

WAGE INEQUALITIES AND AGGLOMERATION IN CROATIA: WHO'S TO BLAME?

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Abstract

This paper uses NUTS3 sub-regional data to investigate the sources of the regional wages differences on the sector level from year 2000 forward in less developed country such as Croatia. The shift-share analysis is used to decompose the spatial variation of wages into productivity effect and occupational composition effect exploring how the spatial variance in wages is attributable to variations in these effects among different sectors. In the last step of the paper we examine the relationship between these two determinants of spatial differences and the agglomeration instrumented by measure of urbanization in the NUTS3 sub-regions.

Keywords: sector composition index, sector-specific agglomeration, Croatia

JEL classification: R12, J31

1. Introduction

Regional inequalities are persistent feature of many economies, especially in less developed countries. One of the most important indicators of the inequalities is regional wage level. It is widely accepted that spatial effects have a different impact among sectors in developed countries. The traditional core-periphery pattern of manufacturing is weakening which tends to work towards regional convergence. On the other hand, service industries continue to concentrate in high-density areas thus reinforcing divergence. Compared to developed, less developed countries have different economic path. Thus, it is reasonable to test the influence of spatial effects among sectors for a less developed country such as Croatia.

The starting point of the study is well documented growing disparities in wages across the Croatian NUTS III regions for period 2000 – 2007 (Table 1.)

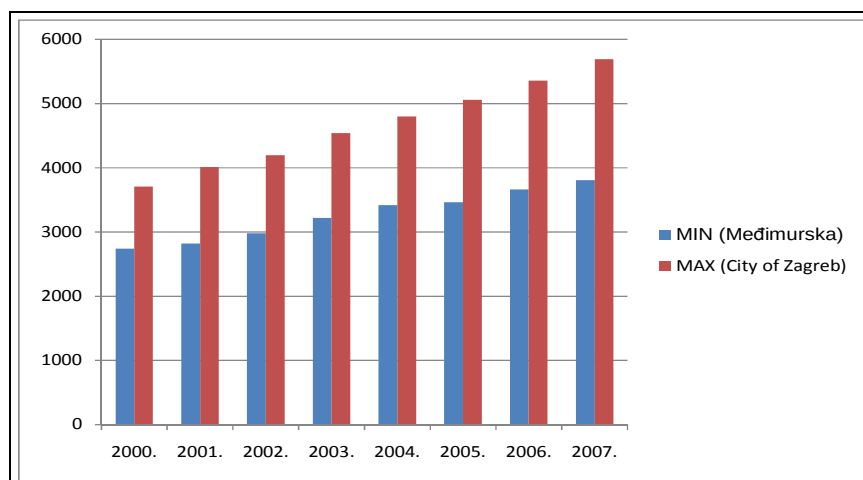
Thus in 2007 maximum average wage (city of Zagreb) was among Croatian NUTS III regions 49,5 % higher then the lowest average wage (county of Međimurska). Taking into consideration that the ratio was increased by 39,8 % from 2000 till 2007 it is easily to conclude that growing disparities in wages are significant source of considerable policy concern.

To explain large spatial wage disparities two broad sets of explanations can be proposed (Estaban, 1999). First, differences in wages across areas could directly reflect spatial

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differences in **productivity of the workforce**. Thus, it can be that in this region productivity per worker is above the mean of Croatia.

Table 1. Average monthly wages (in kunas), NUTS III regions, period 2000 – 2007



Source: Central bureau of statistics- Republic of Croatia -

Next explanation for wage differences is the **occupational composition of employment**¹. It implies that activities are not evenly distributed across areas and require different labor mixes. Consequently, we expect a higher mean wage in areas specialized in more skill-intensive activities. (Rice et al.; 2006.) For instance, the average productivity in agriculture, in industry or in the service sector could be identical across the regions. Yet, the regions specialized in services would have an average wage per worker higher than those specialized in agriculture.

The present article extends the literature in the following direction.

After *disintegrating the economy of Croatia* in three (four) groups of sectors; (*agriculture*) *manufacturing sector, market services and non-market services* and decomposing the average earnings of each group on NUTS III region (county) level into a productivity effect and an occupational composition effect, article concentrates on occupational composition index for different sectors (sector composition index) or to be more precisely on relationship between these indexes and agglomeration instrumented by specific measure of urbanization in the NUTS3 sub-regions in Croatia appreciating different determinants of each effect and therefore different implications for policy makers.

The paper is organized as follows. The next section covers data and descriptive issues, and derives data for decomposition of earnings into occupational composition effect and productivity effect for different sectors (agriculture, manufacturing, market services and

¹ For clarification it is relevant to indicate that occupation stands for activity in National classification of activities 2002. Main reason for maintaining occupation is methodological compatibility with relevant papers.

non-market services). The brief history of analysis of regional wage differences regarding shift-share analysis is reported in Section 3. Section 4 concentrates on relationship between sector composition index for different group of sectors and economic mass presented with a measure of urbanization, concentrating especially on non-market sector. Section 5 presents conclusion with directions for improving efficiency of regional policy.

2. Data and variables construction

In the paper it has been used panel data² for the subregional NUTS3 spatial units of Croatia, for the period 2000 – 2007, provided by Central Bureau of Statistics. The main advantages of using panel data are capturing both cross-section and time-series variation as well as allowing for meaningful inference using a sample with a relatively small number of cross-section observations over a short time period. Allowing for dynamics in the underlying process is relevant not only to infer on the persistence of the series but also to ensure that the estimates for other parameters are consistent. Exceptions are variables for specific measure of urbanization. They cover period 2001 – 2007. In Croatia, NUTS3 subregional unit is the level of county. In the analysis we used data for all 21 counties. Variables are disaggregated two times. Firstly into 17 activities according to National classification of activities 2002 and then in second stage these 17 activities are grouped into three (four) sectors: **(agriculture), manufacturing, market services and non-market services**.

Following papers by Rice et. al. (2006) and Estaban (1999) we present mechanical decomposition for separating contributions to the spatial structure of average wages on **occupational composition index (OCI), productivity index (PI) and allocative index (AI)**. Symbols w_{ijt} and p_{ijt} denote the wage and level of employment in occupation j and area i for a period t . The average wage per hour and average level of employment of occupation j for a period t in the economy as a whole (i.e. aggregating across all i) is given by w_{jt} and p_{jt} . Thus the following equalities present average wages per hour in Croatia for a period t as w_t and average wage per hour for NUTS III region (county) i for a period t with w_{it} :

$$w_t = \sum_j p_{jt} w_{jt} \text{ and} \dots \dots \dots (1)$$

Now it is possible to define the three components of the regional deviation in wages.

The occupational composition index represent by **OCI_{it}** measures the differential wages accruing from region i 's specific occupation composition in period t , assuming that occupation productivities in each region are equal to the Croatian averages for the same period. We thus write:

² The main advantages of using panel data are capturing both cross-section and time-series variation as well as allowing for meaningful inference using a sample with a relatively small number of cross-section observations over a short time period. Allowing for dynamics in the underlying process is relevant not only to infer on the persistence of the series but also to ensure that the estimates for other parameters are consistent.

$$OCI_{it} = \sum_j (p_{ijt} - p_{jt}) w_{jt} \quad (2)$$

OCI_{it} takes positive values if the region is specialized ($p_{ijt} > p_{jt}$) in occupation with high wages at the Croatian level and de-specialized ($p_{ijt} < p_{jt}$) in occupation with low wage levels. OCI_{it} is at the maximum if the region is specialized in the occupation with the highest wage in Croatia.

The productivity index component PI_{it} presents contribution of occupation productivity differences to the shift between regional and national average wages, on the assumption that the region's occupational composition coincides with national one. We then define PI_{it} as:

$$PI_{it} = \sum_j p_{jt} (w_{ijt} - w_{jt}) \quad (3)$$

PI_{it} is positive if the region has occupation productivities above the Croatian average.

The allocative component AC_{it} is defined as:

$$AC_{it} = \sum_j (p_{ijt} - p_{jt}) (w_{ijt} - w_{jt}) \quad (4)$$

This component is an indicator of the efficiency of each region in allocating its resources over the different industrial occupations and can also be viewed as measuring the covariance between occupations specialization and productivity advantages.

