structure of a QMS, its processes, and plans for implementation. Senior management should oversee this portion to ensure the needs of the organization and the needs of its customers are a driving force behind the systems development.

Deployment is best served in a granular fashion by breaking each process down into subprocesses and educating staff on documentation, education, training tools, and metrics. Company intranets are increasingly being used to assist in the deployment of quality management systems.

Control and measurement are two areas of establishing a QMS that are largely accomplished through routine, systematic audits of the quality management system. The specifics vary greatly from organization to organization depending on size, potential risk, and environmental impact.

Review and improve detail how the results of an audit are handled. The goals are to determine the effectiveness and



efficiency of each process toward its objectives, to communicate these findings to the employees, and to develop new best practices and processes based on the data collected during the audit.

Industrial influence on quality and standardization

The history of quality can trace its roots back centuries when craftsmen began organizing into unions called guilds. When the Industrial Revolution came, early quality management systems were used as standards that controlled product and process outcomes. As more people had to work together to produce results and production quantities grew, best practices were needed to ensure quality results.

Eventually, best practices for controlling product and process outcomes were established and documented. These documented best practices turned into standard practices for quality management systems.

Quality became increasingly important during World War II, for example, when bullets made in one state had to work with rifles made in another. The armed forces initially inspected virtually every unit of product. To simplify the process without sacrificing safety, the military began to use quality techniques of sampling for inspection, aided by the publication of military-specification standards and training courses in Walter Shewhart's statistical process control techniques.

The importance of quality only grew after the war. The Japanese enjoyed a quality revolution, improving their reputation for shoddy exports by fully embracing the input of American thinkers like Joseph M. Juran and W. Edwards Deming and shifting focus from inspection to improving all organization processes through the people who used them. By the 1970s, the U.S. industrial sectors, such as electronics and automobiles, had been broadsided by Japan's high-quality competition.



3.27. Quality is a global field of competition at the turn of the 21st century

The American response to the quality revolution in Japan gave birth to the concept of total quality management (TQM), a method for quality management that emphasized not only statistics but approaches that embraced the entire organization.

In the late 20th century, independent organizations began producing standards to assist in the creation and implementation of quality management systems. It is around this time that the phrase "Total Quality Management" began to fall out of favor. Because of the multitude of unique systems that can be applied, the term "Quality Management System" or "QMS" is preferred.

At the start of the 21st century, QMS had begun to merge with the ideas of sustainability and transparency, as these themes became increasingly important to consumer satisfaction. The ISO 19011 audit regime deals with both quality and sustainability and their integration into organizations.

CONTROL TEST PROGRAM

1. Author of the theoretical principles of the model of perfect competition is ...

- A. Smith
- B. D. Ricardo
- C. J. S. Mill
- D. J. Schumpeter
- E. J. Marshall

2. The function of competition, which manifests itself in limiting the economic power of each enterprise (if the monopolist can assign the only possible price, then the competition gives the buyer the opportunity to choose among several sellers) is the following function of competition:



- A. regulation function
- B. control function
- C. distribution function
- D. the function of motivation
- E. all answers are incorrect

3. Competition that arises in a situation where the goods produced by a certain enterprise in comparison with the goods of other firms satisfy the same consumer need, is:

- A. subjective competition
- B. specific competition
- C. functional competition
- D. price competition
- E. all answers are incorrect

4. A market situation in which a relatively large number of small producers offer similar, but not identical, products. This is a competitive environment of:

- A. perfect competition
- B. oligopoly
- C. monopoly
- D. monopolistic competition
- E. all answers are incorrect

5. Among all the competitive forces (according to M. Porter's model), the greatest influence has:

- A. the threat of entry of new competitors
- B. Competition from other industries and substitutes
- C. rivalry between competing rivals in one industry
- D. suppliers power
- E. all answers are incorrect

6. If the concentration ratio of 2 firms is more than 0,5:

- A. the market is unconcentrated
- B. the market is highly concentrated
- C. the market is low-concentrated



- D. There is no competition on the market
- E. all answers are incorrect

7. The indicator which estimates the market concentration using the sum of squares of market shares of competitors. It is about:

- A. concentration index
- B. Herfindahl index
- C. Herfindahl-Fisher index
- D. Index of monopolization
- E. does not have the correct answer

8. Which competitive strategy involves targeting your products to a niche market or targeted audience:

- A. Cost leadership;
- B. focus;
- C. differentiation;
- D. Price leadership;
- E. There is no correct answer

9. What are the 3 competitive strategies?

- A. cost leadership, differentiation, and focus;
- B. offensive, defensive, cooperative;
- C. leader, outsider, outsourcer;
- D. corporate, functional and operational
- E. Does not have the correct answer

10. Classical British economist best known for his theory on wages and profit, **labor theory of value**, theory of **comparative advantage**:

- A. Marshall;
- B. John Mill
- C. Ricardo.
- D. Smith
- E. Does not have the correct answer

11. A **market form** in which the **market** or **industry** is controlled by a small number of **sellers**. Usually, the market has high



barriers to entry, which prevents new firms from entering the market or even be able to have a significant market share:

- A. perfect competition;
- B. oligopoly
- C. monopolistic competition;
- D. monopoly
- E. There is no right answer

12. When a firm pursues differentiation strategy, it attempts to become unique in the industry, by offering those products and services, which have value to the customers:

- A. Cost leadership;
- B. focus;
- C. differentiation;
- D. Price leadership;
- E. The is no correct answer

13. Quality ratio:

- A. the ratio of the consumption price of the estimated and comparable product;
- B. the ratio of the purchase price of the estimated and comparable product;
- C. the ratio of technical parameters of the estimated and comparable product;
- D. the ratio of the price and quality of the estimated and comparable product;
- E. the correlation of the price and quality of the product being valued.

14. For goods that are fully standardized, competitiveness is determined by:

- A. Integrated Competitiveness Index
- B. quality ratio
- C. price index
- D. price / quality ratio
- E. does not have the correct answer



15. The author of the book "An Inquiry into the Nature and Causes of the Wealth of Nations" (1776):

- A. J. Mill
- B. J. Schumpeter
- C. Smith
- D. Ricardo
- E. does not have the correct answer

16. The author of the book "Capital. A Critique of Political Economy" (1867)

- A. J. Mill
- B. K. Marx
- C. J. Schumpeter
- D. Ricardo
- E. does not have the correct answer

17. The unobservable market force that helps the demand and supply of goods in a free market to reach equilibrium automatically is:

- A. the invisible hand
- B. the Underwater current
- C. the Machiavellian approach
- D. the competition between countries
- E. does not have the correct answer

18. Model of perfect competition:

- A. Does not exclude control over market processes
- B. Not completely exclude control over market processes
- C. Completely excludes any control over market processes
- D. Provides full control over market processes
- E. does not have the correct answer

19. The basic condition for the existence of perfect competition:

- A. A large number of consumers and a large number of producers
- B. This market has only a few large firms



- C. firms on this market may produce either differentiated or homogeneous products
- D. profit maximizer, price maker, high barriers to entry and price discrimination
- E. there is no right answer

20. Representatives of the Continental School of Economic Thought are:

- A. Universities of Tokyo, Hitotsubasi, Waseda, Meiji
- B. Professors M. Porter, A. Chandler, M. Enright, J. MacArthur
- C. Switzerland, Sweden, Denmark, Austria, Italy, Germany
- D. Professors X. Takuuchi, H. Koboyasy, M. Tsuchiya, Noguchi
- E. there is no right answer

21. Unfair competition -:

- A. espionage, bribery
- B. Misappropriation of Trade Secrets
- C. Trademark infringement
- D. predatory pricing
- E. All listed

22. A type of competition such that many producers sell products that are differentiated from one another:

- A. Perfect competition
- B. Oligopoly
- C. Monopoly
- D. Monopolistic competition
- E. There is no right answer

23. It usually happens when there is no economic **competition** to produce the product or service and there is no available substitutes to the product or service:

- A. Monopoly
- B. Perfect competition



- C. Monopolistic competition
- D. oligopoly
- E. There is no right answer

24. An individual, group or company that controls all of the market for a particular good or service:

- A. Monopolist
- B. Capitalist
- C. Economist
- D. Oligopolist
- E. There is no right answer

25. The percentage of the industry or market's total sales that is generated by a particular company:

- A. Market size
- B. Market share
- C. Total sales
- D. Market power
- E. There is no right answer

26. This method of Quality control covers activities such as development, design, production, servicing, and production:

- A. Statistical Control;
- B. Failure Testing;
- C. Quality Assurance;
- D. ISO
- E. Does not have the correct answer

27. This method of Quality control will expose the weaknesses of the product in question

- A. Failure Testing;
- B. Statistical Control;
- C. Quality Assurance;
- D. ISO
- E. Does not have the correct answer



28. This method of Quality control involves randomly sampling and testing a portion of the output

- A. Failure Testing;
- B. Statistical Control;
- C. Quality Assurance;
- D. ISO
- E. Does not have the correct answer

29. The most competitive in the market is the product, which due to its consumer properties provides:

- A. The highest cost of consumption in relation to the beneficial effect;
- B. The most beneficial effect in relation to the purchase price;
- C. Maximum price-to-benefit ratio
- D. The most beneficial effect in relation to the lifetime expenses;
- E. Does not have the correct answer

30. What extension of the expression is the most correct: "The competitiveness of the product is ..."

- A. Quality + price + service;
- B. Quality! quality! quality!
- C. Price! price! price!
- D. Quality + service
- E. Innovation + service

31. A process by which entities review the quality of all factors involved in production:

- A. Production quality control;
- B. Service level control;
- C. Level of warranty;
- D. Product price control
- E. Does not have the correct answer



32. Improving competitiveness:

all listed;

- A. become more customer centric;
- B. drive down costs
- C. focus on core competencies;
- D. improve quality

33. According to the international standard ISO 9000-2000, the quality is:

- A. degree to which a set of inherent characteristics fulfils requirement;
- B. an attribute or a property characteristic of an object;
- C. the idea of qualities, and especially how to distinguish certain kinds of qualities from one another;
- D. A combination of properties and characteristics of products or services that enable them to meet the identified or predicted needs of consumers.
- E. Does not have the correct answer

33. A continuous quality improvement model consisting out of a logical sequence of four repetitive steps for continuous improvement and learning:

- A. Plan, Do, Check (Study) and Act
- B. Lemur cycle;
- C. Pleyschner cycle;
- D. Deming cycle;
- E. The Hirschman cycle
- F. Schindler's cycle

34. Visual representation of interacting steps that influence the quality of a product

- A. "Quality Loop";
- B. "PDCA Cycle";
- C. "Deming Cycle";
- D. Quality Path
- E. Does not have the correct answer



35. The concept of TQM is a concept ...:

Visual representation of interacting steps that influence the quality of a product;

- A. a continuous quality improvement model consisting out of a logical sequence of four repetitive steps for continuous improvement and learning: Plan, Do, Check (Study) and Act;
- B. a continuous effort by the management as well as employees of a particular organization to ensure long term customer loyalty and customer satisfaction;
- C. A combination of properties and characteristics of products or services that enable them to meet the identified or predicted needs of consumers
- D. Does not have the correct answer

36. A graph used to study how a process changes over time:

- A. Checklist;
- B. causal diagram;
- C. control chart;
- D. histogram
- E. Does not have the correct answer

37. Quality control inspection sheet

- A. Checklist;
- B. causal diagram;
- C. control chart;
- D. histogram
- E. Does not have the correct answer

38. The statistical quality control tool, which allows you to visualize the magnitude of losses, depending on the various defects, focusing on eliminating those defects that lead to the greatest losses.

- A. control card;
- B. causal diagram;
- C. histogram
- D. Pareto chart;
- E. Does not have the correct answer



39. A statistical quality control tool that can identify the most significant factors affecting the end result. Usually, when analyzing defects leading to the greatest losses:

- A. control card;
- B. causal diagram;
- C. Causal effect diagram;
- D. histogram
- E. Does not have the correct answer

40. The statistical quality control tool, which is a column chart, and allows to visualize the law of distribution of statistical data :

- A. control card;
- B. causal diagram;
- C. histogram;
- D. Pareto chart
- E. Does not have the correct answer

41. The procedure by which the body recognized in the established procedure documents the conformity of products, quality management systems, environmental management systems, personnel with the requirements established by the legislation:

- A. Certification;
- B. Unification;
- C. Verification;
- D. Certification
- E. Does not have the correct answer

42. Certification of products in Ukraine may have:

- A. Only obligatory nature;
- B. Only voluntary;
- C. Only unnecessary character
- D. Obligatory and voluntary;
- E. Does not have the correct answer



EXERCISES

Exercise 1

Total sales of the Firm No.1 in 2020 were 2,2 million USD, Firm No. 2 – 2,6 million USD, Firm No. 3 – 5,5 million USD, Firm No. 4 – 4,8 million USD., Firm No.5,2 – 0,9 million USD. Firm No. 6 – 7,7 million USD, Firm No. 7 – 2,8 million USD, Firm No. 8 – 5,2 million USD, Firm No. 9 – USD 2.5 million, Firm No. 10 – USD 5,8 million, Firm No. 11 – USD 4,0 million, Firm No. 12 – USD 0.9 million. Firm No. 13 – 7 mln. USD, Firm No. 14 – 2,8 mln. USD, Firm No. 15 – 5 mln. USD. Please estimate the Herfindahl-Hirschman index and make your conclusion about the level of concentration on this market.

Exercise 2

Assume the world consists of only two countries – A and B. which produce two commodities – rice and wine using a single factor of production – labor. One unit of labor in country A produces 12 t of rice or 4 t of wine, while in country B it produces 6 t of rice or 3 t of wine. Please calculate the resource costs for rice and wine production in both countries and find their comparative advantage according to Ricardo's theory.

Exercise 3

In some industry the total number of firms is divided into two groups: the first group of small firms (80% of their total number), having low sales, have a market share of only 25%, the second group of biggest firms receives 75% of market. Please illustrate the Lorenz Curve, calculate the Gini coefficient and do conclusions.

Exercise 4

Let's assume that we plan to open a coffee shop business, and



the information available is that the entire region has sales of 350,000,000 and the population of the region is 250,000. Knowing the local population in the target area (10,000), calculate the average sales per head of population, estimate the size of the local market and a sales forecast for the business, assumed that the target market share percentage is 17%.

Exercise 5

Total sales of the Firm No.1 in 2019 were 2 million USD, Firm No. 2 – 25 million USD, Firm No. 3 – 55 million USD, Firm No. 4 – 44 million USD, Firm No. 5 – 9 million USD. Firm No. 6 – 7 million USD, Firm No. 7 – 2,8 million USD, Firm No. 8 – 51 million USD, Firm No. 9 – USD 25 million, Firm No. 10 – USD 51 million, Firm No. 11 – USD 42 million, Firm No. 12 – USD 9 million. Firm No. 13 – 72 mln. USD, Firm No. 14 – 28 mln. USD, Firm No. 15 – 50 mln. USD. Please estimate the Herfindahl-Hirschman index and make your conclusion about the level of concentration on this market.

Exercise 6

Suppose that the published information shows that in the local area sales of 25,000,000 were generated by 25 local restaurants. Calculate the average sales.

Exercise 7

Let's assume that we plan to open a coffee shop business, and the information available is that the entire region has sales of 180,000,000 and the census shows that the population of the region is 1,200,000. From this information calculate the average sales per head of population in the region.

Exercise 8

Let's assume that we plan to open a coffee shop business, and



the information available is that the entire region has sales of 2,000,000 and the census shows that the population of the region is 350,000. Using this information, and knowing the local population in the area being considered is say 15,000 please estimate the size of the local market.

Exercise 9

Let's assume that we plan to open a business operating in the business to business sector, the information available from market size by industry reports is that the entire sector has sales of 7,546,000,000 and that there are 350,000 businesses operating in this sector. From this information please calculate the average sales per business.

Exercise 10

Consider the following hypothetical industry with four total firms:

1. Firm one market share = 30%
2. Firm two market share = 25%
3. Firm three market share = 30%
4. Firm four market share = 15%

Please show how HHI is calculated.

Exercise 11

A Japanese beverage company launches a line of non-alcoholic beers with sales of \$12 million. They estimate the total market size of non-alcoholic beers in Japan at \$1200 million by looking at the earnings of their major competitors. Please estimate the market share of this firm.

Exercise 12

Let's estimate the price indexes for particular product and



particular competitor based on following incoming data

Product	My price	Competitor 1	Competitor 2	Competitor 3	Competitor 4
1	40	38	42	45	41
2	350	355	368	345	380
3	1,2	1,1	1,1	1,0	0,9
4	10	8	8	7	9

Exercise 13

Let's estimate the average price indexes for particular product based on following incoming data

Product	My price	Competitor 1	Competitor 2	Competitor 3	Competitor 4
1	40	38	42	45	41
2	350	355	368	345	380
3	1,2	1,1	1,1	1,0	0,9
4	10	8	8	7	9

Exercise 14

Let's estimate the average price indexes for particular competitor based on following incoming data

Product	My price	Competitor 1	Competitor 2	Competitor 3	Competitor 4
1	40	38	42	45	41
2	350	355	368	345	380
3	1,2	1,1	1,1	1,0	0,9
4	10	8	8	7	9



CHAPTER 4. ENTERPRISE POTENTIAL MANAGEMENT

Theme 1. Fundamentals of enterprise potential management content

- 4.1. Economic potential and economic resources
- 4.2. Meaning of enterprise potential
- 4.3. Enterprise potential management

Key terms and concepts

- ✓ Economic potential
- ✓ Economic resources
- ✓ Management
- ✓ Enterprise potential

4.1. Economic potential and economic resources

In macroeconomics, economic potential is determined by the quantity of labor resources and the quality of their vocational training, by the volume of production capacities of industrial and construction organizations, by the production capacities of agriculture, by the extent of transportation arteries and the means of transport, by the development of sectors in the non-production sphere, by advances in science and technology, and by the resources of explored mineral deposits - in other words, by the elements that in their aggregate make up the productive forces of society.

The features of economic potential are the following:

1) Economic potential depends on the extent of a country's national wealth. National wealth is the total value of wealth and goods generated by all economic activity in a given nation. The national wealth is a useful framework through which to measure the progress of an economy and corresponding economic resources.

2) Economic potential depends on the absolute production capacity of economic branches and on the degree to which the capacities are used. Labor resources and production capacities in many countries are not fully used because of certain patterns of reproduction (for example, industrial production facilities operate at approximately 80 percent of capacity). Economic



potential is therefore calculated on the basis of the actual output and total use of production capacities.

3) Labor resources and the level of vocational training are a key element in economic potential.

4) Economic potential is in large measure determined by the level of industrial development, in particular, the development of the machine-building industry, which supplies all branches of the national economy with the means of production.

5) Economic potential also depends on the degree of development of sectors in the non-production sphere – education, public health, and housing and municipal services – that ensure the reproduction and functioning of labor power.

6) Economic potential is characterized by a high level of development of the productive forces, by a dynamic and proportional economic growth, by the increasing efficiency of production, by the integrated mechanization and automation of production, and by the improvement of qualification levels.

