

PRAG EKONOMIČNOSTI I NJEGOVA PRIMJENA U POSLOVNOJ POLITICI PREDUZEĆA

ECONOMICAL THRESHOLD AND ITS USE IN THE BUSINESS POLICIES OF COMPANIES

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REZIME

U vođenju poslovne politike, poznavanje troškova, kao ulaznog elementa procesa reprodukcije i njihovog ponašanja u dinamičnim sukcesivnim procesima je od velikog značaja za kvalitet ekonomije preduzeća. Činjenica da se troškovi različito ponašaju u odnosu na stepen korišćenja kapaciteta, zahtjeva od menadžmenta preduzeća poznavanje zakonitosti u ponašanju troškova u dinamičnom procesu reprodukcije. U skladu s tim je uspješnost iznalaženja optimalnog stepena korišćenja kapaciteta, gdje se postiže maksimalna dobit. U tu svrhu koriste se metode utvrđivanja graničnih troškova, kao i minimalnog stepena korišćenja kapaciteta, te metod utvrđivanja tačke - praga ekonomičnosti.

Ključne riječi: kapacitet, troškovi, progresija troškova, degresija troškova, remanentnost troškova, granični troškovi, prag ekonomičnosti, proces reprodukcije, ulazni i izlazni elementi procesa reprodukcije, kvalitet ekonomije, mezoekonomski sistem (MOS).

UVOD

Stalni razvoj proizvodnih snaga doprinosi, između ostalog, uvođenju novih djelatvornih sredstava proizvodnje, što uslovljava povećanje troškova kao elementa ulaganja

ABSTRACT

In the leading of business policies, familiarity with expenses, being the entering element in the reproduction process and their conduct in the dynamics of successive processes is of great importance for the quality of company economics. The fact that expenses vary in relation to the degree of using capacities requires from the management of company to be familiar with the legislation of expense conduct in the dynamics of reproduction process. In accordance with this is the success in finding an optimal degree of using capacity, where the maximal profit is gained. For this purpose, methods of establishing limit expenses are used, as well as the minimal degree of using capacities and the method of point determining – economical threshold.

Keywords: capacity, expenses, expense progression, expense degression, expense remanence, limit expenses, economical threshold, reproduction process, entering and exiting elements of reproduction process, economics quality, mesoeconomic system (MOS).

INTRODUCTION

Constant development of producing capacities contributes, among other things, to introducing new and more effective means of manufacture, which implies expense increase as the

procesa reprodukcije. To se naročito odnosi na troškove pripreme proizvodnje. Takav proces prema ekonomskim kriterijumima ima opravdanje samo u uslovima kada dolazi do smanjenja ukupnog trošenja elemenata proizvodnji za dati obim rezultata, odnosno manji rast ovog vida ulaganja u odnosu na porast obima proizvodnje, koji je omogućen tom pripremom.

Svrshodno upravljanje troškovima podrazumijeva poznavanje karakteristika i zakonitosti ponašanja troškova u dinamici pri različitim stepenima korištenja kapaciteta, koje treba da omogući da organizacioni sistem postigne optimalne rezultate. U tu svrhu potrebno je poznavati tačku - prag ekonomičnosti i njegov značaj za vođenje uspješne poslovne politike, ponašanje ukupnih troškova u funkciji njihove kvantitativne strukture, te specifičnosti njihovog ponašanja u dinamici.

POJAM I ZNAČAJ PRAGA EKONOMIČNOSTI

Trošenje elemenata proizvodnje ne može se posmatrati izolovano od rezultata reprodukcije u okviru mezoekonomskog sistema. To proističe iz okolnosti što se troškovi elemenata proizvodnje kao oblik ulaganja vrijednosti, reprodukuju realizacijom proizvoda, kao podsistemom izlaza mezoekonomskog sistema.

Izučavanje zakonitosti ponašanja troškova pokazuje da se smanjivanjem stepena korištenja kapaciteta ne mogu u istoj srazmjeri smanjiti i troškovi elemenata proizvodnje. U vezi s tim mora se ocjenjivati do koje mjere je dopustivo, u okviru poslovne politike, smanjivati stepen korištenja kapaciteta kada se pojave poteškoće i nemogućnosti da se proizvodni potencijal mezoekonomskog sistema koristi na optimalnom nivou. To ocjenjivanje izvodi se upoređivanjem prihoda koji se ostvaruje na datom obimu proizvodnje uz konstantne prodajne cijene proizvoda, i troškova koje izaziva takav obim proizvodnje, što se može kvantitativno izraziti obrascem:

investment element of the reproduction process. This is especially related to the expenses of production arrangement. According to economic criteria, such a process is justifiable only in conditions of decrease in the overall expense of production elements for a certain extent of results, i.e. lower growth of this kind of investment in relation to the increasing extent of production which is enabled by this preparation.

Appropriate guidance of expenses implies knowing the characteristics and the expense legislation in dynamics during all levels of capacity use, which should enable the organizational system to achieve optimal results. For this purpose, the point – economical threshold needs to be established, as well as its importance for leading a successful business policy, the conduct of overall expenses in the function of their quantity structure and their specific conduct in dynamics.

NOTION AND SIGNIFICANCE OF ECONOMICAL THRESHOLD

The expense of production elements cannot be viewed separated from reproduction results in the extent of mesoeconomic system. This comes from the fact that the expenses of production elements as a sort of investment values are reproduced by the realization of a product, which is a subsystem of exiting mesoeconomic system.

Examining the legislation of expense conduct shows that by reducing the levels of capacity use, the expenses of production elements cannot be reduced to the same extent. Therefore, it should be estimated to which extent it is permitted, according to a business policy, to reduce the level of capacity use when difficulties occur and when there are impossibilities of using production potential of mesoeconomic system at optimal level. This estimation is accomplished by comparing the income that is achieved at a certain extent of production with a constant selling price and the expenses that cause such extent of production, which can be represented quantitatively by the following scheme:

$$\sum_{i=1}^n Q_i C_{q\alpha i} = C \geq T$$

Kako je osnovna ekonomska zakonitost izražena u mogućnosti da se stvara veća vrijednost od one koja se ulaže, smanjivanje obima proizvodnje ispod onog stepena korišćenja kapaciteta koji ne obezbeđuje veću realizovanu vrijednost proizvoda od troškova predstavlja ekonomski neopravdanu pojavu. Zato se obim proizvodnje na kome se izjednačava realizovana vrijednost proizvoda (C) sa troškovima (T) smatra pragom ekonomičnosti. Prema tome, stepen korišćenja kapaciteta ispod kojeg se više ne ostvaruje ekonomično poslovanje predstavlja prag ekonomičnosti korišćenja kapaciteta.