Regarding the aim of the paper, or to be more precisely the analysis of the relationship between these indexes on **the level of sector** and **agglomeration** instrumented by specific measure of urbanization in the NUTS3 sub-regions in Croatia, it is necessary to group the abovementioned activities into three (four) sectors. Considering the data limitations four different options for this procedure are introduced in **Table 2 in the Annex**. Due to grouping activities into sectors it is necessary to adopt the mechanical decomposition. The adjustment is introduced in following manner:

The sector composition index represent by $S_m CI_{it}$ measures the differential wages accruing from region i's *specific sector* (m) composition in period t , assuming that sectors productivities in each region are equal to the Croatian averages for the same period³. We thus write:

$$S_m CI_{it} = \sum_j^n (p_{ijt} - p_{jt}) w_{jt} \quad (5)$$

³ For clarification it is relevant to emphasize that each sector (m) is defined as sum of activities from **1** to **n** where **m** stands for sectors (agriculture, manufacturing, market services, non-market services) and **n** for number of activities in each sector.

$S_m CI_{it}$ takes positive values if the region is specialized in sectors with high wages at the Croatian level and de-specialized in sectors with low wage levels. $S_m CI_{it}$ is at the maximum if the region is specialized in the sectors with the highest wage in Croatia.

The productivity sector index component $P_m SI_{it}$ presents contribution of sectors productivity differences to the shift between regional and national average wages, on the assumption that the region's composition coincides with national one. We then define $P_m SI_{it}$ as:

$$P_m SI_{it} = \sum_j^n p_{jt} (w_{ijt} - w_{jt}) \quad (6)$$

$P_m SI_{it}$ is positive if the region has sectors productivities above the Croatian average.

The allocative sector component $A_m SC_{it}$ is defined as:

$$A_m SC_{it} = \sum_j^n (p_{ijt} - p_{jt}) (w_{ijt} - w_{jt}) \quad (7)$$

Interpretation of the $A_m SC_{it}$ also should be readjusted according aforesaid manner.

3. Decompositon of regional wage

In this section it will be provide evidences for modeling the determinants of wage differences according shift – share analysis.

Theoretical foundations have been presented in the articles by *Rice et al. (2006)* and by J. Estaban (1999) and it could be summarized by central equation (8):

$$w_{it} = \alpha + OCI_{it} + PI_{it} + AC_{it} + \varepsilon_{it} \quad (8)$$

where w_{it} stands for average wage per hour in region i for period t, OCI_{it} for occupational composition index, PI_{it} for productivity index, AC_{it} for allocation index all for county i and period t. Constant term is presented by α and error term by ε_{it} for county i and period t.

The next step implies empirical confirmation of the equation (8). Evidence could be found in abovementioned articles. In paper by *Rice et. al.* productivity index and occupational index have been confirmed for NUTS3 sub-regional data for Great Britain. J. Estaban in his attempt to elucidate the extent to which existing interregional inequality per worker within the EU can be attributed to differences in the composition of activities, rather than to productivity gaps that are uniform across sectors has also provided evidences for shift – share analysis for EU regions. Regarding that abovementioned papers have empirical confirmation on developed countires, it is necessary to introduce additional empirical argument introduced in paper by *Muštra et al. (2009)* where abovementioned methodology was tested for regions of Croatia. Thus, the

existing literature supports significance of productivity effect and, for our paper more important, **occupational effect for regional wage differences** for developed and less developed countries.

4. Agglomeration economies and sector composition effect

Taking into consideration previous confirmation of occupational index it is possible now to focus on main contribution of the paper, **empirical confirmation that sector composition index is influenced by agglomeration instrumented by share of urban population and that this influence is different among sectors**⁴.

Starting point for the empirical confirmation is the model with the structure:

$$S_m CI_{it} = \alpha + X_{it}^T \beta + \delta Share_Urban_primacy_{it} + \varepsilon_{it} \quad (9)$$

where X_{it}^T presents control variable vector with dimensions 1 x k in county i for a period t and variable *Share_Urban_primacy_{it}* **share of the population of the biggest urban place** in county i for a period t stands as a instrument for agglomeration. Control variables where chosen based on paper written by Xubei (2007) in which **education** and **age** have been found as a significant variables for regional wage differences. Thus for control variable education has been used share of employed people with higher education⁵ (**share_high_education**) and for age average number of year of employed people (**AVGyear**) and squared average number of year of employed people (**AVGyear2**). It is assumed that ε_{it} are $IID(0, \sigma_\varepsilon^2)$; identically and independently distributed error terms.

Procedure starts with testing equation (9) for a four different options of grouping activities from National classification of activities 2002 already mentioned in table 2. The first challenging dilemma is recognizing is the process static or dynamic. The results of Durbin-Watson test for estimated static model (Fixed effect model, Random Effects model) under equation (9) indicate dynamic nature of our process and therefore we used dynamic model⁶. Thus we introduce modified equation which includes dynamic behavior of dependent variable. This dynamic dimension is characterized by the presence of lagged dependent variable among the regressors.

$$S_m CI_{it} = \alpha + \delta SCI_{i,t-1} + X_{it}^T \beta + \delta Share_Urban_primacy_{it-1} + e_{it} \dots (10)$$

That renders the OLS estimator biased and inconsistent even if ε_{it} are not correlated. As a result, a new method for estimation was introduced by Arellano and Bond (1991). In the paper two step Arellano and Bond GMM estimator is used because one step estimation assumes the error terms to be independent and homoskedastic across counties and over time. Two step estimator relaxes the assumption of independence and homoscedasticity

⁴ Before starting we will indicate that support for the assumption that it is possible to use share of urban population in each county as proxy for level of economic mass is documented for Croatia in paper written by Nejašmić (2000.)

⁵ Education beyond the secondary level

⁶ The omitted results are available by request

by using the residuals obtained from the first step estimation to construct a consistent estimate of the variance-covariance matrix. Thus, when the error term ε_{it} is heteroskedastic the two step estimator is more efficient (Cole, Moshirian and Wu, 2008).

Before introducing results of two step Arellano-Bond dynamic panel estimator in the Table 3, it should be stressed that results indicate **empirical relevance of urban primacy** only for **SCI of non – market service sector**⁷ which could be interpreted as evidence for the main contribution of the paper, or more precisely, as a evidence for hypothesis that ***influence of agglomeration on sector composition index is different among different sectors.***

Thus, **Table 3** represents only coefficients for **sector composition index** of **non-market service sector**.

Table 3. The results of two step Arellano-Bond dynamic panel estimator

Variable	Option 1	Option 2	Option 3	Option 4
SCI_nms	0,644*** (0,022)	0,639*** (0,02)	0,644*** (0,022)	0,639*** (0,02)
avg_age	18,19*** (2,779)	17,725*** (2,873)	18,19*** (2,779)	17,725*** (2,873)
avg_age2	-0,238*** (0,035)	-0,231*** (0,037)	-0,238*** (0,035)	-0,231*** (0,037)
share_high_education	0,111*** (0,011)	0,063*** (0,014)	0,111*** (0,011)	0,063*** (0,014)
share_urban_primacy	0,129*** (0,049)	0,146*** (0,063)	0,129*** (0,049)	0,146*** (0,063)
cons	0,038 *** (0,008)	0,045*** (0,007)	0,038 *** (0,008)	0,045*** (0,007)
Number of observations	126	126	126	126
Number of individuals	21	21	21	21
Sargan test (p-value)	0,455	0,471	0,455	0,471
m1-test (p-value)	0,02**	0,012**	0,02**	0,012**
m2-test (p-value)	0,289	0,261	0,289	0,261
*, **, ***- indicate significance at 10%, 5% and 1% level				
the number in brackets are standard errors				

Correlation coefficients

	share_high_education	avg_age	share_urban_primacy
share_high_education	1.000		
avg_age	0.6258	1.000	
share_urban_primacy	0.5823	0.3084	1.000

Source: Calculation by authors

⁷ The omitted results are available by request

It should be stressed that diagnostic tests (Sargan test and m_2 statistics) for estimated model in Table 3 are satisfying at 5 % confidence level and therefore proposed model is well specified. The correlation coefficients between each of the variables are reported in the lower part of the Table 3. The highest coefficient of correlation is 0.6258 and it indicates that we should not expected high risk of multicollinearity problem between variables of our interest.