In microeconomics, enterprise potential is a specific ability of an economic entity to produce the maximum level of output of goods and services over a set period of time. In this case, the enterprise potential reflects the largest possible profit that an organization can make through effective using of all resources and potentials.

In general, the economic potential of any enterprise is defined by the:

1) quality and volume of available resources at the enterprise;

2) abilities of staff of the enterprise to creation of material benefits that is educational, qualification, and motivational potentials;

3) abilities of management to use available resources (that is preparation and talent of managers is considered to create and correct organizational structures of the enterprise depending on the enterprise's purposes and tasks);

4) innovative abilities (that is ability of the enterprise to



different changes in area of production, management and so on);

5) information abilities (ability to process information for the purpose of its further use);

6) financial abilities (solvency of the enterprise and others).

Economic resources are the basis of the enterprise potential. The economic resources are the factors used in producing goods or providing services. A resource is defined as a service, or other asset used to produce goods and services that meets human needs and wants.

Economic resources can be divided into human resources, such as labor and management, and non-human resources, such as land, capital goods, financial resources, and technology. Let's take a look at the primary types of economic resources.

1) Human resources are the value that the employees of a business provide through the application of skills, knowledge and experience. Human resources refer to the stock of competences, experience, knowledge and personality attributes embodied in the ability to perform labor so as to produce economic value.

- Labor is one of the factors of production, along with land and capital. Even in today's technologically advanced world, human labor is still needed to help process resources into products or to utilize resources to provide services. Different types of labor include production labor and service labor. An example of production labor is the classic factory worker. Service labor includes people involved in providing a service, such as doctors, lawyers, accountants, sales people, mechanics, and plumbers.

- Management is a resource that is used to facilitate efficient and effective production or operations of an enterprise so that it can accomplish its goals. Rather than being directly involved in production or services, managers coordinate, monitor and direct employees engaged in the production or service. Examples of management include a direct supervisor all the way up to the president of a large multinational company.



2) Non-human resources are the combination of actual things such as land, capital goods, financial resources, and technology.

- Land is all real estate and all natural resources on or in it, such as trees, minerals, elements, metals, gems, natural gas, thermal heat, oil, coal, water and crops.

- Capital is the factor of production and includes anything made by human beings that can be used in the production of goods or in providing services. Thus, capital goods refer to already-produced durable goods used in production of other goods or services. For example, it can be used to describe enterprise-specific infrastructure such as factories, private roads, capital equipment, buildings and other such assets.

- Financial resources are the cash funds available to an enterprise for spending in the form of money, liquid securities and credit lines.

- Technology, for purposes of economic resources, is the use of scientific and technical concepts and techniques that help to improve the quantity and quality of the production of goods and services. It's the application of study and research to solve enterprise problems and improve business operations and processes. Technology utilizes capital goods, such as computers and software.

Economic resources can be tangible and intangible.

Tangible resources or assets are any company property that has a physical existence. The tangible resources are cash, equipment, machinery, plant, property anything that has long-term physical existence or is acquired for use in the operations at the enterprise.

Intangible resources are reputation, name recognition, and intellectual property such as knowledge and know how, patents, copyrights, trademarks.

The intangible assets are the long-term resources of an entity, but have no physical existence.



4.2. Meaning of enterprise potential

Enterprise potential is a system of the separate private potentials that forms the economic and social ability of the enterprise to compete with other enterprises and reflects the level of enterprise competitiveness. The enterprise potential includes such components as:

1) Production potential is the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of an enterprise to produce goods and services. The production potential is the volume of products that can be generated by a production plant or enterprise in a given period by using current resources. The production potential consists of

- land potential is the stocks of natural land resources that the enterprise can use for economic activity;
- potential of fixed assets includes the tangible, non-consumable items (such as machines and equipment) owned by the enterprise and forms the basis of technical and technological production capacity;
- potential of working capital is part of the production potential in the form of raw materials, fuel, energy that are in inventories, work in progress and semi-finished products;
- potential of intangible assets covers the non-monetary assets that are divided into two primary forms of intangibles – legal intangibles (such as trade secrets (e.g., customer lists), copyrights, patents, trademarks, and goodwill) and competitive intangibles (such as knowledge activities (know-how, knowledge), collaboration activities, and structural activities).

2) Labour potential is the employee potential that relates to employee's interpersonal connections and refers to the stock of competences, experience, skills, knowledge and personality attributes embodied in the ability to perform labor. Efficient use of employee potential depends on employee engagement that is shows how employees are committed to their organization's goals and values, motivated to contribute to organizational



success, and are able at the same time to enhance their own sense of well-being.

3) Financial potential is the funds that are needed to do economic activity with its own funds or borrowed funds.

Own funds are used by companies, enterprises or other economic entities to put into production in order to make a profit. Example of own funds are net profit.

Borrowed funds are the funds (for example, loans) provided to enterprise by bank. It also means funds made temporarily available to the company from an external source (external investors) or an internal source (owners).

4) Investment potential is the part of financial potential that can be broken into three basic groups: ownership investments, lending investments and cash equivalents. The following are examples of ownership investments: stocks, investment for starting and running a business, investment into real estate and precious objects (metals). The lending investments are long-term loans and bonds. The cash equivalents are investments into assets that can easy to convert back into cash.

5) Innovative potential is the enterprise's ability to effectively use its own internal resources under the existing conditions in order to improve the quality, economy or efficiency of a specific product or process. It is an environment in which innovations are created, developed and implemented.

6) Marketing potential is the enterprise's ability to determine the need and demand in order to meet the needs of potential markets.

7) Logistics potential is the enterprise's ability to manage the flow of resources between the point of origin and the point of consumption in order to meet some requirements.

8) Infrastructural potential is the basic physical and organizational structures and facilities (e.g., buildings, roads, equipment, and power supplies) needed for the operation of an enterprise.

9) Information potential is the collection, storage,



processing and dissemination of information resources that are used to make rational decisions by top executives.

4.3. Enterprise potential management

Enterprise potential management is the efficient and effective deployment and allocation of an enterprise's potentials when and where they are needed. Such potentials may include production, labour, financial, investment, innovative, marketing, logistics, infrastructural and information.

Enterprise potential management is the process through which an enterprise develops the internal potential to most efficiently and effectively provide its work and to sustain itself over the long term. The potential of an enterprise denotes its ability to perform work.

Enterprise potential management is the management of the limits of an organization's resources, such as its labor force, human capital, natural resources such as raw materials, tangible resources such as property or production machinery, office space, technology, equipment and intangible resources such as brand image and knowledge, financial resources and anything else a particular enterprise may use to make a profit.

Enterprise potential management also deals with the capacity of an enterprise's processes – for example, new product development or marketing – as well as with capacity constraints that arise when various resources are combined.

The main advantages of the enterprise potential management are:

- it provides efficient use of the resources;
- it increases the level of inter-personal trust among employees and cooperation and collaboration among the employees;
- it encourages employees to solve problems instead of avoiding them;
- it provides the efficient use of the land potential, fixed assets, working capital and intangible assets;



- it provides the timely receipt of complete and accurate information;
- it helps to make rational decisions;
- it promotes to develop investment, innovative, marketing and logistics potentials;
- it promotes to grow of productivity and profitability;
- it increases total amount of output and reduces total cost of an enterprise.

Theme 2. Methods for how to value a business

Content

4.4. Overview

Business owners frequently have the need or desire to establish a value for their business. Professionals involved in valuing closely held businesses know it is not a simple task. The complexity is further compounded by the fact that each business owner's purpose, motive, and goal in valuing the business varies greatly from those of others. No two businesses are alike; therefore, no one size fits all. The effect these issues may and usually do have on the valuation process gives rise to the concept that the valuation process is more of an art than a science.

There are several commonly used methods of valuation. Each method may at times appear more theoretically justified in its use than others. The soundness of a particular method is entirely based on the relative circumstances involved in each individual case. The valuation analyst responsible for selecting the most appropriate method must base his or her choice of methods on knowledge of the details of each case. When this knowledge is appropriately applied, much of the art factor is eliminated from the process and valuation becomes more of a science. The objective of the Business Valuation Certification Training Center is to make the entire process more objective in



nature.

The commonly used methods of valuation can be grouped into one of three general approaches, as follows:

1. Asset Based Approach
 - a. Book Value Method
 - b. Adjusted Net Asset Method
 - I. Replacement Cost Premise
 - II. Liquidation Premise
 - III. Going Concern Premise
2. Income Approach
 - a. Capitalization of Earnings/Cash Flows Method
 - b. Discounted Earnings/Cash Flows Method
3. Market Approach
 - a. Guideline Public Company Method
 - b. Comparable Private Transaction Method

Theme 3. Asset based approach

Content

- 4.5. Book value method
- 4.6. Adjusted net assets method

Key terms and concepts

- | | |
|------------------------|------------------------|
| ✓ Methods of valuation | ✓ Financial accounting |
| ✓ Business | concept |

The asset-based approach is defined in the International Glossary of Business Valuation Terms as “a general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities”. Any asset-based approach involves an analysis of the economic worth of a company’s tangible and intangible, recorded and unrecorded assets in excess of its outstanding liabilities. Thus, this approach addresses the book value of the Company as



stipulated in Revenue Ruling 59-60:

“The value of the stock of a closely held investment or real estate holding company, whether or not family owned, is closely related to the value of the assets underlying the stock. For companies of this type the appraiser should determine the fair market values of the assets of the company ... adjusted net worth should be accorded greater weight in valuing the stock of a closely held investment or real estate holding company, whether or not family owned, than any of the other customary yardsticks of appraisal, such as earnings and dividend paying capacity”.

While the quote above clearly applies to holding companies, asset-based approaches can also be valid in the context of a company which has very poor financial performance. An important consideration when using an asset approach is the premise of value, both for the company and for individual assets.

4.5. Book value method

This method is based on the financial accounting concept that owners' equity is determined by subtracting the book value of a company's liabilities from the book value of its assets. While the concept is acceptable to most analysts, most agree that the method has serious flaws. Under generally accepted accounting principles (GAAP), most assets are recorded at historical cost minus, when appropriate, accumulated depreciation or cumulative impairments. These measures were never intended by the accounting profession to reflect the current values of assets. Similarly, most long-term liabilities (bonds payable, for example) are recorded at the present value of the liability using rates at the time the liability is established. Under GAAP, these rates are not adjusted to reflect market changes. Finally, GAAP does not permit the recognition of numerous and frequently valuable assets such as internally developed trademarks, trade names, logos, patents and goodwill. Thus, balance sheets prepared under GAAP make no attempt to either include or



correctly measure the value of many assets. Thus, by definition, owners' equity will not normally yield a valid measure of the value of the company. Despite these significant limitations, this approach can frequently be found in buy/sell agreements.

4.6. Adjusted net assets method

This method is used to value a business based on the difference between the fair market value of the business assets and its liabilities. Depending on the particular purpose or circumstances underlying the valuation, this method sometimes uses the replacement or liquidation value of the company assets less the liabilities. Under this method the analyst adjusts the book value of the assets to fair market value (generally measured as replacement or liquidation value) and then reduces the total adjusted value of assets by the fair market value of all recorded and unrecorded liabilities. Both tangible and identifiable intangible assets are valued in determining total adjusted net assets. If the analyst will be relying on other professional valuers for values of certain tangible assets, the analyst should be aware of the standard of value used for the appraisal. This method can be used to derive a total value for the business or for component parts of the business.

The Adjusted Net Assets Method is a sound method for estimating the value of a non-operating business (e.g., holding or investment companies). It is also a good method for estimating the value of a business that continues to generate losses or which is to be liquidated in the near future.

The Adjusted Net Assets Method, at liquidation value, generally sets a "floor value" for determining total entity value. In a valuation of a controlling interest where the business is a going concern, there would have to be a reason why the controlling owner would be willing to take less than the asset value for the business. This might occur where the assets are under-performing, resulting in a conclusion of value that is less than the adjusted net assets value but more than the liquidation value. Before concluding the Adjusted Net Assets Method has



established the floor value, the valuator should consider the potential of overstating the value of assets, existence of non-operating assets, and other omissions in his/her determination.

The negative aspect to this method is that it does not address the operating earnings of the business. Therefore, it would be inappropriate to use this method to value intangible assets, such as patents or copyrights, that are typically valued based on some type of operating earnings (e.g., royalties). However, replacement cost methodology may be utilized in determining values of certain intangibles such as patents.

Illustration – the following reconciliation between book values and fair market values incorporates four major adjustments:

1. To remove non-operating assets, for example: excess cash and cash surrender value of life insurance.
2. To convert LIFO inventory to FIFO inventory.
3. To estimate NPV of the deferred income tax liability associated with the built-in gain on LIFO reserve and PP&E based on a seven-year liquidation horizon discounted to NPV using a 5% discount rate (risk free rate).
4. To adjust property and equipment to estimated fair market value based on appraisal performed by ABC Appraisals, Inc.



	Book Value	Ref	Adjustment	Fair Market Value
Current Assets:				
Cash and Cash Equivalents	\$ 1,119,300	1	\$ (518,000)	\$ 601,300
Accounts Receivable	1,668,232		-	1,668,232
Raw Materials	306,752	2	187,706	494,458
Work in Process and Finished Goods	70,930		-	70,930
Deferred Income Taxes	86,000	3	(86,000)	-
Prepaid Expenses	60,850		-	60,850
Total Current Assets	3,312,064		(416,294)	2,895,770
Property, Plant and Equipment, at Cost:				
Land	88,828	4	4,572	93,400
Buildings and Improvements	1,122,939	4	(305,488)	817,451
Machinery and Equipment	2,560,044	4	(1,379,710)	1,180,334
Vehicles	804,336	4	(628,871)	175,465
Office Equipment	419,284	4	(363,859)	55,425
Total Property and Equipment	4,995,431		(2,673,356)	2,322,075
Less Accumulated Depreciation	(3,376,371)	4	3,376,371	-
Net Property and Equipment	1,619,060		703,015	2,322,075
Other Assets:				
Cash Value of Life Insurance	252,860	1	(252,860)	-
Deposits	30		-	30
Total Other Assets	252,890		(252,860)	30
Total Assets	5,184,014		33,861	5,217,875
Current Liabilities:				
Note Payable to Shareholders	17,000		-	17,000
Accounts Payable	314,554		-	314,554
Income Taxes Payable	(80,199)		-	(80,199)
Accrued Liabilities	411,512		-	411,512
Total Current Liabilities	662,867		-	662,867
Long-Term Debt, Less Current Portion				
Deferred Income Taxes	-	3	253,000	253,000
Total Liabilities	762,867		253,000	1,015,867
Net Assets	\$ 4,421,147			
Adjusted Net Tangible Operating Asset Value (Rounded)				4,202,000
Non-Operating Assets:				
Excess Cash				518,000
Cash Surrender Value Of Life Insurance (Rounded)				253,000
Adjusted Net Tangible Assets				4,973,000

Please Note: In this example, an adjustment for deferred taxes was made. Not making an adjustment for deferred taxes would be theoretically justified in a situation where the analyst is valuing a business for purposes of an Asset Purchase/Sale. However, an adjustment for deferred taxes may be appropriate in a valuation of a C-Corporation when the equity securities of the corporation are to be valued and adjustment has been made to adjust the value of assets from historical amounts to an economic/normalized balance sheet.

The IRS has taken the position that it is inappropriate to



take a discount for the income tax liability arising from asset liquidation when it is unlikely the liquidation will occur. In the Estate of Davis 3, the issue was deferred tax on built-in gains (these potential taxes, also referred to as taxes on “trapped-in gains” in some Tax Court cases, is hereafter referred to as a “BIG tax”) on marketable securities. In Davis, the Tax Court indicated some discount should be considered and allowed a 15 percent discount. The Court was convinced that even though no liquidation was planned or contemplated, a hypothetical willing seller and willing buyer would have considered the potential BIG tax in determining the price to be paid for the holding company stock. In the Estate of Jameson 4, the Court measured the BIG tax discount on timberland based on the NPV of the tax using an expected liquidation date. In the Estate of Dunn 5, the Tax Court allowed a discount on the asset approach but not the income approach. In Dunn, the estate held stock in a C-Corp that rented heavy equipment and the valuator weighted the asset and capitalization of cash flow approaches. In the Estate of Welch 6, the Sixth Circuit confirms the BIG tax discount.

In summary, the BIG tax discount should be considered in valuing closely held C-Corp stock.

Adjustments have ranged from 100% of the tax at the date of valuation, to 100% of the tax on a present value basis over the time frame in which the tax is expected to be incurred, depending on the facts and circumstances in the case.

A crucial point to consider in dealing with taxes is the nature of the investment being valued. A buyer who is considering acquiring an interest in a company as an asset purchase should be aware that a step-up in basis will be received, resulting in additional depreciation and tax benefits. In this case, the tax liability for any capital gains will be with the former owner. As such, the buyer should be willing to pay full market price for the assets (less any commissions or brokers' fees).



Theme 4. Income approach

Content

4.7. Capitalization of earnings/cash flows method

4.8. Discounted earnings/cash flows method

Key terms and concepts

✓ Capitalization

✓ Cash flows method

Revenue Ruling 59-60 clearly requires that an income approach be used when it lists “the earning capacity of the company,” as a factor to be considered. The income approach is defined in the International Glossary of Business Valuation Terms as, “A general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount.”

4.7. Capitalization of earnings/cash flows method

The Capitalization of Earnings Method is an income-oriented approach. This method is used to value a business based on the future estimated benefits, normally using some measure of earnings or cash flows to be generated by the company. These estimated future benefits are then capitalized using an appropriate capitalization rate. This method assumes all of the assets, both tangible and intangible, are indistinguishable parts of the business and does not attempt to separate their values. In other words, the critical component to the value of the business is its ability to generate future earnings/cash flows. This method expresses a relationship between the following:

Estimated future benefits (earnings or cash flows) Yield (required rate of return) on either equity or total invested capital (capitalization rate) Estimated value of the business It is



important that any income or expense items generated from non-operating assets and liabilities be removed from estimated future benefits prior to applying this method. The fair market value of net non-operating assets and liabilities is then added to the value of the business derived from the capitalization of earnings.

This method is more theoretically sound in valuing a profitable business where the investor's intent is to provide for a return on investment over and above a reasonable amount of compensation and future benefit streams or earnings are likely to be level or growing at a steady rate.

Example

Company ABC has five-year weighted average earnings on an after-tax basis of \$591,000. It has been determined that an appropriate rate of return for this type of business is 21.32 percent (after-tax). (See Ibbotson Build-Up Method) Assuming zero future growth and non-operating assets of \$771,000 the value of ABC Company based on the capitalization of earnings method is as follows:

(Numbers rounded)

Net earnings to equity	\$ 591,000
Capitalization rate	<u>÷ 21.32%</u>
Total (rounded)	2,772,000
Value of non-operating assets	<u>+ 771,000</u>
Marketable controlling interest value	<u>\$ 3,543,000</u>

4.8. Discounted earnings/cash flows method

The Discounted Earnings Method is sometimes referred to as the Discounted Cash Flow Method, which suggests the only



type of earnings to be valued, using this method, would be some definition of cash flow, such as operating cash flow, after-tax cash flow or discretionary cash flow. The Discounted Earnings Method is more general in its definition as to the type of earnings that can be used.

