Universität der Bundeswehr München
Institut für Volkswirtschaftslehre

Diskussionsbeiträge

Friedrich L. Sell

Confidence and the erosion of confidence: Economic functions and effects

16. Jg. (2004), Nr. 1

Confidence and the Erosion of Confidence

– Economic Functions and Effects –

Friedrich L. Sell[#]

Munich University of the Federal Armed Forces

[#] Friedrich L. Sell, Department of Economics, Munich University of the Federal Armed Forces, Werner-Heisenberg-Weg 39, D-85577 Neubiberg, e-mail: friedrich.sell@unibw-muenchen.de, Internet: http://www.unibw-muenchen.de/campus/WOW/v1061/deutsch/start.html.

Content

Abstract

"Trust" or likewise "confidence" (the term preferred in this paper) are notions which have received considerable attention by economists in the last 8-10 years. In this contribution, much emphasis is put on the understanding what we really mean by "confidence", what the differences between optimism and confidence are and how the onset of confidence can possibly be explained. Also, we analyze the economic effects of a lack of or the erosion of confidence. The paper intends to provide a comprehensive view on the major effects of confidence on economic growth, the business cycle, its relation to income distribution, etc. Finally, the contribution of confidence to social capital is discussed and the erosion of confidence within, between and towards business enterprises as a consequence of the widespread scandals in the US and other industrialised countries at the beginning of the new millennium is portrayed.

Key words: Corporate Culture, Social Capital, Organisational Behaviour

"Vertrauen" (im Englischen: "Trust" oder auch "Confidence") ist ein Begriff, der sich in den letzten 8 bis 10 Jahren auch unter Ökonomen einer bemerkenswerten Aufmerksamkeit erfreut. In diesem Beitrag wird Vertrauen zunächst als ökonomisches Erfahrungs- und Erkenntnisobjekt vorgestellt. Anschließend diskutieren wir u. a. die Unterschiede zwischen Vertrauen und Optimismus und wie man sich das „erstmalige" Herausbilden von Vertrauen unter ökonomischen Akteuren vorstellen kann. Auch betrachten wir die ökonomischen Funktionen und Effekte eines Mangels oder einer Erosion von Vertrauen. Der Beitrag versucht, die wesentlichen ökonomischen Auswirkungen des Vertrauens auf das Wirtschaftswachstum, den Konjunkturzyklus, die Einkommensverteilung, etc. systematisch abzuhandeln. Schließlich widmen wir der Frage breiten Raum, welchen Beitrag das Vertrauen zum sogenannten Sozialkapital zu leisten vermag und porträtieren die Erosion von Vertrauen innerhalb, zwischen und gegenüber US-amerikanischen Firmen in Folge der weitreichenden Finanzskandale zu Beginn des neuen Millenniums.

Schlagworte: Unternehmenskultur, Sozialkapital, Organisationsforschung

JEL-Klassifikation: M14, D69, D23

"The essence of market economy is that it involves countless economic exchange transactions. Mutual confidence is what many of those transactions are about. An individual lends money to another individual, relying on that person to return it. This confidence is based on the legal system. If a person fails to meet contractual obligations, there are means to enforce them." (Stiglitz 2002, p. 191).

1 Introduction[1]

Regardless of the level, business administrators and economists in the past eight years have shown an increasing interest in a category pertaining to the field of psychology, namely "confidence", or likewise "trust". Among other factors, this is because an important monograph on this subject written by F. Fukuyama was published in 1995. It does not reduce the importance of a much earlier work by Luhmann on the same topic which was brought out in 1973. It is an indication, though, as to the numbers of readers which scientific works written in German reach on an international level.

However, a single scientific volume, as important as it may be, goes only that far in explaining the "boom" that confidence is experiencing in the field of economics. It is to no small degree the progress made in communication and information technology that has given "confidence" a significantly increased status in the working world. Certainly, it may be considered an undisputed fact that "confidence" needs to be counted among the essential cultural elements and fundamentals of an economy and society. On the other hand, it has not been fully explained so far what the economic dimensions of this term are and how to identify the benefits accruing to (or costs incurred by) the individual business enterprise and society as a whole as a result of the existence or nonexistence or erosion of confidence. This treatise is intended to contribute to that goal.

2 Confidence as an Object of Experience

The interest economists take in "confidence" is nothing new; however, it has been greatly revived in the past years, as was stated above. There are several "real" reasons for this. The following might be

[1] This contribution is a completely revised and considerably extended version of my earlier papers (Sell 2002b, 2003a and 2003b). I would like to thank Marcus Mittendorf and Marcus Wiens for their excellent observations and comments.

the most important ones: On the one hand, the modern working world has changed at a rapid pace, and teleworking, E-mail, virtual enterprises, networks, video conferencing and other aspects of communication technology (CT) and information technology (IT) have profoundly changed the "traditional" relationships – if they ever existed, that is – with the workplace, with coworkers, and with superiors. In many ways (though not in every way, as will be explained below) the direct, personal and thus interactive contact between acting individuals has become weaker. If you watch commuters on a platform at the train station in the morning, you will see people standing around silently or busily talking on their mobile phones, but rarely communicating with each other. At the same time, though, the need for "confidence", for "confidence in relationships" has not diminished, but rather has increased. This is not surprising: The less we are able to verify or control the behaviour of coworkers, subordinates, etc. through our own presence, the more we seek to be able to rely on fairness, continuity and reliability.