Donji stepen korišćenja kapaciteta na kome prestaje ekonomično poslovanje preduzeća naziva se i prag korisnosti, jer se ispod toga obima proizvodnje troškovi ne pokrivaju realizacijom proizvoda, odnosno:

$$T = C$$

Ispod praga korisnosti nastaje gubitak u poslovanju preduzeća, koji se izražava u negativnoj razlici između vrijednosti realizacije proizvoda i troškova proizvodnje, što se kvantitativno može izraziti po obrascu:

$$G = T - C$$

pri čemu je: G =gubitak u poslovanju preduzeća, koji izražava negativnu razliku između stvarnih troškova (T) i realizovane vrijednosti proizvodnje (C).

Do pojave praga ekonomičnosti prije padanja stepena korišćenja kapaciteta na nulu dolazi zbog okolnosti što se ukupni troškovi sporije smanjuju od pada obima proizvodnje. Pri tome, smanjenje obima proizvodnje praćeno je održavanjem visine fiksnih troškova na nivou uslovljenom uspostavljanjem kapaciteta. Ova pojava može se grafički predstaviti kao na grafikonu 1.

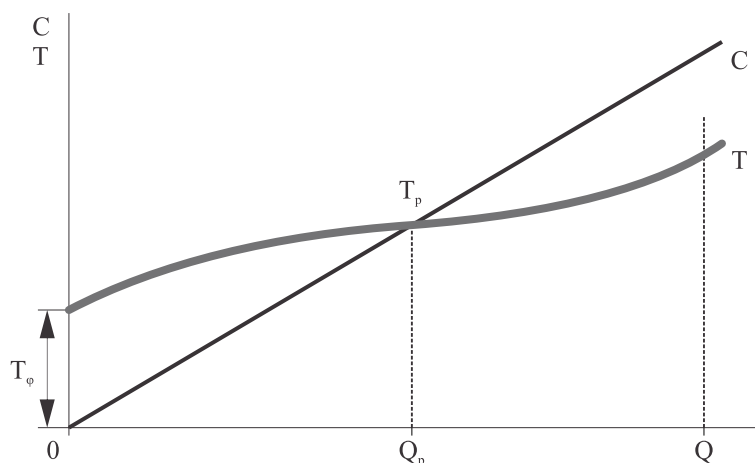
Since the basic economic legislation is expressed in the possibility of creating greater value than the one that is invested, reducing the extent of production below the degree of capacity use which does not comprise greater realized product value than expenses, represents an economic unjustified occurrence. That is why the extent of production that equalizes realized value of products (C) with expenses (T) is considered to be the economical threshold. So, the degree of using capacities where there are no accomplishing economic operations below, represents the economical threshold of using capacities.

The lower degree of using capacities at which ends the economic business of companies is also called the threshold of utility, since below this extent of production the expenses are not covered by the realization of products, which means that:

Below the threshold of utility there is a loss in company business denoted by negative difference between the values of product realization and the expenses of production, quantitatively represented in the following scheme:

G denotes the loss in company business representing the negative difference between real expenses (T) and the realized value of production (C).

The occurrence of economical threshold before lowering the degree of using capacities reaches zero since the overall expenses are decreasing more slowly than the fall in the production extent. During this process, the decrease in production extent is followed by maintaining the rate of fixed expenses at the level which depends on making capacities. This occurrence can be represented in a form of graphic, as shown on graph 1.



Grafikon 1. Prag ekonomičnosti korištenja kapaciteta u uslovima krivolinijskog razvoja ukupnih troškova.

Graph 1. Economical threshold of using capacities in conditions of a curved line development of overall expenses.

PONAŠANJE UKUPNIH TROŠKOVA U FUNKCIJI NJIHOVE KVANTITATIVNE STRUKTURE

CONDUCT OF OVERALL EXPENSES IN THE FUNCTION OF THEIR QUANTITATIVE STRUCTURE

Troškovi elemenata proizvodnje nastaju, s jedne strane u funkciji uspostavljanja kapaciteta i, s druge strane, u funkciji korištenja toga kapaciteta. Međutim, njihovo reprodukovanje omogućuje se samo realizacijom proizvoda na tržištu. Iz toga se može zaključiti da su troškovi uslovljeni i pripremom i izvršenjem proizvodnje, a da se njihovo reprodukovanje obezbjeđuje samo putem izvršene proizvodnje. Zbog toga je za ekonomsku teoriju i praksu značajno izučavanje ponašanja ukupnih troškova u uslovima uspostavljanja kapaciteta i organizacije njegovog korištenja, upoređivanjem kvantitativnog izraza ovog dijela podsistema ulaganja sa vrijednošću realizovane proizvodnje.

Expenses of production elements occur on one side in the function of making capacities, and on the other side in the function of using these capacities. However, their reproduction is enabled only by the realization of products at a marketplace. It can be concluded from this that the expenses are conditioned by both the preparation and the accomplishment of production and that their reproduction is achieved only by accomplished production. That is why it is important for the economic theory and practice to study the conduct of overall expenses in conditions of creating capacities and the organization of its use by comparing quantitative part of this investment subsystem with the value of realized production.

Analiza ulaganja u obliku trošenja elemenata proizvodnje prema kriterijumu njihove uslovljenosti uspostavljanjem i korištenjem kapaciteta podrazumijeva razlikovanje *fiksni*, *relativno fiksnih* i *proporcionalnih troškova*. Na taj način dobija se uvid u kvalitativnu strukturu ovog dijela podsistema ulaza mezoekonomskog sistema. Savremeno organizovana privredna djelatnost nužno pretpostavlja prethodno pomenutu kvalitativnu strukturu troškova elemenata proizvodnje. Međutim,

Investment analysis in a form of expending elements of production, according to the criteria of their relation to creating and using capacities, comprises difference of *fixed*, *relatively fixed* and *proportional expenses*. In this way, an insight to the qualitative structure of this part of entering subsystem of mesoeconomic system is provided. Contemporarily organized business activities essentially presuppose the already mentioned qualitative structure of expenses of production elements. However, for

za upravljanje ponašanjem mezoekonomskog sistema značajno je uspostavljanje određene kvantitativne strukture troškova elemenata proizvodnje, jer se svaka od pomenutih komponenti ovog oblika ulaganja različito ponaša u funkciji dinamike obima proizvodnje i različito se odražava na poslovni uspjeh.

Proces privređivanja na niskom stepenu razvijenosti i organizovanosti privrednih subjekata odlikuje se visokim učešćem proporcionalnih troškova u ukupnom iznosu ovog oblika ulaganja. Pri tome, naročito je izražena zastupljenost troškova osnovnog materijala i radne snage na poslovima izrade, dok je trošenje sredstava za rad minimalno. U takvim uslovima privređivanja nije ostvareno odvajanje poslova pripreme od izvršenja, odnosno pripremno-završne aktivnosti ne uslovljavaju značajnija ulaganja. To podrazumijeva, istina, nizak nivo proizvodne radne snage rada, ali i okolnost da se, u slučaju obustavljanja proizvodnje, otklanjaju skoro svi troškovi.

