

BOJAN PIRŠ, B. Eng.
Sončna ulica 4, 3250 Rogaška Slatina, Republika Slovenija
E-mail: bojan.pirs@slo-zeleznice.si

Traffic Economics
Preliminary Communication
U. D. C.: 656.2:334.758.4(497.2)
Accepted: Mar. 4, 2004
Approved: Sep. 6, 2004

BUSINESS POLITICS-INCORPORATING FACTOR OF SLOVENSKE ŽELEZNICE HOLDING IN EUROPEAN TRAFFIC FLOWS

SUMMARY

The joining of the Republic of Slovenia in the European Union gives special significance to the economic subjects because the past market and competition are open directly for the Slovenian economic subjects. It means that competition will increase for the market of transport service. There will be more possibilities for the enterprises to move faster towards culmination, the phase of degeneration - crisis. Since the business crisis endangers the future existence and development of the Slovenske železnice Holding, it has become very important to be able to control it. In order to avoid this, the Slovenske železnice Holding needs clear and methodical business politics which means common interconnections and interacting influence of elements (rules, criteria, measures and activities), which constantly move, change and develop. The business politics gives aims and feedback as a condition for the existence and functioning of everything, so it cannot be regarded only as a global programme of development, but rather as a very complex and dynamic system.

The elements of the business politics model - incorporating factor to the European traffic flows are the sub-politics of the business politics which influence its realisation; production, staff, marketing, finances and development sub-politics. The evaluation of the elements of the model has taken into consideration their condition and meaning in the realisation of the business politics in 2003 and their expected values in 2008, when simple transmission of achievements is expected in the railway traffic in the European Union and in the year 2012 when a repeated enlargement of the European Union is foreseen.

The model of business politics - factor of integration of the Slovenske železnice Holding into the European traffic flows is an experiment to restore the collaborating relation between certain elements of the model.

KEY WORDS

Slovenske železnice Holding, business politics, staff politics, marketing politics, matrix of growth

1. INTRODUCTION

The idea of enterprises, their mission and their goals remains the practical activity in each enterprise.

People have always wanted to realize and obtain their interests within enterprises. It means that there are always business politics and interests which lead and manage differently. Business politics of Slovenske železnice Holding must be in order, planned and controlled if it wants to achieve certain development and become one of the developing railway firms. The control of success of business politics is possible through the model of matrix of growth which makes it possible for the system which marks a movement of business politics in various suppositions.

In accordance with this problem and the problem of researching determines the model: scientific research and finding out the staff, marketing, production, financial, developing and other characteristics of business politics of the Slovenske železnice Holding and propose a model for competitive assumption in international market.

A complex of problem and object of research determine the model: to realize all characteristics of business politics of Slovenske železnice Holding and to evaluate the elements of system of business politics and to define the mathematical model of business politics of Slovenske železnice Holding which proves that only controlled and guided business politics makes possible the competitive entrance on the European market of railway service.

This research presents a matrix of growth (second part), hypothetical values of elements of model and its calculation (second part), direct and indirect percents of growth of business politics (fourth part) and a synthesis of final results of research (conclusion).

2. FORMULATION OF A MODEL OF BUSINESS POLITICS

It is supposed that business politics contains n elements. The value of elements of business politics is indicated by y_{it} and $y_{i,t-1}$, i element of business politics is ($i=1, \dots, n$) in the period t and $t-1$.

The growth of value of input i elements of business politics is: [1.351]

$$\Delta y_{it} = y_{it} - y_{i,t-1} \quad (1)$$

Indirect growth percentage can be expressed in the form of growth of the matrix of growth of elements of business politics model Δy_{it} and the value of input elements of business politics in the period t :

$$r_{ijt} = \Delta y_{it} / y_{it} \quad i, j = 1, \dots, n. \quad y_{i,t-1} \neq 0 \quad (2)$$

Indirect growth percentage can be expressed in the form of matrix of growth of elements of business politics model [1.352]:

$$R_t = \begin{bmatrix} r_{11} & r_{12} & \dots & r_{1nt} \\ r_{21} & r_{22} & \dots & r_{2nt} \\ \vdots & \vdots & \ddots & \vdots \\ r_{n1t} & r_{n2t} & \dots & r_{nnt} \end{bmatrix} \quad T = 1, \dots, T \quad (3)$$

The elements in the principal vertical mark the direct ($i = j$), and the other ($i \neq j$) the indirect percentage of growth. The elements in i row mark the growth of input in i element of business politics model in relation to inputs in other elements. The elements in i column mark the growth of value of input in all elements of the model in relation to the input i element in the period t .