The coefficients on control variables are all statistical significant and have expected sign in all four options. The results on main variable ***confirm empirical relevance of our measure of agglomeration (Share_Urban_Primary)*** in explaining SCI differences on significance level of 5%.

It should be stressed that the magnitude of coefficients should be carefully observed taking into consideration empirical limitation of procurable data. Hence we concentrate on the sign of coefficients rather than on coefficients magnitude. Thus sign of coefficient of the urban primacy variable implies significant evidence for positive relationship between sector composition index and agglomeration economies in Croatia.

So, taking into consideration that sources of agglomeration might be **economy-wide, location-specific or sector-specific** (Bottazzi et. al., 2008) the **confirmation that the relation between SCI and urban primacy holds only for non-market services** indicates **sector – specific dimension of the agglomeration economy in less developed country such as Croatia.**

What is possible theoretical background for confirmed sector-specific dimension of agglomeration economy?

Starting point for looking the answer could be argument that reasons for entry firms and construction of sector composition index are similar. Therefore it is possible to use literature that tries to explain the regional differences in entry rates as a foundation for sector composition index explanation.

The literature usually identifies three major categories of factors influencing spatial differences: *local demand factors*, *the supply of founders* and *the policy environment* (Keeble et al. 1993; Johnson and Parker 1996).

The local demand factors reflect the market potential for the new firms. Are there sufficiently many potential customers in the region and can they afford to buy the good or service supplied by the entrants? *The supply of founders* perspective focuses on who the individuals starting new firms are. What other opportunities than to start a new firm, do they have and what knowledge do the individuals in particular regions possess? *The policy environment* reflects, for example, what kind of support from local authorities, in terms of financial support and knowledge support, is available to an individual that is planning to start a new firm. Also it includes not only the measures for private subjects, but also location composition of public administration. All abovementioned factors consider agglomeration as a factor influencing a firm's decision to locate in or exit from a particular region and therefore main mark for possible theoretical explanation for confirmed sector-specific dimension of agglomeration economy.

The results of our paper, empirical relevance of urban primacy only for SCI of non – market service sector, emphasize primarily **the role of policy environment**, especially public sector as a key component of non-market service sector. Regarding that main contribution of the paper is **empirical confirmation of sector – specific dimension of the agglomeration economy in less developed country such as Croatia**, full theoretical explanation could and should be main object of the another study.

In the end, it should be stressed importance of the result for further examination of wage-inequalities and agglomeration. Firstly, it may help to clarify whether, below the persistence of interregional inequalities in aggregate productivity per worker, there has been a convergence in composition sector by sector. Secondly, a critical role for the sector composition would cast doubts on the relevance of the aggregative one-sector growth models in explaining the regional differences. Finally, the results validate the appropriateness of the regional policy not only in Croatia but also in other countries with experience of transition, essentially based on instruments geared to generate uniform productivity increases in backward regions (infrastructure and human capital).

5. Conclusion

Growing disparities in wages are source of considerable policy concern. Therefore the paper tries to explore these inequalities by using shift – share analysis.

Shift – share analysis presents mechanical decomposition of wages on occupational composition effect and productivity effect. It is widely accepted that spatial effects have a different impact among sectors in developed countries. On the other hand, less developed countries have different economic path. Thus, it is reasonable to test the influence of spatial effects among sectors for a less developed country such as Croatia.

Focus of the paper encompasses influence of economic mass for occupational composition for four different sectors (agriculture, manufacturing, market services, non-market services). For this purpose it has been established new index, sector composition index, by aggregating similar activities from National classification of activities 2002.

The analysis of importance of the economic mass for sector composition index has been estimated by two step Arellano-Bond dynamic panel-data estimator and confirmed only for non-market service sector. In other words, the results indicate empirical relevance of urban primacy only for sector composition index of non – market service sector which could be interpreted as evidence for hypothesis that influence of economic mass on sector composition index is different among different sectors.

Taking into consideration that source of agglomeration might be economy-wide, location-specific or sector-specific the empirical confirmation of the relation between sector composition index and urban primacy only for no-market service sector indicates sector – specific dimension of the agglomeration economy in less developed country such as Croatia.

These findings should have significant effect on regional policy and therefore in next period research could be focused on recognizing and theoretical modeling relation between economic mass and sector composition appreciating possible different factors in developed countries and in less developed countries.

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Count y	year	Empl_ total	EMPL Man_3	EMPL MS_3	EMPL NMS_3	AVG_ WAGE TOT	AVG_ WAGE MAN_3	AVG_ WAGE MS_3	AVG_ WAGE NMS_3
1	00	23396	12199	6174	5023	2975	2539	2855	3877
1	07	25911	12533	6506	6872	4107	3579	3965	4976
2	00	24172	11267	6245	6660	3047	2414	2905	4010
2	07	28802	13523	7217	8062	4161	3507	3895	5156
3	00	26890	5679	14524	6687	3179	2686	2903	3896
3	07	32018	6958	15853	9207	4690	3987	4607	5150
4	00	284026	91514	118299	74213	3711	3360	3618	4113
4	07	358457	92417	167258	98782	5691	5387	5764	5740
5	00	54376	20311	22237	11828	3154	2963	2923	3859
5	07	65487	22334	27763	15390	4791	4745	4545	5145
6	00	26006	12993	6844	6169	3099	2704	2931	3943
6	07	31631	12831	8174	10626	4484	4072	4083	5121
7	00	25046	15011	5742	4293	3023	2840	2852	3725
7	07	27427	15038	6511	5878	4374	4305	3813	4939
8	00	25155	13203	5879	6073	2910	2375	2816	3924
8	07	27627	13819	6444	7364	4086	3583	3843	5084
9	00	8331	3141	2714	2476	3092	2877	2539	3861
9	07	10000	3277	2870	3853	4461	4136	3800	5000
10	00	26189	15090	7053	4046	2741	2353	2695	3748
10	07	30568	17248	7881	5439	3807	3429	3687	4902
11	00	66939	29728	21375	15836	3032	2642	2777	3877
11	07	77922	30996	24551	22375	4309	3813	4102	5057
12	00	14993	8386	2812	3795	3037	2293	2900	4121
12	07	16105	7494	3550	5061	4088	3431	3688	5217
13	00	81784	26768	36840	18176	3301	3237	3022	3782
13	07	95403	29583	42956	22864	4823	4622	4554	5354
14	00	34634	19083	8141	7410	3301	3039	3123	3948
14	07	38180	18083	8430	11667	4541	4382	4065	4978
15	00	89732	28941	38101	22690	3267	2988	2980	3803
15	07	110882	33740	46190	30952	4656	4477	4257	5256
16	00	18873	6026	7336	5511	3282	2904	2911	4004
16	07	23246	6538	7927	8781	4474	4173	3932	5094

17	00	41295	22505	10317	8473	2888	2357	3046	3911
17	07	51185	27129	13218	10838	3986	3407	4153	5085
18	00	16031	9418	3373	3240	2932	2580	2689	3915
18	07	16594	7646	4298	4650	3986	3550	3537	4990
19	00	25417	11200	6867	7350	3182	2753	2865	3918
19	07	33176	12708	8813	10655	4203	3755	3602	4884
20	00	26615	8674	10139	7802	3236	2696	2959	3969
20	07	34126	8949	13460	11717	4659	4172	4320	5213
21	00	43333	20716	15163	7454	3018	2756	3018	3645
21	07	60908	26762	22371	11775	4583	4336	4645	4898
	00	983233	391853	356175	235205	3291	2890	3164	3946
	07	119565	419606	452241	323808	4817	4336	4730	5311

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Table 2.