The Discounted Earnings Method allows several possible definitions of earnings. It does not limit the definition of earnings only to cash flows. The Discounted Earnings Method is an income-oriented approach. It is based on the theory that the total value of a business is the present value of its projected future earnings, plus the present value of the terminal value. This method requires that a terminal-value assumption be made. The amounts of projected earnings and the terminal value is discounted to the present using an appropriate discount rate, rather than a capitalization rate.

1. Description

The Discounted Earnings Method of valuing a closely held business uses the following steps:

a) Determine the estimated future earnings of the business (in this example we have projected earnings for five years and have assumed no growth beyond this period).

b) A terminal or residual value is often determined at the end of the fifth year. The terminal value that is often used is merely the fifth-year earnings projected into perpetuity.

c) The discount rate determined incorporates an appropriate safe rate of return, adjusted to reflect the perceived level of risk for the business being valued.

d) The estimated future earnings and the terminal value are then discounted to the present using the discount rate determined in Step c) and summed. The resulting figure is the total value of the business using this method.

2. Example

Assume the following pre-tax fully adjusted cash flows as they relate to Homer Co.:

Projected annual cash flows to be received at the end of:



Year 1 \$10,500
Year 2 40,700
Year 3 80,600
Year 4 110,100
Year 5 150,300

Year 1 of the projected cash flows is the year following the valuation date.

The pre-tax discount rate is 24 percent.

The pre-tax capitalization rate is 24 percent.

Calculation of present value factors:

Year	Formula for Present Value Factor	Present value factors for 24% rate of return
1	$1/(1.24)^1$	0.8065
2	$1/(1.24)^2$	0.6504
3	$1/(1.24)^3$	0.5245
4	$1/(1.24)^4$	0.4230
5	$1/(1.24)^5$	0.3411

Calculate the value of the business

a) Calculate the present value of the annual cash flows:

End of Year	Net Cash Flow	Present Value Factor	Present Value
1	\$10,500	0.8065	\$ 8,468
2	40,700	0.6504	26,470
3	80,600	0.5245	42,274
4	110,100	0.4230	46,572
5	150,300	0.3411	51,268
			<hr/> \$175,052



b) Calculate the present value of the terminal value:

End of Year	Terminal Value	Present Value Factor	Present Value
5	\$626,250	0.3411	\$213,614

No long-term sustainable growth is assumed. (Had we assumed sustainable growth at three percent, our discount rate would have to be reduced by three percent to arrive at an appropriate capitalization rate.) The company's terminal value is \$626,250 at the end of year 5 (150,300 24%). This value, also known as the "terminal value", is equal to the present value of a perpetual annual cash flow of \$150,300.

c) Add both present values:

PV of annual cash flows \$175,052

PV of terminal value + 213,614

TOTAL VALUE OF BUSINESS \$ 388,666

Theme 5. Market approach

Content

- 4.9. Advantages and disadvantages
- 4.10. Basic implementation
- 4.11. Sources of guideline company data
- 4.12. Parameters
- 4.13. Matching price to parameter
- 4.14. Basic financial indicators
- 4.15. Market approach: dividend paying capacity method

Key terms and concepts

- ✓ Market approach
- ✓ Basic financial indicators
- ✓ Cash flow
- ✓ Pretax income



The market approach is covered in a survey manner in this part of the course. The complexity and importance of understanding this approach is to cover this topic in greater depth in separate material.

What follows, therefore, is an overview of this important topic.

The idea behind the market approach is that the value of a business can be determined by reference to reasonably comparable guideline companies (“comps”) for which transaction values are known.

The values may be known because these companies are publicly traded or because they were recently sold and the terms of the transaction were disclosed.

This approach is commonly used especially in contexts where the user(s) of the analyst’s report do not have specialized business valuation knowledge. There is an obvious parallel in a lay person’s mind to consulting with a real estate agent prior to listing your home for sale to find out for what amount similar homes in your neighborhood have sold. The market approach is the most common approach employed by real estate appraisers. Real estate appraisers generally have from several to even hundreds of comps from which to choose.

For a business valuation professional, a good set of comps may be as many as two or three – and sometimes no comparable company data can be found. (The objective of analyzing these components is to determine if the comparable company has a similar risk profile.) There are three sources of comparable company transaction data:

- Public company transactions
- Private company transactions
- Prior transactions of the subject company

4.9. Advantages and disadvantages

As with any valuation approach, there are significant advantages and disadvantages.



1. Advantages

a) It is “user friendly.” Companies with similar product, geographic, and/or business risk and/or financial characteristics should have similar pricing characteristics. People outside of business valuation can understand this logic. Users of valuation reports (transaction participants, juries, judges, etc.) tend to find market-based methods to be familiar and easy to understand in comparison to other approaches.

b) It uses actual data. The estimates of value are based on actual transaction prices, not estimates based on number of complex assumptions or judgments. The data can be independently obtained, verified, and tested.

c) It is relatively simple to apply. The market approach derives estimates of value from relatively simple financial ratios, drawn from a group of similar companies. The most complicated mathematics involved is multiplication. However, this is an advantage more in perception than in reality.

d) It does not rely on explicit forecasts. The income approach requires a set of assumptions used in developing the forecasted cash flows. The market approach does not require as many assumptions.

2. Disadvantages

a) Sometimes, no recent comparable company data can be found. This may be the biggest reason the approach is not used in valuation; the analyst may not be able to find guideline companies that are sufficiently similar to the subject. Some companies are so unusual, small, diversified, etc. that there are no other similar companies.

b) The standard of value may be unclear. Most transaction databases provide financial and pricing data but do not explicitly indicate whether the reported transaction was arms-length, strategic, synergistic, fire sale, asset vs. stock, etc. Some argue that the occurrence of actual fair market value transactions reported in transaction databases is probably less than 50%. If the guideline transaction was synergistic, the resulting values multiple will likely produce a synergistic value – not fair market



value.

c) Most of the important assumptions are hidden. Among the most important assumptions in a guideline price multiple is the company's expected growth in sales or earnings. In the income approach the growth rates are disclosed. When applying multiples from guideline companies the implicit subject company growth will be a function of the growth rates built into the prices of the guideline companies on which the value of the subject is based.

d) It is a costly approach. Done correctly, the valuation analyst must perform significant financial analysis on the subject company and equally on each of the comparable companies. The analysis must be done to verify comparability as well as to identify underlying assumptions built into the pricing multiple. This is after and in addition to the significant time and effort to first identify possible comps.

e) It is not as flexible or adaptable as other approaches. Unlike the income approach, the market approach is sometimes difficult to include unique operating characteristics of the firm in the value it produces.

f) Reliability of the transaction data is questionable. Great strides have been made in improving the accuracy, completeness, and depth of the data reported by various subscription services (discussed below). However, particularly with private company transactions, the analyst would do well to use such data with caution.

4.10. Basic implementation

One of the advantages to the market approach is the apparent simplicity in

implementing it. At its simplest, it requires only multiplication and perhaps some subtraction, depending on the multiple selected. The basic format is:

Value = (Price/Parameter) comp x Parameter Subject

(For invested capital multiples, debt should be



subtracted).

4.11. Sources of guideline company data

The first part of the pricing multiple is the numerator – the price measure of the guideline company.

Guideline company transactions refer to acquisitions and sales of entire companies, divisions or large blocks of stock of either private or publicly traded firms. There are several sources available to obtain pricing data for public and private companies. The following is not an exhaustive presentation of sources. Instead, it is a presentation of commonly used sources.

1. Data Sources – Private Companies Transactions

A number of publications collect and disseminate information on transactions. Most publications make their databases accessible on the Internet for a fee on a per-use basis or annual subscription access. Among the most widely used are:

- a) Institute of Business Appraisers (IBA)
- b) BIZCOMPS[®]
- c) Pratt's Stats[™]
- d) Done Deals
- e) Mid-Market Comps (ValueSource)
- f) Mergerstat[®]

The IBA and BIZCOMPS[®] databases cover transactions of relatively small companies.

For example, the BIZCOMPS database has over 8,880 transactions, with a median selling price of \$135,000. The median revenue of the companies included was \$360,000.

Pratt's Stats[™] included about 10,000 transactions with 46% below \$1 million in value. The companies covered tend to be larger, with median revenue of \$1.6 million and a median selling price of \$1.5 million. It reported transactions from 700 SIC and 840 NAICS codes, respectively. Deal prices range from under \$1 million to \$14.5 billion. The information provided for each transaction is much more detailed than it is for either the BIZCOMPS or IBA databases.



The Done Deals, Mid-Market Comps, and Mergerstat data sets generally include transactions where one of the companies, primarily the buyer, was publicly traded. Pratt's Stats™ also include publicly traded transactions for an additional fee. Done Deals and Mid-Market Comps have approximately 7,300 transactions as of 2006.

The deal prices range from \$1 million to \$1 billion with 79% of the companies sold being privately owned. One-half of the prices were under \$15 million. Most of the data comes from SEC filings. As with the other databases covering actual transactions, the range of observations is very large.

2. Data Sources – Public Companies Transactions

Publicly traded companies are required to file their financial statements electronically with the Securities and Exchange Commission (SEC). These filings are public information and are available on the SEC website at www.sec.gov.

Documents can also be obtained from a number of commercial vendors, who add value by allowing the user to extract selected items (i.e., the balance sheet, income statement, etc.) or to search all filings for those meeting certain criteria. In addition, vendors put the data for most or all publicly traded companies in a standardized format. A partial list of those vendors who reformat the data into standardized formats is:

- a) Alacra
- b) Compustat
- c) Disclosure
- d) Reuters
- e) Mergent Company Data Direct
- f) OneSource
- g) Fetch XL

It is also important to remember that in this, the information age, there is a vast amount of financial information available for free. For example, historical financial data, pricing, disclosures, SEC filings, and analyst reports are available at free web sites such as Yahoo!



Finance. If the analyst has identified a public company as a possible comparable, they would do well to go to that company's web site and go to the "Investor Relations" page.

Very often, all SEC filings are available and downloadable for free.

4.12. Parameters

The second part of the pricing multiple is the denominator, the financial statement parameter that scales the value of the company.

Some specific common measures include:

1. Revenues
2. Gross profit
3. EBITDA
4. EBIT
5. Debt-free net income (net income plus after-tax interest expense)
6. Debt-free cash flow (debt-free net income plus depreciation/amortization)
7. Pretax income
8. Net after-tax income
9. Cash flows
10. Asset related
11. Tangible assets
12. Book value of equity
13. Book value of invested capital (book value of equity plus debt)
14. Tangible book value of invested capital (book value of equity, less intangible assets, plus book value of debt)
15. Number of employees

4.13. Matching price to parameter

"Price" should be matched to the appropriate parameter based on which providers of capital in the numerator will be



paid with the monies given in the denominator. For example, in price/EBIT, price is the market value of invested capital (MVIC), since the earnings before interest payments and taxes will be paid to both the debt and equity holders. In price/net income, price is the market value of equity (MVEq) only, since net income is after interest payments to debt holders and represents amounts potentially available to shareholders. Any denominators that exclude interest (e.g., EBIT or EBITDA) should usually be matched with corresponding numerator (e.g., MVIC).

MVIC is usually the numerator paired with:

1. Revenues
2. EBITDA
3. EBIT
4. Debt-free net income
5. Debt-free cash flows

MVEq is usually the numerator paired with:

1. Pretax income
2. Net income
3. Cash flow
4. Book value of equity

4.14. Basic financial indicators

Finally, when determining whether you have found comparable company data, some financial measures that should be included in an analysis for both guideline and subject companies include:

1. Size Measures

These include sales, profits, total assets, market capitalization, employees, and total invested capital. Given how size may affect value, at least one, and maybe all, of these should be included.

2. Historical Growth Rates

Consider growth in sales, profits, assets, or equity.



3. Activity and Other Ratios

Examples are the total asset and inventory turnover ratios. Depending on the type of business being analyzed, other ratios also may be important.

4. Measures of Profitability and Cash Flow

Consider the four most common measures:

a) Earnings before interest, taxes, depreciation and amortization (EBITDA)

b) Earnings before interest and taxes (EBIT)

c) Net income

d) Cash flow

5. Profit Margins

The current level of profits is probably less important than the ratio of profits relative to some base item—usually sales, assets, or equity.

6. Capital Structure

It is essential to use some measures derived from the current capital structure. The most common measures are the values of outstanding total debt, preferred stock (if it exists), and the market value of common equity, since book equity generally has very little to do with how stock investors view their relative position with a company. The ratio of debt to market value of equity can be included since this represents the true leverage of the company.

7. Other Measures

These will be a function of what is important in the industry in which the subject company operates.

4.15. Market approach: dividend paying capacity method

The Dividend Paying Capacity Method, sometimes referred to as the Dividend Payout Method, is an income-oriented method but is considered a market approach as it is based on market data.

It is similar to the capitalization of earnings method. The difference between this method and the capitalization of



earnings method lies in the difference in the type of earnings used in the calculations and the source of the capitalization rate. This method of valuation is based on the future estimated dividends to be paid out or the capacity to pay out. It then capitalizes these dividends with a five-year weighted average of dividend yields of five comparable companies.

Please note this method must be considered for estate and gift tax purposes per Revenue Ruling 59-60.

1. Description

This method expresses a relationship between the following:

a) Estimated future amount of dividends to be paid out (or capacity to pay out)

b) Weighted average “comparable” company dividend yields of comparable companies, further weighted by degree of comparability each year using a sufficient number of comparable companies, generally more than three

c) Estimated value of the business

This method is particularly useful for estimating the value of businesses that are relatively large and businesses that have had a history of paying dividends to shareholders. It is highly regarded because it utilizes market comparisons.

Similar to the Price/Earnings Ratio or other methods relying on market data, this method may not be appropriate for valuing most small businesses because they do not have comparable counterparts in the publicly traded arena. Another problem with this method is that most closely held businesses avoid paying dividends. For tax reasons, compensation is usually the preferred method of disbursing funds.

In determining dividend-paying ability, liquidity is an important consideration. A relatively profitable company may be illiquid, as funds are needed for fixed assets and working capital.

2. Example (Pre-Tax Basis)

StinCo, Inc. has a five-year history of weighted average profits of \$250,000. Its weighted average dividend payout



percentage over the last five years has been 30 percent.

$$\text{Dividend Payout Ratio} = \$250,000 \times 30\%$$

$$\text{Amount of Dividend} = \$75,000$$

The weighted average dividend yield rate of five comparable companies over the last five years is 7.5 percent. Therefore, the value of StinCo, Inc., under the dividend payout method is as follows.

$$\$75,000 / .075 = \$1,000,000$$

3. Observation

It has been suggested that large, “well-heeled” corporations pay out to their shareholders about 40 to 50 percent of their earnings. Therefore, keep this fact in mind when estimating dividend payout potential for companies without a history of paying dividends.

Theme 6. Other approaches: income/asset approaches

Content

4.16. Excess earnings/treasury method

4.17. Excess earnings/reasonable rate method

Key terms and concepts

- | | |
|------------|--------------------------|
| ✓ business | ✓ treasury method |
| ✓ value | ✓ reasonable rate method |

4.16. Excess earnings/treasury method

The Excess Earnings Treasury Method is a derivative method stemming from what is often called the Excess Earnings Return on Assets Method. This method acquired its name from the IRS in ARM 34 and Revenue Ruling 68-609. Revenue Ruling 68-609 also refers to this methodology as the “formula approach” and asserts that “the formula approach may be used for determining the fair market value of intangible assets of a



business only if there is no better basis therefore available.”

Unlike all of the other methods discussed thus far, this method combines the income and asset-based approaches to arrive at a value of a closely held business. Its theoretical premise is that the total estimated value of a business is the sum of the values of the adjusted net assets (as determined by the adjusted net assets method) and the value of the intangible assets. The determination of the value of the intangible assets of the business is made by capitalizing the earnings of the business that exceed a “reasonable” return on the adjusted (identified) net assets of the business.

1. Description

A valuation of a business using the Excess Earnings Treasury Method uses the following steps:

a) Determining the estimated future earnings of the company without regard to growth. Usually this is the historical economic unweighted or weighted average earnings over the last five years, adjusted for any non-recurring items or any other normalizing adjustments.

b) Determining the unweighted or weighted average of the GAAP (or tax basis) net assets. This calculation should exclude goodwill or other intangible assets, whose value is also to be estimated by this method. The analyst uses GAAP net assets in this step in order to ensure as much comparability with industry data as possible, from which a reasonable rate of return will be obtained in Step c).

c) Selecting a reasonable rate of return to apply to the GAAP net assets whose value was determined in Step b). The most appropriate rate of return is the average return on assets (unweighted or weighted) for comparable companies, or as determined from industry averages.

d) Multiply the value of the GAAP net tangible assets of the business, as determined in Step b), by the rate of return determined in Step c). The product is that portion of total earnings of the business attributable to a reasonable return on the weighted average or unweighted average net adjusted



assets.

e) The earnings determined in Step d) are then subtracted from the total earnings determined in Step a). The difference is the excess earnings attributable to the intangible assets being valued by this method.

f) Select a capitalization rate that corresponds to an appropriate rate for a safe return, adjusting it accordingly to reflect the perceived level of risk associated with the company.

g) The amount of excess earnings determined in Step e) is then divided by the capitalization rate determined in Step f). The amount thus derived is the estimated total value of intangible assets.

h) Determine the adjusted net assets at fair market value, as of the valuation date; use the adjusted net assets method. This determination excludes goodwill and all other intangible assets.

i) The final step in valuing the entire business is the mere addition of the value of the intangible assets (determined in Step g)) to the adjusted net tangible assets (determined in Step h)).

2. Example (After-Tax Basis)

a) Assume the following data as they relate to Poker Co.:

(1) The five-year weighted average historical after-tax economic earnings are \$250,000

(2) The GAAP weighted average net assets are \$980,000

(3) The value of adjusted net assets are \$1,050,000

(4) The industry weighted average after-tax return on equity is 12 percent

(5) The appropriate after-tax intangible capitalization rate for Poker Co. is 29.69 percent

(6) The company's current adjusted net assets are \$1,050,000

b) Determine the value of the entire business of Poker Co.:



Calculate the value of intangibles

Weighted average historical after-tax economic earnings			\$250,000
Less earnings attributable to tangible assets:			
GAAP net assets (weighted average)	\$980,000		
x industry ROE(weighted average)	x .12	=	(117,600)
Excess earnings attributable to intangible assets			\$132,400
Divided by intangible capitalization rate		÷	<u>.2969</u>
Estimated value of intangibles (Rounded)			\$446,000

The total value of the business is the sum of the value of net adjusted assets and the value of intangible assets. Therefore, the total value of Poker Co. under the excess earnings-return on assets (treasury method) is as follows:

Determine the value of the entire business

Value of intangibles	\$ 446,000
(+) Value of adjusted net assets (date of valuation)	<u>\$1,050,000</u>
TOTAL VALUE OF BUSINESS	\$1,496,000

4.17. Excess earnings/reasonable rate method

The Excess Earnings Reasonable Rate Method (formally referred to as “Safe Rate Method”) is another derivative of the Excess Earnings Return on Assets Method. This method has acquired its name from the fact it applies a reasonable rate of return to the adjusted net assets rather than an industry rate of return as in the Treasury Method. Another distinction between this method and the Treasury Method is the reasonable rate of return is applied to the latest year’s balance of adjusted net assets rather than to an unweighted or weighted average of net assets (as in the Treasury Method). Similar to the Treasury Method, this method is an income-and-asset-oriented approach. It is also based on the theory that the total value of a business is the sum of the adjusted net assets and the value of the intangibles, as determined by capitalizing the “excess” earnings of the business. The amount of earnings capitalized is those earnings which exceed a reasonable rate of return on the adjusted net assets of the business.