The result is that each element in the matrix of growth is presented by one row and one column with elements, which express direct and indirect relation of growth. The first row expresses the growth of input, but the first column expresses the growth of other elements. In this context all other rows and columns are responsible to other elements of business politics model.

The indirect percentage of growth can be defined in relation to the input j element of the model in period $t-1$: [1, 352]

$$r'_{ijt} = \Delta y_{it} / y_{j,t-1} \quad i, j = 1, \dots, n \quad (4)$$

The indirect percentage of growth (2) and (4) can be restored through other relations.

$$\begin{aligned} r_{ijt} &= r'_{ijt} / (1 + r'_{j,jt}) \quad \text{in} \\ r_{ijt} &= r'_{ijt} / (1 - r'_{j,jt}) \quad i, j = 1, \dots, n \end{aligned} \quad (5)$$

Also, through the exterior vector of elements it is possible to define the matrix of growth. This is useful for practical calculation of the matrix of growth. The vector of growth of the business politics model is:

$$\Delta y_{it} = (\Delta y_{i1} \dots \Delta y_{mt}) \quad (6)$$

The vector of reciprocal values of the business politics model is:

$$\left(\frac{1}{y_t}\right) = \left(\frac{1}{y_{1t}} \dots \frac{1}{y_{nt}}\right) \quad i, j = 1, \dots, n \quad y_{i,t-1} \neq 0 \quad (7)$$

The exterior vector of element of business politics model and the vector of reciprocal values define the matrix of growth of the business politics model:

$$R_{pt} = \Delta y'_t \left(\frac{1}{y_t}\right) = \left[\frac{\Delta y_{1t}}{\Delta y_{mt}}\right] \left[\frac{1}{y_t}, \dots, \frac{1}{\Delta y_{nt}}\right] \quad (8)$$

$$R_{pt} = \begin{bmatrix} \frac{\Delta y_{1t}}{y_{1t}} & \dots & \frac{\Delta y_{1t}}{y_{nt}} \\ \vdots & \ddots & \vdots \\ \frac{\Delta y_{mt}}{\Delta y_{1t}} & \dots & \frac{\Delta y_{mt}}{\Delta y_{nt}} \end{bmatrix} = \begin{bmatrix} r_{11} & \dots & r_{1nt} \\ \vdots & \ddots & \vdots \\ r_{m1t} & \dots & r_{mnt} \end{bmatrix} \quad (9)$$

The matrix of growth allows various observations. By observing only direct percentages of growth, the growth of an element is expressed independent of other elements. Direct and indirect percentage of growth can be expressed contemporary. That means that we can follow contemporary intensity of elements' growth and their relations.

3. HYPOTHETICAL VALUE OF BUSINESS POLITICS MODEL INCORPORATING FACTOR OF SLOVENSKE ŽELEZNICE HOLDING IN EUROPEAN TRAFFIC

It is possible to order part of the business politics elements in its realisation as incorporating factor in the European traffic currents. The elements are sub-politics which influence its realisation: production, staff, financial and developing subpolitics (Table 1).

Table 1 - Values of business politics elements

Elements of business politics	Input y_{it}			Growth $\Delta y_{i,2012}$
	2003	2008	2012	
Production subpolitics	50	80	90	40
Staff subpolitics	30	70	90	60
Marketing subpolitics	20	70	90	70
Financial subpolitics	40	80	90	50
Development subpolitics	50	60	80	30

Source: Developed by the author

This model contains values which are quantified business politics elements in 2003 and values in 2008, when the market of railway service will be set free in 2012 and the European Union will be enlarged:

- **Production subpolitics** - Analysis of the condition and traffic trends indicates that the Republic of Slovenia, despite of different declarations in some documents, has opted for the traffic system which gives priority to road traffic. This relation towards the development of railways is a reason why they are in poor technical condition from the organisational, economical and legal point.

The degree of development and subpolitics can influence the business politics where this input was marked 50 in 2003 in the realisation of the business politics which can increase. With the most advanced technology transport means and modern rules, it is expected that a part of the production politics can be marked by input 80 in 2008 and in 2012 by the input 90 in the realisation of business politics.

