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INTELLECTUAL CAPİTAL AS A MOTİVATİONAL FACTOR FOR FDI

Abstract

The hypothesis of this paper is that the intellectual capital is one of key motivational factors for attracting FDI in Croatia. The confirmation of the hypothesis is based on sectoral and specific firm analysis. The analysis of intellectual capital is based on VAIC method and other methodologies for measuring intellectual capital are also mentioned as a reference. It is also suggested that those sectors that have more intellectual capital are usually more than average users of ICTs, and that investments into ICTs (information and communication technologies) can further increase FDI, which can be seen in developed countries, although not in transition countries.
Keywords: FDI, ICT, intellectual capital

1. INTRODUCTION

The main research question of this paper is whether intellectual capital serves as a motivational factor for FDI inflow in Croatia, and in addition to this, whether this inflow may possible be used to further increase FDI if it is directed into ICT sector. According to the hypothesis of causality between FDI and ICT, higher investment in ICT lead to increase in FDI in developed countries. However, in transition countries this was not observed. In developed countries there is an accumulated capacity of ICT which can cause the inflow of FDI, and in developing and transition countries this capacity must be built up in order to attract FDI. In this hypothesis, the increase in FDI inflow causes new increase of investemnt in ICT and increase of ICT capacty, which was confirmed by Granger causality test on the panel or 23 countries (Gholami, R., Sang-Yong, T.L., Heshmati, A.:: 2003.). The inflow of FDI, coming mostly from multinational companies, is coupled with the subsequent investment in ICTs, such as business management systems, which can lead to increased competitiveness, forcing domestic companies also to invest in ICT. The productivity of work and value added in firms that received FDI is increased, which created the business environment enabling further attraction of FDI. Essentially, those are pull and push effects that are produced by FDI, on the basis of „feedback causality" (Leitão J. i Mário Raposo M. :: 2010.) Although FDI itself does not significantly increase productivity in transition countries, the productivity of work increase caused by investment in ICT is significant (Dimelis, E., Sophia P., Papaioannou Sotiris K.::2010.), both for developing and developed countries. The ratio of human capital and investment in ICT on the concrete example of ERP business system and overall performance of firms has been analysed using VAIC^{TM} method of calculating value added created by intellectual capital, which was developed by Ante Pulić. This method uses VAIC^{TM} and ICE indexes of intellectual capital efficiency to measure value added, human capital and intellectual capital in firms. The main difference from traditional capital accounting methods is that it treats labour costs as an investment and not as a cost. Most methods for measuring intellectual capital divide it into human capital, structural capital and other components (Edvinson, L. and Brünig, G :: 2000). The data on intellectual capital, human capital and value added provided by Ante Pulić and his Center for Intellectual Capital (in annual publications „Intellectual Capital") were used to confirm the correlation of intellectual capital and FDI, and we used a questionnaire and dana on performaces of firms in order to confirm if this fact contributed to the work productivity and consolidation of ICT sector. As intellectual capital was measured by sectors of economy, and FDI is also recorded that way, we were able to prove the correlation between ICE and FDI. We then used the sample of firms that significantly invested in business system (ERP) between 2001 and 2005, and on the basis of ICE and VAIC^{TM} indexes we further selected the sample to include only those firms with above average VAIC^{TM} indeks (higher then 3,6),

and also ICE index (higher then 2,3), to analyse the work productivity increase and value added due to increased intellectual capital of firms, before FDI and after FDI, and to compare this to the control group of firms that did not receive FDI. The ERP may be used as a proxy for all ICT investments on firm level that is correlated with intellectual capital, as it is among the largest initial investment in ICT that also has a 3-4 years period for implementation of the whole solution and large consulting costs (Vukšić-Bosilj, Spremić :: 2011).

2. CORRELATION OF ICE INDEX OF FIRMS AND FDI INFLOW

On the basis of ICE index data and VA of the firms we can make conclusions about the usefulness of such investments before and after investment in ICTs in a certain period of time.

