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Working Paper Number 310
May 2000

First draft

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Abstract

The purpose of this paper is to examine the determinants of the variation in Czech managers' pay levels. Among the questions we attempt to answer are: Are the managers in state-owned firms compensated differently than those in private owned firms? How much of the difference in pay is explained by differences in individual characteristics and job levels? What is the importance of the regional location or the industry affiliation of the firms for managerial pay differentials? We use data from a cross-section of Czech managers in 1998 and estimate earnings equations augmented with a host of explanatory variables related to firm and job characteristics.

JEL Classifications: J33, J44, P23

Keywords: Managerial compensation, transition economy

Acknowledgements

We thank Trexima Ltd for providing the data and Jingkun Li for research assistance.

1. Introduction

In recent years most transition economies have been going through a privatisation process which established a completely new firm and ownership structure. As a consequence, many of the early top managers had to leave their positions and new managerial positions have been created in the new born firms. The new economic environment also implied a radical change in the role of managerial employees. During central planning their main function had predominantly been operational; to find out the best ways of fulfilling the instructions which had been given by the political leaders.

Earnings of top management have jumped to higher levels than before. Of course, in countries where egalitarian remuneration was practised for the last forty years, these developments have attracted a lot of interest. Thus, questions whether the top managers really are worth their compensation and whether the income differentials between different types of firms, industries and regions can be justified, have been raised.

There is, however, very little systematic evidence about the managerial labour market in transition economics. And yet, as emphasized by *e.g.* Aghion *et al.* (1994) and Shleifer and Vishny (1997), the incentive systems of managers are crucial for transition reforms to be successful. Management should be rewarded for reforming firms in a more market-oriented direction. This is particularly important in the transition economies since in these countries managers have considerable power. In fact, they appear to have more power than management in many advanced market economies.

Managerial compensation has also been in the focus in the mature capitalist economies. The bulk of the literature has been concerned with the pay of Northern American CEO's and with UK directors' pay, whereas there are rather few investigations from countries with other form of corporate governance systems, such as those found in continental Europe. For obvious reasons, there is much less studies from transition economies.¹ Another characteristic of the literature is that it focuses predominantly on the relationship between CEO pay and firm performance, and hence, examines changes in CEO pay while paying little attention to differences in levels of pay between CEO's and especially between the CEO's and other managerial employees in the firms; for two recent surveys, see Murphy (1999) and Gomes-Meija and Wiseman (1998).

The aim of this paper is to examine the determinants of the variation in Czech managers' pay levels. Among the questions we attempt to answer are: Are the managers in state-owned firms compensated differently than those in private owned firms? How much of the difference in pay is explained by differences in individual characteristics and job levels? What is the importance

¹ In fact, we are only aware of one previous study; Jones and Kato's (1996) study of CEO compensation in Bulgaria. There are also very few studies of the determinants of individual earnings in general; see Svejnar's (1999) survey. The bulk of this literature focuses on the returns to human capital and changes therein. The studies related to firm performance have typically made use of data on average wages at the firm level.

of the regional location or the industry affiliation of the firms for managerial pay differentials? We make use of data on Czech managers in 1998 and estimate standard earnings equations augmented with a host of explanatory variables related to firm and job characteristics. The paper differs from most previous studies of wage determination in transition economies, not only by its focus on managerial employees, but also by its focus on the period following the initial phase of marketization.

The next section presents the data set used and gives a brief description of managerial pay and managerial pay differentials in the Czech Republic. The third section contains the econometric analyses of the determinants of managerial compensation. The paper finishes off with some concluding remarks and suggestions for further research.

2. Data Description

The data set used in this paper is constructed by combining information from three separate sources. The main part of the data set is an unbalanced panel containing information about 7,764 managerial employees in 229 Czech firms for the year 1998. These data have been collected by *Trexima Zlin*, a Czech private consulting company specialised in human resource management. One of Trexima's major activities is the development and maintenance of the Average Earnings Information System (AEIS) in cooperation with the Ministry of Labour and Social Affairs and the Czech Statistical Office.

The AEIS provides detailed information about the labour costs in occupations and at the regional and industry levels. Thus, AEIS contains information about wages in 400 different occupations including managerial jobs.² Part of the information regarding the managers in our data set has been obtained from the AEIS.