- **Staff subpolitics** - classic organized structure of Slovenske železnice Holding which by its vertical leading and accentuating largness, clear rules, formalization, specialization and control shows how far the staff subpolitics is from the new concept of human treating which must result from the modern view on enterprises as opened systems which adapt to changes and take care for their development. This is the reason why staff subpolitics nowadays has less importance, the input 30 in 2003.

Incorporating Holding in the European traffic flows means that fast response from the managers and other experts is required. Besides, it is not possible to treat people in isolation, but in combination with global business aims. The changes in development of staff potentials demand different politics. Marketing staff politics demands business strategy and competitive developed rules.

Marketing staff subpolitics in Holding would be connected with scientific and technical revolution (the function of workers replaces mechanization and intellectual function automation). That demands changes in the structure of workers as their position in society. Because of the development the relation between the group with I-IV education and the group with V-IX education must change. That means that professional education becomes higher. It is expected that values of staff subpolitics will be with input 70 in 2008 and in 2012 with input 90.

- **Marketing subpolitics:** to restore the real marketing subpolitics is a precondition for successful business politics of Holding in incorporating into the European flows. For this marketing subpolitics it is typical that it depends on some people who keep this level which is far away from the present time. Regarding marketing subpolitics in Holding in 2003 it can be evaluated with input 20.

The marketing philosophy or concept of Slovenske železnice Holding must be founded on finding out the buyers' demands. For that reason, the enterprise must accept marketing thinking in service development, production, acquisition, finance, professional workers and especially in sales which is the most different phase of business of how to produce a concrete service and how to find a buyer. The demands of buyers also change a lot. Their standards are becoming higher. The most important are part-

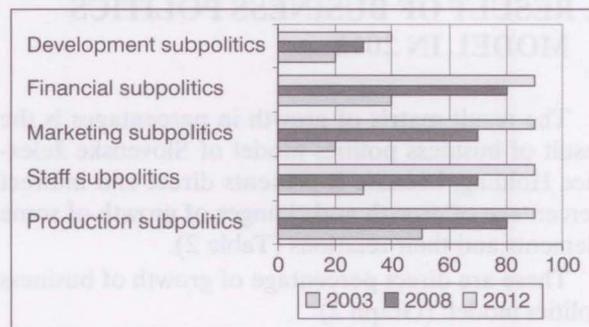
nerships which provide new methods of interacting relations and connect business partners. The relations between Slovenske železnice Holding and the users of logistic services will be founded on further business relations rather than on individual transactions

- **Financial subpolitics** would insure the creation of financial means which makes possible to manage. Financial subpolitics could not realize these aims, because of the financial results which were almost negative, so its value of input was 40 in 2003. Modernization of production, good marketing subpolitics and development of Slovenske železnice Holding would result in the increase of its role and meaning, so that in 2008 its input will be 80 and in 2012 its input will be 90.

- **Development subpolitics** would be the leader in that part of business subpolitics which is connected with further management of Holding. The model element of business politics, marketing subpolitics were evaluated with input 50 in 2003.

Developing their own advances which are necessary for successful incorporation into the European flows. Thus, a part of marketing subpolitics elements could reach the input 60 in 2008 and input 80 in 2012.

Using model matrix of growth in 2003, growth of some elements is expected, the values of which are presented for years 2008 and 2012 (Graph 1).



Graph 1 - Presentation of business politics elements

Source: Developed by the author

This is the growth vector of business politics model from the following values:

$$\Delta y'_{2012} = \begin{bmatrix} 40 \\ 60 \\ 70 \\ 50 \\ 30 \end{bmatrix}$$

Regarding the defined values vector reciprocal values of business politics:

$$\frac{1}{y_{2012}} = \left(\frac{1}{90}, \frac{1}{90}, \frac{1}{90}, \frac{1}{90}, \frac{1}{80} \right)$$

The matrix of business politics growth in relation to current values defines the multiplication exterior vectors $\Delta y'_{2012}$ and $\frac{1}{y_{2012}}$.