Međutim, razvoj proizvodnih snaga, koji se ispoljava u koncentraciji većeg obima ekonomskih vrijednosti u sredstvima za rad, kao i u drugim oblicima pripremno-završnih aktivnosti, podrazumijeva i sve veću zastupljenost fiksnih troškova u ukupnoj vrijednosti ovog oblika ulaganja. Takav proces uslovljava, i pored značajnih ulaganja u proizvodnu pripremu, snižavanje ukupnih troškova po jedinici ostvarene proizvodnje. To proističe iz odgovarajuće supstitucije trošenja jednih, trošenjem drugih dijelova elemenata proizvodnje. Pod odgovarajućom supstitucijom, u prethodnom smislu, podrazumijeva se samo ona varijanta u kojoj se pojavom jednog iznosa u većoj mjeri smanjuje drugi iznos, čime se postiže smanjivanje ukupnog iznosa troškova.

Ocjenjivanje opravdanosti ulaganja u razvoj proizvodne snage određenog mezoekonomskog sistema izvodi se na osnovu upoređivanja rezultata reprodukcije sa ulaganjem elemenata proizvodnje. To posebno dolazi do izražaja kada se kvantitativna struktura ukupnih troškova elemenata proizvod-

the conduct management of the mesoeconomic system, it is important to establish a certain quantitative structure of production elements' expenses, since each of the components of this type of investment is conducted differently in the dynamics function of production extent and influences business success in various ways.

The process of economy at a lower rate of development and organizing the economy subjects implies higher rate of proportional expenses in the overall account of this type of investment. Through this process, it is especially manifested the presence of basic material' expenses and the work energy of workmanship, whereas the expending means for the work are minimal. In such conditions of the economy process, it cannot be not achieved to separate between the business preparation and the business accomplishment, which means that preparatory-accomplishing activities do not require further investments. This comprises, indeed, the lower level of workmanship strength but also the possibility that, in the case of production's termination, almost all expenses are cut off.

However, the development of production sources, manifested in the concentration of greater expend of economic values in the work assets, as well as in other forms of preparatory-accomplishing activities, comprises the growing presence of fixed expenses in the overall value of this type of investment. Such a process requires, besides important investments in the preparation of production, lowering of overall expenses by the unit of an accomplished production. This comes from the corresponding substitution of one type of expending elements by expending other parts of production elements. By the corresponding substitution, mentioned in this case, it is encompassed only one variant in which by the appearance of one account in great measure decreases another account, which causes reduction in overall amount of expenses.

The assessment of justifying investment in the development of production force of a certain mesoeconomic system is conducted by the comparison of reproduction results with the investment of production elements. This is especially manifested when the quantitative structure of overall expenses of production elements

nje posmatra dinamički. Ukoliko u strukturi ukupnih troškova fiksni troškovi imaju veću zastupljenost, pri povećanju obima proizvodnje njihovim stagniranjem biće uslovljeno zaostajanje povećanja ukupnih troškova. U protivnom, ako su fiksni troškovi u strukturi ukupnih manje zastupljeni, što podrazumjeva veću zastupljenost varijabilnih troškova, porast obima proizvodnje usloviće i približno srazmjerno povećanje ukupnog iznosa ovog oblika ulaganja.

SPECIFIČNOSTI PONAŠANJA TROŠKOVA U DINAMICI PROIZVODNJE

S obzirom na kvalitativnu i kvantitativnu strukturu ukupnih troškova elemenata proizvodnje, kao i na karakteristike pojedinih njihovih komponenti, dinamika obima proizvodnje u okviru datog kapaciteta uslovljava određene specifične pojave u ponašanju ovog oblika ulaganja. Tako na različitim stepenima korištenja kapaciteta, pojedine organizacije odlikuje različita kvantitativna struktura ukupnih troškova, zavisno od ponašanja njihove fiksne, proporcionalne ili relativno fiksne komponente.

Mezoekonomske sistemi sa naglašenim učešćem fiksnih u ukupnim troškovima elemenata proizvodnje odlikovaće se značajnijom zastupljenošću ovog dijela trošenja u strukturi cijene koštanja kada je korištenje njihovog kapaciteta na nižem stepenu. Poveća li se stepen korišćenja njihovog kapaciteta, ovi mezoekonomske sistemi odlikovaće se smanjivanjem učešća fiksne komponente u ukupnim troškovima po jedinici proizvoda. Mezoekonomske sistemi sa složenom organizacionom strukturom korištenja kapaciteta odlikuju se visokom zastupljenošću relativno fiksnih troškova, čija dinamika dolazi naročito do izražaja u uslovima *prenaprežanja organizacije*.

Privredne organizacije koje se odlikuju visokim procentom učešća proporcionalnih u ukupnim troškovima elemenata proizvodnje nemaju značajnih razlika u kvalitetu ekonomije na različitim stepenima korištenja kapaciteta.

is seen from the viewpoint of dynamics. If fixed expenses are the most representative ones in the structure of overall expenses, by increase in production expending, their stagnation will require the delay in increasing the overall expenses. On the contrary, if fixed expenses are less represented in the overall structure, which comprises greater representation of variable expenses, the increase in production expending will require approximately balanced increase in overall account of this type of investment.

SPECIFIC CONDUCT OF EXPENSES IN PRODUCTION DYNAMICS

Regarding the qualitative and quantitative structure of overall expenses of production elements, as well as the characteristics of their each components, the dynamics of production extent within a certain capacity requires some specific occurrences in the conduct of this type of investment. So, at different levels of using capacities, some organizations reflect various quantitative structures of overall expenses, depending on the conduct of their fixed, proportional or relatively fixed component.

Mesoeconomic systems with emphasizing participation of fixed production elements in overall expenses of production elements will be characterized by more significant representation of this expending part in the structure of cost expense when the use of their capacity is at a lower degree. If the degree of using their capacities is raised, all mesoeconomic systems will be characterized by the decreasing participation of a fixed component in overall expenses by the unit of production. Mesoeconomic systems with a complex organizational structure of using capacities are characterized by higher representation of relatively fixed expenses, the dynamics of which is especially emphasized in the conditions of *organizational overexertion*.

Economy organizations characterized by higher percentage of participation of proportional expenses in overall expenses of production elements, are not significantly different when the quality of economy is considered at different degrees of using capacities.

Ove specifične pojave u ponašanju ukupnih troškova pri promjenama stepena korištenja kapaciteta, mogu se definisati kao: degresija troškova, progresija troškova i remanentnost troškova.

Degresija troškova

Pojava degresije podrazumijeva zaostajanje rasta troškova za porastom obima proizvodnje u okviru datog kapaciteta. To proističe iz okolnosti što ukupni troškovi svoj rast započinju od nivoa njihove fiksne komponente, dok obim proizvodnje započinje od nultog stepena korištenja kapaciteta. Pri tome, ukupni troškovi, u funkciji porasta obima proizvodnje, rastu samo u svojoj varijabilnoj komponenti, jer se fiksna komponenta ne mijenja.