As Reinermann (2002, p. 169) stated, the most essential feature created by IT, the Internet, "has brought about a large number of innovations which are based on the transparent communication between individuals equal in rank, and quite pointedly not so on hierarchical control." This is an important issue, because at least since Fukuyama, if not earlier, there have been assumptions that there might be an important connection between hierarchy (forms and strengths of hierarchy) on the one hand and confidence on the other. We will come back to that later. Moreover, with IT and CT came a decisive change for the people (Reinermann 2002, p. 167): The requirement for them to stay at a particular location ("fixed network", "PC workstation") has diminished dramatically. Presumably, this also causes an increased demand for confidence, or at least for reliability. For frequent changes of location make people increasingly dependent on the "functioning" of their own environment, which is subject to change.

The above quotation from Stiglitz (2002) intends to draw conclusions from mere observation and/or experience during the economic transformation process, and it points at one important partial aspect of trust: as empirical studies (Zak/Knack 2001, p. 311) found out, "trust increases with formal institutions", among other things. This is so because formal institutions tend to building trust (ibid., p. 316). Why? A proxy for formal institutions is "contract enforceability" (ibid.). Hence, the existence of formal institutions elevates the likelihood ("trust") to see legal norms respected. But this is not exactly what we mean by trust: "people may trust each other only for fear of legal punishment. If this were the case, then the effect of trust would simply be a reinterpretation of the role played by legal enforcement" (Guiso et al., 2001, p. 6). Moreover, because "legal enforcement is a substitute of trust" (ibid., p. 26), people are in special need to put confidence in other persons when there are *no* legal systems and *no* formal mechanisms to enforce obligations.

3 Confidence as an Object of Recognition

Therefore, one might argue in this vein that "confidence" may be dispensed with if relationships between the parties involved can be regulated through contractual provisions, with the agreed (implicit or explicit) contractual penalties acting as the enforcers of such provisions. The new institutional economics (Richter/Furubotn 1999) and especially the formal theory of contracts have developed a whole array of elegant, mathematically sophisticated models over the past 20 years that demonstrate which are the conditions that have to be met to make the incentive compatibility of contracts on all sides big enough for the parties to expect that the contractual provisions will be met. Most recently, however, there have been contributions – such as from the principal agent theory or from the economics of transaction costs – which, generally speaking, deal with those very situations in which the parties involved deliberately make do without a contract, wishing to get involved with their counterparts, and even desiring to have confidence in them. Explanations have been offered not only by the new institutional economics but also by game theory (Demougin 1999, Albert 1999), by organisational psychology (Bissels 2002) and other sub-disciplines of economics such as the economic research of business cycles (Sell 2002a). What has come from all this? All have contributed to the phenomenon, but in the end you ask yourself mainly one thing: Did I learn something about "confidence" or rather something about "cooperation", "credibility", "reputation", "transparency", etc.? Time and again the attempt has been made to use possible surrogates to make "confidence" a tangible thing. We have to ask the critical question as to why the economists, being the representatives of a behavioural science, do not want to become more adept at observing and listening. This is another reason for why there is a need for an in-depth economic analysis of the phenomenon of confidence. As is generally known, the recently deceased German philosopher Hans-Georg Gadamer defined hermeneutics in its entirety as the art of listening (or of being able to listen), for even our everyday language is full of confidence relations that show us the way to economic understanding.

