Interdependence Between Social Values and National Performance Indicators: The Case of the Enlarged European Union

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Based on the desk research, the paper provides an empirical insight into correlations between some social values and five selected economic performance indicators for 20 European Union countries. We concentrated on Composite Trust. This is a one-dimensional representation of citizens' trust on national level and is calculated from three different types of trust that van Oorschot and Arts (2005) derived from the European Values Study (2001). We confirmed correlations between trust and economic performance, but we have also noticed a very different pattern for the old and the new EU member states. The old EU member states show a positive correlation, on the other hand there is no such correlation for the new member states. A plausible hypothesis is that the same level of Composite Trust causes different effects in different societies and economies. We could also assume that social structures in the new EU member states are still distorted and are not in the equilibrium which characterizes EU countries with long democratic and market economy traditions. Economic performance in the new EU member states is based mainly on economic and not on social incentives. On the other hand, correlation between trust and innovativeness is strong in all studied countries. It confirms many studies which see trust as a fundamental social enabler and stimulator for innovativeness.

Key Words: trust, composite trust, social capital, social values, economic performance, innovativeness, European Union, new EU member states

JEL *Classification:* O50

Introduction

Interactions and interdependences between economy and social structures and values attract many researchers from social and economic sciences. It is a promising research area revealing social variables that influence economic development and vice versa. Transition to the Infor-

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mation Society and the New Economy has already disclosed many limitations of the traditional view on economic performance, which is still based mainly on macroeconomical and technological indicators. Our first steps into the information society follow significant changes in social structures and values (Castells 2000) which consequently complicate interplay between social structures and economy. We can also notice uncertainty among researchers and practitioners about the relevance of some macroeconomic and particularly technological indicators in new economic environments. There is an evident lack of 'softer' indicators, which would reveal development forces based on social structures, system of values, and other societal characteristics.

Researchers agree that social structures influence economic development (Sabatini 2006), for example creating a healthier atmosphere for innovativeness, readiness to take business risks, and a better educational system. On the other hand, we can very rarely find these indicators in official national statistics or even in government development policies. This issue is still an academic affair with a minimal influence on a wider public perception of national performance and economic development. Nevertheless, the European Commission has stimulated some interesting researches on the EU level (European Trend Chart on Innovation and Special Eurobarometers), which give an insight into national and regional characteristics.

In this paper, we present a research that focused on correlation between Composite Trust and five macroeconomic indicators in the enlarged European Union. We also experimented with the Composite Social Values Index, as an approximation for social capital. We gathered data on national levels from different EU and international information sources and current researches (Van Oorschot and Arts 2005) and analyzed behavior of these indicators. Putting the 'new' EU25 economies into the same context with the 'old' EU15 member states, we have revealed some social and economic features that could be interesting for other regions, too.

Some Current Researches

SOCIAL CAPITAL

Social capital simplifies our perception and even substitutes a complex concept of social structures and values. Many current researches are focusing on social capital and its interaction with the economy (Florida and Tinagli 2004). The World Bank has even proclaimed social capital as

a missing link in theories of economic development (Torsvik 2000). Recently, Adam and Roncevic (2005) summarized debates and researches, and concluded that social capital is important because *it is a catalyst for disseminating human and intellectual capital, it is a basis for greater levels of synergy and coordination, it is a 'lubricant' of network organizations, and it is a facilitator of intermediary institutions.* This view is very common among social researchers.

Despite theoretical (Putnam 1993) and empirical (Hjerppe 2003; Francois and Zabojnik 2005; Sabatini 2006) evidences of its social and economic relevance, we still lack an unambiguous definition of social capital. Torsvik (2000) argues that: *First, the explanatory variables must be clearly defined. Second, it must be specified how these variables interact in the production process; the mechanisms that these variables work through must be specified. The social capital idea falls short of both standards.* As a result, we measure social capital with indirect indicators. Sabatini (2006) argues that *indirect indicators may be misleading because they do not represent social capital's key components and their use causes a considerable confusion about what social capital is, as distinct from its outcomes, and what the relationship between social capital and its outcomes may be.*

Ambiguity and too descriptive definitions of social capital lead researchers to empirically less convincing conclusions. Often, we are more guessing at results than getting them objectively from empirical data. For that reason, many researchers focus on simpler but less ambiguous social indicators, such as trust or tolerance. These indicators cannot reveal all the complexity of social capital, structures and relations, but they are at least measurable and easier to interpret. In this paper, we follow this path concentrating mainly on trust.