Kada se ukupni troškovi posmatraju kao rezultanta samo fiksnih i proporcionalnih, uz apstrahovanje relativno fiksne komponente, degresija se javlja u svom čistom obliku. Zato se ova varijanta degresivnog ponašanja troškova naziva linearna degresija. Međutim, ako se pojava troškova posmatra u svojoj integralnosti, odnosno uz uključivanje, pored fiksne i proporcionalne komponente, i relativno fiksnih troškova, dolazi do nelinearne degresije.

Linearna degresija. Do pojave linearne degresije troškova dolazi u uslovima zaostajanja porasta ukupnih troškova za porastom obima proizvodnje, kada se ukupni iznos ovog oblika ulaganja sastoji iz fiksne i proporcionalne komponente. U takvim uslovima dolazi samo do promjena proporcionalnih troškova, dok se visina fiksnih troškova zadržava na početnom nivou, uslovljenom uspostavljanjem datog kapaciteta. To proističe iz okolnosti što određeni procenat povećanja obima proizvodnje nije praćen i takvim istim procentom povećanja ukupnih troškova, pošto jedan njihov dio stagnira kao nepromjenjiva veličina.

Ovo specifično ponašanje ukupnih troškova u vidu linearne degresije, do koje dolazi u funkciji dinamike obima proizvodnje u okviru datog kapaciteta, može se grafički predstaviti

These specific occurrences in the conduct of overall expenses, followed by changes in the degree of using capacities, can be defined as: expense degression, expense progression and expense remanence.

Expense degression

The notion of degression encompasses the trailing growth of expenses in relation to the growth of production extent within a certain capacity. This comes from the fact that the growth of overall expenses begins from the level of their fixed component, whereas the production extent begins from the zero degree of using capacities. Through this process, the overall expenses in the function of raising production extent are growing only in its own variable component because the fixed component is not changeable.

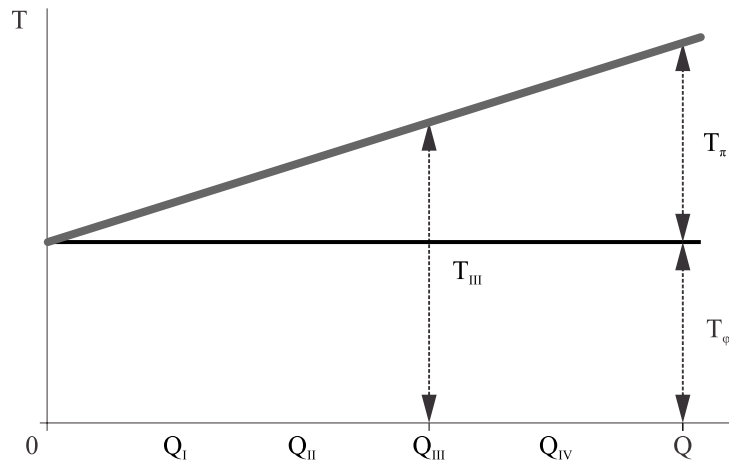
When the overall expenses are seen as the result of fixed and proportional components only, with the abstraction of a relatively fixed component, the degression is clearly recognized. That is why this variant of degressive conduct expenses is called linear degression. However, if this occurrence of expenses is viewed through all the integral parts, which means introducing relatively fixed expenses to the already existing fixed and proportional component, it is called non-linear degression.

Linear degression. Linear degression of expenses is seen in the conditions of trailing growth of overall expenses by the growth of production extent, when the overall amount of this type of investment contains fixed and proportional components. In such conditions, there are only changes in proportional expenses, whereas the rate of fixed expenses is still at the beginning level, conditioned by the creation of a certain capacity. This comes from the fact that some percentage of growing production extent is not accompanied by the same percentage of the overall growth expenses, since one of their parts stagnates like a non-changing factor.

This specific conduct of overall expenses in a form of linear degression, which occurs in the function of production extent's dynamics within a certain extent, can be represented in a form of

kao na grafikonu 2. Pomenuti grafički prikaz pokazuje kako rast ukupnih troškova zaostaje za porastom obima proizvodnje u okviru datog kapaciteta. To proističe iz okolnosti što se pravac kretanja ukupnih troškova odvija po jednačini:

graphic, as seen on graph 2. The mentioned graphic scheme represents the growth of overall expenses trailing by the growth of production extent within a certain capacity. This comes from the fact that the moving direction of overall expenses operates according to the following equation, where:



Grafikon 2. Linearna regresija ukupnih troškova

Graph 2. Linear regression of overall expenses

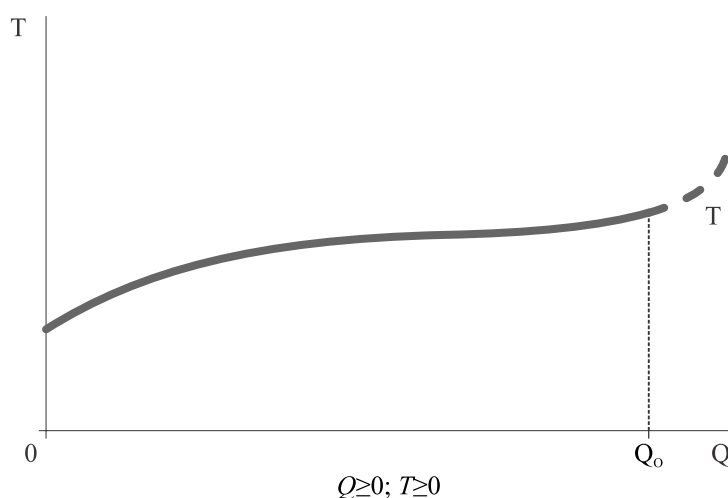
$$y = a + bx$$

pri čemu je: y =iznos ukupnih troškova (fiksni i proporcionalni) na različitim stepenima korištenja kapaciteta; a =iznos ukupnih fiksnih troškova uslovljen uspostavljenim kapacitetom; b =iznos proporcionalnih troškova po jedinici proizvoda; x =ostvareni obim proizvodnje na različitim stepenima korištenja datog kapaciteta.

y =the amount of overall expenses (fixed and proportional) at different degrees of using capacities; a =the amount of overall fixed expenses conditioned by the creating capacity; b =the amount of proportional expenses by the unit of a product; x =the realized production extent at various degrees of using a certain capacity.

Nelinearna regresija. Ako se u funkcionisanju organizacionog sistema javlja, pored fiksnih i proporcionalnih troškova, i njihova relativno fiksna komponenta, doći će do pojave nelinearne regresije. Naime, s obzirom na složenu organizacionu strukturu korištenja kapaciteta, koja je karakteristična za najveći broj mezoekonomskih sistema, nužno se javlja i relativno fiksna komponenta u ukupnim troškovima. A kako relativno fiksni troškovi, zbog njihove uslovljenosti organizacionom strukturom korištenja kapaciteta, imaju nelinearan razvojni tok, i ukupni troškovi u dinamici korištenja kapaciteta dobijaju ovu nelinearnu tendenciju u svome razvoju - Grafikon 3.