county	Ye ar	avg_ wage perh_ tot	avg_ wage perh_ man_3	avg_ wage perh_ ms_3	avg_ wage perh_ nms_3	avg_ age_ emp_ total	share_ _urban	share_ urban_ primacy	share_ high_ educ
1	00	17.04	14.38	10.58	22.65	39.60	0.00	0.00	16.16
1	07	23.83	20.50	16.52	29.54	40.09	63.71	32.42	18.11
2	00	17.19	13.57	10.36	22.53	39.99	0.00	0.00	21.02
2	07	23.93	19.91	16.66	30.04	40.48	45.48	36.63	20.57
3	00	17.98	14.94	11.07	22.83	40.87	0.00	0.00	22.48
3	07	26.99	22.85	18.46	30.09	41.00	63.58	34.98	24.63
4	00	21.12	19.17	15.92	23.65	39.45	0.00	0.00	27.99
4	07	32.81	30.72	27.74	33.38	39.73	100	100	31.90
5	00	17.61	16.24	13.75	22.65	39.57	0.00	0.00	20.46
5	07	27.64	27.00	22.92	30.20	40.36	69.51	27.59	21.95
6	00	17.68	15.28	10.74	23.04	39.65	0.00	0.00	19.57
6	07	25.88	22.96	17.76	30.56	40.23	71.79	42.73	21.15
7	00	17.33	16.31	10.63	21.22	38.22	0.00	0.00	16.66
7	07	25.50	24.98	16.50	29.41	39.68	51.87	25.89	20.64
8	00	16.73	13.68	11.55	21.86	37.55	0.00	0.00	15.84
8	07	23.56	20.39	17.15	29.97	39.11	36.73	9.37	17.71
9	00	17.88	16.53	9.70	22.28	39.14	0.00	0.00	18.55
9	07	25.78	23.61	16.73	29.25	39.83	65.73	24.01	21.47
10	00	15.46	13.13	12.03	21.62	37.53	0.00	0.00	14.39
10	07	21.97	19.60	18.17	28.82	38.57	35.52	23.19	16.01
11	00	17.19	14.85	11.17	22.41	39.54	0.00	0.00	20.11
11	07	24.68	21.53	19.03	29.44	40.39	62.91	34.54	21.62
12	00	17.29	13.12	11.93	23.63	38.89	0.00	0.00	17.20
12	07	23.39	19.45	15.32	30.24	40.14	74.12	33.12	19.95
13	00	18.56	18.07	11.25	22.07	40.33	0.00	0.00	22.66
13	07	27.57	25.87	19.75	31.52	41.14	75.89	44.73	24.80
14	00	18.54	16.88	10.18	22.48	39.13	0.00	0.00	16.81
14	07	25.96	24.56	16.34	29.33	40.26	69.49	28.09	18.75

15	00	18.48	16.70	12.62	22.03	40.38	0.00	0.00	24.87
15	07	27.18	25.21	20.30	31.26	40.63	75.42	38.12	26.27
16	00	18.21	16.24	10.92	22.19	40.65	0.00	0.00	21.45
16	07	25.65	23.48	17.21	29.70	40.93	76.19	42.21	22.30
17	00	16.45	13.46	11.39	22.49	37.80	0.00	0.00	16.29
17	07	22.87	19.31	18.92	29.52	38.90	54.99	26.33	16.57
18	00	16.62	14.60	10.02	22.26	38.92	0.00	0.00	15.38
18	07	23.11	20.50	16.25	29.27	40.37	47.42	24.86	18.81
19	00	18.04	15.54	8.60	22.16	40.12	0.00	0.00	20.15
19	07	24.33	21.37	14.72	28.97	40.38	49.52	18.29	20.46
20	00	18.30	15.08	12.11	22.93	41.03	0.00	0.00	23.41
20	07	26.82	23.27	20.26	30.59	40.59	60.51	43.21	25.39
21	00	17.30	15.89	12.58	21.44	38.45	0.00	0.00	17.29
21	07	26.46	24.82	20.60	28.63	39.26	68.78	20.07	18.58
	00	18.69	16.34	13.06	22.75	39.49	0.00	0.00	22.24
	07	27.84	24.58	21.87	31.08	40.07	69.70	0.00	24.64

Table 2. Grouping activities from National classification of activities 2002 into sectors

Activites two	I.option	II. Option	III. Option	IV. Option
Agriculture, hunting and forestry	Agriculture	Agriculture	Manufacturing	Manufacturing
Fishing				
Mining and quarrying	Manufacturing	Manufacturing		
Manufacturing				
Electricity, gas and water supply				
Construction				
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	Market services	Market services	Market services	Market services
Hotels and restaurants				
Transport, storage and communication				
Financial intermediation				

Real estate, renting and business activities					
Public administration and defence; compulsory social security	nonmarket service	nonmarket service	nonmarket service	nonmarket service	
Education					
Health and social work		Market services		Market services	
Other community, social and personal activities					
Private households with employed persons		nonmarket service		nonmarket service	
Extra-territorial organizations and bodies					

Source: Central Bureau of Statistics of Croatia and authors analysis

Annex tables.

Years 2000-2007

County	year	Empl_ total	EMPL_ Man_3	EMPL_ MS_3	EMPL_ NMS_3	AVG_ WAGE_ TOT	AVG_ WAGE_ MAN_3	AVG_ WAGE_ MS_3	AVG_ WAGE_ NMS_3
1	2000	23396	12199	6174	5023	2975	2539	2855	3877
1	2007	25911	12533	6506	6872	4107	3579	3965	4976
2	2000	24172	11267	6245	6660	3047	2414	2905	4010
2	2007	28802	13523	7217	8062	4161	3507	3895	5156
3	2000	26890	5679	14524	6687	3179	2686	2903	3896
3	2007	32018	6958	15853	9207	4690	3987	4607	5150
4	2000	284026	91514	118299	74213	3711	3360	3618	4113
4	2007	358457	92417	167258	98782	5691	5387	5764	5740
5	2000	54376	20311	22237	11828	3154	2963	2923	3859
5	2007	65487	22334	27763	15390	4791	4745	4545	5145
6	2000	26006	12993	6844	6169	3099	2704	2931	3943
6	2007	31631	12831	8174	10626	4484	4072	4083	5121
7	2000	25046	15011	5742	4293	3023	2840	2852	3725
7	2001	24424	14813	5301	4310	3225	3059	3036	3923
7	2007	27427	15038	6511	5878	4374	4305	3813	4939
8	2000	25155	13203	5879	6073	2910	2375	2816	3924
8	2001	24365	12517	5685	6163	2997	2558	2845	3931
8	2007	27627	13819	6444	7364	4086	3583	3843	5084
9	2000	8331	3141	2714	2476	3092	2877	2539	3861
9	2001	7823	2792	2601	2430	3297	3077	2850	3976
9	2007	10000	3277	2870	3853	4461	4136	3800	5000
10	2000	26189	15090	7053	4046	2741	2353	2695	3748
10	2007	30568	17248	7881	5439	3807	3429	3687	4902
11	2000	66939	29728	21375	15836	3032	2642	2777	3877

11	2007	77922	30996	24551	22375	4309	3813	4102	5057
12	2000	14993	8386	2812	3795	3037	2293	2900	4121
12	2007	16105	7494	3550	5061	4088	3431	3688	5217
13	2000	81784	26768	36840	18176	3301	3237	3022	3782
13	2007	95403	29583	42956	22864	4823	4622	4554	5354
14	2000	34634	19083	8141	7410	3301	3039	3123	3948
14	2007	38180	18083	8430	11667	4541	4382	4065	4978
15	2000	89732	28941	38101	22690	3267	2988	2980	3803
15	2007	110882	33740	46190	30952	4656	4477	4257	5256
16	2000	18873	6026	7336	5511	3282	2904	2911	4004
16	2007	23246	6538	7927	8781	4474	4173	3932	5094
17	2000	41295	22505	10317	8473	2888	2357	3046	3911
17	2007	51185	27129	13218	10838	3986	3407	4153	5085
18	2000	16031	9418	3373	3240	2932	2580	2689	3915
18	2007	16594	7646	4298	4650	3986	3550	3537	4990
19	2000	25417	11200	6867	7350	3182	2753	2865	3918
19	2007	33176	12708	8813	10655	4203	3755	3602	4884
20	2000	26615	8674	10139	7802	3236	2696	2959	3969
20	2007	34126	8949	13460	11717	4659	4172	4320	5213
21	2000	43333	20716	15163	7454	3018	2756	3018	3645
21	2007	60908	26762	22371	11775	4583	4336	4645	4898
22	2000	983233	391853	356175	235205	3291	2890	3164	3946
22	2007	1195655	419606	452241	323808	4817	4336	4730	5311