TRUST

As we already said, trust is not a replacement for social capital. It is just one of social variables. Many authors see trust as an ingredient of the social capital (van Schaik 2002). Sometimes, trust is even a synonym for the social capital itself (Francois and Zabojnik 2005). On the other hand, for Torsvik (2000) trust is a consequence of social capital. Trust has not attracted such attention among researchers as social capital, but there are many reasons that make trust an interesting social and even economic issue.

What makes trust particularly relevant is its double role. It can be a component of social capital, tolerance, or other social variables. How-

ever, it can play a role on its own, as an independent social and economic variable. Trust plays a crucial role in the contemporary management and organizational theories and practice, particularly in virtual and networked organizations that are becoming an organizational paradigm of the 21st century (Mowshowitz 1997). Trust is an indispensable enabler of virtual organizations and virtual management (Bavec 2005). Many studies are dealing with the importance of trust in virtual teams (Keyzerman 2003; Coppola 2004) and in interorganizational networks forming virtual organizations (Holland 1998). They confirm a rising relevance of trust in the global and digitalized economy. Even common sense would tell us that acceptable trust is cheaper than distrust in any business environment.

Van Shaik (2002) assumed that interpersonal trust is unrelated to economic growth at regional levels in Europe. Rimac and Stulhofer (2005) discussed economic development as correlates of trust in the EU. For them, trust is a motivator for cooperation and it lowers operational costs. Their discussion was limited to qualitative arguments without empirical evidence. Raiser (1999) argued that trust relates to economic growth only in developed market economies, but not the case of the Central European countries.

Many other studies deal with trust in an indirect way, as a part of more general social indicators. Florida and Tinagli (2004) introduced the 3Ts (Technology, Talent and Tolerance) indicator and a single Euro-Creativity Index. For them, tolerance stimulates openness to new people and new ideas. An important part of the tolerance indicator is trust, because *distrust can paralyze society* and makes it uncompetitive. However, we could argue that the concepts of social capital and tolerance are partially overlapping and would have similar effects on economic performance.

Mihaylova (2004) published an extensive work on the Social Capital in the Central and Eastern Europe and discussed the trust and economic growth. The main concern of her research was the question: *what is the relationship between society and the economy?* Her paper stayed on the descriptive level, concentrating on sociological and political perspectives with few empirical data. However, her work is important because she tried to find a rationale behind different social structures and economic performance in the CEE and other European countries.

Authors with sociological and not economic background conduct the majority of current researches on social capital. This could be a reason

that we see very little empirical evidence for otherwise plausible and conceivable models of interaction between trust and other social values with economic performance. This fact has even intensified our search for additional empirical evidence to confirm these hypotheses.

In our research, we set up working hypotheses that follow common understanding and perception of the relationship between social values and national development performances. We started with the following hypotheses:

1. Composite Trust will be positively correlated with economic performance indicators for all EU member states.
2. The Composite Social Values Index will be also positively correlated with economic performance indicators for all EU member states but it would be less distinctive than Composite Trust, because of its too simplified structure.
3. Correlations will be equal for both groups of countries – the old EU15 member states and for new EU25 members.
4. Differences between old and new EU member states will a be result of differences in economic development, only.

Research Methods

The primary goal of our research was to assess correlations or interdependences of some social variables with economic performance in the European Union. This is a wide geographical area with significant regional and national differences in economic development and social values, which offers an opportunity to test different hypotheses. We were particularly interested in any differences in behavior between old and new EU member states.

Gathering any primary data on the national levels was far beyond our research resources. For that reason, we conducted desk research looking for in-depth relations between selected indicators, using secondary data from public domain information sources and published researches:

1. The IMD *World Competitiveness Yearbook 2005*;
2. The *European Innovation Scoreboard 2005*;
3. W. van Oorschot and W. Arts, *The Social Capital of European Welfare States: The Crowding out Hypothesis Revisited* (2005);
4. L. C. J. M. Halman, *The European Values Study: A Third Wave* (2001).