4 Confidence Results from Investments and Becomes a Production Factor

In the German language, there are known figures of speech such as *jemandem einen Vertrauensvorschuß geben* (literally: "to give someone an advance payment of confidence"); under the best of circumstances you may *Vertrauen schenken* ("to present someone with your confidence"), or you may choose the more cautious variant of *Vertrauen in jemanden setzen* ("put your confidence in someone"). In doing so, we often accept the fact that this makes us vulnerable (Luhmann 1973). Conversely, we would like to "win" the confidence of our counterpart. This we do, for example, by taking "confidence-building measures" (a term that was readily used during the Cold War era and also during the initial OSCE conferences). From an economic perspective, all of these verbs are flows that symbolise nothing but an investment (even including a "lost" advance payment that we actually have no intention to retrieve) or an "invitation" extended to our counterpart to do precisely that, i.e. to make such an investment. If the investment "pays off" for us, that is if it shows a positive internal rate of interest, we are willing to repeat it. This is exactly where the game theory finds justification – trust can be built among players if they play only tit-for-tat in a repeated prisoner's dilemma (La Porta et al. 1997, p. 333) – and why Berg et al. (1995, p. 123) can talk about "investment games". We may well agree with Ripperger (1998) in that confidence is about fairly risky investments intended to stabilise uncertain expectations or to reduce behavioural risks or, more generally, to reduce uncertainties and the complexities of social actions (Bissels 2002), which in the end comes down to risk reduction. However, this concept needs to be thought through: If it is correct that a market economy needs the Schumpeterian entrepreneur, who is characterised by the fact that he is willing to take ever new risks (in new markets, with new products or procedures), then it becomes also clear what the correlation is that exists between confidence and risk. Confidence creates additional room to move for the Schumpeterian entrepreneur. Consequently, confidence and risk do not compete but complement each other. The pioneering entrepreneur may, if other sectors within his business enterprise are "secured" by a sound foundation of confidence, invest his "venture capital" – H.-W. Sinn (1986) called it the *production factor 'risk'* – in those areas where amortisation is particularly high, such as in future-oriented sectors. Therefore, confidence not only makes it possible to reduce certain risks but also to create a more clear-cut risk profile of entrepreneurs.

As is well known, continued investments will result in capital formation. Accordingly, confidence now has the character of a stock ("I do have his confidence") or, to be more specific, that of an accumulable production factor, such as is frequently used in the modern theory of growth. In this, reciprocity plays the major role: After all, the actual goal is to "have confidence in each other" (flow) and, finally, to deal with each other "in mutual confidence" (stock). The returns of our own investments correlate positively with our counterpart's investment returns.[2] It follows that confidence must not be confused with "cooperation", for even in a cartel there must be cooperation, for good or worse, and yet nobody would harbour the rather absurd idea that confidence between the parties involved might be what this cooperation is based on. If my counterpart had no confidence in me, my own confidence in him would not amount to much in the long run. Here, the difference to

[2] "Certain types of commitment … change the initial game into one in which mutually beneficial courses of action become equilibrium strategies when in fact they were not so initially" (Dasgupta 1988, p. 55).

"credibility" becomes clearly visible. As opposed to confidence, credibility is – initially – a one-sided phenomenon: While you can indeed lose it, you can never give it.

Admittedly, the two do have some points in common. When taking as a basis Luhmann's appropriate differentiation between personal confidence and what is called "*confidence in the system*", such as we (can) have towards institutions like a central bank, this kind of confidence in the system may dwindle at a rapid pace because of opportunistic practices, such as in monetary or exchange rate policy. A grave loss of confidence (in this case meaning: confidence in the foreign currency) literally cuts the ground for risky decisions from under the feet of entrepreneurs in a way that bars them from taking such decisions. In the process, it is completely irrelevant whether the observed willingness to take risks is exogenous (risk-love ex-ante) or endogenous, for example, as a function of governmental guarantee-related behaviour. Can, for example, confidence in a currency be measured? Yes in principle it can; the following calculus is rather simple, even though one may draw on economic relations which are quite elementary and therefore resilient, too:

Relative (stochastic) purchasing power parity:

(1) $$\hat{E} = \pi_i - \pi_a + \varepsilon \;\; ; \;\; \varepsilon \approx (0, \sigma^2)$$

Interest rate determination according to Irving Fisher

(2) $$r_i = i_i - \pi_i^e$$

(3) $$r_a = i_a - \pi_a^e$$

Subtracting (3) from (2) gives:

(4) $$r_i - r_a = (i_i - i_a) - (\pi_i^e - \pi_i^e)$$

The forming of rational expectations over (1) leads to:

(5) $$\hat{E}^e = \pi_i^e - \pi_a^e$$ in (4)

(6) $$r_i - r_a = i_i - i_a - \hat{E}^e$$

The arbitrage condition requires: $r_i - r_a = 0$ and therefore (6) results in:

(7) $$i_i = i_a + \hat{E}^e$$

Consequently, at a given foreign interest rate the expected rate of depreciation of the domestic currency becomes lower as the domestic interest rate falls[3]. But the greater the confidence in a currency is, the lower the expected rate of depreciation becomes: “Depreciation of the exchange value of a national currency as the result of loss of confidence by investors in the currency of a country pursuing unsustainable policies …“ (Schwarz 2002, p. 459). Currency depreciation, hence signals in turn a loss of policy credibility, a fact which Knack and Keefer (1997, p. 1266) found in their econometric experiments where the coefficients for trust fell, when currency depreciation was added to the regressions.