$$R_{2012} = \begin{bmatrix} \frac{40}{90} & \frac{40}{90} & \frac{40}{90} & \frac{40}{90} & \frac{40}{80} \\ \frac{60}{90} & \frac{60}{90} & \frac{60}{90} & \frac{60}{90} & \frac{60}{80} \\ \frac{70}{90} & \frac{70}{90} & \frac{70}{90} & \frac{70}{90} & \frac{70}{80} \\ \frac{50}{90} & \frac{50}{90} & \frac{50}{90} & \frac{50}{90} & \frac{50}{80} \\ \frac{30}{90} & \frac{30}{90} & \frac{30}{90} & \frac{30}{90} & \frac{30}{80} \end{bmatrix}$$

The result matrix of growth presents growth of business politics model of Slovenske železnice Holding in 2012:

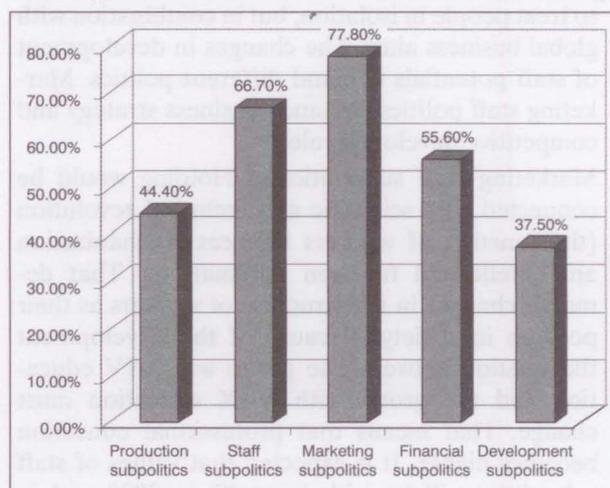
$$R_{2012} = \begin{bmatrix} 0,444 & 0,444 & 0,444 & 0,444 & 0,500 \\ 0,667 & 0,667 & 0,667 & 0,667 & 0,750 \\ 0,778 & 0,778 & 0,778 & 0,778 & 0,875 \\ 0,556 & 0,556 & 0,556 & 0,556 & 0,625 \\ 0,333 & 0,333 & 0,333 & 0,333 & 0,375 \end{bmatrix}$$

4. RESULT OF BUSINESS POLITICS MODEL IN 2012

The result matrix of growth in percentages is the result of business politics model of Slovenske železnice Holding, because it presents direct and indirect percentage of growth and changes of growth of some elements and their relations (Table 2).

These are direct percentage of growth of business politics model: (Graph 2)

- Direct percentage of growth presents that the production politics will increase from 2003 to 2012 by 44.4% which is expected because of the modernization of suprastructure and the central leading traffic.
- Direct percentage of growth would be 66.7%. Regarding modernization and modern marketing, subpolitics, innovation are necessary from 2003 to 2012.
- The highest direct percentage of growth from 2003 to 2012 has marketing subpolitics 77.8%. The marketing economy demands concrete and modern marketing subpolitics.
- The value of financial subpolitics from 2003 to 2012 is 55.6% which will result in joining the European Union and common monetary system.
- The increase of development subpolitics from 2003 to 2012 is 37.5% which is expected because of innovation in the technology, organization, economy and law. It will be necessary to adapt everything to the needs of Slovenske železnice Holding.



Graph 2 - Direct percentage of growth of business politics model

Source: Developed by the author

Table 2 - Percentage of growth of business politics model in 2012

	Production subpolitics	Staff subpolitics	Marketing subpolitics	Financial subpolitics	Development subpolitics
Production subpolitics	44.4%	44.4%	44.4%	44.4%	50%
Staff subpolitics	66.7%	66.7%	66.7%	66.7%	75%
Marketing subpolitics	77.8%	77.8%	77.8%	77.8%	87.5%
Financial subpolitics	55.6%	55.6%	55.6%	55.6%	62.5%
Development subpolitics	33.3%	33.3%	33.3%	33.3%	37.5%

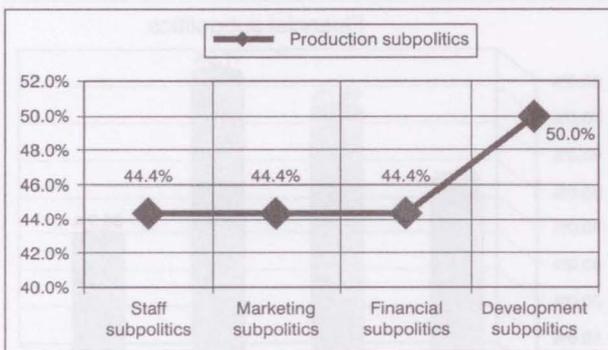
Source: Developed by the author

In researching the growth of success of business politics it is not enough to connect relations between elements of business politics. The indirect percentage of independence which presents relations results in the dynamic system of business politics. The following percentages of business politics elements are provided:

- If we compare production politics in relation with other elements which influence from 2003 to 2012 regarding staff, marketing and financial subpolitics, the growth of production subpolitics will be 50% (Graph 3).
- But comparing indirect percentage of growth with other elements in relation with production subpolitics it is clear that staff subpolitics will increase by 66.7%. Comparing the marketing with production subpolitics it is clear that it will increase by 77.8%. Financial subpolitics will have 51% of growth, and development subpolitics will have 33.3% of growth (Graph 4).
- Comparing staff subpolitics in relation with other elements which influence the realisation of business

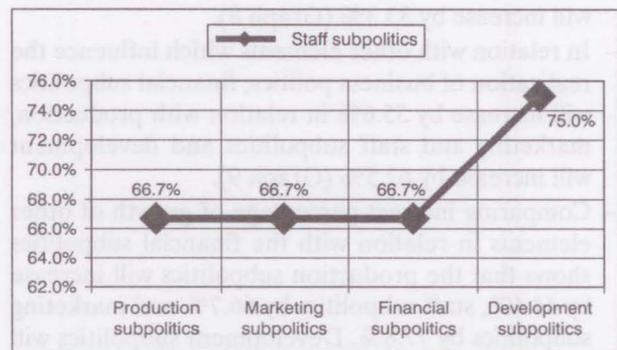
politics a growth of 66.7% from 2003 to 2012 is obvious. Staff subpolitics in relation with marketing and financial subpolitics would also increase by 66.7%. Comparing the development subpolitics the growth will be 75% (Graph 5).

- From indirect percentage of growth of other elements in relation with staff subpolitics it is clear that production subpolitics will increase by 44.4% in relation with staff subpolitics. Comparing the marketing subpolitics with staff subpolitics, it will increase by 77.8%. Financial subpolitics in relation with staff politics has a growth of 55.6%, but the production subpolitics will increase by 33.3% (Graph 6).
- Marketing subpolitics in relation with other elements which influence the realization of business politics shows growth of 77.8% in relation with production subpolitics. Marketing subpolitics in relation with staff and financial subpolitics shows growth by 77.8%. Comparing marketing subpolitics with development subpolitics shows growth by 87.5% (Graph 7).



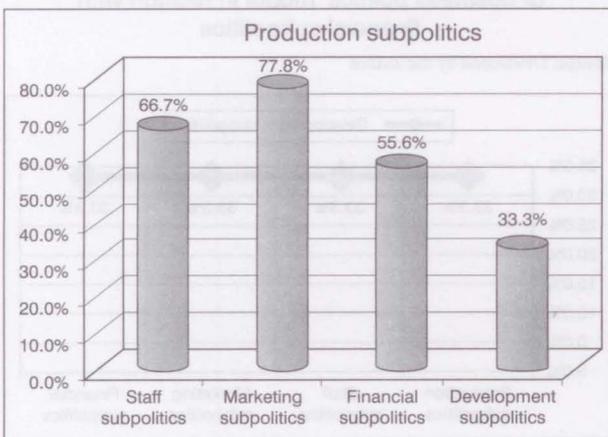
Graph 3 - Indirect percentages of growth of production subpolitics in relation to other elements of business politics model

Source: Developed by the author



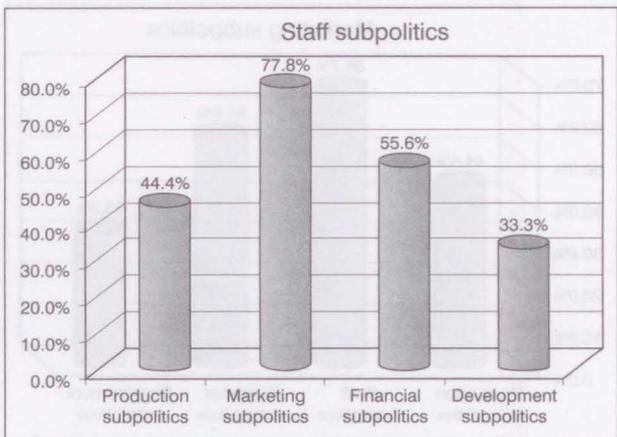
Graph 5 - Indirect percentage of growth of staff subpolitics in relation with other elements of business politics model