The second source of information is based on the Survey of Managerial Staff Earnings (SMSE) which is also by carried out by Trexima Zlin. This annual voluntary survey is directed at top executives, managers and board members and has been carried out since 1993.

The third source of data is a firm register, *Obchodni vestnik*, which contains information about firm characteristics. Such information is not collected for the AEIS and Trexima Zlin used the identification number of organisations (ICO) to supplement the AEIS with information about the firms. The data set used in this paper has been constructed by merging the three different and partly overlapping data sets described above. As a consequence it has complete information (that is, in addition to the SMSE information also AEIS and firm information for the manager) for

² In recent years wage data have collected each quarter for about 850.000 employees in 850-900 firms.

only part of the data set. However, as there are no reasons to expect the “full information” data set to be a non-random sample of all managers in the full data set, we will in the following use this sample in the econometric analyses.

Tables 1 and 2 give some basic descriptive statistics for the managers and the firms, respectively. From Table 1 we can see that the great majority (79 per cent) of the managers are males and that two thirds of the managers have a university education. About one third of the total compensation of the managerial employees comes in other forms than straight salary. Distinguishing between managerial levels, we may furthermore note that most of the female managers are lower rank and that the proportion of female decreases at higher levels in the hierarchy. The share of managers with an university education increases as we move up the corporate ladder. The share of straight salary in total compensation is on average a little over thirty per cent and increases from 30 per cent for division heads to 40 for the CEOs. As the data come from relatively few (but predominantly large) companies -- see below – the majority of the managerial employees in the sample are either organisation/unit directors (25 per cent) or division heads (64 per cent)

TABLE 1

TABLE 2

Table 2 contains some descriptive information on the firms by sectors. It can be seen that the majority of the firms in our sample are medium-sized or large firms (in the Czech sense, of course: the average number of employees is 1,384) and that the majority of firms are from the manufacturing sector. One third of the firms are still state-owned and the foreign-owned firms make up 5 per cent of the sample. The service sector firms are small and more likely to be private owned.

3. The Determinants of Managerial Pay

This section focuses on various determinants of managerial pay. By “pay” we refer to total compensation. This is made up of a straight salary component, an individually determined premium pay component (which is *not* related to firm performance), performance related pay and compensation for board membership. On average straight salary makes up 73.5 per cent of total compensation, the bonus share is 23 per cent and premium pay and board membership compensation account for 2.5 and 1 per cent of total pay, respectively.

The basic equation to be estimated is:

$$(1) \quad \ln(\text{pay})_i = f(\text{age, educational level, gender, industry, region, firm size (measured by sales, number of employees, or value of assets) type of firm (ownership), position within firm})$$

in which the level of managerial pay is explained by sets of individual, firm and job characteristics.

On the basis of estimates of different versions of (1) we attempt to answer questions like: Is there a firm size effect in Czech firms as have been found for a number of other countries? This is a particularly interesting question with respect to transition economies as during the communist system large firms, especially firms with many employees, were associated with more political power and hence, better possibilities to obtain higher pay. If considerable firm size effects still are present, this would indicate that the managerial pay structure has been rigid.

Does the type of firm matter? Are there differences between state-owned and privately owned companies? Among the latter, is there a difference between domestic and foreign firms? How much do individual characteristics, firm and industry characteristics, and position “explain” of the variation in pay across individuals? What does the pay-age-experience relationship look like? What is the role of education? What do pay differentials between positions (after having controlled for other determinants of pay) look like? How much more does a general manager earn than managerial employees at lower levels in the corporate hierarchy?

Another set of questions concern regional and inter-industry pay differentials. How large are they after controlling individual and other factors? During central planning, the tariff wage scales were set to encourage workers to move to the “socially important” heavy industries. How much of these inter-industry differentials remain is an interesting question. Another pay differential of interest is that between the genders; how much is due to differences in individual characteristics, firm characteristics, and positions held, and how much is due to unobserved (“unexplained”) factors? Central planning Czechoslovakia used to have the lowest earnings inequality but the highest gender inequality among the eastern European countries.

Unfortunately, the data set does not include any conventional corporate performance measure. There is, however, some surrogate information, namely the top manager’s subjective assessment of the current state of the firm. Although, as will be seen below, this is far from an ideal measure, we will try it out in order to see what impact firm performance has on the level of managerial pay.