Non-linear regression. If in the functioning of organizational system there is, besides fixed and proportional expenses, the relatively fixed component of expenses, the non-linear regression will occur. So, taking into account their complex organizational structure of using capacities, which is a common characteristic for the majority of mesoeconomic systems, there is always a relatively fixed component as well in overall expenses. Since relatively fixed expenses, for their requiring organizational structure of using capacities, have non-linear ongoing flow, the overall expenses in the dynamics of using capacities also get this non-linear tendency in their development - Graph 3.



Grafikon 3. Nelinearna degresija ukupnih troškova

Graph 3. Non-linear degredation of overall expenses.

Progresija troškova

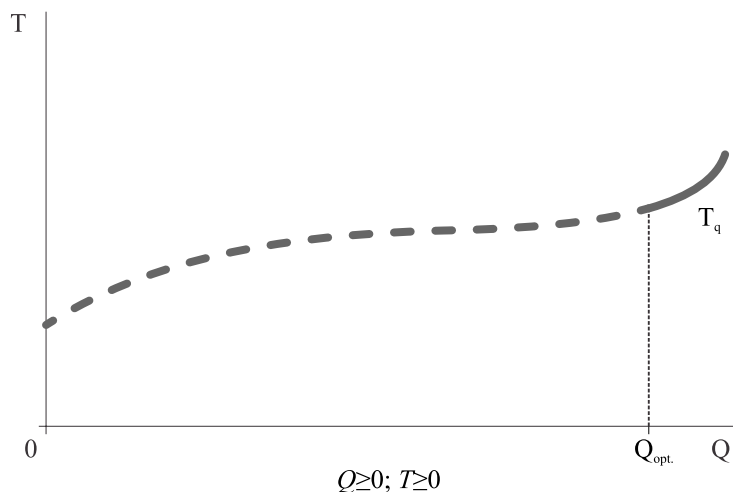
S obzirom na tendenciju relativno fiksnih troškova da se progresivno razvijaju u odnosu na porast obima proizvodnje pri nastojanju da se potpuno iskoristi tehnički kapacitet organizacionog sistema i ukupni troškovi poprimaju takve karakteristike u svom kretanju. To znači da do progresije troškova dolazi, uglavnom, na višem stepenu iskorištenja kapaciteta, kada se nastoji da se obim proizvodnje približi nivou tehničkog kapaciteta. Međutim, tehnički, odnosno instalisani, kapacitet predstavlja mogućnost proizvodnje, koja bi se mogla realizovati samo u idealnim uslovima poslovanja, kada bi se eliminisala negativna dejstva svih organizacionih faktora. To, drugim riječima, znači, da na putu potpunom iskorištenju tehničkog kapaciteta stoji niz organizacionih smetnji, koje se izražavaju u subjektivnim slabostima, kao što su zastoji u proizvodnji zbog: nedostatka sirovina, ili poteškoća u plasmanu proizvoda, zatim kvara sredstava za rad, prekomjernih izostanaka radnika sa posla i sl. Otklanjanje pomenutih subjektivnih slabosti podrazumijeva, pored preduzimanja organizacionih mjera u vidu upravljanja mezoekonomskim sistemom, i određena dodatna trošenja elemenata proizvodnje. Zato nastojanje da se, i pored pomenutih organizacionih smetnji, ostvari maksimalno korištenje tehničkih

Expense progression

Regarding the tendency of relatively fixed expenses to be progressively developed in relation to growing production extent by trying to use completely the technical capacity of an organizational system, overall expenses get these characteristics in their development as well. This means that the expense progression mostly occurs at a higher degree of using capacities, when there is a tendency to take the production extent to the level of technical capacity. However, the technical, or the installed capacity represents the production possibility, which could only be realized in perfect business conditions and if the negative effects of all organizational factors are eliminated. In other words, this means that on the path of using technical capacities completely, there is a chain of organizational distractions reflected in subjective weaknesses, such as a standstill in production because of: the lack of raw materials, difficulties in product establishing, the breakdown of working devices, too many absences of employees at work etc. Removing the mentioned subjective weaknesses encompasses, besides taking organizational measures in a form of managing the mesoeconomic system, some additional expenses of production elements. Insisting on trying to use the maximum of technical capacities, besides the already mentioned organizational distrac-

kapaciteta, uslovljava brži rast troškova od porasta obima proizvodnje. Pojava takvog kretanja ukupnih troškova predstavlja progresiju, što se može grafički predstaviti kao na grafikonu 4.

tions, requires faster growth of expenses than the growth of production extent. This type of the flow of overall expenses represents progression, which can also be seen in a graphic scheme, as shown on Graph 4.

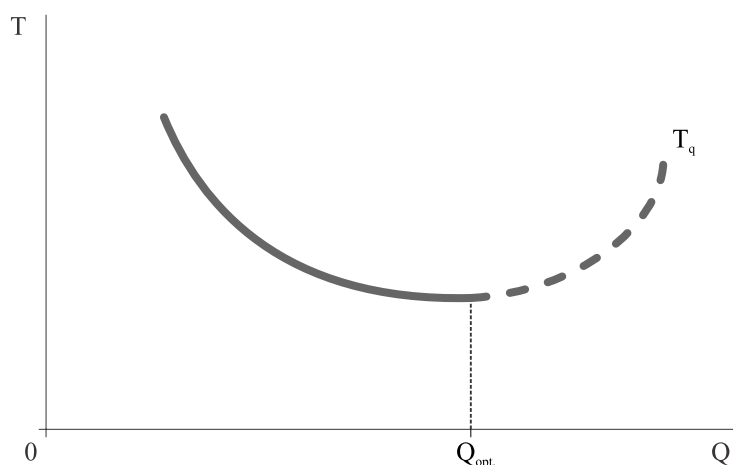


Grafikon 4. Linija progresije ukupnih troškova

Graph 4. Progression line of overall expenses

Pojava progresije troškova elemenata proizvodnje na višim stepenima korištenja kapaciteta karakteristična je i za ponašanje po jedinici proizvoda. Naime, kako u takvim uslovima ukupni troškovi rastu brže od porasta obima proizvodnje, dolazi i do porasta cijene koštanja.

The occurrence of expense progression of production elements at higher levels of using capacities is also the characteristic of conduct by the product unit. Namely, since in such conditions the overall expenses are raising faster than the growth of a product extent, there is also the growth in *cost price*.



Grafikon 5. Linija progresije cijene koštanja.

Graph 5. Progression line of cost price.

Grafikon 5. koja pokazuje progresivnu tendenciju kretanja ukupnih troškova, koja pokazuje progresivno kretanje cijene koštanja proizvoda u funkciji razvoja obima

Graph 5. denotes progressive tendency of moving overall expenses, which represents the progressive movement of a product's cost price for the aim of production extent's

proizvodnje na višim stepenima korištenja kapaciteta služi i za orijentaciju pri ocjeni gornje granice racionalnosti korištenja tehničkog kapaciteta. Naime, na pomenutim slikama vidi se na kom stepenu korištenja kapaciteta prestaje degresija, a počinje progresija troškova.