Table1   VAIC and ICE for chosen firms, ICT sector excluded

	VAIC 96-01	ICE 2003	VA96-01	VA 2006	ICE 2006
TDR	13,72	7,91	556	863	7,4
Tankerska plovidba	10,82	7,59	380	409	8,96
Plinacro	10,78	15.86	177	311	11,71
Končar- e.tr.	8,69	3,68	34	86 (2003)	----
DM	7,33	3,19	68	196	3,48
PBZ Am. Ex	7,32	4,81	154	305	5,96
Žito	7,31	4,37	81	155	5,62
Zagreb.piv.	6,54	6,34	453	----	----
HEP	3,0 (2002)	5,65	1494 (2002)	478	9,85 (2005)
TC Koromačno**	4,47 (2002)	5	---	---	---
Našicecement	5,49	4,64	158	198	5,06
PLIVA	5,47	2,75	2101	1084	4,11
Atlantic trade	4,66	2,71	39	97	2,43
Cedevita	4,49	1,84	93	74	2,97

Belupo	4,44	3,11	230	293	---
Privredna banka	4,17	4,31*	2767	---	5,65*
INA	4,13	3,51	3898	3892,6	3,77
Jamnica	4,1	3,1	175	254	2,04
Vindija	3,91	2,43	123	---	3,3 (2005)
Lura	3,73	2,07	405	375	2,03
Franck	3,71	3,11	201	200	3,25
Coca Cola	3,71	3,45	326	289	2,76
Ledo	3,6	3,61	163	194	2,52
Dalmacijacement	3,25	3,67	208	251	2,63
KONZUM	---	1,28	---	231	1,43
(Source: Intellectual Capital 95-01, November 2002., 2004, 2007; Center for Intellectual Capital - CIK) * PBZ Leasing **Holcim					

By observing the value added data, $VAIC^{TM}$ and ICE indexes between 1996 – 2006., we concluded that ICE index of firms that received FDI increased until the inflow of FDI, whereas value added slowle decreased in that period. After the FDI inflow and the investment in business system (ERP) based on ICT, value added increased and ICE index remaind the same or somewhat decreased. On the basis of the data for sectors of economy, we proved a moderate correlation between FDI between 1993 and 2005 with ICE index in 2006, as well as moderate correlation with ICE I-IX 2005. with correlation coefficient 0,72551 (p-Value = 0,044 – two-tailed). There is no correlation between FDI and VAIC index for 2002. Regression equation is y = 64.54431 + 100.27419 x, so if there was a causal relationship between ICE and FDI, we could claim that a higher ICE index in economic sectors attracts more FDI; however, they do not increase value added (and VAIC index) in the short term, which can be explained by the application of the "logic of capital" the development, which is mainly geared towards work productivity increase and not value added increase. That suggests that foreign investors are mainly interested in cheaper qualified labour and entering the domestic market of Croatia and not the development of intellectual capital of Croatian firms and further expansion to the world market.

Figure 1 Linear regression of FDI 1993-2005 and ICE 2006

Simple Linear Regression

Yt = -369.63218055647 + 241.63801042145 Xt
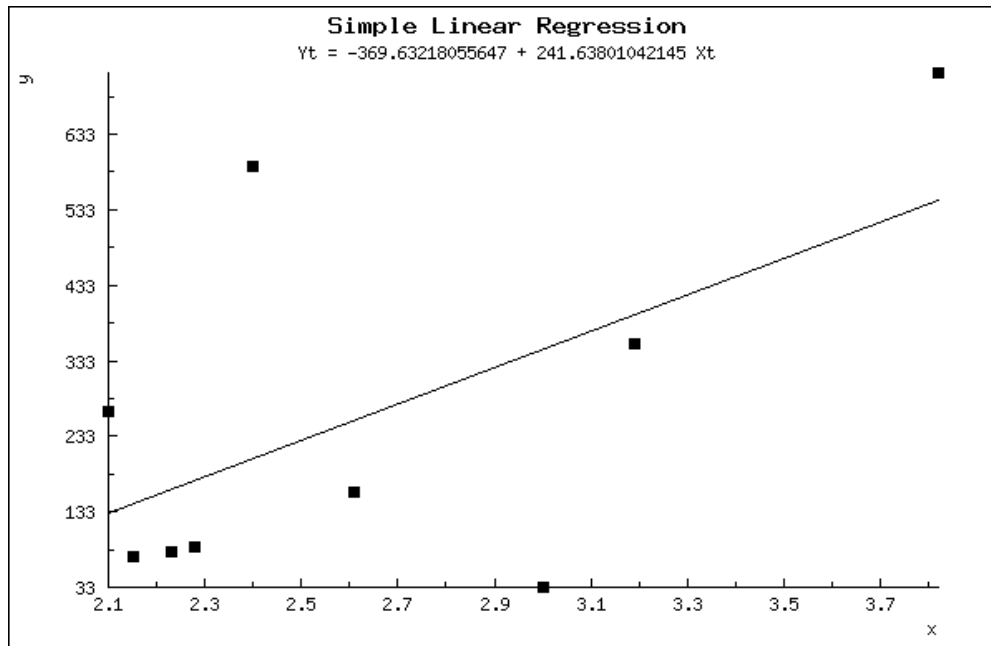
Correlation coefficient: 0,7157