Table 3 reports the results from estimations of a managerial pay equation with standard individual characteristics, capturing human capital differences, and augmented with job level dummies (the omitted category being division heads which is the lowest rank in the data set) and firm size as measured by the log number of employees. The job levels available in the data set are: general

manager or CEO, assistant manager (*odborný reditele*), organisation/unit director (*reditel závodu, divize*), and division head (*vedoucí vyssiho útvaru*).

We can observe the familiar concave age-earnings profile, topping at about 50 years of age, and university education being rewarded by about 13 per cent higher pay, *ceteris paribus*. These estimates as well as the effects of job levels turned out to be very robust to changes in specification. The gender differential is about 16 per cent even after controlling for human capital and job levels. It should of course be remembered that the big majority of the female managerial employees in the Czech Republic are in lower rank positions; see Table 1 above.

TABLE 3

The job level dummies trace out a clear rank-pay relationship. The relative differences between CEOs and assistant managers, assistant managers and unit directors, and unit directors and division heads (the omitted category) are roughly of equal size. Exclusion of the job level dummies does not lead to dramatic changes in the other coefficients, but it does lead to a considerable decrease in explanatory power.

The data allow us to distinguish between four types of firms according to their biggest owner: state-owned, private domestic owned, private foreign owned firms and cooperatives. From Table 3 we can notice that the state-owned firms pay their managers about the same compensation as domestic private-owned firms (the omitted category) do. There is a small but statistically significant difference, the compensation in the state companies being 2.0 - 2.5 per cent lower. We can see that managers of cooperatives earn considerably less than the others. Furthermore, foreign owned firms pay their managers about 10 per cent higher compensation than domestic privately owned firms.

It should be noted that the managerial pay differentials remain largely unchanged also after controlling for regional and industry effects. Thus, the differentials do not reflect foreign owned firms being located mainly in the Prague area or that state-owned firms are predominantly found in certain (manufacturing) industries.

We have also estimated the pay equations separately for managerial employees in state owned and in privately owned firms, respectively.³ These estimations, which are set out in *Table 4*, reveal some interesting similarities as well as differences in the compensation of managers in

³ There are more large state owned firms and less managers with a university education in the privately owned firms. Otherwise, the managers' observable traits do not differ much between privately and state owned firms.

state and privately owned firms.⁴ Firstly, it can be noted that our earnings equations explain roughly as much of the variation in managers pay in the private sector as in the state-owned firms.

TABLE 4

Secondly, the returns to schooling and experience (measured here by age) do not differ much between private and state owned firms.⁵ The return to experience is slightly higher in private firms. This is quite surprising as one might expect recent labour market experience to be more valuable in private firms. Also the advantage of having a university degree is the same in the state and private firms. The gender pay differential is negative in both type of firms but is clearly higher in the private firms. Thirdly, the hierarchical pay structures are equally steep in private and state firms.

A difference worth noting is the impact of firm size on managers pay: this is significantly negative in the private sector firms, whereas executive compensation increases in firm size in the state sector. Also among private owned firms is there a difference of about 9 per cent in managerial pay between domestic and foreign firms.

Finally, we can note that entering industry and region dummies did not change the other coefficient estimates much. For the state firm managers being employed in the process, energy and construction industries is associated with a substantial wage premium. Notably, the machine industry does not pay its managers a higher pay than other sectors. There are also relatively large pay differentials between other industries and regions, and they are among the same magnitude in state and privately owned firms.

One distinguishing feature of the Czech labour market are the relatively large differentials across regions and industries; see, for example, Burda and Profit's (1996) analysis of the regional unemployment differentials in the Czech Republic. As can be seen from *Table 3*, columns 2,3 and 4, there remain some significant differences in managerial pay even after catering for individual characteristics and firm size. In particular the differences between industries appear to be relatively large. The highest managerial pay is found in the trade and the construction sector whereas compensation is lowest in agriculture, machine manufacturing and the hotel and catering industry.

The differences between regions are smaller. Managers in the capital region can expect to obtain about 14 per cent more in pay than managers in South Bohemia which is the omitted region in the estimations. North Moravian executives earn 8 to 9 per cent more and managers in West Bohemia

⁴ Flanagan (1998) estimates earnings equations for all types of wage earners. He finds a private sector wage premium of about 15 per cent, after controlling for human capital and gender.

⁵ Flanagan (1998) found the return to education to be higher in privatized firms than in state and new private sector firms.