Remanentnost troškova

Dok su pojave degresije i progresije troškova karakteristične za porast obima proizvodnje, dotle se remanentnost javlja u funkciji smanjivanja stepena korištenja kapaciteta. Tako, posmatrajući pojavu smanjivanja obima proizvodnje sa određenog dostignutog stepena korištenja kapaciteta na neki niži nivo, uočava se i tendencija opadanja iznosa ukupnih troškova. Međutim, ovo opadanje iznosa ukupnih troškova sa nivoa koji su dostigli nakon porasta obima proizvodnje ne odvija se istim intenzitetom kao što je bio njihov porast, već jednim usporenijim trendom.

Kada se povećava obim proizvodnje u okviru uspostavljenog kapaciteta organizacionog sistema, s težnjom da se taj kapacitet što potpunije iskoristi, ulažu se dodatne vrijednosti u određena proširenja grla proizvodnje, rezervne izvore energije, nove skladišne objekte i sl, te dolazi do porasta ukupnih troškova. Međutim, kada se obim proizvodnje, nakon toga, smanjuje, iznos ukupnih troškova u svom opadanju zaostaje.

Do ovakvog zaostajanja smanjivanja ukupnih troškova za tempom opadanja obima proizvodnje dolazi usljed prethodno pomenutih karakteristika relativno fiksnih troškova, koji su uslovljavali i progresiju u funkciji povećanja stepena korištenja kapaciteta. Takvo ponašanje ukupnih troškova može se i grafički predstaviti kao na grafikonu 6. koja pokazuje krivolinijski trend kako u porastu, tako i u smanjivanju iznosa ovog oblika ulaganja.

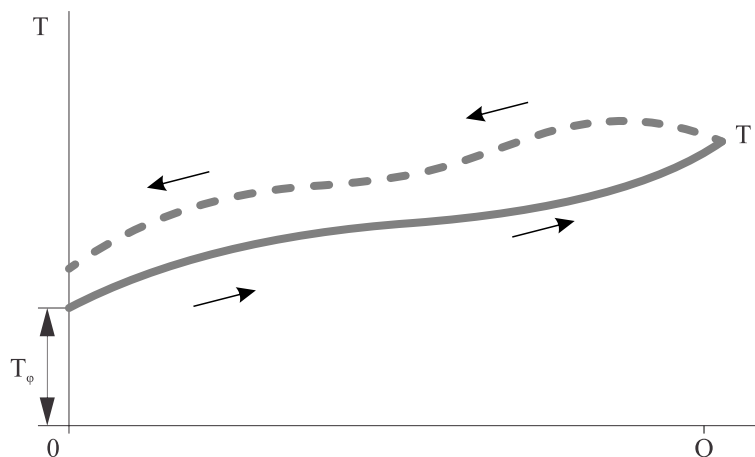
development at higher levels of using capacities, and is also used for orientation in estimating the upper limit of the rational use of a technical capacity. Namely, in the mentioned scheme, it is shown at what level of using capacities ends expense degression and starts expense progression.

Expense remanence

Whereas expense degressions and expense progressions are related to the growth of production extent, expense remanence occurs in the function of lowering degree of using capacities. So, by observing the lowering production extent from a certain reached level of using capacities to a certain lower level, it can also be noticed the falling tendency in the amount of overall expenses. However, this fall in the amount of overall expenses from the level reached after the growth of production extent does not flow with the same intensity as their growth, but with the falling tendency.

When the production extent is increased within an already established capacity of organizational system with the tendency of using that capacity completely, some extra values are invested in certain expansions of the main production, as well as in the additional sources of energy, new warehouses etc., so there is a rise in overall expenses. However, when the production extent is decreased afterwards, the amount of overall expenses in its decrease is trailing.

This trailing in the decrease of overall expenses by the tempo of decreasing production extent occurs during the already mentioned characteristics of relatively fixed expenses, which have required progression in the function of increasing levels of using capacities. Such conduct of overall expenses can also be presented graphically, as on Graph 6., which shows a curved line trend both in increasing and decreasing amount of this type of investment.



Grafikon 6. Pojava remanentnosti troškova

Graph 6. Occurrence of expense remanence

Pojava remanentnosti troškova je, naročito, karakteristična u uslovima privremenog povećanja stepena korištenja kapaciteta, od kojeg se mora odustajati čim nestane potrebe za tako povećanim obimom proizvodnje. U takvim uslovima dolazi do potrebe dodatnog ulaganja u obliku trošenja elemenata proizvodnje zbog uspostavljanja novog sloja korištenja kapaciteta.

The occurrence of expense remanence is especially noticed in conditions of temporarily increasing level of using capacities which has to be stopped as soon as the need for such decreased production extent is lost. In such conditions, there is the need for additional investment in a form of expending production elements for the purpose of creating a new-layer of using capacities.

UTVRĐIVANJE TAČKE - PRAGA EKONOMIČNOSTI

ESTABLISHING THE POINT - ECONOMICAL THRESHOLD

Izračunavanje praga ekonomičnosti

Calculating the economical threshold

Utvrđivanje praga ekonomičnosti u konkretnom organizacionom sistemu podrazumijeva poznavanje kvalitativne i kvantitativne strukture troškova i njihove dinamike u funkciji promjena stepena korištenja kapaciteta. Poznato je da svaka mezoekonomska organizacija u svome poslovanju ima: fiksne, relativno fiksne i proporcionalne troškove. Međutim, kvantitativna struktura ukupnih troškova klasifikovanih prema uslovljenosti dinamikom stepena korištenja kapaciteta, razlikuje se od jednog do drugog mezoekonomskog sistema, zavisno od organskog sastava elemenata proizvodnje u njemu, što ima značaja kod formiranja poslovne politike konkretnog preduzeća.

Establishing the economical threshold in a certain organizational system encompasses familiarity with the qualitative and quantitative structure of expenses and their dynamics in the function of a changing degree of using capacities. It is known that every mesoeconomic organization in business operation has: fixed, relatively fixed and proportional expenses. However, the quantitative structure of overall expenses classified by their relation to the dynamics degree of using capacities varies from one to another mesoeconomic system, depending on the organic composure of its production elements, which is important in forming business policies of a certain company.