t-STAT: 1.846203; F-test: 3.408465

Table 2 *1993-2005 - FDI in million euros, ICE 2006, ICE I-IX 2005 andi VAIC 2002*

Sector	FDI	ICE 2006	ICE 2005	VAIC 2002
Financial intermediation	714,03	3,79	2,96	2,28
Wholesale and retail trade	589,37	2,37	2,39	2,64
Mining	354,92	3,16	2,2	2,78
Other business services	266,25	2,07	1,84	
Post and telecom	159,37	2,58	2,24	2,73
Construction	85,2	2,25	2,11	2,19
Hotels and	72,85	2,12	2,27	3,4

restaurants				
Other production of non-metallic products	79,3	2,2	1,44	2,3
Water	32,83	2,87	1,96	--
Other	322,18	--	--	--
Agriculture	1	1,56	1	1,59
Source: HNB i CIK – Center for Intellectual Capital				

It appears, from the above data, that the intellectual capital appears is the one of motivation factors of FDI inflow in Croatia, as the sectors with lower ICE indexes attracted less FDI in comparison with sectors with above average ICE. It may not, however, be excluded that there are also other factors and it may not be concluded that the intellectual capital is the main or sole motivational factor in FDI attraction in Croatia.

3. INVESTMENT IN ICT (SOFTWARE) IN FDI RECIPIENT FIRMS

On the basis of the analysis of individual firms included in our analysis of the firms investing in ERP software and the size of those firms in overall Croatian economy on one hand, and the sectors in which those large firms operate and ICE indexes of those sectors on the other hand, we also assumed that the firms in the sectors with the highest ICE index are the largest investors in ICT, whereas the firms in sectors with lower ICE index, that did not attract as much FDI, do not invest that much into ICT (such as hotel and restaurant sector, agriculture forestry and fishing sector and construction sector). In the firms with the sectors that have average ICE we assumed that the situation varies according to the size of the firm, so that in the wholesale nad retali and processing industry sectors the larger and more competitive firms invest more in ICT than smaller and less competitive firms. In the sector of wholesale and retail trade and processing industry (manufacturing) sector, there is a greenfield FDI inflow that is not motivated by the ICE index, but return on investment. The approximation for the total amount of FDI in ICT sector for large corporation is the amount invested into introduction of ERP system, as such investments are the largest ICT investments in firms, and only two corporations provided them – SAP and S&T, of which the former held the largest portion of the market, approximately 90%. Only the most competitive large corporations, with the highest amount of capital and profit were able to

acquire such a business system, following the trend set by the foreign large firms in Croatia (subsidiaries created by greenfield investments) and those that were acquired by foreign investors. We also used the questionnaire for firms using ICT and the questionnaire for the ICT producing firms in the analysis, except for this rough approximation, according to the predefined methodology. The problem with such approach is the small number of actual respondents, because of lack of interest in the research, but it may be assumed that most people in ICT industry in Croatia share their opinions, as this sector is rather small in size and very compact and integrated in terms of mutual contacts and communication of participating actors. This assumption also seems valid since, due to relatively short period of Croatian independence and development of market economy, most ICT firms in Croatia share common values and business environment, that is still dominated by telecoms and faculties.