1. Description

To value a business using the Excess Earnings Reasonable Rate Method, follow these steps:

a) Determine the estimated future earnings of the company.

b) Determine the current adjusted net assets at fair market value, using the adjusted net assets method. This determination must exclude goodwill and other intangible assets.

c) Select a reasonable rate of return to apply to adjusted net assets whose value was determined in Step b). The rate chosen should correspond to the relative liquidity and risk of the underlying assets to which it is being applied.

d) Multiply the value of the adjusted net tangible assets of the business determined in Step b) by the rate of return determined in Step c). The product is the part of total earnings attributable to a return on adjusted net assets. Adjusted net assets, once again, exclude intangible assets.

e) The earnings determined in Step d) are then subtracted from the total earnings determined in Step a). The difference is the excess earnings considered to be attributable to the intangible assets being valued by this method.

f) Select a capitalization rate that corresponds to an appropriate rate for a reasonable return and that has been adjusted for any perceived level of risk and other relevant concerns associated with the company.

g) The amount of excess earnings determined in Step e) is then divided by the capitalization rate selected in Step f), to arrive at the estimated value of the intangible assets.

h) The final step in valuing the entire business is the mere addition of the value of the intangible assets (determined in Step g)) to the value of the adjusted net tangible assets (determined in Step b)).

2. Example (Pre-Tax Basis)

a) Assume the following as they relate to Lesbro, Inc.

(1) The five-year weighted average historical pre-tax



economic earnings are

\$380,000

(2) Value of the latest year's net adjusted assets are \$1,050,000

(3) The company's assumed reasonable rate on adjusted net assets is 10 percent

(4) The appropriate pre-tax intangible capitalization rate for Lesbro, Inc. is 49.48 percent

b) Determine the value of the entire business of Lesbro, Inc.

Calculate the value of intangibles

Weighted average historical pre-tax economic earnings	\$380,000
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Less earnings attributable to tangible assets:

Adjusted net assets	\$1,050,000		
x reasonable rate (cost of debt in this example)*	.10	=	(105,000)

Excess earnings attributable to intangible assets	\$ 275,000
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Divided by intangible capitalization rate**	.4948
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Estimated value of intangibles (Rounded)	\$556,000
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The total value of the business is the sum of the value of net adjusted assets and the value of intangible assets. Therefore, the total value of Lesbro, Inc. under the Excess Earnings (Return on Assets) Reasonable Rate Method follows:

Determine the value of the entire business

Value of intangibles	\$556,000
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(+) Value of adjusted net assets	<u>\$1,050,000</u>
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TOTAL VALUE OF BUSINESS	\$1,606,000
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*The valuator should be aware of what the local courts are looking for with regard to the cost of debt, for example, prime plus 1 or 2 percent.

NOTE: The Excess Earnings (Return on Assets) Treasury Method is applied to after-tax economic earnings. By comparison, the Excess Earnings (Return on Assets) Reasonable Rate Method example is applied to pre-tax economic earnings.



Different types of earnings (after-tax versus pre-tax) have been used to demonstrate that these methods can be applied regardless of the benefit stream. This is not intended to imply that after-tax economic earnings are the only appropriate benefit stream to be used with the Treasury Method. Similarly, this is not intended to imply that pre-tax economic earnings are the only appropriate benefit stream to be used with the Reasonable Rate Method. Any appropriate benefit stream (pre-tax or after-tax, earnings or cash flow, etc.) can be used with either the Treasury Method, the Reasonable Rate Method or any of the other income or market approaches discussed in this chapter.

CONTROL TEST PROGRAM

1. The three general approaches that need to be considered by the valuation analyst in each valuation engagement include:

- a. Income, Asset Based, and Excess Earnings
- b. Market, Treasury, and Income
- c. Income, Going Concern, and Market
- d. Income, Asset Based, and Market

2. As a component of the capitalization of future earnings or cash flows method, the future earnings or cash flows as estimated by the valuation analyst:

- a. Are always calculated on an after-tax basis
- b. Exclude any income or expense items generated from non-operating assets and liabilities
- c. Are based only on the historical results of operations in the fiscal year closest to the valuation date
- d. Exclude any compensation to the owner(s) of the business

3. If the capitalization of future earnings/cash flows method is used in a valuation engagement for U.S. Gift Tax



purposes, the valuation analyst is required to include how many historical years in the estimate of the future earnings/cash flows?

- a. At least three years, based on Treasury Regulations
- b. As many years as the valuation analyst deems appropriate, based on his/her professional judgment
- c. Five years, based on requirements of the Internal Revenue Service
- d. Two to five years, based on Treasury Regulations

4. In the discounted earnings/cash flows method, the Gordon Growth Model is used:

- a. To determine the period of stabilized earnings/cash flows of the company
- b. To determine the number of periods (years) needed in the projection period
- c. To calculate the “terminal value” of the company
- d. To calculate the present value factor based on an assumed rate of return

5. To find useful and relevant comparable guideline publicly traded companies to use in the market approach is:

- a. Relatively easy because numerous comparable guidelines publicly traded companies exist for the privately held businesses that are the subject of the valuation analyst’s valuation engagements
- b. Relatively easy because finding comparable guideline publicly traded companies is quick and inexpensive as the information is readily available from public sources
- c. Relatively difficult because the methodology relies on explicit financial forecasts which are not readily available for the comparable companies
- d. Relatively difficult because company size differential, management depth, product and services diversity and access to debt capital will seldom match the privately held company being valued



6. The primary methods used to calculate the value of privately held business interests in the income approach are:
- Capitalization of Earnings/ Cash Flows Method and Excess Earnings/Treasury Method
 - Excess Earnings/Treasury Method and Discounted Earnings/Cash Flows Method
 - Capitalization of Earnings/Cash Flows Method and Discounted Earnings/Cash Flows Method
 - Discounted Earnings/Cash Flows Method and Price/EBITDA Method

7. According to Russel L. Parr in Investing in Intangible Assets, there are ten essential characteristics of an intangible asset. One such essential characteristic is:

- To provide an economic advantage in the form of lower manufacturing or operating costs such as substituting high cost high quality materials for low cost materials enabling a higher quality product
- To provide an economic advantage in the form of lower manufacturing or operating costs such as reducing the amount of labor required to manufacture, inspect, package or account for a product
- To provide an economic advantage in the form of lower manufacturing or operating costs such as lowering high manufacturing speeds by reducing fuel or electric power requirements
- To provide an economic advantage in the form of lower manufacturing or operating costs such as reducing shipping costs by eliminating manufacturing environmental hazards

8. The Financial Accounting Standards Board (FASB) has issued Accounting Standards Codifications that address valuation considerations for goodwill and other intangible assets. Which of the following is correct?

- ASC 830 did not affect valuations based on arms-length bargaining.



b. ASC 59-60 does affect valuations, and the valuation analyst must take care to follow the eight factors outlined in ASC 59-60.

c. ASC 66-49 outlined procedures to all types of non-cash property for which an appraisal is required for gifting and/or charitable contribution.

d. ASC 350 addresses how intangible assets acquired with a group of assets (but not those required in a business combination) should be accounted for upon their acquisition.

9. When valuing the stock of a real estate holding company, most likely the valuator will give the greatest weight to which method?

a. Capitalization of earnings method

b. Book value method

c. Adjusted net assets method

d. Rule of thumb

10. Using the adjusted net asset method, the valuation analyst only values the tangible assets of the company.

a. True

b. False

11. The adjusted net assets method generally sets a _____ for determining total entity value.

a. floor value

b. high value

c. forced liquidation value

d. investment value

12. Which one of the following adjustments would be a normalized adjustment to the balance sheet in the adjusted net assets method?

a. Convert inventory from FIFO to LIFO

b. Remove excess cash

c. Adjust owner's compensation



d. Remove expenses related to fire damage of a Company's manufacturing plant

13. Which method is based on the theory that the total value of a company is the present value of its projected future earnings plus the present value of the terminal value?

- a. Capitalization of earnings
- b. Discounted cash flows
- c. Excess earnings
- d. Adjusted net assets method

14. The mid period method of discounting should be used when the equity holder:

- a. Has access to cash flows at the end of the year (or period)
- b. Has access to cash flows throughout the year (or period)
- c. Does not have access to any cash flows
- d. Both a and b

15. Advantages of the market approach include:

- a. It uses actual data, it is relatively simple to apply, and it is inexpensive to determine.
- b. It uses actual data, it is inexpensive to determine, the data obtain via transaction databases are very reliable.
- c. It uses actual data, it is relatively simple to apply, and it does not rely on explicit forecasts.
- d. It is user friendly, relatively inexpensive to determine, and simple to apply.

16. Which two private company transactional databases cover relatively small companies?

- a. BIZCOMPS and DoneDeals
- b. BIZCOMPS and Institute of Business Appraisers (IBA)
- c. Institute of Business Appraisers (IBA) and Mergerstat
- d. Mergerstat and BIZCOMPS



17. Using the market approach, “price” should be matched to the appropriate parameter based on which providers of capital in the numerator will be paid with the monies given in the denominator. Market value of invested capital (MVIC) is usually the numerator that is paired with _____ in the denominator.

- a. EBITDA
- b. pretax income
- c. net income
- d. book value of equity

18. Which method combines the income and asset-based approaches to arrive at a value of a closely held business?

- a. Adjusted net assets value method
- b. Discounted cash flows method
- c. Guideline public companies' method
- d. Excess earnings method

19. A “pass-through” entity is one which:

- a. Passes the value of the entity to the owners in a taxable transaction
- b. Pays no entity-level income taxes, but passes through any income or losses to the owners of the entity
- c. Calculates its entity-level tax liability and passes it through to the owners of the entity
- d. Pays the individual taxes of the owners as a pass-through item

20. Which model for valuing a minority interest in a pass-through entity assumes 100% of the company’s earnings is being distributed?

- a. Mercer
- b. Grabowski
- c. Van Vleet
- d. Treharne



21. The S election allows a shareholder to avoid which individual level tax?

- a. Capital gain tax
- b. Income tax
- c. Dividend tax
- d. Foreign tax

22. There are four recognized models for valuing a minority interest in a pass-through entity. Which of the following statements is INCORRECT?

- a. All four models recognize distributions impact value.
- b. All four models recognize there is potential value in retained net income.
- c. All four models assume the same holding period.
- d. All four models consider the dividend tax on C corporation dividends.

Bonus Questions /Responses:

1. The Excess Earnings/Treasury Method presumes that the value of a business is the sum of the values of its adjusted net assets and intangible assets, using what is considered to be a “reasonable” return on the adjusted net assets. List the steps used in the method: ...

2. List the steps to be used in Excess Earnings/Reasonable Rate Method: ...

3. Geri Co has a 10-year history of weighted average profits of \$900,000 and a weighted average dividend paid of 3.5% of earnings. Comparable companies indicate a weighted average yield of 6.2%. 1st – Calculate the value under the dividend payout method:

Earnings: 900,000.

Dividend amount: $900000 \times 3.5\% = 31500$.

Weighted average yield of comparables: 6.2%.

Dividend payout value: $31500 \times 6.2\% = 508,065$.



2nd – Calculate if the weighted average dividend payout

was:

$$45\% = 900000 \times 45\% = 405000 \quad 6.2\% = 6,532,258.$$

$$30\% = 900000 \times 30\% = 270,000 \quad 6.2\% = 4,354,839.$$

$$50\% = 900000 \times 50\% = 450000 \quad 6.2\% = 7,258,065.$$

QUESTION: What issues do you see using this method?





CHAPTER 5. CRISIS MANAGEMENT IN ENTREPRENEURSHIP AND TRADE

Theme 1. Crisis: essence and research methodology

Content

- 5.1. General concepts of crisis and crisis phenomena
- 5.2. Economic cycles and crises
- 5.3. Types of crises

Key terms and concepts

- ✓ Crisis
- ✓ Crisis types
- ✓ Causes of crisis
- ✓ Consequences of the crisis
- ✓ Crisis phases
- ✓ Economic cycles

5.1. General concepts of crisis and crisis phenomena

A crisis is anything that has the potential to significantly impact an organization.

Crisis (from the Greek *krisis* – decision, turning point, result, exit, ending, trial and above fair punishment):

- 1) a moment of risk or stress;
- 2) a sharp change in anything, a difficult transition state;
- 3) acute difficulty with something; difficult situation.

The crisis is the extreme exacerbation of contradictions in the socio-economic system, which threatens its viability in the environment; it is a turning point in the functioning of the system, in the process of which it is exposed from the outside and inside, which requires a qualitatively new response from it.

The crisis breaks the stability of the system, while radically updating it.

Any system can be in two opposite states: functioning and development.



Functioning is the maintenance, preservation of functions that determine the integrity of the socio-economic system, its qualitative certainty and essential characteristics.

Development is the acquisition of a new quality that changes the stability and conditions of the functioning of the socio-economic system.

Functioning constrains development and at the same time is its nutrient medium, development destroys many processes of functioning, but creates conditions for its more stable implementation. Stable situation and crisis are constant antagonisms in development of any system.

The crisis should be seen as a turning point in the development of the system, which gives space to a new round of economic change

The most significant terms explaining the essence of the crisis:

a) exacerbation – a more intense, unbearable and irreconcilable condition;

b) threat – the possibility or inevitability of occurrence of something dangerous, pitiful;

c) life-saving – able to survive in difficult conditions, tolerate unfavourable conditions;

d) the environment – a set of economic conditions in which the company operates;

e) qualitatively new changes – transformation in the organization of the enterprise.

The crisis reflects the essence of the contradictions within the enterprise. (The extent of the exacerbation of existing contradictions determines the stage of the crisis, its duration, the nature of the consequences, etc.).

The corporate crisis is a process characterized by a certain duration and, accordingly, has certain time limits. (In the course of the crisis, certain stages can be singled out.)

The crisis is an objective economic process, the basis of which forms the tendencies of development of certain types of activities of the enterprise, its separate management



subsystems.

The main feature of the crisis is a significant violation or loss of a viable state of the enterprise as a result of violations of the parameters of viability. (Overcoming the crisis or restoring viability is associated with the restoration of viability parameters through internal and external management actions).

The crisis can occur at all stages of the company's life cycle. The crisis is cyclical, it occurs with a certain periodicity. (This periodicity is an individual characteristic of the enterprise.) Deployment of the crisis is generated by a set of external and internal factors. (They are also individual in nature).

The emergence of the crisis creates certain threats and risks for the operation of the enterprise, and its passage (overcoming) has certain consequences for the future "fate" of the enterprise - positive and negative.

The positive effects of the crisis:

- crisis offers organizational change opportunities;
- crisis offers organizations learning opportunities;
- crisis offers organizations opportunities for growth;
- crisis offers organizations opportunities to become

international.

The negative effects of crisis:

- internal communication failure;
- centralized authority;
- decreased quality in decision process;
- reduced tendencies in organizational change;
- inadequate coordination;
- confusion in mission, authority, and responsibilities;
- the rise of fear and panic among the personnel;
- corrupted decision process;
- demoralized staff;
- physiological and psychological depression;
- increased self-defence;
- corrupted relations between departments in

organization.

The main causes of the crisis:



- Natural causes reflect the phenomena of climate, earthquakes, floods and other cataclysms of natural origin.
- Technogenic causes are related to human activity.
- Objective reasons are related to the cyclical needs of modernization and restructuring of enterprises.
- Subjective reasons reflect mistakes and voluntarism in management.
- External are related to the trends and strategies of macroeconomic development, or even the development of the world economy, competition, political situation in the country.
- Internal are associated with a risky marketing strategy, internal conflicts, deficiencies in the organization of production, management imperfections, innovation and investment policies.

Possible consequences of the crisis:

- possible restoration of organization;
- system destruction;
- rehabilitation of the enterprise;
- the emergence of a new crisis.

In the crucial point of the crisis, the situation either improves or worsens. First of all, it depends on the effectiveness of crisis management.

5.2. Economic cycles and crises

The term “life cycle” has long been used in reference to the stages in the life of an item or organization. In this instance, the life cycle is an iterative process of alternation of ups and downs in the economy. Such periods are called phases, the highest point in the cycle is a peak and the lowest is bottom.

The economic cycle is the production movement from the beginning of the previous to the beginning of the next economic crisis, which has a different effect on the phases of the cycle and other spheres of social reproduction, and hence on economic relations. In theory, the cycle is treated as a period of economic development from the beginning of one crisis to the next.

The economic cycle includes the following phases:



- The crisis is a sharp violation of the existing economic equilibrium as a result of disproportions in the process of reproduction, which are sharply increasing. Depression is the cycle phase, which manifests itself in the stagnation of production.

- Revival is a phase of recovery, which begins with a slight increase in production (in response to rising demand) and a marked reduction in unemployment.

- Rise (growth) - this is the phase of the cycle, when the volume of production exceeds the volume of the previous cycle and grows at a high rate.

- New crisis.

Life cycle of the enterprise

Business as an economic category also has its cycles which are quite natural in acting. For organization, it is important to be able to distinguish and define the phase cycle for coordinating management, mission and strategy formulation, if necessary, to be ready to change the trajectory of development. Accustoming the original concept from the biological sciences, some researchers prescribe life cycle as a natural way of development from birth to death.

Greiner contributed on a theoretical part of company's development as evolution and revolution. Considering application achieved by the scientist, it is argued that organizations pretend to move through five types of growth each phase containing a relatively calm period of growth that ends with a management crisis.

The five phases identified by Greiner are:

1. Growth through creativity, followed by a crisis of leadership

2. Growth through direction, followed by a crisis of autonomy

3. Growth through delegation, followed by a crisis of control

4. Growth through coordination, followed by a crisis of red tape



5. Growth through collaboration; followed by a crisis of psychological saturation among employees.

The Adizes organizational lifecycle characterizes several phases in the life, from creating and growth through to maturation and decline. The Adizes lifecycle is described in ten phases: Courtship, Infancy, Go-Go, Adolescence, Prime, Stable, Aristocracy, Early Bureaucracy, Late Bureaucracy and Death.

Conflicts that arise at certain stages, it is quite natural, successful overcoming them allows you to move on to the next degree of enterprise development.