5 per cent more. The fourth column gives the results from including both region and industry as explanatory variables.⁶ The estimated regional and industry effects remain largely unchanged. Consequently, we can conclude that the regional differentials in managerial pay are only to a small extent due to regional differences in industry structure.

The regional and inter-industry pay differentials found would be a smaller problem if they were only transitory. We cannot provide evidence that they are, but given the low level of labour mobility this is unlikely to be the case. Persistent regional and sectoral wage differentials have been found in many Western European countries and in the US, too. The problem is that little is known about the reasons for why they arise and persist. Nevertheless, one should be aware of the fact that differentials of the magnitude found here, may constitute a strong impediment to reallocation of managerial employees between industries and regions.

As already noted, a drawback of our data set is that there is no direct corporate performance measure like rate of return on capital or accounting profits in the SMSE survey. There is, however, one piece of information about the economic conditions of the firm, namely the assessment of the situation of the firm by its top manager. The CEOs are asked to state which one of the four alternatives listed in the table best describes the current situation of the firm. In 1998, 54.7 per cent of the managers in the data set were in firms that were expanding and in good shape, 30.6 per cent were in firms they considered to be stable and 14.7 per cent in companies which were stagnating. The corresponding shares for firms were 61.1, 23.6 and 14.8 per cent, respectively. When we entered this information in the managerial pay equation we obtained following results.

Firstly, good and expanding firms have higher paid managers than the reference category, the firms in a stable situation. Secondly, managers in the firms, the condition of which is considered as stagnating, also had a higher compensation than those in the stable firms. This is somewhat surprising but it should, of course, be noted that these results refer to the level of pay and not to changes therein. Note, that the same pattern is present also in the estimations where we control for industry and region.

Finally, we have also estimated the pay equations on a sub-sample of CEOs. The results which are set out in *Table 5*, differ in many respects from those obtained from estimations on the whole sample of managers. Thus, for example, the age-pay relation is convex, a pattern for which we lack an explanation, the coefficient to university education is lower for the CEOs, whereas the firm size effect on their pay is four times as large as for other managerial employees. For the CEOs there is no difference in their pay between cooperatives, state owned and domestic private owned firms, whereas the chief executives in foreign firms earn 16-22 per cent more than the others. General

⁶ As was noted in connection with Table 6, the regional and inter-industry differentials in pay were similar in both state and privately owned firms.

managers in good and expanding firms receive a clearly higher compensation than their colleagues. There is no difference in CEO pay between stable and stagnating firms, however. The regional and industry differentials appear to be much higher for CEOs. This is especially true for the regional differences, although one should note that there may be rather few observations from some of the regions (and industries). As differences with respect to firm performance are smaller, these differences could be a cause for concern.

4. Concluding remarks

We have made use of a fairly rich data set on Czech managers' pay, their jobs and employers in order to study managerial pay determination in a transition economy some years after the initial phase of marketization. Our findings are firstly that there is a positive firm size effect on managerial earnings, but that this effect due to a positive pay-firm size relation in for the state-owned companies. CEO pay is, however, strongly affected by firm size. This is interesting since pre transition, managers were often rewarded on the basis of company size (which was synonymous to political power).

Secondly, we find that the managers in state-owned firms receive approximately the same compensation as their colleagues in private owned firms. This result survives inclusion of industry effects and several other controls. Clearly the non-existence of a pay differential does not create incentives for the managers in state owned firms to push for further privatisation or reforms in a market-oriented direction.

Thirdly, a prominent feature of the data are the significant regional and inter-industry differentials in pay. The differences remain relatively large even after catering for individual and firm characteristics. The data at our disposal do not allow us to pinpoint the sources of these premia, but their mere magnitude should be a cause of concern as they may slow down reallocation processes. Finally, we have isolated a positive, albeit not very strong, relationship between the subjectively assessed performance of the firms and the pay levels of their managerial staff. It should be noted that all these results have been obtained from a single cross-section. In future work we hope to be able to draw on (longitudinal) data for longer time periods during which there have been changes in the economic environment as well as in the firms (and especially in their ownership structure).