4. RESULTS OF THE QUESTIONNAIRE FOR THE ICT SERVICE PRODUCING FIRMS

We examined ICT service producing firms by questionnaire, using the same methodology. The structure of ICT service producing firms is even more irregulare, as there are almost only small firms with a smaller number of medium firms. We used a sample of 17 small, 2 medium and 2 large firms. The sample was structured according to the number of firms including subsectors of J62 (computer programming, consulting and related activity) and J631 (data processing, server services and internet portals), so we used 16 firms from J62 subsector and 4 firms from J631. The sample was not geographically structured, as we deemed this criterion as not relevant for representativeness, due to the characteristics of ICT business activity that is not bound to some specific location, so we treated the whole of Croatia as one geographic location including all firms in the sample.

On the basis of the questionnair, we conclude that the ICT service producing firms are mainly oriented towards domestic market and SEE and "Balkan" region, and the main barriers are poor state legislation, legal system and public adnimistratin, as well as poor business environment. Other barrier is also high labour cost, whereas labour quality and ICT infrastructure received good marks. The firms are mainly in service sector and their clients are mainly firms active in financial intermediation, wholesale and retail trade and public services, health and education. They expect growth mostly in sectors connected with ICT business solutions, management and system integration (SI) services. The questionnaire did not precisely determine the strategic goals of those firms, but it may be suggested that they are mostly interested in developing the existing market and expansion in the region, where their clients are located, and also in providing services to the governments in the region.

5. PERFORMANCES OF LARGE FIRMS THAT INTRODUCED ERP

The analysis of performances in 2007 of large firms that introduced ERP business system between 2001 and 2005. (2-6 years of lag), we find that the revenue and profit of those firms after the investment in ICT grew faster in comparison with the previous period.

Table 3   Revenue and net profit of firms, 2007. and 2008.

	Revenue (in 000 kuna)		Net profit (in 000 kn)	
	2007.	**2008.**	**2007**	**2008.**
Adris/TDR	2970784	3022245	667721	499100
Podravka	3431816	3660034	18336	47463
Belupo	610560	730881	77600	72380
Atl.grupa/Cedevita	1699103	2024459	54456	77034
Coca-Cola	1003689	--	50000	--
Ericsson NT	1781486	1800059	199795	204368
Franck	562698	618350	59590	52050
INA d.d.	24095000	27144000	1278000	350000
Z. pivovara	822833	802991	152260	162564
Pliva d.d.	6061978	4968355	702951	259939
Elka	640148	--	7683	--
Elektrok.	415515	--	12096	--
Henkel	460414	--	22765	--
Holcim	480688	--	43896	--
Cemex	1138860	--	118152	--
Metro	1617408	--	36936	--
Jamnica	946628	1080000	51740	72760

Ledo	1.007339.	1164209	69426	89431
KONZUM	10000000	12707828	221000	329233

Source: Zagreb stock exchange (www.zse.hr), FINA i www.poslovna.hr

The growth continued in 2008 and 2009, when the majority of economy had a downturn due to economic crises. We also find that revenue per employee and net profit per employee are above average, but the cost per employee in total expenditures is varied. It may be assumed that the ratio of personnel cost per employee and net profit per employee is proportional to the investment, with the aim of increasing the work productivity and profits, and not investing in employees and increasing value added in the medium and long term. This would also apply to the envestment in ICT in those firms.

Table 4   Labour in firms, 2007 (number of workers, profit, revenue, cost,

HCE – human capital efficiency index).

	Number of workers (average on the basis of working hours)	Revenue per worker (000 €)	Net profit per worker (000. €)	Personel costs in total expenditures (in %)	Ratio of cost per worker and net profit per worker *	HCE (human capital efficiency) = (profit +HC) /HC *
Adris (TDR)	700	399,75	107,08	10,8	0,3	4,41
Belupo	841	101,26	12,88	26,2	1,79	1,55
Cedevita	272	147,98	15,46	1,52	0,13	8,69
CocaCola	734	189,92	9,54	13,3	2,5	1,39
Ercisson NT	1000	188,32	19,82	20,2	1,72	1,58
INA	10000	331,28	13,66	6,4	1,49	1,67
Podravka	4000	83,47	0,12	18,3	-----	6,47
Z. pivov.	518	216,85	40,13	16,6	0,73	2,36
PLIVA HR	2000	145,15	-4,32	16,3	-----	----
ELKA	518	171,64	2,06	9,4	7,73	1,13
Elektrok.	1000	57,71	1,68	27,4	9,14	1,11
Henkel	107	597,63	29,55	5,1	0,98	2,02
Holcim	205	325,67	29,74	10,8	1,07	1,93