The purpose of the diagnosis phase of the organizational life cycle is to identify the stage of development and the means to develop timely solutions at this stage. The ability to diagnose specific stage of development can assist in the development of strategies, risks and opportunities for taking timely appropriate management decisions currently and in the future.

Each crisis also has its own phases of passage:

- Stage one: The Storm Breaks
- Stage two: The Storm Rages
- Stage three: The Storm Passes

1- The Breaking Crisis

- Control seems to be slipping out of the company.
- Lack of solid detail about the crisis. Hard-to-provide information demanded by the media, analysts and others.
- Temptation to resort to a short-term focus, to panic and to speculate.
- For a period of time, everyone loses perspective.

2- Spread and Intensification of Crisis

- Speculation and rumours develop in the absence of hard facts.
- Third parties- regulators, scientists and other experts – add weight to the climate of opinion.
- Corporate management comes under intense scrutiny from internal and external groups.

3- Rebuilding Needs

- To manage reputation. There are opportunities in a



crisis to build positive perceptions of the company or product that last beyond the crisis period.

- Company communication/ culture. The company embarks on a long-term programme to tackle management issues and communication problems that exacerbated the crisis.

5.3. Types of crises

In the economic literature consider different classifications of the types of crisis.

Lerbinger categorized eight types of crises:

- natural disaster;
- technological crises;
- confrontation;
- malevolence;
- organizational misdeeds;
- workplace violence;
- rumours;
- terrorist attacks/man-made disasters.

Natural disaster related crises, typically natural disasters, are such environmental phenomena as earthquakes, volcanic eruptions, tornadoes and hurricanes, floods, landslides, tsunamis, storms, and droughts that threaten life, property, and the environment itself.

Technological crises are caused by human application of science and technology. Technological accidents inevitably occur when technology becomes complex and coupled and something goes wrong in the system as a whole. Some technological crises occur when human error causes disruptions. When an accident creates significant environmental damage, the crisis is categorized as megadamage. Samples include software failures, industrial accidents, and oil spills.

Confrontation crisis occur when discontented individuals and/or groups fight businesses, government, and various interest groups to win acceptance of their demands and expectations. The common type of confrontation crisis is



boycotts, and other types are picketing, sit-ins, ultimatums to those in authority, blockade or occupation of buildings, and resisting or disobeying police.

An organization faces a crisis of malevolence when opponents or miscreant individuals use criminal means or other extreme tactics for the purpose of expressing hostility or anger toward, or seeking gain from, a company, country, or economic system, perhaps with the aim of destabilizing or destroying it. Sample crisis include product tampering, kidnapping, malicious rumours, terrorism, cybercrime and espionage.

Crisis of organizational misdeeds occur when management takes actions it knows will harm or place stakeholders at risk for harm without adequate precautions. Lerbinger specified three different types of crises of organizational misdeeds: crises of skewed management values, crises of deception, and crises of management misconduct.

Workplace violence occurs when an employee or former employee commits violence against other employees on organizational grounds.

False information about an organization or its products creates crises hurting the organization's reputation. Sample is linking the organization to radical groups or stories that their products are contaminated.

Man-made disasters are the result of human intent, error, or as a result of failed systems. They can be divided into categories such as terrorism, technological hazards, transportation hazards and environmental accidents.

Alan Hilburg defines organizational crises as:

- Sudden crisis.

Sudden crises are circumstances that occur without warning and beyond an institution's control. Consequently, sudden crises are most often situations for which the institution and its leadership are not blamed.

- Smoldering crisis.

Smoldering crisis differ from sudden crises in that they begin as minor internal issues that, due to manager's negligence, develop to crisis status. These are situations when



leaders are blamed for the crisis and its subsequent effect on the institution in question.

Types of crises in the enterprise:

1. Measure of manifestation:
 - general – covers the socio-economic system;
 - local – covers the share of socio-economic system.
2. The nature of the occurrence:
 - Predictable (regular)
 - Unexpected (random)
3. The factor of the crisis:
 - Endogenous (internal)
 - Exogenous (external)
4. The extent of the consequences:
 - Lightweight – does not directly threaten functioning enterprises
 - Heavy – threatens the future existence of the company and requires immediate financial rehabilitation.
 - Catastrophic – leads to the destruction of the enterprise as an independent economic unit.
5. Development phase:
 - Crisis of profitability – permanent losses liquidate equity.
 - Strategic crisis – the enterprise has destroyed production potential and lack of long-term factors of success.
 - Solvency Crisis is a recurrent lack of cash for a company to meet its obligations and finance its current activities.
 - Bankruptcy (insolvency) – the inability of an enterprise to meet the requirements of creditors for a long time.
6. Level of managerial influence on the crisis:
 - Managed – is subject to managerial influence.
 - Unmanaged – the direction and nature of the crisis process cannot be changed as a result of managerial influence.
7. Local scope of the manifestation:
 - Sales crisis
 - Industrial crisis
 - Financial crisis



- Management crisis

Theme 2. Crisis management for companies

Content

- 5.4. Symptoms and Crisis Recognition
- 5.5. The essence and purpose of crisis management.
- 5.6. The specifics of the crisis management enterprise.

Key terms and concepts

- ✓ Crisis management
- ✓ Crisis symptom
- ✓ Management types
- ✓ Crisis Decision-Making
- ✓ Crisis management function
- ✓ Crisis management stages

5.4. Symptoms and Crisis Recognition

Overcoming crises is a managed process. The success of management depends on the timely recognition of the crisis, the symptoms of its onset. Forecasting crises is possible only on the basis of a special analysis of situations and trends.

How to identify a crisis in an enterprise?

We need to answer such questions:

What are the signs of a crisis in an enterprise?

What indicators can measure the depth of this crisis?

What criteria should be used to choose methods and tools for a management crisis?

Gradual losses of certain parameters of viability of the enterprise indicate a deepening of the crisis.

First, there is a loss of the parameters of the viability of the first level – parameters L1, in the future – parameters L2, etc.

- Level 1 (L1) Provision of break-even activity or achievement of target indicators, strategic goals and tasks of the enterprise.



- Level 2 (L2) Ensuring financial equilibrium, that is, the ability to generate cash receipts in volumes and in time sufficient to finance an operating, investment activity of an enterprise.
 - Level 3 (L3) Availability of assets to ensure fulfillment of obligations to repay debt capital and ensure the required level of liquidity of assets.
 - Level 4 (L4) Presence of net assets of the enterprise (balance between market value of available assets and volume of liabilities) in volumes that correspond to state requirements and target parameters of activity.

The final phenomenon - the apogee of crisis deployment – is the emergence of a threat of bankruptcy (insolvency) of the enterprise. The economic characteristic of insolvency is the impossibility of a complete settlement of external liabilities (parameter L3).

Confirmation of this is inequality:

$$A_{mar} < TO,$$

and also a decrease in net assets, after settlements with creditors, to a critical level (parameter L4):

$$A_{mar} - TO < OE,$$

where A_{mar} is the market value of assets controlled by the enterprise; TO – the total volume of obligations of the enterprise; OE – the required amount of company's equity for continuation of operation.

Systematization of possible variants of compliance with the parameters of viability allows identifying five states of viability of the enterprise, which can be described as follows:

$$SL = \{S(L1), S(L2), S(L3), S(L4)\}.$$

Deploying a corporate-level crisis is structurally divided into 3 phases of the crisis: a hidden crisis (or crisis of efficiency), a solvency crisis and a debt settlement crisis (the threat of bankruptcy, insolvency).

1. Full viability of the enterprise as an economic system:



$$\left. \begin{array}{l} L1 \geq 0 \\ L2 \geq 0 \\ L3 \geq 0 \\ L4 \geq 0 \end{array} \right\} SL = \{1, 1, 1, 1\}.$$

2. Effectiveness crisis (hidden crisis):

$$\left. \begin{array}{l} L1 < 0 \\ L2 \geq 0 \\ L3 \geq 0 \\ L4 \geq 0 \end{array} \right\} SL = \{0, 1, 1, 1\}.$$

Characteristic features of this stage are the reduction of the efficiency of the enterprise, which manifests itself through the negative dynamics of indicators of profitability and capital, the duration of the operational and financial cycle of the enterprise, its market value, etc.

3. Solvency Crisis:

$$\left. \begin{array}{l} L1 < 0 \\ L2 < 0 \\ L3 \geq 0 \\ L4 \geq 0 \end{array} \right\} SL = \{0, 0, 1, 1\}.$$

The characteristic features of this phase are a periodic and continuous shortage of cash for the enterprise to fulfil its obligations and to finance its current activities.

An external manifestation of such a situation is the emergence of a situation of insolvency characterized by a delay in the implementation of current payments (violation of payment deadlines due to lack of money in the current account), payment of economic sanctions (fines, penalties) for late payment, the appearance of overdue payables and outstanding loans and loans.



4. Debt settlement crisis (threat of bankruptcy, financial insolvency):

$$\left\{ \begin{array}{l} L1 < 0 \\ L2 < 0 \\ L3 < 0 \\ L4 \geq 0 \end{array} \right. \quad SL = \{0, 0, 0, 1\}.$$

5. The destruction of the enterprise as an economic system:

$$\left\{ \begin{array}{l} L1 < 0 \\ L2 < 0 \\ L3 < 0 \\ L4 < 0 \end{array} \right. \quad SL = \{0, 0, 0, 0\}.$$

The deepening of the solvency crisis causes the emergence a situation in which an enterprise cannot meet the requirements of its creditors for a certain time (according to the current legislation, the critical period of performance of obligations is three months). This prompts lenders to judicial protection of their rights by instituting a bankruptcy case for an entrepreneur.

5.5. The essence and purpose of crisis management

Crisis management is the process by which an organization deals with a disruptive and unexpected event that threatens to harm the organization or its stakeholders.

Crisis management is a situation-based management system that includes clear roles and responsibilities and process related organisational requirements company-wide. The response shall include action in the following areas: Crisis prevention, crisis assessment, crisis handling and crisis termination. The aim of crisis management is to be well prepared for crisis, ensure a rapid and adequate response to the



crisis, maintaining clear lines of reporting and communication in the event of crisis and agreeing rules for crisis termination.

The overall coordination of an organization's response to a crisis, in an effective, timely manner, with the goal of avoiding or minimizing damage to the organization's profitability, reputation, or ability to operate.

Crisis management involves identifying a crisis, planning a response to the crisis and confronting and resolving the crisis.

The techniques of crisis management include a number of consequent steps from the understanding of the influence of the crisis on the corporation to preventing, alleviating, and overcoming the different types of crisis.[6] Crisis management consists of different aspects including:

- Methods used to respond to both the reality and perception of crisis.
- Establishing metrics to define what scenarios constitute a crisis and should consequently trigger the necessary response mechanisms.
- Communication that occurs within the response phase of emergency-management scenarios.

Crisis management has four objectives:

- Reducing tension during the incident;
- Demonstrating corporate commitment and expertise
- Controlling the flow and accuracy of information
- Managing resources effectively

Problems and Challenges in Crisis Decision-Making

• Surprise and hesitation. The shock of a crisis can create a delay in response that allows your critics and the media to fill the gap with negative comment and speculation.

- Pressure and stress must be channeled by the discipline of a crisis strategy.
- Mistaking information distribution for communication.
- Treating key audiences as “opponents”.

Crisis management function:

- monitoring
- unpredictable responsibilities



- increased lead time
- time pressures
- coordination
- oversight
- delegation & accountability
- content as address
- obtain views and data
- monitor conditions
- obtain expertise
- draft contingencies
- validate options
- obtain approvals
- delegate authority
- establish accountability
- eliminate duplication
- coordinate
- inform
- take action.

Stages of crisis management

James categories five phases of crisis that require specific crisis leadership competencies. Each phase contains an obstacle that a leader must overcome to improve the structure and operations of an organization. James's research demonstrates how leadership competencies of integrity, positive intent, capability, mutual respect, and transparency impact the trust-building process.

- Signal detection
- Preparation and prevention
- Containment and damage control
- Business recovery
- Learning.

Signal detection

Signal detection is the stage in a crisis in which leaders should, but do not always, sense early warning signals (red flags) that suggest the possibility of a crisis. The detection stages of a crisis include:



- **Sense-making:** represents an attempt to create order and make sense, retrospectively, of what occurs.
- **Perspective-taking:** the ability to consider another person's or group's point of view.

Preparation and prevention

It is during this stage that crisis handlers begin preparing for or averting the crisis that had been foreshadowed in the signal detection stage. Hilburg has demonstrated that using an impact/probability model allows organizations to fairly accurately predict crisis scenarios. He's recognized the greatest organizational challenge is 'speaking truth to power' to predict truly worst-case scenarios.

Containment and damage control

Usually the most vivid stage, the goal of crisis containment and damage control is to limit the reputational, financial, safety, and other threats to firm survival. Crisis handlers work diligently during this stage to bring the crisis to an end as quickly as possible to limit the negative publicity to the organization, and move into the business recovery phase.

Business recovery

When crisis hits, organizations must be able to carry on with their business in the midst of the crisis while simultaneously planning for how they will recover from the damage the crisis caused. Crisis handlers not only engage in continuity planning (determining the people, financial, and technology resources needed to keep the organization running), but will also actively pursue organizational resilience.

Learning

In the wake of a crisis, organizational decision makers adopt a learning orientation and use prior experience to develop new routines and behaviors that ultimately change the way the organization operates. The best leaders recognize this and are purposeful and skillful in finding the learning opportunities inherent in every crisis situation.



5.6. The specifics of the crisis management enterprise

The main types of crisis management:

- extreme management
- routine and preventive crisis management;
- provocative crisis management.

Extreme crisis management is a coordinated action aimed at overcoming and eliminating the negative consequences of a sudden or unexpectedly detected glow crisis.

Characteristics of extreme crisis management:

The object is a crisis process, not an enterprise.

The subject is the decision maker.

The goal is to save the company.

Objectives – the implementation of measures to overcome the crisis.

The nature of the discussion of the situation and decision making is extraordinary.

The nature of the action is extraordinary.

Methods and tools are extraordinary.

Contents of extreme crisis management:

(a) express-analysis of a crisis situation;
(b) rapid decision making to stabilize the crisis;
(c) implementation of emergency measures to stabilize the situation;

(d) deep and thorough diagnosis of crisis problems;

(e) selection and development of an anti-crisis strategy;

(f) development of a crisis plan;

(g) the creation of an organizational mechanism for managing the implementation of a crisis plan: reporting, developing recommendations and adjusting the crisis plan;

(h) implementation of a crisis response plan.

Extreme response program:

- Control of financial flows.
- Working with working capital: delayed payments and loan repayment; accelerating the return of receivables; inventory reduction.



- Surplus assets: identification, rental, sale.
- Cost reduction.
- Suspension of release of unprofitable products and activities of unprofitable divisions.

The most important features of the activities of the stabilization program: urgency, emergency, reversibility.

Routine preventive crisis management

Routine preventive crisis management is a set of constantly implemented activities for minimization the need to apply extreme crisis management. Routine preventive crisis management is constantly implemented at the enterprise by the organization itself and is built into the organization's management system.

Characteristics of preventive crisis management

- The object is the enterprise itself.
- The subject is the permanent head of the enterprise.
- The goal is to reduce the risk of crises and minimize the damage from their occurrence.
- Tasks – the implementation of specific activities that meet the goal.

- The nature of discussing situations and making decisions is ordinary. The nature of the action is planned.

- Methods and tools are planned.

Content of routine preventive crisis management:

- Identification and assessment of significant threats (risks) to the system threatening the crisis, and drawing up a ranked list of these risks.

- Implementation of systemic measures to reduce the amount of risk from the list.

- In relation to each risk from the list - identification of signs of the development of the crisis process.

Content of routine preventive crisis management:

- Development of a system for monitoring the signs of crisis development and an appropriate information alert system.

- Involvement in the permanent monitoring system of signs of crisis development. Development of action plans to



prevent the development of crises.

- Development of instructions for action to prevent the development of crises.

Content of routine preventive crisis management:

- Education and training of personnel to prevent crises.
- Training and teaching staff to prevent the development of crises.

- Involvement of action plans to overcome crises in the event of a pre-crisis situation.

Content of routine preventive crisis management:

- Monitoring and control of personnel and system actions during exercises and drills to prevent the development of crises, as well as in the context of preventing the development of real crises.

- Analysis of the results of monitoring and control of personnel actions during exercises and training sessions to prevent the development of crises, as well as in the context of preventing the development of real crises and updating the system based on the results of this monitoring.

Provocative crisis management is a set of measures to organize a deliberate controlled crisis in order to prevent a catastrophic crisis.

Characteristics of provocative crisis management:

- The object is a crisis process.
- The subject is a decision maker, preferably with special professional skills of a crisis manager.
- The goal is to organize a controlled crisis, limited in time, scope and consequences, to prevent a catastrophic crisis.

Characteristics of provocative crisis management:

- Content is a set of activities that provoke primarily the socio-psychological tensions of the staff (or part of it).
- Tasks – mobilization of attention and efforts of employees; identification of weak, unstable or disloyal members of labor collectives and (or) management; distraction of attention to the provoked problem (conflict) from a more systematic and threatening conflict, etc.

Principles of constructive use of the crisis:



1. Eliminate laxity and restore order to: production discipline; technological discipline; performing discipline.
2. To audit the assets (including intangible) to identify the assets: recorded but non-existent; forgotten, but useful for sale; forgotten, but useful to use.
3. To conduct a SWOT-analysis and formulate on the basis of its new vision of the organization.
4. To compare the new vision with the old purpose and to formulate a new mission and goals of the organization.
5. To count cash, not profit.
6. To reduce costs faster than incomes fall to obtain a reserve of free money.
7. Go into the mode of "organizational agility", i.e. quickly assess the situation, make decisions and clearly implement.
8. Quickly move from a "survival" strategy to a "development" strategy by searching for and attempting to apply innovations.
9. Identify the most important and subtle consumer preferences and focus on them.
10. Capitalize knowledge, i.e. retrain staff and hire the best specialists.
11. Get rid of the ballast (real estate, equipment, stocks, and people).
12. No unexpected and sudden reductions in staff: communicate with people, explain the situation to people, and prepare people for changes and difficulties.

Types of management crisis depend on the stage of the crisis.

- Active crisis management (Crisis prevention):
 - Risk analysis
 - Scenario technique
 - Early detection system
 - Crisis handbook
 - Crisis team
 - Crisis training
- Reactive crisis management (Crisis solving):
 - Risk classification



Organization

Information search

Crisis PR

Immediate measures

Coordination crisis plan

- Recovery (Crisis post processing):

Update of crisis strategy

Process optimization

Documentation of crisis event

Good crisis management is essential, but never a substitute for daily risk management processes. Risk management processes should apply to all customers, although depth and detail may depend on the transaction and customer. Transactions involving credit or other types of financial risk should incorporate a risk management process.