However, a “credulous audience” will not demand from an economic institution that it should implement its announcements down to the last letter and at any given time (just think of the German Bundesbank’s target zone for M3). Goal violations are accepted inasmuch and as long as compensating action is taken that may be interpreted as a “timely reversal”. What is decisive is that the promised results do materialise in the medium and long term (Maaß/Sell 1998). Otherwise, there is a loss of confidence, which goes along with a loss of credibility. “Reputation” (Ripperger 1998) then would be the public information as to the “credibility” of an acting individual or institution.

Luhmann’s analysis of trust in institutions helps us to make a further differentiation: the *erosion* of confidence is much worth than lack of confidence, simply because the good taste of trust could already be felt earlier. We tend to miss those things we already enjoyed before much more than unknown panaceas. More precisely, institutions like central banks can confirm that a lack of confidence among the public leaves them with the expensive option of the “taking the medicine” strategy (Sell 2001, pp. 129-156). However, the *erosion* of confidence means to them that the cheaper “fixing” or “cheating strategies” are out of reach in the first place. If the purpose is to overcome the *erosion* of confidence, they may be left with the “regaining reputation” strategy which is by far the most expensive one (ibid.).

“I am confident that I can do it” – what does this colloquial, often-heard phrase stand for? We may safely assume that it does mean that a person is willing to take risks. By slightly altering the phrase into “I have confidence in myself”, we can easily see that it is also about confidence – or trust – in one’s own abilities. Obviously, this is the very precondition for being willing to take risks, for it is the very essence of economic risk that a business decision may result in a future profit but just as well in a loss. To be confident in one’s own is an attitude which apparently has its links to the notion of optimism. Here, there is some confusion of terms in the literature.

3 “The degree of confidence … as measured by the pattern of spreads” (Goodhart 2002, p. 231).

5 Optimism vs. Confidence

In the framework of game theory “trust” or “confidence” is modelled and/or interpreted for example as a particular subjective probability assigned by the principal in the event that the agent implements the required level of input, care etc., which is the action desired by the principal (Demougin 1999, p. 305). Both players find themselves in an agency relationship characterised by “moral hazard and adverse selection” (ibid., p. 303) and can be taken to be risk-neutral. It is typical for such a game to find a trade-off for the cheating strategy of the agent; on the one hand the direct (short-term) gain of cheating may exceed the rent of implementing the required input but, on the other hand at the (long-term) risk that the game ends. Hence ex-ante, it is not clear whether the expected present value of cheating dominates vis-à-vis implementing.

As we have explained, players are – excluding exceptions – more often not in an agency relationship, but confronted with game situations of a Kydland/Prescott/Barro/Gordon world. What sort of meaning can trust or confidence have here? Obviously, confidence has to be linked to the issue of expectations. According to the view put forward by Maaß and Sell (1998, p. 520), confidence or likewise confident expectations, can persist even if an institution like a central bank dares to cheat the public as long as cheating is regarded only as a transitory phenomenon and it implies “the belief by private agents that any actual monetary target deviation by the central bank will be 'healed' by a compensating policy in the (near) future so that the medium to long-term achievements in the field of price stability are not put in danger” (ibid.). Yet, confidence or trust is not the opposite to scepticism/pessimism (the first being some sort of weaker pessimism) as some papers tend to argue implicitly, but suspiciously. Accordingly, scepticism or pessimism matches optimism (Allen/ Faulhaber 1988, p. 398).

If one would still be interested to relate the notion of confidence to the attitude of optimism, the answer is straightforward: Contrary to the observation of confidence, where at least one individual has to be confident in someone else, optimism (pessimism) in comparison, has to do with (the lack of) self-confidence. In the definition of Heifetz and Spiegel (2000, pp. 1 and 2), “optimists overestimate the positive impact of their own actions, pessimists underestimate it, and only realists assess it correctly”. We will come back to this judgement. Max Weber, by the way, has apparently been a strong opponent to any “naïve” optimism among philosophers; as Hennis (2001, p. 17) reports, he blamed some of his colleagues for their attempt to find the road to happiness and justice in science. “Who would believe in that”, he is quoted, “only great children on their reading desk or in press rooms” (ibid.).

Another possibility to differentiate between confidence and optimism is put forward by Ripperger (1998): As in the case of hopes, optimism is related to exogenous risks with the important implication that in principle no contract can be made with the agent who possibly triggers the uncertain events. As opposed to this, confidence is related to endogenous risks, that is to situations where the risk taken by some agent is dependent of the behaviour of another agent. In principle, a contract can be signed between these two agents (ibid., p. 38). Such a contract may (but must not) be one between an agent and a principal.