Cemex	750	210,91	21,88	13,7	1,18	1,84
Metro	1000	224,64	5,13	5,1	2,18	1,45
Jamnica	1000	111,04	5,96	18	3,17	1,31
Ledo	1000	137,11	9,27	13,1	1,8	1,55
Konzum	10000	144,09	2,98	7,6	3,6	2,76

Source: www.poslovna.hr   * calculated by the author

Correlation coefficient between labour cost per employee and profit per employee is approximatley the same for the sample of all domestic and all foreign firms, as well as for all domestic and foreign firms. We conclude that there may be negative correlation between the foreign capital in firms (more than 50% foreign owned) and ratio of investment in employees and profit. It follows that the increase of value added in these firms after FDI was not due to investment in employees, but from investment in ICT, which aimed to increase value added and not only the productivity. Therefore, we conclude that foreign owners invest in ICT in order to increase value added in medium and long term, and domestic owners invest in ICT in order to follow the trend and invest in the employees, thereby increasing the ICE index and intellectual capital, attracting the FDI. The aim of the foreign owned firms appears to be to maximize the ROI, and the aim of domestic firms is to attract the investment, as they lack their sufficient capital to be competitive.

Figure 2   - Regression of personnel costs per worker and profit per worker for domestic firms

Simple Linear Regression
Yt = 12.834553157243 + 0.17016651081521 Xt
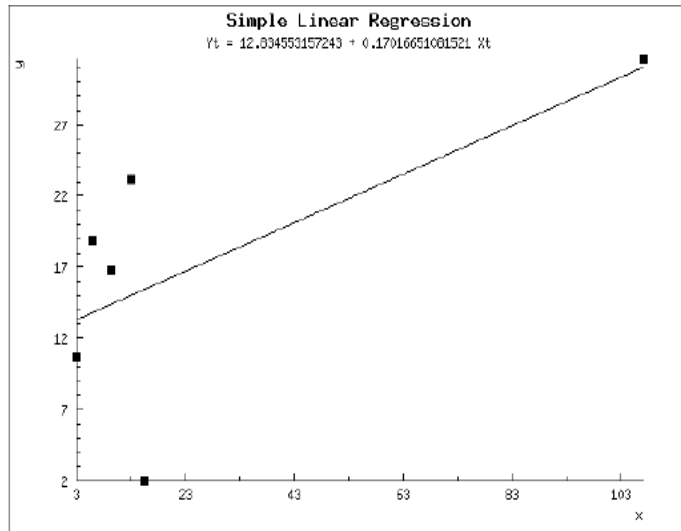
Correlation coefficient = 0.67;
T -test: 1.8094095491296; F- test: 3.273963; P-value: **0.072324**

Figure 3 - Regression of personnel costs per worker and profit per worker for foreign owned firms

Simple Linear Regression
Yt = 16.192012424398 + 0.42096543963550 Xt
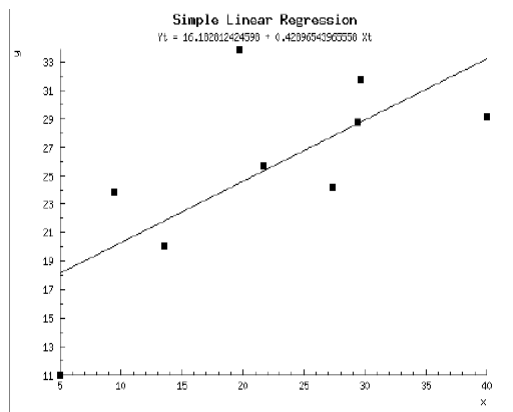
Correlation coefficient = 0.69
F-test: 6.547868 T-test: 2.558880187316; P-value: 0.031359