Van Oorschot and Arts (2005) used primary data from the European Values Study and introduced eight variables as multidimensional representation of social capital. Three of them were dealing with trust *(trustworthiness, trust in institutions,* and *interpersonal trust)* and five with other social values *(passive participation, active participation, friends, family, and political engagement).* We used their individual data on the country level to describe social values.

We simplified van Oorschot and Arts' multidimensional view on social capital, and introduced two one-dimensional variables:

- Composite Trust
- Composite Social Value Index

Composite Trust is a one-dimensional representation of citizens' trust on national level and was calculated from three different types of trust that van Oorschot and Arts (2005) derived from the European Values Study. The idea was to represent trust as a single indicator that can be used for assessing correlations with economic performance indicators. Introduction of the Composite Social Value Index was purely experimental. Following the proposition of van Oorschot and Arts that all eight selected indicators can be an approximation for social capital, we were interested in whether it was positively correlated with economic performance indicators, as predicted by other studies.

ECONOMIC PERFORMANCE INDICATORS

The IMD *World Competitiveness Yearbook 2005* was a source of individual data on national level for competitiveness, business efficiency, economic efficiency, and government efficiency (columns 4–7 in table 1). From the *European Innovation Scoreboard 2005* we obbtained the Summary Innovation Index for selected countries (column 8 in table 1). This index gives an overview of an aggregate national innovation performance. We should mention that not all individual indicators are referring to the same year; they are spread over a period of four years. We could justify this methodological inconsistency with the fact that social values and economic performance indicators are changing relatively slowly overtime, and they did not change significantly over the period of four years.

CALCULATIONS OF COMPOSITE TRUST AND THE COMPOSITE SOCIAL VALUE INDEX

We obbtained individual data on the national level from van Oorschot and Arts (2005). We calculated Composite Trust as simply as possible.

Trustworthiness, trust in institutions, and interpersonal trust were normalized on the average 1, and summed up with equal weighting applied to all three indicators. The result is normalized again; so on average Composite Trust in the selected countries is equal to 1 (column 2 in table 1). We also experimented with other social variables, calculating a Composite Social Value Index (column 3 in table 1) in a similar way as Composite Trust, using the following eight indicators (Van Oorschot and Arts 2005): trustworthiness, trust in institutions, interpersonal trust, passive participation, active participation, friends, family, and political engagement. The average Composite Social Value Index for selected countries equals 1.

SELECTED 20 EU MEMBER STATES

We were able to gather a full set of selected data only for 20 EU countries (column 1 in table 1), 14 old member states from the EU15 and 6 new member states from Central Europe and including Estonia. In the research, we calculated correlations separately for old and new member states, and for all 20 EU countries together.

Discussion of Results

In table 1, we collected individual data used in our research. We calculated Composite Trust (column 2) and the Composite Social Values Index (column 3); other data are from primary sources, as described.

Table 2 shows correlation coefficients between Composite Trust, the Composite Social Value Index, and national performance indicators for old and new member states, and for all 20 countries under discussion.

COMPOSITE SOCIAL VALUE INDEX

From table 2 we can conclude that the Composite Social Value Index does not correlate significantly with all five performance indicators. We could argue that correlation coefficient 0.61 (business efficiency) and correlation coefficient 0.59 (competitiveness) indicate some correlation of composite social values for old member states, but we did not explore these relations further because correlations with trust were significantly higher. However, it is interesting to point out that for new member states the correlation coefficient is much lower. As we will see later in discussion of the results, these significantly lower correlations indicate differences in behavior patterns in old and new member states. The results also rejected our second hypothesis, i.e. that the Composite Social Values Index