Svaka promjena stepena korištenja kapaciteta uslovljava i određenu promjenu troškova elemenata proizvodnje. Ova promjena visine

Every change in the degree of using capacities requires a certain change in expenses of production elements. This change in the degree of

ukupnih troškova nastaje u dijelu varijabilnih, dok se fiksna komponenta zadržava na nivou koji je uslovljen uspostavljanjem kapaciteta. Međutim, promjene visine varijabilnih troškova u funkciji dinamike korištenja kapaciteta odnose se na srazmjerno mijenjanje proporcionalne komponente u njima, dok se relativno fiksna komponenta javlja samo u slučaju raslojavanja obima proizvodnje u smislu mijenjanja organizacione strukture korištenja proizvodne mogućnosti datog mezoekonomskog sistema. Tako posmatrana dinamika ukupnih troškova u funkciji dinamike stepena korištenja kapaciteta omogućava svodenje ovog oblika ulaganja elemenata proizvodnje na samo fiksnu i proporcionalnu komponentu, jer se relativno fiksna komponenta ne javlja obavezno, ukoliko nema promjena u organizacionoj strukturi korištenja kapaciteta. Polazeći od toga da se u funkciji promjena obima proizvodnje mijenjaju samo proporcionalni troškovi, dok se relativno - fiksni ne javljaju kada nema raslojavanja korištenja kapaciteta, praga ekoizračunavanja, praga ekonomičnosti može se izvesti po slijedećem obrascu:

$$K_{qp} = \frac{T_{\varphi}}{QC_q - QT_{\pi q}} = \frac{T_{\varphi}}{C - T_{\pi}}$$

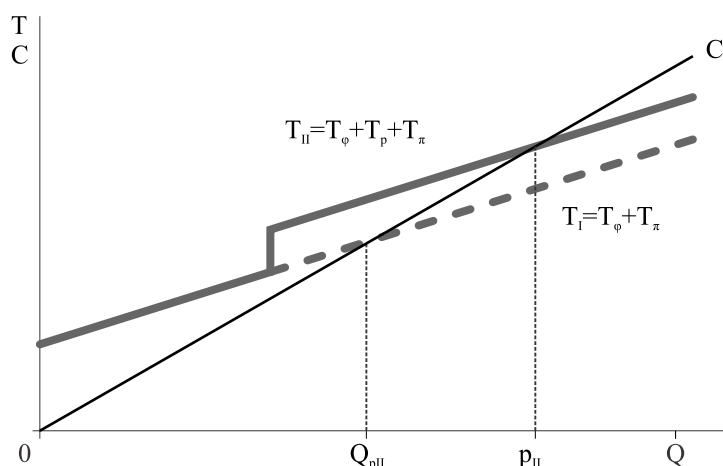
pri čemu je: K_{qp} = stepen korištenja kapaciteta na pragu ekonomičnosti, dok ostali simboli imaju isto značenje kao u ranijim obrascima.

Ako se u razmatranje pojave praga ekonomičnosti korištenja kapaciteta uvrste i relativno - fiksni troškovi, koji nastaju u funkciji promjene organizacione strukture korištenja proizvodne mogućnosti mezoekonomskog sistema, doći će do situacije koja se može grafički predstaviti kao na grafikonu 7. Pomenuta slika pokazuje da je došlo do pomijernja praga ekonomičnosti korištenja kapaciteta u pravcu većeg obima proizvodnje, jer su ukupni troškovi skokovito porasli u funkciji prelaska obima proizvodnje iz jedne u drugu zonu. To znači da je došlo do uvođenja bilo nove serije, bilo nekog drugog organizacionog podsistema u korištenju kapaciteta.

overall expenses is formed in the variable part, whereas the fixed component is maintained at the level required by forming capacities. However, the change in growth of variable expenses in the dynamics function of using capacities represent the balanced changing of their proportional component, whereas the relatively fixed component occurs only in the case of a layered production extent, which means changing organizational structure of using production possibilities of that mesoeconomic system. The dynamics of overall expenses, being viewed in such a manner, in the function of dynamics degree of using capacities enables reducing this type of investment of production elements at only fixed and proportional component, since the relatively fixed component does not occur regularly unless there are no changes in the organizational structure of using capacities. Having in mind the fact that in the function of production extent changes, only proportional expenses are changed, whereas the relatively fixed expenses do not occur in the lack of layered using capacities, the threshold of ecocalculation or the economical threshold, this can be conducted by the following pattern:

So, K_{qp} represents the degree of using capacities at the economical threshold, whereas other symbols have the same meaning as in earlier patterns.

If the relatively fixed expenses, formed in the function of changing the organizational structure of using production capacities of mesoeconomic systems, are used in studying the economical threshold of using capacities, there will be an occurrence presented graphically on Graph 7. The mentioned figure shows that there are changes in the economical threshold of using capacities in the direction of rising production extent, since the overall expenses are highly raised in the function of moving production extent from one zone to another. This means that new series or some other organizational subsystems have been introduced for the purpose of using capacities.



Grafikon 7. Utvrđivanje praga ekonomičnosti korištenja kapaciteta u uslovima raslojavanja proizvodnje uvođenjem nove serije.

Graph 7. Establishing the economical threshold of using capacities in conditions of layered production by introducing new series.

Primjena praga ekonomičnosti u poslovnoj politici

U poslovnoj politici preduzeća prag ekonomičnosti utvrđuje se na osnovu date kvalitativne i kvantitativne strukture ukupnih troškova, kao i veličine ukupnog kapaciteta. Tako se u preduzećima sa visokim organskim sastavom elemenata proizvodnje javlja relativno veliko učešće fiksnih u ukupnim troškovima. Obrnuto je u onim organizacijama koje imaju nizak organski sastav elemenata proizvodnje.

Preduzeća u čijim troškovima relativno visoko učešće imaju fiksni troškovi odlikuju se i višim pragom ekonomičnosti korištenja kapaciteta. To proističe iz činjenice što se realizacijom njihovih proizvoda tek na višem stepenu korištenja kapaciteta mogu pokriti svi fiksni troškovi i oni varijabilni koji su nastali u vezi s takvim obimom proizvodnje. A iznos realizacije utvrđuje se množenjem ostvarenog obima proizvodnje tržišnim cijenama proizvoda, koje su, u funkciji dinamike obima proizvodnje, konstantne veličine.

Ova pojava praga ekonomičnosti korištenja kapaciteta u vezi sa ponašanjem ukupnih troškova u funkciji dinamike obima proizvodnje rezultat je prethodno pomenutih okolnosti da se troškovi ne mogu svesti na nulu ni kada obim proizvodnje padne na nulti stepen kori-

The use of economical threshold in business policies

In the business policies of a company, the economical threshold is established on the basis of ascertain qualitative and quantitative structure of overall expenses, as well as on the size of overall capacities. Therefore, in companies with higher organic composure of its production elements, there is a relatively high participation of fixed expenses in overall expenses. This process is reversed in organizations with a lower organic composure of its production elements.

Companies with a relatively high participation of fixed expenses in their overall expenses also have a higher economical threshold of using capacities. This comes from the fact that, by the realization of their products, only at the higher level of using capacities all expenses can be covered, as well as those variable expenses made by the very production extent. The amount of realization is calculated by multiplying the realized production extent with the market price of products, which are constant scales in the dynamics function of production extent.

This occurrence of economical threshold of using capacities in relation to the conduct of overall expenses in the dynamics function of production extent is the result of already mentioned circumstances under which expenses cannot be reduces to zero even if the production extent falls to the

štenja kapaciteta. Stoga se već na određenom stepenu korištenja kapaciteta smanjena realizacija, usljed smanjenja stepena korištenja kapaciteta ispod optimalnog, izjednačava sa iznosom troškova, koji sporije opadaju nego što opada obim proizvodnje. Kod još naglašenijeg smanjenja realizovane vrijednosti proizvodnje, dolazi do još nepovoljnijeg odnosa prema troškovima, odnosno, nastaje gubitak u poslovanju preduzeća.