A number of authors identify the attitude of optimism with the observation “that most people are overconfident about their own relative abilities, and unreasonably optimistic about their futures” (Camerer/Lovallo 1999, p. 306). Or, as Hvide puts it, “if (a, the author) worker is overconfident, his confidence level exceeds his true (average) ability” (2002, p. 20). Yet, the correlation between optimism (pessimism) and overconfidence, is far from being clear: One may argue that it is not the optimists who misjudge the capabilities of their adversaries, but rather the pessimists. Optimists are not automatically “overconfident about the precision of their knowledge” (Odean 1998, p. 1888). On the contrary, it may be that they transfer a job/task to other agents because they expect them to do a great job. They can be optimistic about the outcome, no matter if they themselves or others will be the acting persons. As a consequence and contrary to Heifetz and Spiegel (2000), it is definitely not a must in the attitude of optimists to “overestimate the degree to which they were instrumental in bringing it (the positive result, the author) about” (ibid., p. 1893).

As a result, economic agents tend to execute economic decisions – like business and/or market entry – which, without misjudging one's own relative skills, might not have occurred. It seems as if optimism comes in here as sort of illusion and/or missing realism, as the subjects concerned “seem to neglect the fact that they are competing with a reference group of subjects who all think they are skilled too” (ibid., p. 307). Statistically spoken, a majority of agents pretend to be above the average in skills, although, if the trait is symmetrically distributed, only half of them can be. Optimists are blamed for not thinking that “everybody else is thinking the same way” (ibid., p. 315). In his recent paper, Hvide (2002, p. 22) addresses the issue of overconfidence in labour markets. In a two periods game between firms and workers, “a moderate degree of overconfidence gives the agent the highest expected utility” (or wage, the author). Such a moderate degree of overconfidence is labelled “pragmatic belief”. The main force behind belief is the incentive to take into account what pays rather than what is true (ibid., p. 24). Some overconfidence pays because the firm has to give a higher offer in time 1 to attract the worker if he, the worker, has high expectations about future (time 2) job offers.

Yet, to be overconfident in the impact of one's own actions, or to overestimate the effectiveness of a policy adoption, does not cover all aspects of optimism. There are optimists who do not act at all in the sense of an entrepreneur or of an adviser to the policy-maker, but simply as consumers. Optimism/pessimism and consumers have a lot in common. The optimism of single consumers will be reinforced – and hence translated into a growing consumer demand on the macroeconomic level – once the well-known bandwagon effects (Sell 1997, pp. 8-10) come into play. What has been used to be framed "herding" in modern analysis of international financial crises (Sell 2001), has a corollary in the leader-follower relationship in consumption behaviour. Bandwagon effects can work in both directions and so contribute to understanding why consumers beliefs tend to homogenise during both the upswing and the downswing phase of the business cycle. Burdekin and Langdana (1995, p. 145) conclude that there is an "enhancing catalytic effect of consumer sentiment. Therefore, fluctuations in explanatory variables that are not simultaneously accompanied by fluctuations in sentiment, might have a disproportionately lower effect on overall economic activity".

6 Consumers' Confidence

The majority of papers intending to make use of indicators which could reflect consumers' beliefs, draw on measures of so-called "consumer confidence" (Acemoglu/Scott 1994, p. 1) or "consumer sentiment" (Delorme Jr et al. 2001, p. 864). The Gallup-Survey, for example, takes into account (and later averages over them) responses to five questions given by consumers who were asked about their last year experiences with "general economic conditions" and their "household finances", the "expectations of change" in these variables over the next year and, finally about whether "it is a good time to make a major purchase" (Acemoglu/Scott 1994, p. 3). However, computing a simple average of these responses is like comparing apples with pears: Whereas having positive (negative) expectations regarding the future in the forward looking answers reveals, by and large, the size of optimism (pessimism) among the interviewed people, the backward looking answers – and also the answer with regard to the propensity to purchase in the present – give some hint as to what extent people were surprised (disillusioned) in the immediate past. The multidimensionality of combining different attitudes with different types of errors gets lost, if one simply identifies low (high) confidence with "consumers (being) depressed (glad) and pessimistic (optimistic) about the current state of the economy" (Delorme Jr et al. 2001, p. 866). In this simplistic view, pessimism (optimism) is "caused" by a good (bad) expected state of the economy and it is no longer possible to explain the business cycle as being driven by strong private beliefs among private agents and the corresponding updating of these beliefs according to the development of the economy. If agents are either just "pessimistic" or "optimistic", then there is no room for explaining the turning-points in the business cycle.

The ICS (University of Michigan) is based also on the responses to five questions; "among the five questions used to compile the index are two major components: One reflects consumer assessments of current economic conditions; another focuses on expectations about the future" (Kinsey/Collins 1990, p. 206). Theses two components of the ICS "make up two separate indices called the index of consumer expectations (ICE) and the index of current economic conditions (ICEC)" (ibid.). This separation is an improvement, but still: How are expectations towards the future and the perception of the present related to each other? In a rational expectations framework Kinsey and Collins (1990, pp. 209-214) estimate the ICE as, among other things, a function of the ICEC. This procedure is, if at all, only half way of explaining the disillusion of optimists/positive surprise of pessimists.