TABLE 1 Individual data at the country level EU

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Old member states							
Austria	1.03	1.02	74.3	68.9	50.8	58.9	0.51
Belgium	0.98	1.09	67.5	51.3	54.1	41.9	0.50
Denmark	1.17	1.11	82.5	77.1	47.0	74.3	0.60
Finland	1.11	1.06	82.6	75.7	46.1	75.9	0.68
France	0.95	0.92	64.2	37.5	58.9	38.6	0.46
Germany	1.02	0.97	67.8	44.7	52.5	45.9	0.58
Greece	0.86	1.08	50.3	31.1	40.2	31.1	0.21
Ireland	1.03	1.02	77.8	73.4	61.8	68.9	0.42
Italy	0.99	0.93	45.8	21.6	44.2	18.1	0.36
Netherlands	1.09	1.39	77.4	67.9	58.4	56.2	0.48
Portugal	0.94	0.82	52.4	25.1	42.4	42.2	0.28
Spain	1.02	0.89	59.4	34.3	50.8	47.8	0.30
Sweden	1.12	1.36	76.3	67.6	49.2	57.9	0.72
United Kingdom	1.00	0.98	68.5	51.0	56.5	51.0	0.48
New member states							
Czech Republic	0.94	0.93	60.1	47.7	45.2	40.3	0.26
Estonia	0.93	0.84	66.7	49.3	54.4	65.3	0.32
Hungary	0.95	0.81	59.9	47.4	39.8	44.8	0.31
Poland	0.98	0.82	39.0	11.5	35.5	21.2	0.23
Slovakia	0.93	1.03	58.6	44.1	33.8	61.4	0.21
Slovenia	0.96	0.95	49.3	21.8	43.3	33.3	0.32

NOTES Column headings are as follows: (1) EU country, (2) Composite Trust, (3) Composite Social Values, (4) competitiveness, (5) business efficiency, (6) economic efficiency, (7) government performance, (8) Summary Innovation Index.

SOURCES *European Values Study 2005;* IMD *World Competitiveness Yearbook 2005; European Innovation Scoreboard 2005;* Van Oorschot and Arts 2005.

would be positively correlated with economic performances indicators for all EU member states. Our guess is that the Composite Social Values Index, as we calculated it, cannot be a realistic approximation for social capital. The main reason that we experimented with this indicator in the first place was just our curiosity to discover whether a simple composition of publicly available social values has any meaning as an indicator on its own.

TABLE 2 Correlation coefficients for old and new EU25 member states, and for total of all states under discussion

(1)	(2)	(3)	(4)	(5)	(6)
Composite Trust					
Old	0.81*	0.79*	0.18	0.77*	0.79*
New	−0.93*	−0.90*	−0.41	−0.94*	0.07
All	0.72*	0.69*	0.33	0.58*	0.82*
Composite Social Values					
Old	0.55*	0.61*	0.18	0.36	0.51*
New	0.11	−0.12	−0.28	0.29	−0.41
All	0.59*	0.61*	0.30	0.38	0.59*

NOTES Column headings are as follows: (1) EU member states, (2) competitiveness, (3) business efficiency, (4) economic efficiency, (5) government efficiency, (6) Summary Innovation Index. *Correlation is significant at the 0.05 level.

COMPOSITE TRUST

On the other hand, we can notice a significant correlation between Composite Trust and performance indicators, with the exception of economic efficiency. To gain a better insight into these correlations we graphically visualized the results. Graphical presentations have revealed some very distinguishing features.

The first three graphs (figures 1, 2, and 3) show the interdependence between Composite Trust and competitiveness, business efficiency, and government efficiency. We can see that Composite Trust in all new EU member states is below the EU average and is nearly equal, regardless of their economic performance. Ten years ago, Kolankiewicz (1996) argued that in the Central European countries lower trust remains as a legacy of socialism, in which generalized trust tended to be low. We could also suspect that the lower lever of trust in the new EU member states reflects their 'historical experience' with triple and often traumatic transition in the last 10 to 15 years, which caused radical changes in their societies. We have in mind political transition from the socialistic system, economic transition to the market economy, and finally accession to the EU. All together, the new EU member states are more distrustful than the old member states, but this fact has no direct influence on their economic performance.