Ukoliko je učešće fiksnih u strukturi ukupnih troškova veće, prag ekonomičnosti na višem stepenu korištenja kapaciteta, što uslovljava manju elastičnost preduzeća u mijenjanju obima proizvodnje pod dejstvom poremećaja na polju korištenja uspostavljene proizvodne sposobnosti datog mezoekonomskog sistema. Naime, preduzeća sa visokim organskim sastavom elemenata proizvodnje, pa prema tome i visokim učešćem fiksnih u ukupnim troškovima, ne mogu smanjivati svoj obim proizvodnje bez rizika da im se pojavi gubitak u poslovanju već pri neznatnom smanjivanju stepena korištenja kapaciteta ispod optimalnog nivoa proizvodnje.

S druge strane, preduzeća sa nižim organskim sastavom elemenata proizvodnje, pa prema tome i nižim učešćem fiksnih u ukupnim troškovima, mogu smanjivati stepen korištenja svog kapaciteta do nižeg obima proizvodnje bez opasnosti da dospiju u poslovni gubitak, jer se i manjom realizacijom proizvedene vrijednosti pokrivaju ukupni fiksni i oni varijabilni troškovi koji su uslovljeni takvim obimom proizvodnje. Stoga su ova preduzeća mnogo elastičnija u mijenjanju stepena korištenja kapaciteta bez pojave gubitka u svom poslovanju.

Međutim, iako su preduzeća kao organizacioni sistemi s nižim organskim sastavom elemenata proizvodnje elastičnija u promjeni obima proizvodnje bez pojave gubitka, privredni subjekti s višim organskim sastavom imaju prednosti u vezi sa značajnijom regresijom ukupnih troškova pri povećanju stepena korištenja kapaciteta (zbog regresije fiksnih troškova). Naime, kod preduzeća sa višim organskim sastavom elemenata proizvodnje,

zero level of using capacities. That is why the realization is already decreased at a certain level of using capacities within the decreasing level of using capacities below the optimal one, and is balanced with the amount of expenses which are decreasing more slowly than the production extent. With more manifested reduction of realized production value, there are some undergoing negative effects on expenses, which means that there is a loss in company business.

If the participation of fixed expenses in the structure of overall expenses is bigger, then the economical threshold is at the higher rate of using capacities, which signifies less flexibility of the company in changing the production extent under the influence of disorder at using the established production capability of a certain mesoeconomic system. Namely, companies with higher organic composure of its production elements, and accordingly with high participation of fixed expenses in the overall expenses, cannot reduce their production extent without risking to have a loss in business operating at the very insignificant lowering level of using capacities under optimal level of production.

On the other hand, companies with lower organic composure of its production elements and accordingly with high participation of fixed expenses in the overall expenses, can reduce the level of using their capacities to the lower production extent without risking to have a loss in business operating, since even by less realization of a production value, all fixed and variable expenses conditioned by such production extent are covered up. That is why all these companies are more flexible to change the level of using capacities without any loss in their business operations.

However, even though the companies, being the organizational systems with lower organic composure of its production elements, are more flexible in changing the production extent without a loss, economy subjects with higher organic composure of its production elements are more advantageous when it comes to the significant regression of overall expenses by increasing the degree of using capacities (for the regression of fixed expenses). Namely,

zbog degresije ukupnih troškova pri povećanju stepena korištenja kapaciteta, dolazi do snižavanja cijene koštanja proizvoda. To je rezultat okolnosti što se fiksni troškovi, u takvim slučajevima, po jedinici proizvoda značajno smanjuju, čime se smanjuju ukupni prosječni troškovi, s obzirom na to što su u njima u najvećoj mjeri zastupljeni upravo fiksni troškovi.

ZAKLJUČAK

Osnovni zadatak preduzeća kao organizacionog sistema je ostvarivanje postavljenih ekonomskih ciljeva, tj. postizanje što višeg nivoa kvaliteta ekonomije. Kvalitet ekonomije kao stepen ekonomske uspješnosti u ostvarivanju postavljenih ciljeva preduzeća, izražava se odnosom između ostvarenih rezultata reprodukcije i izvršenih ulaganja za ostvarivanje tih rezultata.

Ulaganje u proces reprodukcije javljaju se u dva osnovna oblika: ulaganja u obliku angažovanja sredstava i ulaganja u obliku troškova. Za postizanje što višeg nivoa kvaliteta mezoekonomskog sistema troškovi reprodukcije imaju izuzetan značaj. Poznavanje njihovih pojava oblika, karakteristika, zakonitosti u ponašanju u dinamici sukcesivnih procesa od izuzetnog je značaja za uspješnost u poslovanju. S tim u vezi veliki značaj ima poznavanje tačke - praga ekonomičnosti, pomoću kojeg menadžment preduzeća, između ostalog, utvrđuje stepen korištenja kapaciteta koji u datim uslovima obezbjeđuje poslovanje bez gubitaka.

Pored toga izučavanje zakonitosti u ponašanju ukupnih troškova u uslovima uspostavljanja kapaciteta i organizacije njegovog korištenja, ima veliki značaj za svrsishodno upravljanje troškovima poslovanja. U tu svrhu naglašen je značaj uspostavljanja određene kvantitativne strukture troškova: fiksnih, proporcionalnih i relativno-fiksnih, jer se svaka od ovih vrsta ponaša različito u dinamici proizvodnje, što se različito odražava i na kvalitit ekonomije preduzeća.

companies with higher organic composition of its production elements, for the degression of overall expenses by increasing the degree of using capacity, undergo the fall of products' cost price. This occurs for the fact that fixed expenses, in such cases, are significantly reduced by the unit of a product and then the overall average expenses are also reduced since they are mostly composed of the very fixed expenses.

CONCLUSION

The main task of a company as an organizational system is accomplishing the already established economic goals, i.e. reaching the highest possible quality level of economics. The economic quality as the level of economic success in accomplishing the established economic goals of companies is represented by the relation between the accomplished results of reproduction and the investments made for the accomplishment of the very results.

Investment in the process of reproduction is manifested in two basic types of investment: investment in the form of engaged devices and investment in the form of expenses. Expenses of reproduction are of great importance for reaching the higher quality levels of a certain mesoeconomic system. Familiarity with their types, characteristics, and their conduct legislation in the dynamics of successive processes is of great importance for business success. Accordingly, familiarity with the point – economical threshold is also very important because it allows the management of companies, among other things, to determine the level of using capacities under certain circumstances that enables business operating without a loss.

After all, studying the legislation of the conduct of overall expenses in terms of making capacities and the organization of their use have a great influence on the appropriate running of business expenses. For this purpose, it is very important to establish a certain quantitative structure of expenses: fixed, proportional and relatively-fixed ones, since each of these types is conducted differently in production dynamics and has a different effect on the quality of a company's economics.

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