Notwithstanding these shortcomings, many of those papers come up basically with a correct message: Not only is the state of the economy reflected in consumers' confidence, but also "consumer sentiment causes fluctuations in GNP" (Matsusaka/Sbordone 1995, p. 297). Empirical investigations support the presumption that consumer confidence is positively (negatively) correlated with good (bad) news from the real macro-economy (Delorme Jr. et al. 2001, p. 866). It can also be shown that indicators of consumers' confidence do work as leading indicators for the change in the consumption of goods (ibid., p. 868). There is also econometric evidence for the hypothesis that "exogenous changes in consumer sentiment have real effects on output" (Matsusaka/Sbordone 1995, p. 317). Why this can be and how it can be, are key questions addressed in a different paper (Sell 2002a).

7 Measuring Confidence

This brings up the more general question how to "measure" trust or confidence. It seems as if the recent paper by Glaeser et al. (2000) offers a view shared by the majority of the professionals working in that area of research. However, how much "confidence" can we put into their methodological approach? As the authors say, "we measure trust … by conducting experiments with monetary rewards" (ibid., p. 812). Then they regress returns from the experiments "on personal characteristics of our subjects" (ibid., p. 839) and they compare these results with the outcome of surveys (results from the National Opinion Research Centre's General Social Survey, GSS). Following the authors, "experiments measure preferences … much more convincingly than surveys, since experiments provide direct observations of behaviour" (ibid., p. 841). Some econometric results (size, sign and significance of estimated coefficients) don't convince even the authors and they hypothesise that "failure arises because of the novelty of the experiment" (ibid., p. 836). Here at last there seems to be quite a bit of danger – notwithstanding the brilliant and scrupulous methodological steps taken by this group of researchers – to fall deeply into the Lucas-critique trap: not only is the experiment situation quite different from the daily “yes-or-no putting trust into someone else” scenario, but also the continuos novelty of trade-offs and decision making challenges is a constant and not an exception in our lives.

Therefore, as long as it proves difficult to observe economic behaviour under “normal circumstances”, the outcomes of experiments should be treated very carefully and one should be even more cautious to interpret signals from experiments as measures of trust. National surveys, with all their well known limitations, may well contain more robust information on the beliefs, hopes and further sentiments of the people, such as the willingness to trust others. In the same vein, Alesina and La Ferrara (2002) made use of the GSS survey (1974-1994) for their extensive and rigorous econometric research on “who trusts”. They found three groups of variables which can “explain” fairly well the propensity to trust: individual characteristics (education, income, etc.), belonging to discriminated groups and thirdly the type of community where the agents live (income inequality, mobility, etc.).

Zak and Knack (2001, p. 306) have based their empirical research on the trust phenomenon on data from the World Values Surveys (WVS). The measure of trust used is almost identical to the GGS survey: the percentage of respondents in “each country agreeing that most people can be trusted against the alternative that you can’t be too careful in dealing with people (ibid.). In this sample, there are data available from 41 market economies in three waves (1981, 1990/91, 1995/96).

8 Confidence as a Consumer Good

We would “jump too short” if we were satisfied to accept the above identification of confidence as a capital good. Our everyday language, which after all does nothing else but reflect our treatment of goods created and/or cultivated by human beings – thus reflecting “culture” – helps us here, too: A known phrase that we use, for example, is that we “enjoy” somebody's confidence. As understood by economists, this makes confidence a consumer good. This is a clear (and further) indication that such specifications of benefit functions that are merely relating to material goods are highly incomplete at least. We have known this already from those cases of “do-gooders” who, while ever willing to make a donation, are not only concerned with the well-being of others but just as well with their contentment about their own, generous actions.

Confidence as a capital good *and* a consumer good? As we know, the classical world had far less difficulties with considering one and the same item as a consumer or as a capital good, depending on how it was used (we just have to think of grain in David Ricardo's explanation on the economic surplus of agriculturally used areas). In principle, a consumer good may be privately or publically owned. In the internal activities of a business enterprise or between business partners, the wording cited above expresses somebody's contentment as to the fact that he has direct, uncomplicated, even "confidential" access to (or dealings with) his counterpart or superior, which other individuals in his environment do not have in this form. Therefore, it is a special, "exclusive" consumer good, and as such a purely *private* one. The social character which confidence might also take on – admittedly, as a capital and not as a consumer good – will be discussed at a later stage.

Does confidence diminish the more you use it? In other words: does the consumption of confidence lead to its *erosion*? Not at all, or putting things more cautiously: hardly so, if you treat it carefully. In this respect, we are reminded of the widows in a Bible story who use a jug to fetch water from the well without ever using up all the available water (Sell 1991, p. 352).[4] An early example of the modern concept of sustainability! As opposed to long-lived consumer items, confidence is not necessarily subject to wear and tear. It can, however, be "gambled away". This can happen because of even the most minor breach of trust, by a breach of loyalty or faith, etc. Having said this, we may also state that while the process of building up (and later on enjoying) confidence can be quite time consuming, confidence may fade away in an instant.