Figure 4 - Regression of personnel costs per worker and profit per worker for both domestic and foreign owned firms

Simple Linear Regression
Yt = 12.386160530404 + 0.52680700415984 Xt
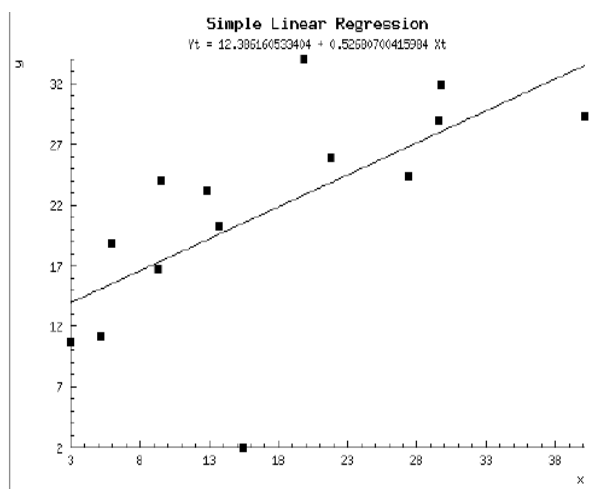
Corr. coef. = 0.66
T-test: 2.9539014761047; F-test:8.725534; P-value: 0020903

Whereas we get significant correlation for foreign owned firms (Figure 3), domestic firms would not exist if we removed Adris group (TDR), from the sample. However, if the regression is made for both foreign and domestic fims, we again get a significant, moderate correlation. (Figure 4). Therefore, we may conclude that domestic firms generally behave just as foreign owned firms, but they do not generally have sufficient capital to invest in their employees (TDR is a counter example of a firm with a lot of capital, operating in tobacco industry). In conclusion, it may be deduced that FDI in domestic firms with higher intellectual capital are usefule, because they do not only enable the increase of value added, but also the higher investment in employees, which means higher investment into intellectual capital, which is proportional to the profits of the firm, and may also lead to spillover effects.

6. WORK PRODUCTIVITY IN CROATIAN ICT SECTOR

Work productivity in ICT sector in 2005 was the highest in large firms, much lower in medium and at lowest in small ICT firms. However, the productivity in small firms increased due to increase of revenue, which shows the strengthening of ICT sector with respect to work productivity in small firms. That increase was caused probably by the higher value added and competitiveness of small firms. IN 2008 the productivity of medium firms also significantly increased, and in 2008 and 2009 the productivity of large

firms decreased because of smaller revenue. This confirms the trend of strengthening and consolidation of ICT sector and suggests the increase in inovativeness due to „logic of knowledge", and decrease of „logic of capital" based on old foreign technology absorption.

Table 5. Productivity in service ICT sector – 2005 and 2006

	Work productivity (revenue per working hours, in HRK)			
	SMALL	MEDIUM	LARGE	TOTAL
2005	183.07	403.92	1012.57	305.2
2006	233.47	509.52	730.12	291.39
2007	218.45	470.93	665.48	291.52
2008	266.12	624.12	215.27	293.33
2009	228.78	342.5	224.51	231.03

Calculated by the author

Ratio of profit and revenue in ICT sector for small enterprises is much better in the sector of ohter computer activities than in the rest of the ICT sector, and generally better in services than in manufacturing.

Table 6 – ratio profit/revenue in ICT sector – small enterprises

Activity									
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Computer equipment consulting services	--	3,58	5,37	4,2	--	--	--	--	--
Computer programming, consulting and connected activities (J62)	6,05	7,01	6,48	6,4	--	--	10,26	10,15	10,7
Dana processings erver	8,03	10,11	6,48	7,33	--	--	11,99	9,31	7,39

services and connected activities, Internet portals (J631)								
Database creation and management	3,72	5,59	6,52	4,25	--	--	--	--	--
Maintenance of office equipment and computers	2,95	4,18	3,31	4,84	--	--	--	2,72	--
Computer activities (K72)	10,06	7,42	8,07	7,39	9,04	9,33	9,32	8,17	8,15
IT sector (according to HGK)	4,62	5,77	4,9	4,8	--	--	5,72	5,35	--