All three graphs (figures 1, 2, and 3) reveal different patterns in behavior of the old and the new EU member states. Trend lines for both groups

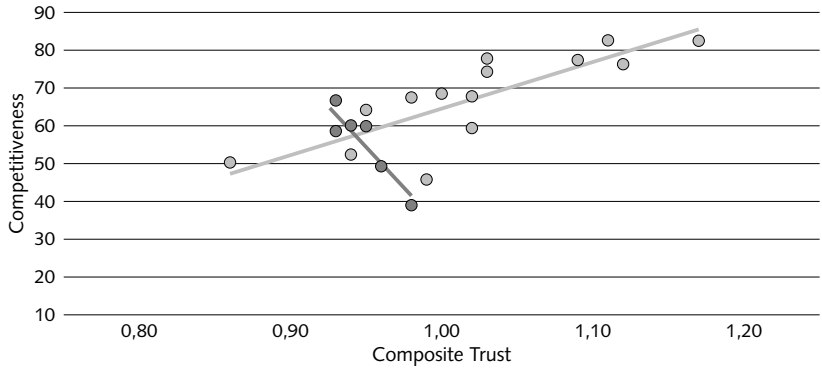

FIGURE 1 Correlation between Composite Trust and competitiveness
○ old member states (— linear), ● new member states (— linear)

are nearly perpendicular to each other. We have some difficulties in interpreting negative correlations for the new member states because we cannot assess errors in primary data and consequently in the correlation coefficients. Trend lines are slightly inclined to the left side. We interpreted this anomaly as a statistical error in data and we assumed that these lines are vertical to the x-axis and do not characterize any negative correlations. They just show that in these countries the performance indicators do not depend on Composite Trust, or vice versa. On the other hand, a positive correlation between Composite Trust and performance indicators is evident for all old EU member states.

The trend-line for the old member states, in figure 1, shows that higher trust means higher competitiveness. The correlation coefficient 0.81 is high. On the other hand, the trend-lines for the new EU member states are nearly vertical, which means that competitiveness, business, and government efficiency do not depend on Composite Trust. Correlations for the old member states are high enough to be statistically significant.

This Result leads to the conclusion that the effect of trust is not equal in the old and new member states. A plausible hypothesis is that the same level of Composite Trust has different effects in different societies and economies. We will see the same behavior in figures 2 and 3. Obviously, other development forces compensate for the lack of trust in the case of new EU member states. These results also to some extent confirm Raiser's (1999) observation that trust relates to the economy in developed market economies, but not in the Central European countries.

A positive correlation between trust and business efficiency (figure 2)

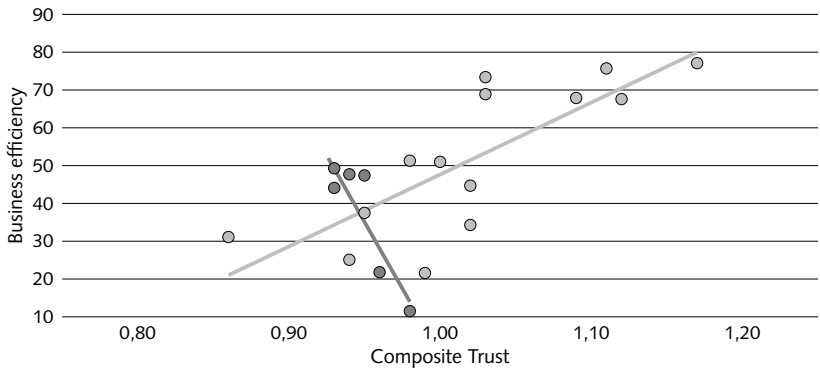

FIGURE 2 Correlation between Composite Trust and business efficiency
○ old member states (— linear), ● new member states (— linear)

looks straightforward. By the definition of business efficiency (IMD *World Competitiveness Yearbook 2005*) it is *an extent to which enterprises are performing in an innovative, profitable and responsible manner including productivity and efficiency, labor market, finance, management practices and attitudes and values.* Estonia is on the top and Poland is on the bottom of business efficiency in the Central European and Baltic region, regardless of their nearly equal level of trust. Looking for the forces that compensate for a lack of trust, we can assume that Estonia introduced more efficient development incentives than Poland.

A similar situation is seen in figure 3. Government performance (IMD *World Competitiveness Yearbook 2005*) is *an extent to which government policies are conducive to competitiveness: public finance, fiscal policy, institutional framework, business legislation and societal framework.* Again, Estonia and Slovakia are on the top and Poland on the bottom. Portugal, for example, is falling behind all EU member states. We can also notice large differences in government efficiency in new member states, which are independent from the level of trust. Government efficiency depends on a wide spectrum of issues, from economic to historic (Bavec 2006), but it seems that social issues are lower on the influence list than others are.