9 On the Onset of Confidence

As Berg et al. (1995, p. 124) have correctly stated, the majority of contributions to the trust phenomenon are quite weak when it comes to explain why and when confidence emerges in the first place and/or whether "trust will exist absent repeated interactions" (ibid.). This finding is surprising, though. Because daily business life – perhaps more than "Room A/Room B-experiments" – offers a bunch of observations which can help to understand the inherent process(es). Take the case of the ferry cruising between the island of Jurèia (Porto do Prelado) and the mainland in Brazil, which serves to grasp some aspects of mistrust instead of initial and "sustainable" trust: the passengers pay for the two passages only on their way back from the island, that is during the second part of the trip. This comes as a signal of mistrust and not of confidence: only then they can be "sure" that the ferry will take them back. The "confidence" put in the passengers by the company running the ferry is no trust either, because the ferry is the only possibility of return to the passengers. Here we have a nicely designed self-enforceable contract in an environment of mistrust. It works perfectly among other things because of the lack of alternatives. And it functions without a formalised contract. Hence, the lack of formal contracts is not a sufficient condition for the observation of trust. If passengers would pay in advance – other things being equal – then they would place unilaterally trust in the ferry company indeed. Usually, trust or likewise confidence can only be explained in a more sophisticated context. The majority of business transactions, as is well known, occur in a world of different islands – very much in the vein of E. S. Phelps' famous parabola – and not between an island and the mainland. Also, there is an "exchange" of reciprocal demands/needs with more than one transaction or service involved.

Suppose there is just one ferry and the ferryman (F), domiciled in island A, happens to have just one passenger in the morning, a salesman (S). Assume S has no cash at all to pay the transport, but that he can leave his car on island A as a sort of deposit. For F there is not enough time to verify the value of the car before the trip. The intention of S is to make a deal (D) on island B which should enable him to pay for his trip on his way back. There are no more islands and no more ferries within reach. In principle, the ferryman has a moral hazard problem as the salesman might feel the opportunity to cheat (see Zak/Knack 2001, p. 297) the ferryman. He does not know a-priori whether S possibly has the option to stay, at least for some time, on island B. Nor can he be sure that the car is no lemon and that the deal D will be profitable. Will F ever go for a trip to island B and hence become a creditor to S in the first place? Which alternatives does he have?

(i) The first calculus F can make is to assess whether the selling price of the car (p) can cover the costs of transport from A to B and from B to A. Most likely, it will. F always has the choice to go back to A and to sell the car. This inspection, however, is costly and time consuming. He will then only come back to island B to pick up S if the realised selling price p (net of transaction costs) did at least cover the costs of the first travel (from A to B and from B to A). If F realises (or better: anticipates) a selling price of p (net of transaction costs) above the travel costs from A to B and from B to A, he has an argument for himself to put trust in S with regard to the success of D. Then, it makes sense to save time and costs and to avoid the verification of the selling price p. Participating in the net revenues of D[5] – making the simple assumption of no further passengers – most likely pays for the trip. For S it is important to anticipate that F will trust him. Otherwise he cannot reap the benefits of the deal (which can only be realised on island A, an information which is private and not disclosed to the ferryman) nor has he the chance to make further deals as long as he is "locked in" island B. F could "abuse" from its resource monopoly (the ferry) and leave S alone on island B.

[4] "Trust, like other moral resources, grows with use and decays, with disuse" (Dasgupta 1988, p. 56).

[5] If F is risk-averse, he will prefer to be paid from the net revenues of D at least the ordinary fare price. If, however, F is not risk-averse, he may prefer to be paid a constant share of the D revenues. Notice that F has now the typical choice problem of the landlord whether to sign a fixed rent or a share cropping contract with the tenant.

But then, no profitable arrangements with S can occur in the future. We learn: credible announcements give rise to mutual trust. But there are more alternatives.

(ii) Suppose F decides to stay at the port of island B and to wait for S. Whether F takes such a decision is uncertain for S ex-ante. Therefore, the calculus concerning p and the travelling costs still holds. But waiting for S is no free lunch for F: now we consider the opportunity costs stemming from the foregone earnings of another trip from A to B and from B to A with passengers P. The decision to wait is only profitable if the expected share of D (the option is waiting) – suppose the expected share declines for F through time because the time S would have to wait for him represent opportunity costs in the sense of preparing a second deal – exceeds the net revenues from a second trip with P *and* from the reduced share of D (the option is transporting P). Here, some additional trust in the capabilities of S (he is able to sign contracts and seal deals quickly) is needed. We learn: signalling correct assessments of market values gives rise to further trust.