Theme 3. Risk management approaches

Content

5.7. Risk management: general approaches

5.8. Risk Assessment

5.9. Risk Treatment

Key terms and concepts

- | | |
|-----------------------|-------------------|
| ✓ Risk | ✓ Risk management |
| ✓ Risk identification | ✓ Risk indicators |
| ✓ Hedging | ✓ Diagnostics |

5.7. Risk management: general approaches

Risk can be defined as the combination of the probability of an event and its consequences. In all types of undertaking, there is the potential for events and consequences that



constitute opportunities for benefit (upside) or threats to success (downside).

Risk Management is increasingly recognized as being concerned with both positive and negative aspects of risk. In the safety field, it is generally recognized that consequences are only negative and therefore the management of safety risk is focused on prevention and mitigation of harm.

Risk management is a central part of any organization's strategic management. It is the process whereby organizations methodically address the risks attaching to their activities with the goal of achieving sustained benefit within each activity and across the portfolio of all activities.

The focus of good risk management is the identification and treatment of these risks. Its objective is to add maximum sustainable value to all the activities of the organization. It marshals the understanding of the potential upside and downside of all those factors which can affect the organization.

It increases the probability of success, and reduces both the probability of failure and the uncertainty of achieving the organization's overall objectives. Risk management should be a continuous and developing process which runs throughout the organization's strategy and the implementation of that strategy. It should address methodically all the risks surrounding the organization's activities past, present and in particular, future.

It must be integrated into the culture of the organization with an effective policy and a program led by the most senior management. It must translate the strategy into tactical and operational objectives, assigning responsibility throughout the organization with each manager and employee responsible for the management of risk as part of their job description. It supports accountability, performance measurement and reward, thus promoting operational efficiency at all levels.

The risks facing an organization and its operations can result from factors both external and internal to the organization. The diagram overleaf summarizes examples of key risks in these areas and shows that some specific risks can



have both external and internal drivers and therefore overlap the two areas. They can be categorized further into types of risk such as strategic, financial, operational, hazard, etc.

Table 1

Risk factors

Externally driven:	Internally driven:
Financial risk: interest rates, foreign exchange, credit.	Financial risk: cash flow & liquidity.
Strategic risks: competition, customer changes, industry changes, customer demand.	Strategic risks: research & development intellectual capital.
Operational risks: regulation, culture, board composition.	Operational risks: accounting controls information systems, recruitment, supply chain
Hazard risks: contracts, natural events, suppliers, environment.	Hazard risks: public access, employees, properties, products & services

Risk management protects and adds value to the organization and its stakeholders through supporting the organization's objectives by:

- providing a framework for an organization that enables future activity to take place in a consistent and controlled manner
- improving decision making, planning and prioritization by comprehensive and structured understanding of business activity, volatility and project opportunity/threat
- contributing to more efficient use/allocation of capital and resources within the organization
- reducing volatility in the non-essential areas of the business
- protecting and enhancing assets and company image



- developing and supporting people and the organization's knowledge base
- optimizing operational efficiency.

5.8. Risk Assessment

Risk Assessment is defined by the ISO/ IEC Guide 73 as the overall process of risk analysis and risk evaluation.

Risk identification sets out to identify an organization's exposure to uncertainty. This requires an intimate knowledge of the organization, the market in which it operates, the legal, social, political and cultural environment in which it exists, as well as the development of a sound understanding of its strategic and operational objectives, including factors critical to its success and the threats and opportunities related to the achievement of these objectives.

Risk identification should be approached in a methodical way to ensure that all significant activities within the organization have been identified and all the risks flowing from these activities defined.

Risk identification techniques – brainstorming, questionnaires, business studies which look at each business process and describe both the internal processes and external factors which can influence those processes, industry benchmarking, scenario analysis, risk assessment workshops, incident investigation, auditing and inspection, HAZOP (Hazard & Operability Studies) etc.

Whilst risk identification can be carried out by outside consultants, an in-house approach with well communicated, consistent and coordinated processes and tools is likely to be more effective. In-house 'ownership' of the risk management process is essential.

The objective of risk description is to display the identified risks in a structured format, for example, by using a table. The risk description table overleaf can be used to facilitate the description and assessment of risks. The use of a well-designed



structure is necessary to ensure a comprehensive risk identification, description and assessment process.

By considering the consequence and probability of each of the risks, it should be possible to priorities the key risks that need to be analyzed in more detail. Identification of the risks associated with business activities and decision making may be categorized as strategic, project/ tactical, operational. It is important to incorporate risk management at the conceptual stage of projects as well as throughout the life of a specific project.

Risk estimation can be quantitative, semiquantitative or qualitative in terms of the probability of occurrence and the possible consequence. For example, consequences both in terms of threats (downside risks) and opportunities (upside risks) may be high, medium or low. Probability may be high, medium or low but requires different definitions in respect of threats and opportunities.

X_n – the magnitude of losses in the event of a negative effect of the decision, P_n – probability of occurrence of a negative consequence, x_i – the possible result from occurrence of the event, expressed in money terms, P_i – probability of occurrence of the variant of the event; $f(x)$ is the function of the probability density distribution of random losses; X – the magnitude of possible losses or losses; K – the basis of comparison, for which it is most convenient to take either the property of the enterprise, or the total cost of resources for this type of economic activity, or the expected income (profit) from this type of activity.



Table 2

System of indicators of quantitative risk assessment

Indicator	Calculated formula	Risk assessment criterion
Absolute indicators		
The risk of an alternative solution	$R = X_H * P_H,$	→min
Mathematical expectation	$M(x) = \sum_{i=1}^n X_i \cdot P_i$ $M(x) = \int_{-\infty}^{+\infty} f(x) dx$	→min (expected losses) →max (expected revenues)
Dispersion	$\sigma^2 = \sum_{i=1}^n (x_i - M(x))^2 \cdot P_i$ $\sigma^2 = \int_{-\infty}^{+\infty} M(x - M(x))^2 f(x) dx$	→min →min
Permissible risk indicator	$W(x) = 1 - \int_{-\infty}^{x_{\text{дон}}} f(x) dx$	<0,1
Critical risk indicator	$W(x) = 1 - \int_{x_{\text{дон}}}^{x_{\text{кр}}} f(x) dx$	<0,01
Catastrophic risk indicator	$W(x) = 1 - \int_{x_{\text{кр}}}^{x_{\text{кат}}} f(x) dx$	<0,001
Relative risk indicators		
Coefficient of variation	$\sigma_B = \frac{\sigma}{M(x)}$	<0,33
Risk ratio	$W = \frac{X}{K}$	→min



- statistical;
- expediency method;
- heuristic;
- analytical;
- method of analogues;
- method of decision tree;
- normative, etc.

When the risk analysis process has been completed, it is necessary to compare the estimated risks against risk criteria which the organization has established. The risk criteria may include associated costs and benefits, legal requirements, socio-economic and environmental factors, concerns of stakeholders, etc.

Risk evaluation therefore, is used to make decisions about the significance of risks to the organization and whether each specific risk should be accepted or treated.

5.9. Risk Treatment

Risk treatment is the process of selecting and implementing measures to modify the risk. Risk treatment includes as its major element, risk control/mitigation, but extends further to, for example, risk avoidance, risk transfer, risk financing, etc.

Any system of risk treatment should provide as a minimum:

- effective and efficient operation of the organization;
- effective internal controls;
- compliance with laws and regulations.

The risk analysis process assists the effective and efficient operation of the organization by identifying those risks which require attention by management. They will need to prioritize risk control actions in terms of their potential to benefit the organization.

Effectiveness of internal control is the degree to which the risk will either be eliminated or reduced by the proposed control



measures. Cost effectiveness of internal control relates to the cost of implementing the control compared to the risk reduction benefits expected.

The proposed controls need to be measured in terms of potential economic effect if no action is taken versus the cost of the proposed action(s) and invariably require more detailed information and assumptions than are immediately available.

Firstly, the cost of implementation has to be established. This has to be calculated with some accuracy since it quickly becomes the baseline against which cost effectiveness is measured. The loss to be expected if no action is taken must also be estimated and by comparing the results, management can decide whether or not to implement the risk control measures.

An organization must understand the applicable laws and must implement a system of controls to achieve compliance. There is only occasionally some flexibility where the cost of reducing a risk may be totally disproportionate to that risk.

In order to prevent negative effects from the risk, an organization may use such methods:

Risk Transfer and Contracting

There is a common adage about risk management—namely, that the owner should allocate risks to the parties best able to manage them. Risk transfer can be entirely appropriate when both sides fully understand the risks compared to the rewards. This strategy may be applied to contractors, sureties, or insurance firms. The party that assumes the risk does so because it has knowledge, skills, or other attributes that will reduce the risk.

Risk Buffering (or risk hedging)

Risk buffering (or risk hedging) is the establishment of some reserve or buffer that can absorb the effects of many risks without jeopardizing the project. Buffering can also include the allocation of additional time, manpower, machines, or other resources used by the project. It can mean oversizing equipment or buildings to allow for uncertainties in future requirements.



Risk Avoidance

Risk avoidance is the elimination or avoidance of some risk, or class of risks, by changing the parameters of the project. It seeks to reconfigure the project such that the risk in question disappears or is reduced to an acceptable value. The nature of the solution may be engineering, technical, financial, political, or whatever else addresses the cause of the risk. However, care should be taken so that avoiding one known risk does not lead to taking on unknown risks of even greater consequence.

Risk Control

Risk control refers to assuming a risk but taking steps to reduce, mitigate, or otherwise manage its impact or likelihood. Risk control can take the form of installing data-gathering or early warning systems that provide information to assess more accurately the impact, likelihood, or timing of a risk. If warning of a risk can be obtained early enough to take action against it, then information gathering may be preferable to more tangible and possibly more expensive actions.

Organizational Flexibility

The following are examples of flexible decision making that can help mitigate risks under conditions of uncertainty:

Defer some decisions until more data are obtained in order to make better decisions based on better information.

Restructure the project such that the impact of early decisions on downstream conditions is minimized.

Stage the project such that it is reviewed for go or no-go decisions at identifiable, discrete points. Change the scope of the project, either up or down, at some future decision points.

Analyze and simulate the effects of strategic decisions before making them.

A flexible decision-making approach requires that project directors be active and show initiative.

Risk Assumption

Risk assumption is the last resort. It means that if risks remain that cannot be avoided, transferred, insured, eliminated, controlled, or otherwise mitigated, then they must simply be accepted so that the project can proceed.



Theme 4. Diagnosis of crisis: the signs and methods of conducting

Content

- 5.10. Express-analysis of the financial condition of the enterprise
- 5.11. Break-even point analysis
- 5.12. Resource analysis of the internal environment of the enterprise
- 5.13. Situation analysis
- 5.14. Methods of estimating the enterprise environment for crisis diagnostics
- 5.15. Diagnosis of bankruptcy of the enterprise

Key terms and concepts

- ✓ Sustainability
- ✓ Insolvency
- ✓ Bankruptcy
- ✓ Internal environment
- ✓ External environment analysis
- ✓ Insurance

5.10. Express-analysis of the financial condition of the enterprise

Express-analysis – an operational assessment of key indicators that characterize the financial condition of the enterprise.

The analysis and evaluation of the financial state is carried out with a view to preventing possible financial complications in the company in advance, as in the conditions of competition and market instability practically every enterprise can become bankrupt.

Sustainability is the ability of an organization to fulfill its vision and mission, meet its goals, and serve its clients over time, regardless of changing funding conditions. Financial sustainability is a process, not an end. It can be evaluated through profitability, liquidity, solvency and efficiency.

The source of information for the analysis of financial



condition is the financial statements of the enterprise: the balance sheet, the income statement, statement of cash flow.

Liquidity is the ability to meet cash requirements (e.g., pay bills). Many nonprofit organizations are faced with the challenge of undercapitalization and do not have enough cash or liquidity to pay their regular bills. As a result, they have to cut core programs and sometimes dissolve. It is important for nonprofit organizations to assess their liquidity, anticipate potential for undercapitalization, and develop strategies to address such an issue. The liquidity of an organization can be measured by the current ratio, the net working capital, and the acid test or quick ratio or liquidity ratio.

Table 1

Characteristics of liquidity indicators

Liquidity indicator	Content	Calculation formula	Normative value
Cash ratio	The cash ratio compares a company's most liquid assets to its current liabilities.	$\text{Cash ratio} = \frac{\text{Cash} + \text{Cash equivalents}}{\text{Current liabilities}}$	> 0,2 - 0,3
Quick ratio	The acid-test or quick ratio measures the ability of an organization to use its near cash or quick assets to immediately pay its current liabilities.	$\text{Quick ratio} = \frac{\text{Cash} + \text{Marketable securities} + \text{Account receivables}}{\text{Current liabilities}}$	> 1
Current ratio	The current ratio helps measure the ability to pay the bills on time. It is a common measure of the short-term liquidity of a business. The ratio is used by analysts to determine whether they should invest in or lend money to an entity.	$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$	> 1,5–2



Solvency or leverage is the ability to pay all debts if the business were sold tomorrow. Solvency is different from liquidity because it deals with the long-term ability of an organization to continue to exist and expand. The debt ratio and the debt-to-equity ratio are two common measures of organizational solvency.

Table 2

Characteristics of solvency indicators

Solvency indicator	Content	Calculation formula
Debt ratio (The dependency ratio)	The debt ratio is used to measure the ability to pay all debts if the organization was sold tomorrow. It is calculated by dividing the total liabilities by the total assets. The debt ratio calculates the long-term solvency of a company.	$DR = \frac{\text{Total liabilities}}{\text{Total assets}}$
Debt-to Equity (Fund Balance) ratio	The Debt-to Equity ratio measures the proportion of long-term debt common equity or fund balance.	$DER = \frac{\text{Long-term debt}}{\text{Equity}}$

Efficiency is the ability of an organization to deliver the maximum service possible with the lowest amount of human, material, and financial resources.



Table 3

Characteristics of efficiency indicators

Efficiency indicators	Content	Calculation formula
Asset Turnover Ratio	The asset turnover ratio (ATR) measures the productivity of an organization, which is how much income or revenue was generated from assets employed.	$ATR = \text{Total revenues} / \text{Average total assets}$
Working capital turnover ratio	The working capital turnover ratio (WCTR) measures how much income or revenue was generated from working capital.	$WCTR = \text{Total revenues} / \text{Working capital}$
Equity turnover ratio	The equity turnover ratio (ETR) measures how much income or revenue was generated from equity of the enterprise.	$ETR = \text{Total revenues} / \text{Average equity}$
Turnover rate of payables	The turnover rate of payables (PTR) measures how much income or revenue was generated from payables.	$PTR = \text{Total revenues} / \text{Average payables}$
Repayment period of payables	Repayment period of payables (RPP) shows how fast the company repays payables.	$RPP = 360 / PTR$
Turnover rate of receivables	The turnover rate of receivables measures how much income or revenue was generated from receivables.	$RTR = \text{Total revenues} / \text{Average receivables}$
Repayment period of receivable	Repayment period of receivable (RPR) shows how fast the company receive receivables.	$RPR = 360 / RTR$



Qualitative indicators of efficiency: other nonconventional measures, such as the percentage of change, the growth ratio, the network of product markets; availability of products to be exported; business reputation; the common size ratios, and the fund mix ratio can provide valuable information to analyze trends and the efficiency of an organization.

Profitability describes the ratio of financial performance of the enterprise to the cost of resources used.

Table 4

Characteristics of profitability indicators

Profitability indicators	Content	Calculation formula
Profit margin	The profit margin helps measure how a company uses its revenues and controls its expenses to generate an acceptable rate of return.	Profit margin = Net profit/Net sales
Return on Assets	This indicator helps to assess the payback on assets of the company.	ROA = Net profit /Average total assets
Return on Equity	This indicator helps to assess the payback on equity of the company.	ROE = Net profit/ Average Equity

The results of express analysis of the financial condition of the enterprise are summarized and evaluated as a table.



Table 5

Interpretation of express analysis results

Indicators	Script of a crisis enterprise	Script of a healthy company
Current ratio	< 1	> 2
Average maturity of receivables	> 100 days	< 40 days
Turnover of inventory	< 4	>10
Trend of revenue changes	decrease	increase
Profitability	decrease	increase

5.11. Break-even point analysis

Break Even Analysis in economics, business, and cost accounting refers to the point in which total cost and total revenue are equal. A break-even point analysis is used to determine the number of units or dollars of revenue needed to cover total costs (fixed and variable costs).

Formula for Break Even Analysis:

Break even quantity = Fixed costs / (Sales price per unit – Variable cost per unit)

Where:

- Fixed costs are costs that do not change with varying output (i.e. salary, rent, building machinery).
- Sales price per unit is the selling price (unit selling price) per unit.
- Variable cost per unit is the variable costs incurred to create a unit.

It is also helpful to note that sales price per unit minus variable cost per unit is the contribution margin per unit.

Example of Break Even Analysis: Colin is the managerial accountant in charge of Company A, which sells water bottles. He previously determined that the fixed costs of Company A

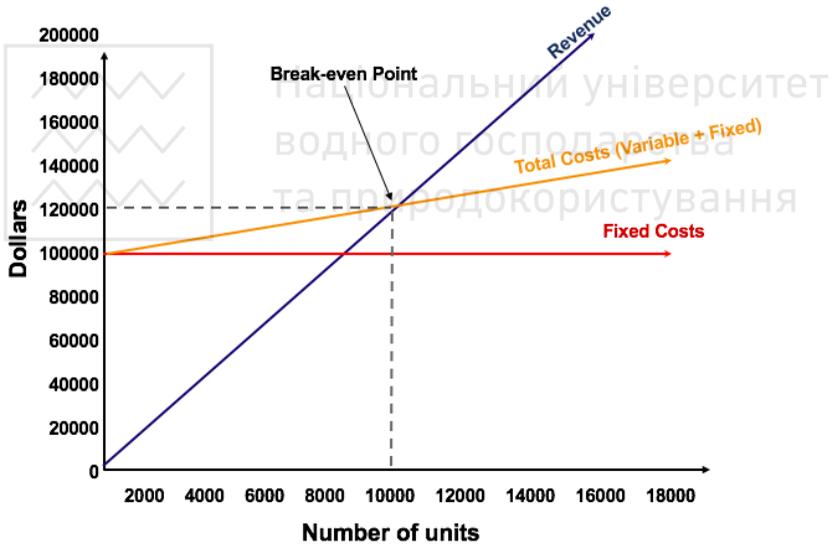


consist of property taxes, a lease, and executive salaries, which add up to \$100,000. The variable costs associated with producing one water bottle are \$2 per unit. The water bottle is sold at a premium price of \$12. To determine the break-even point of Company A's premium water bottle:

$$\text{Break even quantity} = \$100,000 / (\$12 - \$2) = 10,000$$

Therefore, given the fixed costs, variable costs, and selling price of the water bottles, Company A would need to sell 10,000 units of water bottles to break even.

The graphical representation of unit sales and dollar sales needed to break even is referred to as the break even chart or Cost Volume Profit (CVP) graph. Below is the CVP graph of the example above:



Explanation:

1. The number of units is on the X-axis (horizontal) and the dollar amount is on the Y-axis (vertical).
2. The red line represents the total fixed costs of \$100,000.
3. The blue line represents revenue per unit sold. For example, selling 10,000 units would generate $10,000 \times \$12 =$



\$120,000 in revenue.