In figure 4, we can see a very different pattern. We notice a significant correlation between Composite Trust and the Summary Innovation Index (correlation coefficient 0.82). In the contrast to figures 1, 2, and 3, the old and the new EU member states follow a similar trend line. This result confirms researches that placed the trust at the center of social values

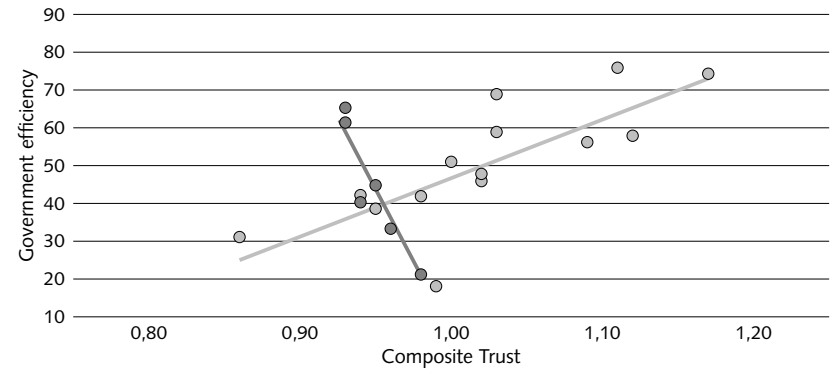

FIGURE 3 Correlation between Composite Trust and Government Efficiency
○ old member states (— linear), ● new member states (— linear)

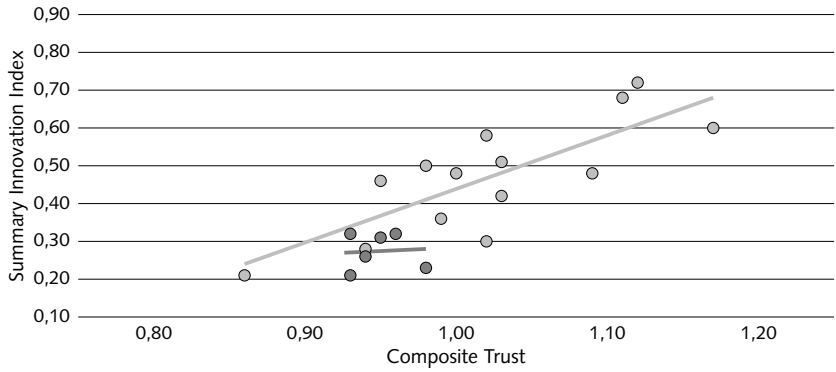

FIGURE 4 Correlation between Summary Composite Trust and the Summary Innovation Index
○ old member states (— linear), ● new member states (— linear)

relevant for human innovativeness (Florida and Tinagli 2004). Scandinavian countries have the highest Composite Trust (table 1). In general, high social capital and consequently high levels of trust are trademarks of innovative societies. Researches in other regions, for example Singapore (Keong 2006), have empirically confirmed similar conclusions.

What is particularly worrying for the new EU member states is their significantly lower level of innovativeness. We will not argue about the reasons. What our research shows is just the fact that the low level of trust is associated with low innovativeness, and vice versa. This means that we cannot stimulate innovativeness just with economic incentives. We are supposed to introduce social changes, too. On the other hand, we know that social values and structures are changing very slowly, which

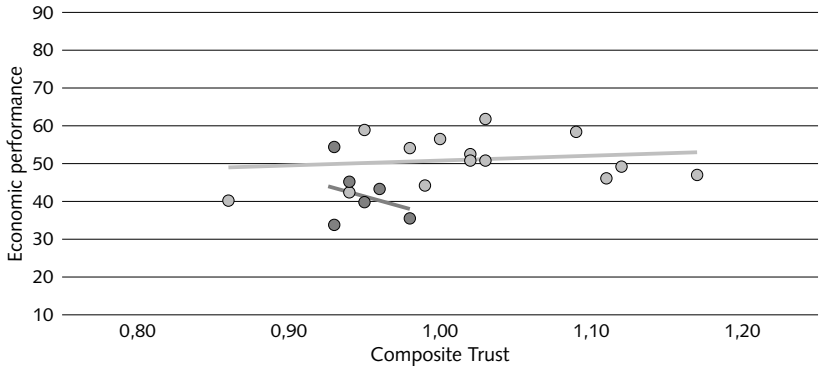

FIGURE 5 Correlation between Composite Trust and National Economic Performance
○ old member states (— linear), ● new member states (— linear)

leads to the plausible conclusion that positive changes in innovativeness are slower than economic changes. This could explain the decade long struggle of new EU member states to raise their innovativeness, with very slow improvements. New EU member states still compensate for the impact of lower innovativeness to their economies with a higher level of direct foreign investments and import of new technologies.