County	year	Empl_ total	EMPL_ Man 3	EMPL_ MS 3	EMPL_ NMS 3	AVG_ WAGE_ TOT	AVG_ WAGE_ MAN 3	AVG_ WAGE_ MS 3	AVG_ WAGE_ NMS 3
1	2000	23396	12199	6174	5023	2975	2539.91	2855.17	3877.28
1	2001	22798	11606	6125	5067	3117	2687.83	2987.82	3925.59
1	2002	22182	11478	5622	5082	3232	2804.80	3395.37	3915.64
1	2003	23045	12263	5608	5174	3460	3017.12	3309.89	4145.04
1	2004	24797	12246	5695	6856	3602	3120.87	3487.26	4380.91
1	2005	24332	11739	6026	6567	3754	3327.59	3584.55	4498.94
1	2006	24984	11999	6303	6682	3928	3424.83	3799.75	4746.36
1	2007	25911	12533	6506	6872	4107	3579.33	3965.34	4976.89
2	2000	24172	11267	6245	6660	3047	2414.47	2905.44	4010.75
2	2001	24479	11801	6095	6583	3158	2543.05	3064.82	4062.83
2	2002	24746	11885	6191	6670	3223	2593.19	3156.31	4064.66
2	2003	24501	11783	6155	6563	3564	2853.83	3394.10	4323.28
2	2004	27158	11853	6497	8808	3670	3086.98	3472.76	4504.53
2	2005	26152	11726	6633	7793	3826	3193.10	3703.73	4703.83
2	2006	27257	12365	6922	7970	3981	3284.18	3739.14	4962.44
2	2007	28802	13523	7217	8062	4161	3507.12	3895.83	5156.86
3	2000	26890	5679	14524	6687	3179	2686.04	2903.94	3896.82
3	2001	26809	5571	14545	6693	3429	2946.47	3194.37	3986.03

3	2002	26732	5811	14219	6702	3519	3106.50	3340.70	4028.12
3	2003	26112	5247	13999	6866	3789	3217.20	3610.57	4204.60
3	2004	28679	5695	14092	8892	4047	3411.32	3900.50	4453.37
3	2005	29266	6102	14403	8761	4246	3722.67	4152.58	4585.86
3	2006	30619	6515	15199	8905	4481	3843.40	4429.14	4851.80
3	2007	32018	6958	15853	9207	4690	3987.83	4607.62	5150.27
4	2000	284026	91514	118299	74213	3711	3360.87	3618.17	4113.15
4	2001	284547	88971	120713	74863	4011	3786.24	3958.74	4242.20
4	2002	287035	87311	123420	76304	4198	4000.96	4187.20	4358.54
4	2003	301389	89735	134368	77286	4539	4292.05	4570.21	4598.06
4	2004	322338	88168	142817	91353	4801	4527.55	4796.47	4949.84
4	2005	323089	86206	144022	92861	5059	4750.41	5078.88	5197.29
4	2006	339802	88501	155624	95677	5358	5005.41	5443.56	5417.42
4	2007	358457	92417	167258	98782	5691	5387.28	5764.03	5740.25
5	2000	54376	20311	22237	11828	3154	2963.52	2923.64	3859.08
5	2001	55302	20463	22723	12116	3533	3511.95	3291.29	3911.91
5	2002	56067	20498	23678	11891	3718	3672.83	3530.90	4053.99
5	2003	56120	20310	23544	12266	3984	3906.53	3758.95	4301.30
5	2004	59198	20307	24296	14595	4163	4120.95	3936.56	4523.74
5	2005	60283	21071	24529	14683	4399	4416.98	4150.27	4688.97
5	2006	62914	21807	26176	14931	4596	4619.14	4352.93	4848.51
5	2007	65487	22334	27763	15390	4791	4745.74	4545.27	5145.22
6	2000	26006	12993	6844	6169	3099	2704.56	2931.41	3943.42
6	2001	25590	12526	6874	6190	3265	2945.07	3118.05	3936.77
6	2002	26412	13329	6802	6281	3434	3227.09	3184.57	3988.85
6	2003	25439	12080	6947	6412	3679	3331.75	3374.61	4211.21
6	2004	28237	11697	7504	9036	3933	3585.81	3597.78	4470.20
6	2005	28856	11771	7222	9863	4125	3764.25	3827.37	4662.42
6	2006	30186	12376	7576	10234	4283	3918.79	3981.39	4845.71
6	2007	31631	12831	8174	10626	4484	4072.18	4083.62	5121.96
7	2000	25046	15011	5742	4293	3023	2840.24	2852.89	3725.74
7	2001	24424	14813	5301	4310	3225	3059.34	3036.71	3923.33
7	2002	24477	14665	5385	4427	3418	3277.64	3218.72	3944.97
7	2003	25242	14966	5733	4543	3702	3570.65	3348.67	4194.34
7	2004	26292	14323	6061	5908	3865	3734.05	3447.76	4402.90
7	2005	25792	14247	5896	5649	4038	3910.73	3679.10	4594.83
7	2006	26739	14828	6212	5699	4245	4179.87	3757.44	4721.15
7	2007	27427	15038	6511	5878	4374	4305.43	3813.45	4939.67
8	2000	25155	13203	5879	6073	2910	2375.89	2816.40	3924.54
8	2001	24365	12517	5685	6163	2997	2558.59	2845.58	3931.94
8	2002	24460	12647	5680	6133	3083	2649.39	2999.43	3915.19
8	2003	24568	12787	5628	6153	3402	2897.50	3238.55	4243.39
8	2004	25971	12734	5744	7493	3464	2957.94	3344.36	4388.25
8	2005	25531	12546	5848	7137	3632	3141.43	3463.31	4541.25
8	2006	26475	12826	6383	7266	3827	3363.37	3575.58	4718.44
8	2007	27627	13819	6444	7364	4086	3583.16	3843.94	5084.06
9	2000	8331	3141	2714	2476	3092	2877.27	2539.87	3861.12
9	2001	7823	2792	2601	2430	3297	3077.76	2850.14	3976.35
9	2002	7870	2788	2573	2509	3711	3603.47	2980.74	4181.01
9	2003	9794	4759	2564	2471	4110	4626.32	3108.67	4208.26
9	2004	11723	5103	2813	3807	3948	4223.81	3107.75	4421.21
9	2005	10177	3312	2734	4131	4007	3664.39	3413.07	4586.06

9	2006	9957	3128	2767	4062	4192	4009.72	3612.04	4712.60
9	2007	10000	3277	2870	3853	4461	4136.46	3800.28	5000.09
10	2000	26189	15090	7053	4046	2741	2353.68	2695.19	3748.80
10	2001	25088	14244	6808	4036	2821	2479.37	2722.65	3843.73
10	2002	26468	15025	7205	4238	2979	2625.62	2955.26	3885.30
10	2003	27189	15497	7303	4389	3221	2829.50	3073.82	4150.20
10	2004	28193	15409	7409	5375	3420	2981.39	3269.65	4453.79
10	2005	27458	15453	6926	5079	3463	3076.93	3387.83	4487.92
10	2006	28944	16070	7462	5412	3661	3320.29	3581.07	4604.57
10	2007	30568	17248	7881	5439	3807	3429.37	3687.98	4902.26
11	2000	66939	29728	21375	15836	3032	2642.58	2777.25	3877.77
11	2001	65778	28890	21198	15690	3198	2819.48	2932.69	4054.72
11	2002	65741	28443	21336	15962	3299	3031.85	3080.10	3901.20
11	2003	66209	28201	21675	16333	3540	3072.55	3280.97	4184.05
11	2004	71583	27666	22522	21395	3674	3205.75	3464.77	4360.59
11	2005	71612	27974	22639	20999	3881	3371.09	3707.18	4543.62
11	2006	75108	29418	23186	22504	4034	3572.11	3855.34	4703.87
11	2007	77922	30996	24551	22375	4309	3813.55	4102.19	5057.24
12	2000	14993	8386	2812	3795	3037	2293.47	2900.98	4121.88
12	2001	14841	7928	3096	3817	3128	2596.84	3164.64	4134.46
12	2002	14841	7979	3106	3756	3265	2762.36	3213.25	4275.45
12	2003	15050	8027	3159	3864	3488	2879.73	3297.11	4334.81
12	2004	17038	8180	3383	5475	3615	2971.47	3344.39	4521.99
12	2005	16998	7777	3389	5832	3719	3056.67	3454.96	4847.06
12	2006	16054	7662	3354	5038	3901	3290.25	3525.89	4928.69
12	2007	16105	7494	3550	5061	4088	3431.82	3688.92	5217.92
13	2000	81784	26768	36840	18176	3301	3237.57	3022.29	3782.79
13	2001	81899	26837	36530	18532	3564	3512.64	3333.24	3956.09
13	2002	82495	26730	37169	18596	3725	3664.42	3516.03	4118.41
13	2003	84019	26965	38110	18944	3993	3828.67	3782.35	4422.98
13	2004	88543	27480	38979	22084	4182	3973.51	3954.70	4707.02
13	2005	89273	27700	39400	22173	4414	4260.68	4150.51	4894.32
13	2006	91718	28595	40704	22419	4591	4470.96	4308.12	5067.00
13	2007	95403	29583	42956	22864	4823	4622.67	4554.52	5354.64
14	2000	34634	19083	8141	7410	3301	3039.22	3123.18	3948.41
14	2001	32658	17486	7738	7434	3378	3113.42	3195.39	4034.97
14	2002	32098	16797	7556	7745	3518	3331.64	3285.40	4001.08
14	2003	32190	16712	7478	8000	3757	3573.22	3372.20	4173.19
14	2004	35330	16699	8118	10513	3881	3655.66	3507.05	4368.73
14	2005	35509	16327	7888	11294	4088	3880.27	3670.11	4601.12
14	2006	36454	16651	8349	11454	4345	4199.62	3877.58	4734.55
14	2007	38180	18083	8430	11667	4541	4382.86	4065.72	4978.70
15	2000	89732	28941	38101	22690	3267	2988.05	2980.52	3803.67
15	2001	89439	29676	36831	22932	3491	3290.82	3220.21	3952.86
15	2002	89923	30275	36631	23017	3549	3408.31	3332.76	3961.00
15	2003	94753	32415	38726	23612	3830	3610.74	3561.75	4225.32
15	2004	104732	33395	40642	30695	3997	3773.85	3664.87	4571.58
15	2005	105078	34072	41167	29839	4197	4001.42	3851.18	4760.82
15	2006	108049	34062	43536	30451	4394	4245.04	4036.19	4920.00
15	2007	110882	33740	46190	30952	4656	4477.58	4257.42	5256.36
16	2000	18873	6026	7336	5511	3282	2904.19	2911.30	4004.05