4. The yellow line represents total costs (fixed and variable costs). For example, if the company sells 0 units, the company would incur \$0 in variable costs but \$100,000 in fixed costs for total costs of \$100,000. If the company sells 10,000 units, the company would incur $10,000 \times \$2 = \$20,000$ in variable costs and \$100,000 in fixed costs for total costs of \$120,000.

5. The break-even point is at 10,000 units. At this point, revenue would be $10,000 \times \$12 = \$120,000$ and costs would be $10,000 \times 2 = \$20,000$ in variable costs and \$100,000 in fixed costs.

6. When the number of units exceeds 10,000, the company would be making a profit on the units sold. Note that the blue revenue line is greater than the yellow total costs line after 10,000 units are produced. Likewise, if the number of units is below 10,000, the company would be making a loss. From 0-9,999 units, the total costs line is above the revenue line.

5.12. Resource analysis of the internal environment of the enterprise

Another method for identifying problems that could lead to a crisis is the analysis of resources of the enterprise's internal environment. It involves a detailed study of various aspects of the use of all internal resources of the enterprise. The recommended algorithm for this analysis includes the steps of exploring such internal resources as: technical, technological, personnel, organizational, financial resources, the structure of enterprise management and so on.

Indicators analysing the use of technical resources: evaluation of equipment availability, estimation of moral and physical wear and tear of equipment, conformity of equipment to the requirements of quality of goods, easy to maintain equipment, evaluation of premises according to requirements, evaluation of the premises in terms of the need for repair /



expansion / refurbishment, estimation of equipment placement optimality.

Indicators analysing the use of technological resources: assessment of competitiveness of production technologies, assessment of conformity of existing technologies with modern requirements, the presence of their own technological developments, the presence of patents, licenses for inventions, know-how, characteristic of sources of technological resources of the enterprise.

Indicators analysing the use of personnel resources: assessment of the qualification of the employees, assessment of the demographic (age) composition of workers, assessment of adaptability of workers, estimation of personnel turnover, estimation of labour productivity of personnel, assessment of the level of motivation of the staff.

Indicators analysing the use of organizational structure: detection of “excessive” departments, detection of “unprofitable” departments, detection of unloaded departments.

Indicators analysing the use of financial resources: liquidity, solvency, efficiency, profitability, cost structure, the ratio between fixed and variable costs.

Indicators analysing the use of the structure of enterprise management: evaluating the simplicity of the management structure, detection of duplication of managerial functions, estimation of the speed of information transmission, detection of information loss.

5.13. Situation analysis

The situation analysis or 5C analysis is considered the most useful and common way to analyze the market environment, because of the extensive information it provides.

Company

The company analysis involves evaluation of the company's objectives, strategy, and capabilities. These indicate to an organization the strength of the business model, whether



there are areas for improvement, and how well an organization fits the external environment.

- **Goals & Objectives:** An analysis on the mission of the business, the industry of the business and the stated goals required to achieve the mission.
- **Position:** An analysis on the Marketing strategy and the Marketing mix.
- **Performance:** An analysis on how effectively the business is achieving their stated mission and goals.
- **Product line:** An analysis on the products manufactured by the business and how successful it is in the market.

Competitors

The competitor analysis takes into consideration the competitors position within the industry and the potential threat it may pose to other businesses. The main purpose of the competitor analysis is for businesses to analyze a competitor's current and potential nature and capabilities so they can prepare against competition. The competitor analysis looks at the following criteria:

- **Identify competitors:** Businesses must be able to identify competitors within their industry. Identifying whether competitors provide the same services or products to the same customer base is useful in gaining knowledge of direct competitors. Both direct and indirect competitors must be identified, as well as potential future competitors.
- **Assessment of competitors:** The competitor analysis looks at competitor goals, mission, strategies and resources. This supports a thorough comparison of goals and strategies of competitors and the organization.

Predict future initiatives of competitors: An early insight into the potential activity of a competitor helps a company prepare against competition.

Customers

Customer analysis can be vast and complicated. Some of the important areas that a company analyzes include:

- **Demographics**



- Advertising that is most suitable for the demographic
- Market size and potential growth
- Customer wants and needs
- Motivation to buy the product
- Distribution channels (retail, online, wholesale, etc...)
- Quantity and frequency of purchase
- Income level of customer.

Collaborators

Collaborators are useful for businesses as they allow for an increase in the creation of ideas, as well as an increase in the likelihood of gaining more business opportunities. The following types of collaborators are:

- Agencies: Agencies are the middlemen of the business world. When businesses need a specific worker who specializes in the trade, they go to a recruitment agency.
- Suppliers: Suppliers provide raw materials that are required to build products. There are 7 different types of Suppliers: Manufacturers, wholesalers, merchants, franchisors, importers and exporters, independent crafts people and drop shippers. Each category of suppliers can bring a different skill and experience to the company.
- Distributors: Distributors are important as they are the 'holding areas for inventory'. Distributors can help manage manufacturer relationships as well as handle vendor relationships.
- Partnerships: Business partners would share assets and liabilities, allowing for a new source of capital and skills.
- Businesses must be able to identify whether the collaborator has the capabilities needed to help run the business as well as an analysis on the level of commitment needed for a collaborator-business relationship.

Context

To fully understand the business climate and environment, many factors that can affect the business must be researched and understood. An analysis on the climate is also



known as the PEST analysis. The types of climate/environment firms have to analyze are:

- Political and regulatory environment: An Analysis of how active the government regulates the market with their policies and how it would affect the production, distribution and sale of the goods and services.
- Economic Environment: An Analysis of trends regarding macroeconomics, such as exchange rates and inflation rate, can prove to influence businesses.
- Social/cultural environment: Interpreting the trends of society, this includes the study of demographics, education, culture etc....
- Technological analysis: An analysis of technology helps improve on old routines and suggest new methods for being cost efficient. To stay competitive and gain an advantage over competitors, businesses must sufficiently understand technological advances.

5.14. Methods of estimating the enterprise environment for crisis diagnostics

The most popular methods of assessing the corporate environment for crisis diagnosis include: SWOT, PESTLE, SPACE, Porter's Five Forces analysis, etc.

SWOT researches for Strengths, Weaknesses, Opportunities, and Threats.

Strengths and weaknesses are internal to your company—things that you have some control over and can change. Examples include who is on your team, your patents and intellectual property, and your location.

Opportunities and threats are external—things that are going on outside your company, in the larger market. You can take advantage of opportunities and protect against threats, but you can't change them. Examples include competitors, prices of raw materials, and customer shopping trends.



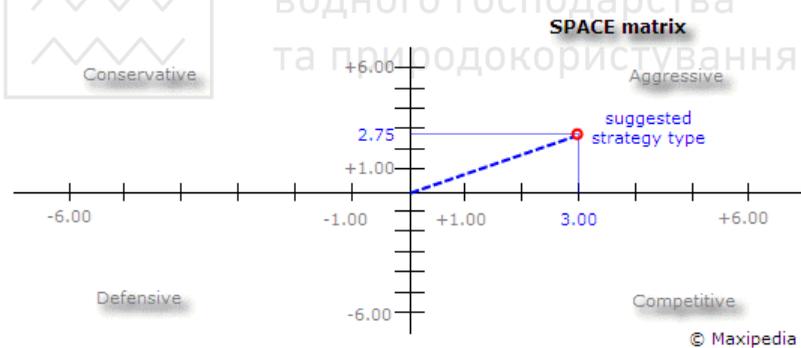
A SWOT analysis organizes your top strengths, weaknesses, opportunities, and threats into an organized list and is usually presented in a simple two-by-two grid.

The SPACE matrix is a management tool used to analyze a company. It is used to determine what type of a strategy a company should undertake. The Strategic Position & Action Evaluation matrix or short a SPACE matrix is a strategic management tool that focuses on strategy formulation especially as related to the competitive position of an organization.

The SPACE matrix can be used as a basis for other analyses, such as the SWOT analysis, BCG matrix model, industry analysis, or assessing strategic alternatives (IE matrix).

The SPACE matrix is broken down to four quadrants where each quadrant suggests a different type or a nature of a strategy: aggressive, conservative, defensive or competitive.

This is what a completed SPACE matrix looks like:



A PESTEL analysis or PESTLE analysis (formerly known as PEST analysis) is a framework or tool used to analyze and monitor the macro-environmental factors that may have a profound impact on an organization's performance. This tool is especially useful when starting a new business or entering a foreign market.



List of PESTEL factors includes: political, economic, social, technological, environmental and legal factors.

Porter's Five Forces is a fundamental framework that describes the competitive environment. If done properly, the Five Forces Analysis can accurately describe any competitive environment at any level.

The Five Forces analysis is most often used as a tool for external, i.e. third-party analysis of a competitive environment.

5.15. Diagnosis of bankruptcy of the enterprise

The bankruptcy possibility (insolvency) is the company's inability to meet maturing obligations resulting either from current operations, whose achievement conditions the continuation of activity, or from compulsory levies.

The scoring method is one of the ways of comprehensive investigation of the state of solvency of an economic agent in order to establish the possibility of bankruptcy risk event. There are a number of scoring methods to assess the likelihood of bankruptcy.

The most commonly used are:

Altman Z-score model

$$Z\text{-Score} = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E$$

Where: A = working capital / total assets

B = retained earnings / total assets

C = earnings before interest and tax / total assets

D = market value of equity / total liabilities

E = sales / total assets

If Z-score below 1,8 - company is headed for bankruptcy, from 1,8 to 3 – "middle" performance whose fate is difficult to predict, above 3 - the company is far from bankruptcy.

Modified Altman Bankruptcy Model

$$Z = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$$

Where: X1 = working capital / total assets

X2 = retained earnings / total assets

X3 = Profit before interest and tax / total assets



X_4 = market value of equity / liabilities book value.

If Z-score less than 1.10 – company is considered bankrupt, from 1.10 to 2.60 - company is considered to be in the middle and there bankruptcy or non-bankruptcy cannot be predicted, more than 2.6 - company is considered non-bankrupt.

Taffler Model

$$Z = 0.53 \cdot R_1 + 0.13 \cdot R_2 + 0.18 \cdot R_3 + 0.16 \cdot R_4$$

Where: R_1 = Gross profit/Current debt

R_2 = Current assets/Total debts

R_3 = Current debts /Total assets

R_4 = Income from sales /Total assets

Function values are interpreted as follows: $Z \leq 0,2$ - high probability of bankruptcy, $Z \geq 0,3$ - low bankruptcy risk.

Conan and M. J. Holder model

$$Z = 0.24 \cdot X_1 + 0.22 \cdot X_2 + 0.16 \cdot X_3 - 0.87 \cdot X_4 - 0.1 \cdot X_5$$

Where: X_1 - Gross operating surplus / Total debts

(Gross operating surplus = operating income – operating expenses)

X_2 – Permanent capital / Total assets

Permanent capital = equity + long-term debts

X_3 – (Current assets – Stocks) / Current debts

X_4 – Financial expenses / Turnover (Sales)

X_5 – Staff expenses / Turnover (Sales)

The interpretation of the bankruptcy risk will be realized as follows in the table.

Table 6

Interpretation of Conan and M. J. Holder model

Score value	Company's sit	Probability of bankruptcy
$Z \geq 0,16$	Very good	Under 10%
$0,1 < Z \leq 0,16$	Good	10% - 30%
$0,04 < Z \leq 0,1$	Under observation	30% - 65%
$Z \leq 0,04$	Danger	65% - 90%



Theme 5. Crisis management: directions and methods

Content

- 5.16. Methods (measures) of crisis management
- 5.17. Crisis management strategy development
- 5.18. Crisis communications
- 5.19. Crisis management plan

Key terms and concepts

- ✓ Tactical methods
- ✓ Communications
- ✓ Crisis planning
- ✓ Strategic methods
- ✓ Strategy development
- ✓ Crisis Communications Team

5.16. Methods (measures) of crisis management

Methods of crisis management are divided into tactical and strategic.

Methods of the first group are aimed at quick improvement of financial indicators of the enterprise that is, overcoming the consequences of the crisis. However, in most cases, these methods are not enough to eliminate the main cause of the crisis state - an inefficient management system. And this requires the use of measures of longer duration. That is, the application of strategic methods is aimed at improving the qualitative characteristics of enterprises.

System of tactical methods of crisis management includes:

Downsizing – the company's ability to adapt to the conditions of the internal and external environment by reducing production capacity and number of personnel of the company in accordance with real demand and market opportunities.

Sanitation – a set of measures of financial-economic, production-technical, organizational and social character, aimed at rapid improvement of financial performance of the enterprise



due to changes in the structure of assets and liabilities of the enterprise.

Monitoring – research, assessment and forecast of the environment in connection with the economic activity of the enterprise.

Controlling – a function in the management system that analyses and coordinates the system of execution of production programs in comparison with the planned indicators.

System of strategic methods of crisis management includes:

Diversification – expanding the scope of the business entity in any direction, so as not to be dependent on one market, is applied at the beginning of the establishment of the enterprise, at the first signs of crisis.

Regularization – formation of a system of strategic planning and management accounting; creation of a complex system financial control and planning; creation of automated accounting system; implementation of full-fledged marketing services, etc.

Reengineering – redesigning the business processes of the enterprise by reducing redundant links and operations in business processes, unnecessary time and other resources

Restructuring – implementation of organizational-economic, legal, production-technical measures aimed at changing the structure of the enterprise, its management, forms of management, which can provide the company with financial rehabilitation, increase of production of competitive products, increase of production efficiency

Merger – the merger of enterprises (by creating a new legal entity or joining enterprises to the main enterprise), as a result of which the owners (shareholders) of the merged companies will control all net assets of the joint ventures

Liquidation – termination of the company's activity, exclusion of it from the registers



5.17. Crisis management strategy development

All organizations should have a crisis management policy which is at the same level of importance as the mission statement and business plan. A proper crisis management policy can rapidly restore normality and confidence for workers in the organization. It also provides a good source of PR material for the media.

Determine whether it is a crisis. This question is important to ask, as there are many situations that go wrong because the right person to handle it is not around. You may be in charge of a project until your supervisor comes back and are unable to contact him during a crisis. You have to make your own decisions in his absence and your action is dependent on the level of authority given.

See the Big Picture. It is not easy to handle a crisis if you are not aware of all the facts. The final outcome may not be the way you envisage. If your role is a leader, you have to be detached from the emotional side of the crisis and rationally take stock of how to move on. Again, this is not as easy as it sounds as you may have long time colleagues who are involved in this crisis.

Gather the Relevant Team. It is important to be able to meet up with the relevant team to discuss about the situation. This is to ensure that the team is able to analyse and make a united stand about handling this crisis. This team should also comprise of the authorities, if the crisis is serious.

Set a Timeline. You must construct a timeline and ensure that each process scenario is highlighted. This practice will be a check to prevent your team from spending too much time in one aspect of handling the crisis.

Develop a Procedural Manual. Is there an organizational situational manual that you can use for this situation? Are you able to recollect the tips that were given to you when you participated in a mock drill?



Seek External Experts. You should get external experts to access the situation if the crisis is totally unanticipated. However, you must have had a close-door meeting with your inner circle. This is essential, as you do not want to unnecessarily reveal confidential information to external parties.

Speak To The Media. It is important to prepare a press kit which provides a full detailed report about the crisis. If you are comfortable to conduct a press interview, you have to ensure that you have the full details first.

Fine tune Your Communication Style. You have to ensure that your communication style is in sync with the crisis. Remember to be forthcoming with reliable information and try not to speculate. This will also ensure that the victims' immediate families do not overly worry. It will also not help if you come across as very emotional in the media as you want to communicate that your organization has everything under control.

Protect your reputation. If the crisis involves the loss of lives, it is not unthinkable that your credibility and organisation's reputation is put into question. Assuming that the crisis was beyond your organisation's control, you have to stick to your best judgement and not be led into a debate that may open your organisation to possible legal action.

5.18. Crisis Communications

Every organization is vulnerable to crises. The days of playing ostrich – burying your head in the sand and hoping the problem goes away – are gone.

Experience demonstrates that organizational leadership often does not understand that in the absence of adequate internal and external communications:

- Operational response will break down.
- Stakeholders will not know what is happening and quickly become confused, angry, and negatively reactive.



- The organization will be perceived as inept, at best, and criminally negligent, at worst.
 - The length of time required to bring full resolution to the issue will be extended, often dramatically.
 - The impact to the financial and reputational bottom line will be more severe.

The basic steps of effective crisis communications are not difficult, but they require advance work in order to minimize damage. So if you're serious about crisis preparedness and response, read and implement these 10 steps of crisis communications, the first seven of which can and should be undertaken before any crisis occurs.

PRE-CRISIS

1. Anticipate Crises

If you're being proactive and preparing for crises, gather your Crisis Communications Team for intensive brainstorming sessions on all the potential crises that could occur at your organization.

There are at least two immediate benefits to this exercise:

- You may realize that some of the situations are preventable by simply modifying existing methods of operation.
- You can begin to think about possible responses, about best-case/worst-case scenarios, etc. Better now than when under the pressure of an actual crisis.

2. Identify Your Crisis Communications Team

A small team of senior executives should be identified to serve as your organization's Crisis Communications Team. Ideally, the organization's CEO will lead the team, with the firm's top public relations executive and legal counsel as his or her chief advisers. If your in-house PR executive does not have sufficient crisis communications expertise, he or she may choose to retain an agency or independent consultant with that specialty. Other team members are typically the heads of your major organizational divisions, as any situation that rises to the level of being a crisis will affect your entire organization. And sometimes, the team also needs to include those with special



knowledge related to the current crisis, e.g., subject-specific experts.

3. Identify and Train Spokespersons

Categorically, any organization should ensure, via appropriate policies and training that only authorized spokespersons speak for it. This is particularly important during a crisis. Each crisis communications team should have people who have been pre-screened, and trained, to be the lead and/or backup spokespersons for different channels of communications.

All organizational spokespersons during a crisis situation must have:

- The right skills
- The right position
- The right training

4. Spokesperson Training

All stakeholders, internal and external, are just as capable of misunderstanding or misinterpreting information about your organization as the media. It's your responsibility to minimize the chance of that happening.

Spokesperson training teaches you to be prepared, to be ready to respond in a way that optimizes the response of all stakeholders.

5. Establish Notification and Monitoring Systems

Notification Systems

Today, we need to have – immediately at hand - the means to reach our internal and external stakeholders using multiple modalities.

It is absolutely essential, pre-crisis, to establish notification systems that will allow you to rapidly reach your stakeholders using multiple modalities. If you use more than one modality to reach your stakeholders, the chances are much greater that the message will go through.

Monitoring Systems

Intelligence gathering is an essential component of both crisis prevention and crisis response.



Knowing what's being said about you on social media, in traditional media, by your employees, customers, and other stakeholders often allows you to catch a negative "trend" that, if unchecked, turns into a crisis.

Likewise, monitoring feedback from all stakeholders during a crisis situation allows you to accurately adapt your strategy and tactics.