The figure 5 shows an unexpected result. Composite Trust is not correlated with economic performance for all 20 selected EU countries (correlation coefficient 0.33). Correlation with the Composite Social Value Index is even lower (correlation coefficient 0.30). This result is interesting because it has triggered some methodological warnings related to our desktop research. We are not in position to assess correctness of theprimary data and we have to take them as accurate. In the case of the Economic Performance indicator published in the IMD *World Competitiveness Yearbook 2005,* we have some reservations about its correctness. Looking at other economic indicators it is hard to justify the economic performance indicators for Slovenia 21.8 and Italy 21.6 on the one hand, and Slovakia 44.1 and Estonia 49.3 on the other.

Our opinion is that correlation between Composite Trust and economic performance should be more significant in the case of data that are more realistic. This would also back up Raiser's (1999) view about the character of trust in national economies.

Conclusions

The ambition of this paper is to present some empirical evidence and not to provide a detailed explanation of the present situation. For that

reason, we can just briefly comment on our working hypothesis. Surprisingly, the hypothesis that Composite Trust will be positively correlated with national performances indicators was confirmed only for the old EU member states and not for the new ones. The hypothesis that correlations will be alike for the old and the new EU member states was confirmed only for correlation of Composite Trust and the Summary Innovation Index (SII).

We do not have enough empirical evidence to make decisive conclusions, but our research leads to some plausible suggestions. One of them is that trust and other social variables do not have the same effects in all countries. The old EU member states represent relatively stable social structures and values in comparison with the new member states. The most developed North European countries like Denmark, Sweden, Finland, and the Netherlands have significantly higher Composite Trust than others. Greece and Portugal are on the other side, with the lowest Composite Trust. However, they do show a positive correlation between trust and their performance. There is no such interdependence in the new EU member states. At first, they all represent a distinguishable cluster, with Composite Trust lower than the EU average. We could presume that social structures in the new EU member states are still distorted and are not in the equilibrium which characterizes developed countries with long democratic and market economy traditions (Mihaylova 2004; Kolankiewicz 1996). Nevertheless, the new EU member states are economically and socially successful, despite some deficiency in their social capital. This indicates another stimulus for economic development and opens up a dilemma if higher social capital is primarily a result of economic development, or vice versa.

The Summary Innovation Index (SII) is the only one of five performance indicators that shows a different pattern. It is strongly correlated with Composite Trust for all countries studied. This confirms many studies, which see trust as a fundamental social enabler and stimulator for innovativeness (Rimac and Stulhofer 2005; Florida and Tinagli 2004). This fact could have significant consequences for the new EU member states, because they all face low national innovativeness. If innovativeness follows the same time-resistance as social structures, then it will be difficult for them to make 'big leaps' in innovativeness that are often seen in their economic performance. It is not a surprise that their national innovation policies reflect frustration with slow progress in this field. On the other hand, it is very indicative that there are nearly no references to social

values in their innovation policies. Understanding of social incentives in national innovation policies is obviously very low.

The results support the view (Van Oorschot and Arts 2005) that we have to adopt a 'multi-dimensional' interpretation of trust and other social variables as social capital. They used an eight-dimensional indicator for social value, which proved to be difficult to manipulate and interpret. On the other hand, our oversimplified approach – when we transformed their 8-folded indicator into a single number-proved to be inappropriate. Behavior of this one-dimensional social indicator was not even close to the behavior that we would expect from the social capital. A multidimensional view would complicate our models and interpretation of results, but it is the only way to gain a deeper insight into the complicated interplay between social values and economy in general. The multidimensional model of social capital and its interactions with economy deserves further researchers' attention.

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