Source: HGK – Croatian Business Chamber, FINA – Financial Agency

7. CONCLUSION

On the basis of the analysis of intellectual capital indexes and FDI, we may conclude that there is a correlation between FDI and intellectual capital in Croatia, but the correlation between attracting FDI and ICT is weak. FDI have mainly targeted domestic market or expansion in the region, without strategic goal of further expansion. They have mostly been in services, mainly financial intermediation and trade. It is possible to notice a certain dynamics in attracting FDI, which is directed to those firms with higher ICE, and that those firms tend to increase ICE by investing into human capital and ICT. On the basis of a proxy of ERP systems in large Croatian firms, we may conclude that the large investments in FDI increase the value added and productivity of large firms. FDI are positively and significantly correlated with the intellectual efficiency (ICE), which leads to the increase of value added (VA) after the investment in large ICT in firms that have received FDI, in comparison with the control group of domestic large firms that have not received FDI. However, some time after receiving FDI, ICE slowly decreases. We conclude that the intellectual capital of firms has the function

of attracting FDI, and the investment geared towards increasing intellectual capital stops, having achieved this goal. Further investments are directed to increasing productivity and value added by different means, including the investment into ICT. This increases the possiblity of strengthening the ICT sector by using external ICT services and spillover effects, which may be seen by observing the increase in the productivity of Croatian small and medium ICT firms in J62 and J631 sectors, in comparison with large firms in those sectors..

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RESULTS OF THE QUESTIONNAIRE

Investments of the firms in ICT

1. In the last 5 years, as a percentage of revenue						
0,00%	**0-5%:**	5-10%:	10-15%	15-20%	20-30%	> 30%
0,00%	**83,00%**	17,00%	0,00%	0,00%	0,00%	0,00%
mean: 2,17 var.:0,17 s. dev.: 0,41						
2. In the last 10 years, as a percentage of revenue						

0,00%	0-5%:	5-10%	10-15%	15-20%	20-30%	> 30%
0,00%	**83%**	17,00%	0,00%	0,00%	0,00%	0,00%

mean: 2,17   var.:0,17   s. dev.: 0,41

3. In the last 5 years, as a percentage of revenue, for external ICT

0,00%	**0-5%**	5-10%	10-15%	15-20%	20-30%	>30%
17,00%	**67,00%**	17,00%	0,00%	0,00%	0,00%	0,00%

mean 2,06   var: 0,4   s. dev: 0,63

4. In the last 10 years, as a percentage of revenue, for external ICT

0,00%	**0-5%**	5-10%	10-15%	15-20%	20-30%	>30%
0,00%	**83,00%**	17,00%	0,00%	0,00%	0,00%	0,00%

mean: 2,17   var.:0,17   s. dev.: 0,41

5. Planned investment in ICT in next 2 years

0,00%	**0-5%:**	5-10%	10-15%	15-20%	20-30%	>30%
0,00%	**100,00%**	0,00%	0,00%	0,00%	0,00%	0,00%

mean: 2   var: 0   s. dev: 0

6. Planned invenstment in external ICT in next 2 years

0,00%	0-5%	5-10%	10-15%	15-20%	20-30%	>30%
0,00%	**67,00%**	33,00%	0,00%	0,00%	0,00%	0,00%

mean: 2,33   var: 0,27   s. dev.: 0,52

Reasons for investment in ICT

	İncreasing competitiveness on the domestic market	İncreasing competitiveness on the foreign market	İmprovement of business processes and control	Following a business trend	Other
mean	*4,5*	*3,5*	*5,83*	*5,33*	*5*
var	6,7	6,7	5,77	5,07	1,33
s.dev.	2,59	2,59	2,4	2,25	1,15
median	3	3	3	3	2

Reasons for investment in external ICT

	Concentration on core busines	Favorable cost of ext.services	Lack of trained labour	Business connections	Other reasons
mean	4,67	3,67	4,8	2,33	3,5
var	4,67	3,47	5,2	3,47	3,67
s.dev	2,16	1,86	2,28	1,86	1,91
median	3	2	3	2	--

Labour education

	mean	Var.	s. devijacija
Workers with at least higher education	3	2	1,41
Workers pursuing training	2	0,8	0,89