16	2001	18248	5719	7109	5420	3314	3025.65	2971.46	3945.39
16	2002	18408	6227	6681	5500	3554	3314.99	3163.26	4129.78
16	2003	18468	6162	6676	5630	3761	3349.23	3305.31	4286.74
16	2004	20317	6049	7033	7235	3907	3609.88	3438.89	4489.01
16	2005	20788	6297	7315	7176	4047	3744.32	3607.08	4583.18
16	2006	22820	6590	7641	8589	4234	3974.58	3759.49	4774.35
16	2007	23246	6538	7927	8781	4474	4173.53	3932.77	5094.91
17	2000	41295	22505	10317	8473	2888	2357.82	3046.99	3911.14
17	2001	42052	23008	10505	8539	3014	2541.12	3129.53	3985.17
17	2002	43208	23873	10601	8734	3105	2639.51	3360.70	4032.03
17	2003	44927	24890	11221	8816	3348	2796.30	3556.61	4291.37
17	2004	46566	24386	11731	10449	3503	2976.44	3632.87	4452.48
17	2005	47076	24286	12019	10771	3675	3128.48	3817.33	4656.86
17	2006	48870	25320	12652	10898	3835	3281.50	3988.27	4803.61
17	2007	51185	27129	13218	10838	3986	3407.70	4153.94	5085.67
18	2000	16031	9418	3373	3240	2932	2580.08	2689.07	3915.57
18	2001	15744	9087	3413	3244	3019	2622.90	2807.80	4202.14
18	2002	15294	8398	3550	3346	3136	2788.35	3012.81	4006.79
18	2003	14568	7599	3560	3409	3459	3065.86	3023.11	4236.20
18	2004	15744	7358	3607	4779	3531	3101.46	3161.51	4495.96
18	2005	15303	7335	3526	4442	3639	3165.67	3307.70	4630.24
18	2006	15637	7152	3949	4536	3843	3412.82	3435.77	4733.62
18	2007	16594	7646	4298	4650	3986	3550.16	3537.37	4990.18
19	2000	25417	11200	6867	7350	3182	2753.44	2865.50	3918.34
19	2001	24869	10760	6736	7373	3245	2746.72	2976.31	4041.73
19	2002	25292	10787	6863	7642	3403	2976.12	3137.27	4078.61
19	2003	25617	10945	7061	7611	3633	3153.92	3189.33	4174.53
19	2004	29428	11152	7353	10923	3755	3257.41	3299.16	4443.09
19	2005	29599	11215	7629	10755	3892	3428.62	3453.58	4555.78
19	2006	31025	11866	8180	10979	4006	3589.79	3482.41	4686.17
19	2007	33176	12708	8813	10655	4203	3755.54	3602.32	4884.37
20	2000	26615	8674	10139	7802	3236	2696.17	2959.62	3969.91
20	2001	26348	8175	10379	7794	3461	3038.95	3206.20	3990.56
20	2002	25895	7682	10195	8018	3628	3227.43	3450.19	4099.71
20	2003	26626	7944	10451	8231	3960	3505.35	3647.15	4362.09
20	2004	30610	7941	10962	11707	4133	3688.19	3836.05	4542.25
20	2005	32034	7964	11179	12891	4327	3890.10	4074.60	4772.88
20	2006	32250	8496	12199	11555	4423	3928.00	4138.27	4981.61
20	2007	34126	8949	13460	11717	4659	4172.22	4320.28	5213.95
21	2000	43333	20716	15163	7454	3018	2756.91	3018.35	3645.52
21	2001	43249	20744	15092	7413	3261	2948.52	3302.55	3758.13
21	2002	44092	20960	15487	7645	3454	3169.42	3493.77	3834.27
21	2003	46428	21620	16747	8061	3769	3490.95	3825.32	4060.96
21	2004	53166	24530	17962	10674	3982	3649.99	3987.09	4393.18
21	2005	55291	24521	18853	11917	4194	3904.57	4275.41	4511.95
21	2006	58604	26345	20597	11662	4368	4108.42	4458.11	4639.35
21	2007	60908	26762	22371	11775	4583	4336.60	4645.48	4898.23
	2000	983233	391853	356175	235205	3291	2890.36	3164.38	3946.97
	2001	976350	383614	356097	236639	3506	3143.98	3425.28	4055.74
	2002	983736	383588	359950	240198	3659	3326.69	3624.26	4118.53
	2003	1012254	390907	376713	244634	3949	3554.98	3903.56	4352.35
	2004	1095643	392371	395220	308052	4143	3713.84	4085.33	4625.83

	2005	1099497	389641	399243	310613	4352	3907.24	4326.61	4823.24
	2006	1144466	402572	424971	316923	4569	4123.39	4565.71	5008.30
	2007	1195655	419606	452241	323808	4817	4336.50	4730.34	5311.36

Table 2.

County	year	AVG_WAGE perH_TOT	AVG_WAGE perH_MANS	AVG_WAGE perH_MANS	AVG_WAGE perH_NMANS	AVG_AGE EMP_TOT	SHARE_URBAN	SHARE_URBAN PRIMACY	SHARE_HIGH EDUC
1	2000	17.040	14.3853	10.5827	22.6537	39.60	0.00	0.00	16.16
1	2001	17.974	15.2786	11.9605	22.9497	39.57	62.59	31.51	16.60
1	2002	18.772	16.0660	13.1678	23.0375	39.65	62.69	31.60	17.34
1	2003	20.087	17.2546	13.7974	24.8084	39.61	62.87	31.72	17.71
1	2004	20.661	17.6004	14.7451	25.8418	39.35	62.96	31.85	17.31
1	2005	21.878	19.1037	15.2497	26.9119	39.75	63.08	32.00	17.93
1	2006	22.859	19.7332	16.0361	28.1025	39.81	63.26	32.21	18.04
1	2007	23.831	20.5058	16.5279	29.5439	40.09	63.71	32.42	18.11
2	2000	17.190	13.5739	10.3634	22.5386	39.99	0.00	0.00	21.02
2	2001	17.968	14.3598	11.3200	23.2152	40.37	45.49	36.54	21.07
2	2002	18.417	14.7789	11.7280	23.2115	40.57	45.42	36.49	20.96
2	2003	20.473	16.0802	12.6917	25.0724	40.53	45.43	36.49	21.26
2	2004	20.921	17.4939	13.3052	25.8946	39.98	45.54	36.58	20.54
2	2005	21.946	18.2295	14.1429	27.0108	40.54	45.58	36.60	21.13
2	2006	22.934	18.8149	15.6817	28.5884	40.42	45.51	36.58	21.71
2	2007	23.936	19.9149	16.6628	30.0426	40.48	45.48	36.63	20.57
3	2000	17.985	14.9447	11.0739	22.8325	40.87	0.00	0.00	22.48
3	2001	19.372	16.6460	12.5534	22.8391	41.07	64.26	35.55	23.06
3	2002	20.301	17.5868	13.4092	23.6844	41.21	64.08	35.39	23.28
3	2003	21.817	18.3912	14.2948	24.7956	41.31	63.99	35.28	24.18
3	2004	23.303	19.5411	15.6168	26.0262	41.02	64.04	35.26	23.93
3	2005	24.507	21.2183	16.7285	26.9318	41.26	63.90	35.15	24.00
3	2006	25.839	22.0482	17.6761	28.5974	41.13	63.81	35.04	24.54