Source: Developed by the author



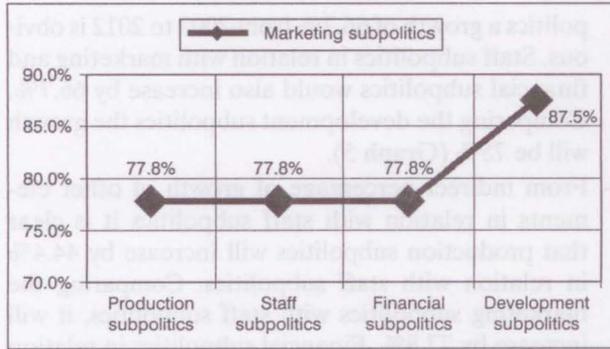
Graph 4 - Indirect percentage of growth of other elements of business politics in relation with production subpolitics

Source: Developed by the author



Graph 6 - Indirect percentage of growth of other elements of business politics model in relation with staff subpolitics

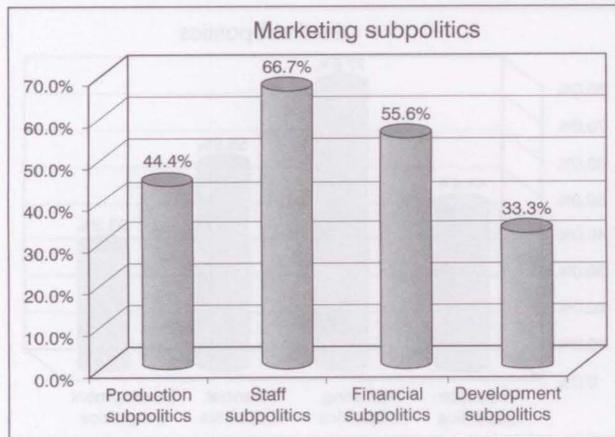
Source: Developed by the author



Graph 7 - Indirect percentage of growth of marketing subpolitics in relation with other elements of business politics model

Source: Developed by the author

- Comparing indirect percentage of growth of other elements in relation with marketing subpolitics it is clear that the production subpolitics will increase by 44.4%. In relation with marketing subpolitics, staff subpolitics will increase by 66.7%. In relation with marketing subpolitics, financial subpolitics will increase by 77.8% and the development subpolitics will increase by 33.3% (Graph 8).
- In relation with other elements which influence the realization of business politics, financial subpolitics will increase by 55.6% in relation with production, marketing and staff subpolitics and development will increase by 62.5% (Graph 9).
- Comparing indirect percentage of growth of other elements in relation with the financial subpolitics shows that the production subpolitics will increase by 44.4%, staff subpolitics by 66.7% and marketing subpolitics by 77.8%. Development subpolitics will increase only by 33.3% from 2003 to 2012 (Graph 10).
- Comparing the development subpolitics in relation with other elements which influence the realization

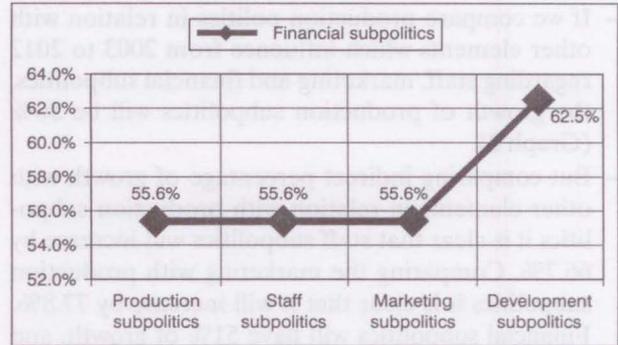


Graph 8 - Indirect percentages of growth of the elements of business politics model in relation with marketing subpolitics