5. References

Aghion P, O. Blanchard and S. Burgess (1994), "The Behaviour of State Firms in Eastern Europe, Pre Privatization", *European Economic Review* (38), 1327-1349

Burda M. and S. Profit (1996), "Matching Across Space: Evidence on Mobility in the Czech Republic", *Labour Economics* (3), 255-278

Chase R.S. (1995), Returns to Education and Experience in Transition Czech Republic and Slovakia. Mimeo, Department of Economics, Yale University

Flanagan R. J. (1995), Wage Structures in the Transition of the Czech Economy. International Monetary Fund Working Paper 95/36

Flanagan R. J. (1998), "Were Communists Good Human Capitalists? The Case of the Czech Republic", *Labour Economics* (5), 295-312

Gomes-Meija L. and R. Wiseman (1999), "Reframing Executive Compensation: An Assessment and Outlook", *Journal of Management Studies*

Grosfeld I. and J-F. Nivet (1997), Wage and Investment Behaviour in Transition: Evidence from a Polish Panel Data Set". Centre for Economic Policy Research Discussion Paper No. 1726

Jones D.C. and T. Kato (1996), "The Determinants of Chief Executive Compensation in Transitional Economies: Evidence from Bulgaria", *Labour Economics* (3), 319-336

Murphy K. J. (1999), "Executive Compensation", in: A. B. Atkinson and F. Bourguignon (eds.): *Handbook of Labor Economics*, Volume 3

Rosen S. (1992), "Contracts and the Market for Executives", in: L. Werin and H. Wijkander (eds.): *Contract Economics*. Oxford: Basil Blackwell

Shleifer A. and R. Vishny (1997), "A Survey of Corporate Governance", *Journal of Finance* (52), 737-783

Svejnar J. (1999), "Labor Markets in the Transitional Central and East European Economies", in: O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*, Volume 3. North-Holland; Amsterdam

Table 1: Descriptive statistics for the managers in 1998

Indicators/Category	Total	% of total	CEO's	Ass. Manager	Org.dir	Div. Head
Age(average years)			47,29	47,20	44,88	46,09
Gender:						
Male	6038		211	560	1298	3969
Female	1597		15	58	585	939
Education:						
University	4231	66,49	171	458	1184	2418
Other	2132	33,51	26	87	422	1597
Total compensation (ths)	402,43		1065,84	651,93	448,57	323,59
Salary (ths)	265,60		622,07	396,61	282,70	226,55
Bonus+other comp. (ths)	136,84		443,77	255,33	165,87	97,05
No. of observation	7764		229	620	1909	5006

Table 2: Descriptive statistics for the firms in 1998

Indicator	% of total	Manufacturing	Trade and transports	Services
Employees		% of observations in industry		
up to 99 empl.	8,03	15,86	5,17	78,97
from 100 to 199 empl.	3,59	58,96	5,18	35,86
from 200 to 499 empl.	11,65	71,87	3,69	24,45
from 500 to 999 empl.	15,38	85,77	2,98	11,26
1000 empl. and more	61,36	6,84	7,83	23,78
Ownership		% of observations in industry		
State	33,31	55,76	7,92	36,32
cooperative	2,80	83,58	8,96	7,46
Private-domest.owned	59,91	68,33	9,18	22,50
Private-foreign owned	3,98	85,61	5,61	8,77
No. of observations	7167	4677	617	1873
Per cent	100	65,26	8,61	26,13

Table 3. Estimations of managerial pay equations on the 1998 sample

Indep. vars.	1	2	3	4
Constant	4.555** (0.098)	4.505** (0.099)	4.564** (0.096)	4.513** (0.097)
Age	0.030** (0.004)	0.031** (0.004)	0.031** (0.005)	0.032** (0.004)
Age ² /100	-0.030** (0.005)	-0.032** (0.005)	-0.031** (0.005)	-0.033** (0.005)
Male	0.160** (0.010)	0.154** (0.010)	0.186** (0.010)	0.175** (0.010)
University education	0.128** (0.009)	0.123** (0.009)	0.124** (0.009)	0.121** (0.009)
CEO	1.097** (0.023)	1.091** (0.023)	1.086** (0.023)	1.083** (0.023)
Assistant manager	0.669** (0.015)	0.666** (0.015)	0.668** (0.014)	0.666** (0.014)
Organis. director	0.326** (0.010)	0.333** (0.010)	0.302** (0.010)	0.313** (0.010)
Log employees	0.022** (0.002)	0.017** (0.002)	0.022** (0.002)	0.017** (0.002)
State-owned	-0.021* (0.009)	-0.024** (0.009)	-0.021* (0.009)	-0.023** (0.009)
Cooperative	-0.204** (0.024)	-0.201** (0.025)	-0.156** (0.024)	-0.155** (0.024)
Private, foreign owned	0.134** (0.018)	0.152** (0.018)	0.090** (0.018)	0.099** (0.019)
Stagnating	0.069** (0.013)	0.061** (0.013)	0.114** (0.014)	0.100** (0.014)
Good	0.112** (0.010)	0.120** (0.010)	0.111** (0.011)	0.114** (0.011)
Strong	1.070** (0.331)	1.015** (0.327)	1.025** (0.323)	0.977** (0.320)
Prague		0.141** (0.022)		0.136** (0.022)
North Bohemia		0.042 (0.23)		0.029 (0.023)
Central Bohemia		-0.044 (0.031)		-0.057 (0.031)
West Bohemia		0.056* (0.026)		0.044 (0.026)
Indep. vars.	1	2	3	4