3	200 7	26.992	22.8579	18.4684	30.0964	41.00	63.58	34.98	24.63
4	200 0	21.125	19.1710	15.9295	23.6547	39.45	0.00	0.00	27.99
4	200 1	22.920	21.5387	17.6777	24.2190	39.63	100	100	29.18
4	200 2	24.172	22.9431	19.0817	25.0508	39.70	100	100	29.69
4	200 3	26.098	24.4472	20.6196	26.6608	39.62	100	100	29.98
4	200 4	27.512	25.7058	22.0545	28.5358	39.56	100	100	30.28
4	200 5	29.228	27.1946	23.7965	30.2099	39.78	100	100	31.33
4	200 6	30.926	28.6288	25.7963	31.5311	39.72	100	100	31.50
4	200 7	32.816	30.7274	27.7471	33.3832	39.73	100	100	31.90
5	200 0	17.611	16.2459	13.7509	22.6573	39.57	0.00	0.00	20.46
5	200 1	19.932	19.4556	15.8842	22.7703	39.89	70.61	28.36	20.67
5	200 2	21.205	20.6652	17.2085	23.7158	39.80	70.44	28.24	20.68
5	200 3	22.604	22.0436	18.0897	25.3013	39.99	70.18	28.09	24.72
5	200 4	23.687	23.1513	19.2957	26.4646	39.99	70.08	27.96	21.23
5	200 5	25.137	24.7101	20.6691	27.5548	40.11	69.97	27.83	21.43
5	200 6	26.464	26.1697	21.7957	28.6536	40.31	69.84	27.74	21.81
5	200 7	27.640	27.0081	22.9248	30.2017	40.36	69.51	27.59	21.95
6	200 0	17.683	15.2862	10.7423	23.0489	39.65	0.00	0.00	19.57
6	200 1	18.568	16.5813	11.6036	22.9740	39.87	71.06	41.96	20.07
6	200 2	19.539	18.0627	12.3337	23.3509	39.68	71.23	42.11	19.47
6	200 3	21.225	18.7835	13.4990	25.1168	40.06	71.44	42.29	20.84
6	200 4	22.549	20.2192	15.0046	26.2848	39.96	71.50	42.40	20.15
6	200 5	23.855	21.2914	16.0241	27.8708	40.20	71.55	42.51	20.49
6	200 6	24.901	22.1585	17.0444	29.3252	40.31	71.66	42.54	20.91
6	200 7	25.881	22.9631	17.7632	30.5620	40.23	71.79	42.73	21.15
7	200 0	17.332	16.3127	10.6380	21.2253	38.22	0.00	0.00	16.66
7	200 1	18.722	17.9457	11.4982	22.2436	38.46	49.99	24.92	17.73
7	200 2	19.550	18.6060	12.6377	22.7746	38.87	50.19	25.06	18.13
7	200 3	21.265	20.2817	13.2863	24.4619	39.08	50.38	25.20	18.46
7	200 4	22.405	21.7270	14.2137	25.2909	39.01	50.71	25.38	19.39

7	200 5	23.454	22.7024	14.9251	26.7136	39.61	50.95	25.52	20.03
7	200 6	24.764	24.2721	15.4749	27.9099	39.69	51.19	25.74	20.15
7	200 7	25.504	24.9888	16.5066	29.4128	39.68	51.87	25.89	20.64
8	200 0	16.732	13.6847	11.5585	21.8680	37.55	0.00	0.00	15.84
8	200 1	17.207	14.5120	11.5174	23.2276	37.89	36.14	9.10	16.16
8	200 2	17.941	15.3449	12.5070	23.2778	38.12	36.26	9.15	16.07
8	200 3	19.712	16.5046	13.2307	25.2308	38.49	36.38	9.19	16.44
8	200 4	19.994	16.9686	14.3229	25.7294	38.36	36.47	9.22	16.90
8	200 5	21.055	17.9872	15.5131	26.7435	38.81	36.52	9.23	17.38
8	200 6	22.132	19.2402	16.2150	27.7337	39.15	36.58	9.28	17.74
8	200 7	23.561	20.3903	17.1517	29.9796	39.11	36.73	9.37	17.71
9	200 0	17.881	16.5368	9.7087	22.2849	39.14	0.00	0.00	18.55
9	200 1	19.048	17.6203	11.6402	23.5408	39.65	64.98	24.19	20.11
9	200 2	20.858	20.0355	12.4296	24.6145	39.89	65.28	24.28	20.14
9	200 3	22.459	22.8719	13.1945	25.2978	38.92	65.30	24.26	16.90
9	200 4	21.994	22.0495	13.3548	25.6354	38.80	65.49	24.24	16.09
9	200 5	23.364	21.2678	15.1706	26.8778	39.29	65.64	24.20	19.24
9	200 6	24.278	22.9643	15.9214	27.4299	39.70	65.70	24.08	20.42
9	200 7	25.786	23.6141	16.7356	29.2516	39.83	65.73	24.01	21.47
10	200 0	15.464	13.1356	12.0323	21.6296	37.53	0.00	0.00	14.39
10	200 1	16.150	14.1006	12.7111	22.3253	37.88	35.42	23.24	15.12
10	200 2	17.137	14.9639	13.8199	22.7227	37.68	35.44	23.27	14.53
10	200 3	18.681	16.1974	14.7063	24.9226	38.06	35.52	23.33	14.75
10	200 4	19.787	17.1453	15.8622	26.1066	37.90	35.56	23.34	15.54
10	200 5	20.007	17.5824	16.8955	26.4608	38.82	35.57	23.32	17.09
10	200 6	21.161	18.9710	17.6892	27.2914	38.51	35.51	23.25	16.39
10	200 7	21.974	19.6003	18.1747	28.8251	38.57	35.52	23.19	16.01
11	200 0	17.194	14.8542	11.1718	22.4180	39.54	0.00	0.00	20.11
11	200 1	18.335	15.9908	12.3113	23.5522	39.83	62.78	34.70	20.43