Source: Developed by the author

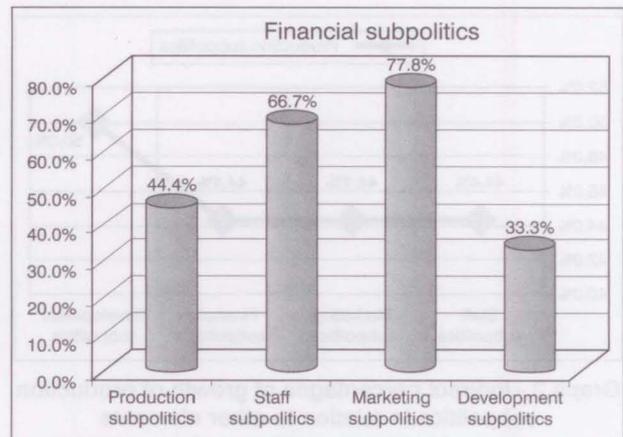
of business politics shows a result that production, staff, marketing and financial subpolitics will increase by 33.3% (Graph 11).

- By comparing indirect percentage of growth of other elements in relation with development subpolitics it is clear that the production subpolitics will



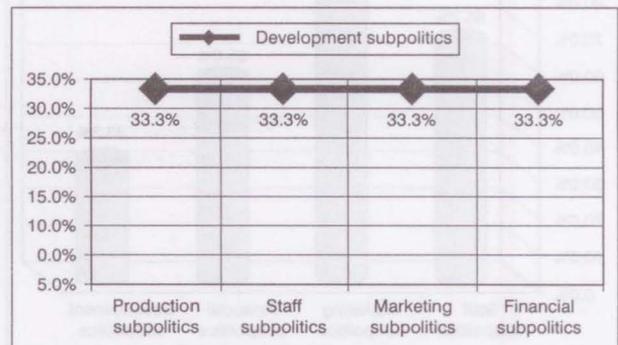
Graph 9 - Indirect percentage of growth of financial subpolitics in relation with other elements of business politics model

Source: Developed by the author



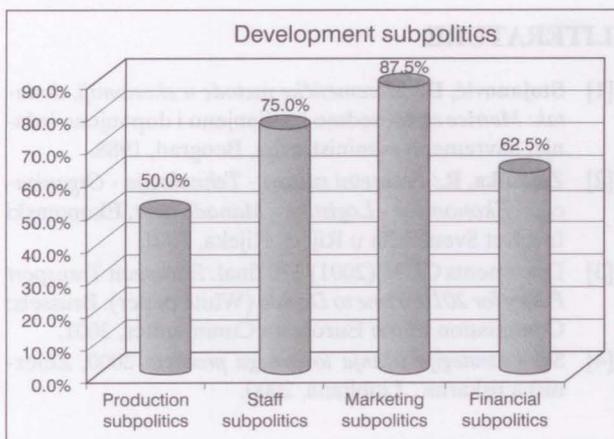
Graph 10 - Indirect percentage of growth of elements of business politics' model in relation with financial subpolitics

Source: Developed by the author



Graph 11 - Indirect percentage of growth of development subpolitics in relation with other elements of business politics model

Source: Developed by the author



Graph 12 - Indirect percentage of growth of other elements of business politics model in relation with development subpolitics

Source: Developed by the author

increase by 50%. Indirect growth of staff subpolitics will increase by 75%. In relation with production subpolitics, the marketing subpolitics will increase by 87.5% and financial subpolitics will increase by 62.5% (Graph 12).

The matrix of growth can be shown for different years (year) $t = 1, 2, \dots, t$. It is possible to calculate the matrix of growth of business politics of Slovenske železnice Holding for 2008 in relation with 2003 and the matrix for 2012 in relation with 2008. By comparing the percentages of growth it is possible to get useful information of business politics of the Slovenske železnice Holding.

5. CONCLUSION

As the incorporating factor of the Slovenske železnice Holding in the European traffic flows the mathematical model of business politics connects the basic elements of business politics. This model uses the matrix of growth which has double function: generalization of growth with direct and indirect percentage of growth and makes possible the dynamic system and gives a projection of the future development of business politics.