Both require monitoring systems be established in advance. There a variety of paid monitoring services that provides not only monitoring, but also the ability to report results in a number of formats. Monitoring other stakeholders means training personnel who have front-line contact with stakeholders (e.g., Customer Service) to report what they're hearing or seeing to decision-makers on your Crisis Communications Team.

6. Identify and Know Your Stakeholders

Who are the internal and external stakeholders that matter to your organization? I consider employees to be your most important audience, because every employee is a PR representative and crisis manager for your organization whether you want them to be or not! But, ultimately, all stakeholders will be talking about you to others not on your contact list, so it's up to you to ensure that they receive the messages you would like them to repeat elsewhere.

7. Develop Holding Statements

While full message development must await the outbreak of an actual crisis, "holding statements," messages designed for use immediately after a crisis breaks, can be developed in advance to be used for a wide variety of scenarios to which the organization is perceived to be vulnerable, based on the assessment you conducted in Step 1 of this process.

The organization's Crisis Communications Team should regularly review holding statements to determine if they require revision and/or whether statements for other scenarios should be developed.

POST-CRISIS



8. Assess the Crisis Situation

Reacting without adequate information is a classic "shoot first and ask questions afterwards" situation in which you could be the primary victim. However, if you've done all of the above first, it's a "simple" matter of having the Crisis Communications Team on the receiving end of information coming in from your team members, ensuring the right type of information is being provided so you can proceed with determining the appropriate response.

Assessing the crisis situation is, therefore, the first crisis communications step you can't take in advance. If you haven't prepared in advance, your reaction will be delayed by the time it takes your in-house staff or quickly hired consultants to run through steps 1 to 7. Furthermore, a hastily created crisis communications strategy and team are never as efficient as those planned and rehearsed in advance.

9. Finalize and Adapt Key Messages

With holding statements available as a starting point, the Crisis Communications Team must continue developing the crisis-specific messages required for any given situation. The team already knows, categorically, what type of information its stakeholders are looking for. What should those stakeholders know about *this* crisis? Keep it simple. Have no more than three main messages that go to all stakeholders and, as necessary, some audience-specific messages for individual groups of stakeholders. You'll need to adapt your messaging to different forms of media as well.

10. Post-Crisis Analysis

A formal analysis of what was done right, what was done wrong, what could be done better next time and how to improve various elements of crisis preparedness is another must-do activity for any Crisis Communications Team. I have developed a formal process for accomplishing this, but even a solid in-house brainstorming session can do the job.



5.19. Crisis Management Plan

To counter any looming crisis, a proper process and plan must be used for effective crisis management. A crisis management plan is a documented outline of a process to follow for an organization to respond effectively to a crisis.

Crisis management planning will focus mainly on building infrastructures that help the company negate possibly risks and how to respond to crises should they occur. It also involves the organization workforce and the crisis management team in testing the methods and having regular internal training on the processes.

At a minimum, your crisis plan should address the following:

- Internal and external stakeholders
- Primary spokespeople for each communication channel
- Communication infrastructure and redundancies
- Decision-making chain of command
- Access to emergency funds
- Holding statements
- Contingency plans

The following guidelines are recommended for establishing good crisis management plans:

- Identify an individual from your workforce to take over crisis management role as a manager. Or, you can employ a professional crisis manager who can help you in planning crisis management processes.
- Initiate frequent training and refresher courses on handling crises. Drills and fake operations must frequently take place to keep refreshing stakeholders on emergency responses to crises.
- Form a crisis team to work under the leadership of a crisis manager. When a crisis occurs, this is the team that should be able to respond quickly. A veteran of several training and drills for such occurrences, it is expected to be in the



frontline in directing other stakeholders on what to do and where to assemble to avoid further accidents.

- Planning responses and crisis management processes for various potential crises is highly recommended. It takes several approaches and processes to address different crises.

- Initiate systems that can effectively monitor or detect foreseeable crises signals early enough in order to tackle the situation before it gets out of hand. Examples of such systems are smoke detectors that can detect potential fire long before it gets out of hand.

- Provide a list of key persons in case of a crisis and their contacts. The contact information must be displayed where anyone can see and easily access them.

- Identify the ground person to be notified immediately when a crisis occurs. Apart from a crisis manager, there must be a coordinating person among employees who possess first-hand news on a looming crisis. It should be the same person who can be trusted by his colleagues with vital information on any suspected crisis.

- Identify a central point where the employees can assemble and the exit points to use in case of a crisis. Emergency exit doors with ease of opening them must be labelled well and an emergency central place identified and properly labelled as well.

- Regular testing of the crisis management process and emergency equipment and updating them frequently or as needed.

In any organization, whether it is small or large, problems or dangers are bound to happen that can disrupt the smooth operations or affect it negatively. The organizational hazards, which can occur unexpectedly and drastically, are capable of causing immense harm to its workforce or stakeholders. Such occurrences can be defined as crises, and it is essential to manage them with efficiency and tact.



CONTROL TEST PROGRAM

1. Crisis is:
 - a) a moment of risk or stress.
 - b) a sharp change in anything, a difficult transition state.
 - c) acute difficulty with something; difficult situation.
 - d) all answers are correct.
2. The maintenance, preservation of functions that determine the integrity of the socio-economic system, its qualitative certainty and essential characteristics.
 - a) Functioning.
 - b) Development.
 - c) Existence.
 - d) Being.
3. The possibility or inevitability of occurrence of something dangerous, pitiful is...:
 - a) exacerbation;
 - b) threat;
 - c) life-saving;
 - d) environment.
4. Choose the correct statement:
 - a) The crisis has only negative consequences for the enterprise.
 - b) The crisis has only positive consequences for the enterprise.
 - c) The crisis has both positive and negative consequences for the enterprise.
 - d) All answers are correct.
5. Crisis causes that are related to human activity:
 - a) Natural;
 - b) Technogenic;
 - c) Objective;
 - d) Subjective.
6. Reasons that are related to the cyclical needs of modernization and restructuring of enterprises :
 - a) External;
 - b) Internal;
 - c) Objective;



d) Subjective.

7. The cycle phase, which manifests itself in the stagnation of production, is...:

- a) revival;
- b) depression;
- c) rise;
- d) crisis.

8. The circumstances that occur without warning and outside the control of an institution characterize the type of crisis:

- a) Sudden crisis;
- b) Smoldering crisis;
- c) Local crisis;
- d) General crisis.

9. Name the signs of the Crisis of profitability.

- a) Permanent losses liquidate equity.
- b) The enterprise has destroyed production potential and lack of long-term factors of success.
- c) A recurrent lack of cash for a company to meet its obligations and finance its current activities.
- d) All answers are correct.

10. The process by which an organization deals with a disruptive and unexpected event that threatens to harm the organization or its stakeholders is named:

- a) Risk management.
- b) Crisis management.
- c) Event management.
- d) PR management.

11. A coordinated action aimed at overcoming and eliminating the negative consequences of a sudden or unexpectedly detected glow crisis.

- a) Extreme management.
- b) Routine crisis management.
- c) Preventive crisis management.
- d) Provocative crisis management.

12. The goal of extreme crisis management is...:

- a) to reduce the risk of crises and minimize the damage from



their occurrence.

- b) to save the company;
- c) to organize a controlled crisis;
- d) to avoid crisis.

13. Crisis post processing connected with...:

- a) risk analysis, scenario technique, early detection system, crisis handbook, crisis team, etc.
- b) risk classification, organization, information search, crisis PR, etc.
- c) updating of crisis strategy, process optimization, documentation of crisis event.
- d) all answers are correct.

14. The eliminating some risk by changing project or activity parameters. That is...:

- a) risk avoidance;
- b) risk control;
- c) risk assumption;
- d) risk transfer.

15. Internally driven financial risk factors are ...:

- a) interest rates, foreign exchange, credit;
- b) competition, customer changes, industry changes, customer demand;
- c) cash flow, liquidity;
- d) recruitment, supply chain.

16. What signs are not the main symptoms of the crisis?

- a) low Operational assessment of key indicators characterizing the financial condition of the company is called an ...:
- a) express assessment.
- b) express analysis.
- c) express method.
- d) diagnostics.

17. The financial statements of the enterprise include:

- a) the balance sheet.
- b) the income statement.
- c) statement of cash flow.
- d) all answers are correct.



18. The ability to meet cash requirements is called ...:
- liquidity.
 - solvency.
 - efficiency.
 - profitability.
19. The efficiency of an organization can be measured by ...:
- the current ratio, the quick ratio or liquidity ratio.
 - the debt ratio, the debt-to-equity ratio.
 - the working capital turnover ratio, the repayment period of payables.
 - the profit margin, the return on assets.
20. Choose the correct formula for Break Even Analysis:
- Break even quantity = Fixed costs / (Sales price – Variable cost).
 - Break even quantity = Fixed costs / (Sales price per unit – Variable cost per unit).
 - Break even quantity = Variable costs / (Sales price per unit – Fixed cost per unit).
 - Break even quantity = Variable costs / (Sales price – Fixed cost).
21. The company's fixed costs are \$ 20,000, the price of the product is \$ 30, and the variable costs \$ 20 per unit, then the Break even quantity will be:
- 1000 units.
 - 2000 units.
 - 3000 units.
 - 4000 units.
22. Method that is used to determine what type of a strategy a company should undertake.
- Situation analysis.
 - SWOT analysis.
 - SPACE analysis.
 - PESTEL analysis.
23. Which of the following applies to economic factors that may have a profound impact on an organization's performance?
- Trade control; lobbying activities; size of government



budgets.

b) Gross domestic product trend; unemployment trend; stock market trends; price fluctuations.

c) Climate change; natural disasters; air and water pollution; recycling standards.

d) Use of birth control; education level; minorities; crime levels.

24. Demographics, advertising that is most suitable for the demographic, market size and potential growth, motivation to buy the product, income level of customer are the main areas of ...:

a) competitors analysis.

b) collaborators analysis.

c) company analysis.

d) customer analysis.

25. The goal of downsizing is :

a) significant reduction of fixed expenses, reduction of production cost.

b) restoration of liquidity and solvency, restoration of profitability and competitiveness.

c) early detection of the crisis.

d) accelerating the detection of crisis phenomena.

26. Association within one organization of different stages of production and distribution, different types of activities for significant cost savings is the goal of company's ...:

a) diversification.

b) regularization.

c) reengineering.

d) restructuring.

e) liquidation.

27. The formation of management systems capable of solving a large amount of complex tasks related to work in market conditions, access to international markets is the goal of company's ...:

a) diversification.

b) regularization.

c) reengineering.



d) restructuring.

e) merger.

28. Sharp increase in performance indicators such as labor productivity, service or production time, cost is the goal of company's ...:

a) diversification.

b) reengineering.

c) restructuring.

d) merger.

e) liquidation.

29. To achieve further joint distribution of risks and benefits from the association is the goal of company's ...:

a) diversification.

b) regularization.

c) restructuring.

d) merger.

e) liquidation.

30. What methods of crisis management refer to tactical?

a) Regularization and reengineering.

b) Restructuring and liquidation.

c) Controlling and sanitation.

d) Downsizing and diversification.

EXERCISES

Exercise 1

According to the reform plan, organizational and technical measures were taken to introduce the new equipment in the enterprise activity:

1. Capital expenditures for measures – 42 thousand UAH.
2. The relative reduction of the number of employees according to the project – 16 people.
3. The average salary of one employee is 6500 UAH.
4. Taxes accrued on salary – 22%.
5. Expenditure on overalls – 65 UAH per worker per year.



6. Annual depreciation charges on capital investments – 15%.
7. Additional electricity consumption – 42 thousand kW a year.
8. Electricity tariff – 1.56 UAH. / kWh- hour.
9. The total number of employees of the company – 430 people.

Calculate the increase in performance of staff, additional annual profit, additional cash flow and the payback period for organizational and technical measures.

Exercise 2

The enterprise has implemented new financial management systems. To create a system spent – 1650 thousand UAH. Depreciation rate is 25%. Due to the system of control over financial flows, the cost of production was decreased by 1.2%. The basic cost of production is 2560 UAH / t. The basic level of production is 45 thousand tons. The production output of the project is 52 thousand tons. The price of 1 ton of the product is 2816 UAH. To substantiate expediency of introducing the financial management system by means of indicators: additional profit, additional cash flow and payback period.

Exercise 3

Due to the implementation of the cost management system, the cost of materials was decreased by 5%, the complexity of products by 12%. The volume of production increased from 12 thousand tons to 18 thousand tons. Cost per unit of production at the base level was 1203 UAH, including materials – 856 UAH. Price of 1 ton of products 1503 UAH. The basic complexity of products is 120 people – hours. Average tariff rate is 1.5 UAH a year. Expenditures on the creation of a cost management system are 2150 thousand UAH. The annual depreciation rate is 25%. Calculate system efficiency.



Exercise 4

"Alfa" Company has received a long-term loan of 30 million pounds sterling in the bank "Omega". At the time of signing the loan agreement, the equity of this company amounted to 32 million pounds sterling. In addition, the company used an urgent loan of 10 million pounds sterling to provide its business.

The loan agreement contains the condition that the total debt of the borrowing company should not exceed 120% of the amount of equity capital. At the beginning of the loan period, Alfa has used GBP 15 million in total loans.

Calculate the relative level of debt with respect to Alfa's equity. Can Omega Bank provide additional loans to the company, provided that the company suffered losses of GBP 7 million and would like to offset them by using further 10 million pounds sterling of credit? Can "Alpha" company in this case be limited to borrowing funds worth £ 5 million?

Exercise 5

The joint-stock company achieved the following results of its production and commercial activity for the year: sales volume - 100000 units (pieces); selling price per unit of production - UAH 100; variable costs for the entire volume of production - UAH 3,000,000; fixed costs for the entire volume of production - UAH 5,000,000. However, the market conditions require the joint-stock company to reduce the selling price from 100 to 80 UAH per unit of products to stay on it as a seller of their own goods.

Determine the necessary sales volume that can provide: 1) the volume of production without loss, i.e. with zero profitability (sales revenue only compensates for gross expenses); 2) the amount of profit achieved in the previous year from the sale of products.

Exercise 6

Current assets of the company at the end of the reporting year amounted to 43945000 UAH, and short-term liabilities – 31416000 UAH.



Calculate: the current liquidity of the assets of the enterprise at the end of the reporting year; the amount of undistributed profits for the guaranteed achievement by the enterprise of the normative value of the current liquidity ratio equal to 2, subject to the unchanged amount of urgent liabilities.

Exercise 7

The manufacturing company has its own performance indicators, as shown in the table.

Indicators of production and financial activity of the enterprise, ths. UAH

Indicators	Last year	Current year
Capital of the firm (C)	16800	17300
Current assets (CA)	7900	8200
Total assets (TA)	21500	22400
Accumulated capital (balance of previous years) (AcC)	5200	5800
Short-term liabilities (ShL)	2400	2200
Total debt of the firm (TD)	10700	10300
Sales volume of products (VPs)	29500	33450
Profit of the firm (R)	4200	4600

1. Calculate the integral coefficient of financial stability of the manufacturing enterprise for the last year and the year following it.

2. To make a conclusion on the financial stability of the enterprise, considering that if the estimated coefficient is more than 3, then the firm has reached a stable financial state, a coefficient of 1.8 and less - indicates an unstable financial state of the enterprise.

Exercise 8

Using the following data about the activities of the company, calculate the amount of profit, the impact of the



operating leverage, the profitability threshold, the stock of financial strength and to analyze the financial sustainability of the enterprise. Output data: price per unit – UAH 230; sales volume – 2500 pieces; salary of the administration – 23200 UAH; rent 8000 UAH; the cost of raw materials is 3 000 UAH; interest on a loan – 1800 UAH; depreciation charges – 6700 UAH; wages of workers – 52440 UAH; other fixed costs – 12800 UAH; other variable costs – 14960 UAH.

Exercise 9

Fixed (annual) costs of the firm make 500 thousand UAH, variable costs – 10% of sales volume (per year). The expected sales volume is 600 thousand UAH.

Determine the losses that can be incurred by an enterprise if demand for products will reduce by 10%?

Exercise 10

Entrepreneur № 1 saved his 10 ths. dollars, taking in debt another 40 thousand dollars under 10% per annum and invested all 50 ths. dol. in the stocks of one of the companies. But the actual stocks price began to fall, and when it dropped by 40%, the businessman decided to get rid of unreliable stocks. As a result, the losses led him to bankruptcy. Entrepreneur number 2 also invested his 50 ths. dollars in the stocks of the same company, and then sold them. However, he avoided bankruptcy. Calculate the risk of each entrepreneur. What is the reason for the bankruptcy of the first entrepreneur?

Exercise 11

Using financial statements of the company, you should to conduct an express analysis of its financial condition and diagnostics of enterprise bankruptcy.



Income statement, per year

Sales (revenue)	1680000
Cost of Goods Sold	1360000
Gross Profit (Loss)	320000
Operating expenses	
Selling expenses:	
Advertising	43500
Commissions	25400
Total selling expenses	68900
Administrative expenses:	
Office supplies expense	52000
Office equipment expense	76000
Total administrative expenses	128000
Total Operating Expenses	196900
Net Operating Income	123100
Non-operating and other Income	
Interest revenues	65000
Gain on sale of investments	34800
Interest expense	-34000
Loss from lawsuit	-24000
Total non-operating Income	41800
Net Income (Loss)	164900



Balance sheet

ASSETS	in the begin- ning	at the end	LIABILITIES	in the begin- ning	at the end
	of the year			of the year	
Current assets			Current liabilities		
Cash	5300	4200	Notes payable	9800	10000
Petty cash	250	200	Accounts payable	67500	68000
Temporary investments	19000	22000	Wages payable	15000	15300
Accounts receivable – net	75000	72500	Interest payable	69000	7000
Inventory	54000	59500	Taxes payable	14000	13200
Supplies	6400	5200	Warranty liability	2100	2300
Prepaid insurance	2900	2900	Unearned revenues	1900	2200
Total current assets	162850	166500	Total current liabilities	179300	118000
Investments	67500	78000	Long - term liabilities		
			Notes payable	3200	33000
Property, plant & equipment			Bonds payable	610000	620000
Land	11000	11000	Total long - term liabilities	613200	653000
Land improvements	13400	12200			
Buildings	310000	320000	Total liabilities	792500	771000
Equipment	435000	470000			
Less: accum depreciation	-110000	-125000	STOCKHOLDERS' EQUITY		
Property, plant & equipment - net	659400	688200	Common stock	225000	225000
Intangible assets			Retained earnings	330000	445000
Goodwill	155000	155100	Accum. other comprehensive income	13000	15000
Trade names	230000	250000	Less: Treasury stock	-82600	-115000
Total intangible assets	385000	405100	Total stockholders' equity	485400	570000
Other assets	3150	3200			
Total assets	1277900	1341000	Total liabilities & stockholders' equity	1277900	1341000



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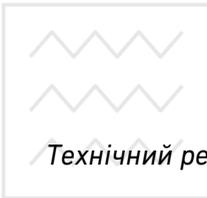


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