Management education

	60-75%	75-90%	Above 90%	mean	var	s. dev
Higher	17,00%	33,00%	50,00%	6,33	0,67	0,82

Importance of ICTs in business

	computer	internet	web	LAN	SAP
mean	6,5	5,83	5,33	6,83	5,6
var	0,7	1,77	2,27	0,17	6,8
s.dev	0,84	1,33	1,51	0,41	2,61
median	7	6	6	7	6

Usage and knowledge of ICT

	YES	NO	mean	var	s. dev.
SOA	60,00%	40,00%	1,4	0,3	0,55
SOA in business	0	100,00%	2	0	0
BRMS	40,00%	60,00%	1,6	0,3	0,55
BRMS in business	0	100	2	0	0
BPS/BPM usage	0	100,00%	2	0	0
Computer training	100,00%	0	1	0	0
R&D	80,00%	20,00%	1,2	0,2	0,45
R&D investment	Up to 1 million kn	2-3 mil. kn			
	80,00%	20,00%	1,2	0,2	0,45

Firm activity

	mean	var	standard dev.	median
Manufacturing	4,75	6,92	2,63	5
Service	4,80	4,70	2,17	5
				%
Wholesale	6,80	4,70	2,17	20,00%

and retail trade				
Processing industry				40,00%
Other business services				40,00%

Amount of foreign capital in the firm

udio	0,00%	1-20%	mean	var	s.deviation
%	80,00%	20,00%	1,2	0,2	0,45

Education of the respondent

Education	higher	masters	mean	var	s.deviation
%	60,00%	40,00%	2,4	0,3	0,55

Note: N = 150 and values are in the range of 1-7

Profit and amount of foreign capital

Firm profit in percentage of revenue, last 10 years						
loss	0%	**5-10%**	10-15%	15-20%	20-30%	>30%
0,00%	0,00%	**100,00%**	0,00%	0,00%	0,00%	0,00%
mean: 3 var: 0 s. dev: 0						
2.amount of foreign capital						
<10%	10-20%	20-30%	**30-40%**	40-50%	50%-100%	100,00%
50,00%	0,00%	0,00%	**50,00%**	0,00%	0,00%	0,00%
mean: 2,5 var: 4,00 s. dev.: 2,12						

Geographic location of the client's firm

	mean	var	s.dev	median

Domestic, region	7	7	0	7
Old EU MS	1	0	0	1
New EU MS	1	0	0	1
world	1	0	0	1

Activity of client forms by economic sectors

	mean	var	s.dev
Agriculture, hunting, forestry, fishing	1,5	0,5	0,71
El. Energy, gas, water supply	2	2	1,41
Financial intermediation	**4**	8	2,83
Wholesale and retail trade	**3,5**	4,5	2,12
construction	2	2	1,41
Processing industry	2	1,41	1,41
Mining	1	0	0
Education, health, public services	**4,5**	12,5	3,54
Other business services and real estate	1	0	0

Expected growth by sectors of IT

	mean	var	s.dev
Network infrastructure	3,5	4,5	2,12
Fixed network	2,5	4,5	2,12
IP network	3,5	4,5	2,12
Radio access network	2	2	1,41
Business ICT solutions	**6**	0	0

Management services	6	0	0
SI	**5**	2	1,41
CS	4,5	0,5	0,71
NDI	4,5	0,5	0,71

Strategic motives of foreign owners for investment in Croatia

	mean	var	s.dev
Support for business partners	1	0	0
Expansion in the region	1	0	0
EU projects	1	0	0
Expansion of the existing market in the EU	1	0	0
Entering the EU market	1	0	0
Other	**4**	**18**	**4,24**

Main barriers for FDI in Croatia

	mean	var	s. dev.
Uneducated workforce	1	0	0
High labour cost	**4,5**	4,5	2,12
Business environment	**5,5**	12,5	3,54
Undeveloped ICT infrastructure	2,5	0,5	0,71
Poor legislature, legal system, public administration	**7**	2	1,41
Other	3,5	12,5	3,54

Firm activity

	mean	var	s. dev
manufacturing	4,5	4,5	2,12
services	7	0	0

Note: N = 20. Values are in the range of 1-7