11	200 2	19.014	17.1735	13.1045	23.2349	40.09	62.74	34.66	21.01
11	200 3	20.541	17.4129	14.2718	25.1640	40.18	62.79	34.67	21.28
11	200 4	21.206	18.0499	15.3789	26.0341	39.99	62.80	34.66	20.94
11	200 5	22.433	19.1823	16.8218	26.7286	40.26	62.83	34.65	21.54
11	200 6	23.317	20.3619	17.7732	27.7271	40.31	62.82	34.61	21.57
11	200 7	24.681	21.5362	19.0327	29.4454	40.39	62.91	34.54	21.62
12	200 0	17.296	13.1266	11.9367	23.6309	38.89	0.00	0.00	17.20
12	200 1	17.899	14.7713	12.7774	24.0883	39.13	74.66	32.85	17.65
12	200 2	18.800	15.7952	13.3768	24.8925	39.24	74.49	32.85	18.00
12	200 3	20.348	16.5215	13.7518	25.9935	39.49	74.51	32.94	18.55
12	200 4	20.746	16.7230	13.9241	26.5128	39.16	74.53	32.98	17.98
12	200 5	21.435	17.3838	14.4572	28.5467	39.51	74.40	32.96	17.96
12	200 6	22.419	18.6314	14.6347	28.9031	39.78	74.33	33.01	19.52
12	200 7	23.393	19.4593	15.3294	30.2434	40.14	74.12	33.12	19.95
13	200 0	18.562	18.0730	11.2541	22.0784	40.33	0.00	0.00	22.66
13	200 1	20.145	19.5705	12.8728	22.8965	40.43	77.78	47.14	23.04
13	200 2	21.154	20.4796	13.8210	24.0627	40.67	77.44	46.77	23.32
13	200 3	22.623	21.4416	15.0169	25.2909	40.84	77.16	46.42	23.50
13	200 4	23.593	21.9704	16.0980	27.1106	40.81	76.81	45.89	23.58
13	200 5	25.246	23.7597	17.2333	28.8829	40.97	76.48	45.36	24.19
13	200 6	26.271	24.9528	18.1363	29.9996	41.14	76.10	44.88	24.66
13	200 7	27.573	25.8718	19.7579	31.5202	41.14	75.89	44.73	24.80
14	200 0	18.544	16.8876	10.1896	22.4808	39.13	0.00	0.00	16.81
14	200 1	19.138	17.3826	10.7221	23.2848	40.16	68.66	28.20	18.00
14	200 2	20.160	18.9037	11.0457	23.1629	40.40	68.79	28.22	18.65
14	200 3	21.561	20.1356	11.8433	24.5941	40.62	68.93	28.23	18.68
14	200 4	22.072	20.3716	13.2914	25.4358	40.27	69.08	28.25	18.56
14	200 5	23.505	21.7627	14.2784	27.4787	40.47	69.25	28.27	18.88
14	200 6	24.923	23.6788	15.2300	28.0849	40.49	69.31	28.14	18.91
14	200 7	25.960	24.5663	16.3428	29.3342	40.26	69.49	28.09	18.75

15	200 0	18.483	16.7056	12.6236	22.0361	40.38	0.00	0.00	24.87
15	200 1	19.788	18.2897	13.6480	23.0414	40.56	76.38	40.58	25.56
15	200 2	20.231	19.0846	14.2483	23.2063	40.60	76.07	40.20	25.61
15	200 3	22.043	20.2230	15.7207	25.1066	40.45	75.91	39.90	25.45
15	200 4	22.764	20.8830	16.2160	26.8722	40.28	75.85	39.43	24.88
15	200 5	24.063	22.2949	17.1992	28.2195	40.60	75.72	38.93	25.41
15	200 6	25.301	23.7871	18.3651	29.1374	40.64	75.60	38.44	25.75
15	200 7	27.188	25.2165	20.3021	31.2626	40.63	75.42	38.12	26.27
16	200 0	18.216	16.2464	10.9206	22.1947	40.65	0.00	0.00	21.45
16	200 1	18.539	16.9347	11.3359	22.2473	41.34	76.50	43.64	22.70
16	200 2	20.088	18.6348	12.0328	23.0503	41.28	76.29	43.40	22.19
16	200 3	21.389	18.7974	13.2387	24.3618	41.32	76.05	43.15	22.21
16	200 4	22.083	20.5182	14.1932	25.2530	40.96	76.14	42.95	21.90
16	200 5	23.643	21.9484	15.2449	26.7243	41.10	76.09	42.67	22.19
16	200 6	24.521	22.5082	16.1326	28.2692	40.81	76.10	42.40	21.52
16	200 7	25.651	23.4810	17.2168	29.7003	40.93	76.19	42.21	22.30
17	200 0	16.455	13.4658	11.3917	22.4972	37.80	0.00	0.00	16.29
17	200 1	17.388	14.6898	12.3624	23.0239	37.98	55.09	26.58	16.44
17	200 2	17.734	14.9800	13.7990	23.2279	38.06	55.03	26.55	16.29
17	200 3	19.195	15.8579	15.0128	24.8496	38.15	55.03	26.56	16.22
17	200 4	19.941	16.7644	15.6771	25.6723	38.36	55.06	26.50	16.68
17	200 5	21.181	17.9179	16.6880	27.0989	38.48	55.00	26.40	16.54
17	200 6	22.061	18.7115	17.7065	27.8999	38.65	54.93	26.38	16.76
17	200 7	22.875	19.3187	18.9229	29.5263	38.90	54.99	26.33	16.57
18	200 0	16.627	14.6062	10.0280	22.2604	38.92	0.00	0.00	15.38
18	200 1	17.226	14.8438	11.2369	24.2446	39.28	46.34	24.25	15.82
18	200 2	18.109	15.8458	12.0131	23.4268	39.92	46.48	24.31	16.49
18	200 3	20.120	17.3186	12.7535	25.4706	40.30	46.59	24.35	17.67
18	200 4	20.351	17.7006	13.3041	26.4382	39.87	46.85	24.57	17.38

18	2005	21.116	18.2832	14.1046	27.1575	40.46	46.85	24.64	18.42
18	2006	22.495	20.1676	15.3208	27.4383	40.34	47.01	24.75	19.01
18	2007	23.118	20.5056	16.2569	29.2751	40.37	47.42	24.86	18.81
19	2000	18.045	15.5405	8.6003	22.1609	40.12	0.00	0.00	20.15
19	2001	18.730	15.8010	9.1389	23.5095	40.27	48.86	17.53	20.85
19	2002	19.680	16.9593	10.3561	23.7682	40.41	48.92	17.68	21.29
19	2003	21.235	18.2083	10.9160	24.6674	40.53	48.99	17.83	21.56
19	2004	21.736	18.5333	12.1789	26.2131	40.16	49.09	17.97	20.43
19	2005	22.606	19.6521	12.8894	26.9576	40.49	49.13	18.10	20.87
19	2006	23.347	20.6284	13.4629	27.7699	40.47	49.26	18.17	20.66
19	2007	24.330	21.3742	14.7252	28.9727	40.38	49.52	18.29	20.46
20	2000	18.308	15.0879	12.1174	22.9341	41.03	0.00	0.00	23.41
20	2001	19.627	17.1404	13.3196	22.9164	41.06	61.59	44.74	24.09
20	2002	20.870	18.3872	14.2052	24.1868	40.87	61.25	44.45	24.85
20	2003	23.023	20.1740	15.7066	26.0363	40.84	60.88	44.15	25.06
20	2004	23.982	20.6746	17.2372	26.8321	40.31	60.98	44.02	24.15
20	2005	24.975	21.7749	18.1154	28.2555	40.36	60.78	43.67	23.94
20	2006	25.591	22.1523	18.9806	29.4628	40.55	60.65	43.38	25.50
20	2007	26.827	23.2733	20.2664	30.5990	40.59	60.51	43.21	25.39
21	2000	17.303	15.8908	12.5892	21.4433	38.45	0.00	0.00	17.29
21	2001	18.678	16.7604	14.1397	22.0478	38.77	69.26	20.46	18.35
21	2002	20.042	18.2287	15.6572	22.6758	38.75	69.05	20.41	18.33
21	2003	21.966	20.1023	16.7856	24.2176	38.77	68.69	20.31	18.32
21	2004	22.973	20.8378	17.3696	25.8622	39.00	68.69	20.26	18.24
21	2005	24.419	22.5303	18.5418	26.7547	39.31	68.72	20.22	18.29
21	2006	25.297	23.6142	19.3392	27.2062	39.32	68.68	20.12	18.27
21	2007	26.465	24.8247	20.6011	28.6366	39.26	68.78	20.07	18.58
	2000	18.698	16.3433	13.0668	22.7588	39.49	0.00	0.00	22.24
	2001	20.034	17.7975	14.4962	23.3795	39.74	69.75	0.00	23.03
	2002	21.028	18.8544	15.6533	23.9602	39.83	69.70	0.00	23.28

	200 3	22.695	20.1081	16.9170	25.5097	39.87	69.66	0.00	23.55
	200 4	23.674	20.9343	18.0490	26.9804	39.75	69.71	0.00	23.49
	200 5	25.156	22.1725	19.4017	28.2896	40.03	69.70	0.00	24.15
	200 6	26.410	23.5350	20.6623	29.4073	40.05	69.71	0.00	24.43
	200 7	27.843	24.5899	21.8710	31.0899	40.07	69.70	0.00	24.64