The evaluation of the elements of the model has taken into consideration their condition in realization of business politics of the Slovenske železnice Holding in 2003 which is marked by low parameters by 20 and 50. It is expected that in 2008 there will be the highest effect of business politics of the Slovenske železnice Holding because of the European traffic flows. The elements of business politics of Holding will obtain in 2008 the value of parameters between 60 and 80. To realize the model in 2012 the Slovenske železnice Holding must move its business politics in direction which will bring modern transport technology,

suprastructure which makes possible fast, economic, comfortable, safe and ecological transport. To realize this model, marketing and staff investments in intellectual capital are necessary, which is not possible without good and professional staff. The principle is marketing philosophy which has to be presented in enterprises. The model demands development which must follow the trends of transport.

The results of research had aims, such as competitive incorporation of the Slovenske železnice Holding in the European flows. Including all the geographic advantages of the Republic of Slovenia regarding the European traffic flows, modernization and modern infrastructure, suprastructure, changes in staff potentials, marketing philosophy and development of advanced strategy, it will be possible to reach the results expected in 2012 when the European Union will extend especially in corridors V and X which is important for successful business politics of the Slovenske železnice Holding in their integration in the European traffic flows.

BOJAN PIRŠ, B. Eng.

Sončna ulica 4, 3250 Rogaška Slatina, Republika Slovenija
E-mail: bojan.pirs@slo-zeleznice.si

POVZETEK

POSLOVNA POLITIKA – DEJAVNIK VKLJUČEVANJA HOLDINGA SLOVENSКИH ŽELEZNIC V EVROPSKE PROMETNE TOKOVE

Vstop Republike Slovenije v Evropsko unijo daje poseben pomen gospodarskim subjektom, saj se nekdanji trg in konkurenca direktno odpreta za naše gospodarske subjekte. To pa pomeni, da bo prišlo do večje konkurence na trgu transportnih storitev. Zaradi velike turbolentnosti okolja, bo vedno večja možnost, da se podjetja v okviru eksploatacijskega ciklusa hitreje pomikajo proti kulminaciji, oziroma v fazo degeneracije - krizo. Ker poslovna kriza ogroža nadaljni obstoj in razvoj Holdinga Slovenske železnice, postaja obvladovanje le-te vedno pomembnejše. Da bi se Holding Slovenske železnice tega izognil je potrebna jasna, sistematična in koncizna poslovna politika, ki pomeni skupno medsebojno povezavo in medsebojno vplivanje elementov (načela, kriteriji, mere, aktivnosti), ki so v stalnem gibanju, spreminjanju in razvoju. Poslovna politika je tista, katera karakterizira določene cilje in povratne vezi kot pogoj za obstoj in funkcioniranje vsega, zato se ne more gledati samo kot globalni program razvoja, ampak kot zelo sestavljen dinamični sistem.

Elementi modela poslovne politike - dejavnika vključevanja Holdinga Slovenske železnice v evropske prometne tokove, so podpolitike poslovne politike, ki vplivajo na njeno realizacijo: proizvodna, kadrovska, tržna, finančna in razvojna podpolitika. Pri vrednotenju elementov modela je vzeto v obzir njihovo stanje in pomen v realizaciji poslovne politike, v letu 2003 in njihove pričakovane vrednosti v letu 2008, ko bo nastopil prosti pretok storitev v železniškem prometu v Evropski uniji ter v letu 2012, ko se predpostavlja, da bo prišlo do ponovne širitve Evropske unije.

Model poslovne politike – dejavnika vključevanja Holdinga Slovenskih železnic v evropske prometne tokove, je v bistvo poskus, da se na eksplicitni način vzpostavi kolaborativni odnos med odrejenimi elementi modela.

KLJUČNE BESEDE

Holding Slovenske železnice, poslovna politika, proizvodna politika, kadrovska politika, tržna politika, finančna politika, razvojna politika, matrika rasti.

LITERATURE

- [1] **Stojanović, D.:** *Matemetičke metode u ekonomiji, dodatak: Matrice rasta*, sedmo izmijenjeno i dopunjeno izdanje, Savremena administracija, Beograd, 1988.
- [2] **Zelenika, R.:** *Prometni sustavi - Tehnologija - Organizacija - Ekonomika - Logistika - Manadžment*, Ekonomski fakultet Sveučilišta u Rijeci, Rijeka, 2001.
- [3] Documents COM (2001) 370 final: *European Transport Policy for 2010: Time to Decide* (White paper). Brussels: Commission of the European Cummunities, 2001.
- [4] **SŽ - Strategija trženja tovornega prometa 2000**, Železniška tiskarna , Ljubljana, 2000.