South Moravia		0.021 (0.023)		0.027 (0.022)
North Moravia		0.092** (0.022)		0.080** (0.021)
Agriculture			-0.182** (0.044)	-0.181** (0.044)
Process industry			-0.042** (0.013)	-0.017 (0.013)
Machines			-0.174** (0.014)	-0.159** (0.014)
Energy			0.015 (0.019)	0.013 (0.019)
Construction			0.177** (0.023)	0.167** (0.023)
Transports			-0.052** (0.020)	-0.073** (0.020)
Hotels & restaurants			-0.159* (0.073)	-0.170* (0.072)
R ²	0.455	0.469	0.483	0.494
N. of obs.	7,383	7,383	7,383	7,383

Table 4. Pay equations for managers in state- and private owned firms

Indep. variables	Private owned firms	State-owned firms
Constant	4.857 (0.118)	4.517 (0.179)
Age	0.037 (0.005)	0.032 (0.008)
Age squared/100	-0.038 (0.006)	-0.031 (0.009)
University education	0.130 (0.011)	0.132 (0.015)
Female	-0.201 (0.013)	-0.108 (0.015)
CEO	1.065 (0.028)	1.134 (0.040)
Assistant manager	0.698 (0.018)	0.573 (0.023)
Organisation director	0.345 (0.013)	0.289 (0.017)
Log employees	-0.012 (0.004)	0.029 (0.005)
Foreign owned	0.091 (0.020)	
Regional dummies	<i>yes</i>	<i>yes</i>
Industry dummies	<i>yes</i>	<i>yes</i>
R ²	0.490	0.532
N. of obs.	5,058	2,133

Table 5. Pay equations for CEOs only

Indep. variables	1	2	3
Constant	8.784 (1.008)	8.131 (0.980)	8.797 (1.009)
Age	-0.108 (0.046)	-0.106 (0.044)	-0.110 (0.046)
Age squared/100	0.113 (0.050)	0.111 (0.048)	0.117 (0.050)
Male	-0.099 (0.107)	-0.086 (0.102)	-0.068 (0.108)
University education	0.088 (0.104)	0.071 (0.100)	0.078 (0.104)
Log employees	0.081 (0.024)	0.079 (0.022)	0.082 (0.024)
State owned	-0.009 (0.073)	-0.004 (0.070)	-0.018 (0.075)
Cooperative	-0.154 (0.167)	-0.009 (0.166)	-0.092 (0.171)
Foreign private	0.212 (0.133)	0.158 (0.128)	0.218 (0.133)
Stagnating	-0.042 (0.097)	0.033 (0.094)	-0.016 (0.100)
Good	0.170 (0.075)	0.226 (0.073)	0.199 (0.080)
Prague		0.640 (0.161)	
North Bohemia		0.391 (0.173)	
Central Bohemia		0.923 (0.252)	
West Bohemia		0.312 (0.210)	
East Bohemia		0.494 (0.171)	
South Moravia		0.704 (0.168)	
North Moravia		0.539 (0.160)	
Agriculture			-0.335 (0.163)

Indep. variables	1	2	3
Process industry			-0.134 (0.080)
Machines			-0.092 (0.092)
Energy			0.063 (0.147)
Construction			-0.073 (0.166)
Hotels & restaurants			0.363 (0.435)
Transports			0.098 (0.143)
R ²	0.105	0.198	0.191
N. of obs.	215	215	215