(iii) F decides from the very start to make many, at least two trips, that is to keep his business running. Suppose that he sells the car, once back from his first trip, as he comes back to A for new passengers anyway. He has initially earnings of p minus the corresponding travel costs. If S knows that the ferry will go on travelling in any case, we possibly have a different calculus than above: now the selling price p may well fall below the costs of a single trip from A to B and back to A. Because if D is successful, S can try to "compensate" for the low selling price p with a sufficient large share of D. However, S bears the risk of being expropriated by F (as he wants to come back to A), if the selling p showed to be comparatively low. Here we see that a prohibitive high compensation payment can be the cost of misusing the trust of someone else. Or, put it otherwise: honouring trust saves transaction costs (Alesina/La Ferrara 2002, p. 207). Yet, F could again "abuse" from the fact that S is "locked in" the island and ask for an unfair share of D even when the selling price of p covered his expenses. Building up confidence between two parties, hence, may imply to renounce on the temptation to "extract" additional profits from a business partner who is "locked in" or in a classical "hold up" situation (Richter/Furubotn 1999, pp. 93/150). This insight has also been gained in recent contributions of evolutionary game theory when explaining the paradoxical outcomes of ultimatum-game experiments (Güth et al. 1982, pp. 367-388 and Güth et al. 2000, pp. 83-110).

This setting embeds two essentials of trust set up by Dasgupta (1988, p. 51):

- In "the sense of correct expectations about the *actions* of other people that have a bearing on one's own choice of action
- when that action must be chosen before one can *monitor* the actions of those others."

Our "story" moreover satisfies the 4 conditions set by Berg et al. (1995, p. 126) for the onset of trust:

- both agents (ferryman, salesman) are looking for positive profits;
- placing trust in the trustee puts the trustor at risk (notice that the two agents are both trustor and trustee at different stages in our example);
- the trustee's decision benefits the trustor at a cost to the trustee (dito);
- both trustor and trustee are made better off from the transactions compared to the outcome which would have occurred if the trustor had not entrusted the trustee.

and finally Zak's and Knack's definition of trust in a society according to which it

- "can be defined as the aggregate time that agents do not spend in verifying other's actions" (ibid., p. 303).

10 Confidence and Economic Growth

The existence of an additional accumulable production factor "confidence" of the type described contributes positively to economic growth; this, too, conversely seen, is an explanation for the poor performance of former Socialist planned economies, which were systems of permanent suspicion, control and mutual distrust[6]. Like any accumulable production factor, confidence may be subject to a writeoff process: The capital of confidence may very quickly *erode* if somebody "abuses our confidence", proves to be "unworthy" of our confidence or, conversely, if we "lose" our business partner's confidence.

Write-offs may also be only moderate, such as when our counterpart does no longer have our "full confidence", when we choose to "trust him only so far", that is, if what we have in him is "limited confidence". Thus, confidence is by no means a binary variable (all or nothing), as is sometimes suggested. Or, as Zak and Knack put it, "there are degrees of trust" (2001, p. 298). These "limited forms" of confidence function like systems of self-protection. In the case of an *erosion* of confidence, the losses implied for us should, however, be limited as well.

If we consider confidence to be a production factor, its contribution to economic growth becomes readily evident. In substitutional production functions, the existence of a production factor helps us to economise on other resources. Insofar, the visual depth of transaction cost economics is not big enough as far as the phenomenon of confidence is concerned. What is saved – if the confidence is there – is not only the transaction cost but cost as such in the conventional sense of the consumption of resources which are valued at factor prices. Confidence can be a substitute for employing legal departments, or at least our "in-house attorney" (at least to some degree) as well as for "monitoring"; it can reduce the cost for communications and transport, and it can make insurances and the arranging of contracts redundant, etc. And, as Zak and Knack (2001, p. 296) have so convincingly explored, it reduces the hours spent investigating one's broker to whom we have delivered our monetary wealth for financial investments.

It is also possible that confidence may only contribute to the output if it exists in fixed portions in relation to other production factors. In that case, it may quickly develop into a bottleneck factor for economic growth. Unless confidence is available in sufficient quantities, production will not be taken up at all or will remain below a profitable level.

Fukuyama (1995, p. 196, footnote 5) pointed to another important contribution that confidence makes to growth and which refers to a society's preparedness and eagerness to be innovative: If all the employees of an industrial sector are not much willing to have confidence and are distrustful, especially so with regard to innovations "because they fear these innovations might be used to their disadvantage" (Blümle/Schoser 2002, p. 278), this will cause a tendency to delay or even hinder technological progress. Now, the theory of finance tells us that risk avoidance is a quite rational behaviour. If *looking out* also involves *looking ahead*, a risk-averting strategy may well consist in seeking to improve one's own qualifications as early as possible so as to be able to meet the future, more stringent demands of one's job.

The following statement applies to work relations in a modern business enterprise: "The network economy is based on technology but can be established only on relationships. It starts with chips and ends with confidence" (Kelly 1999, p. 190). Among other things, this is caused by the fact that the new technologies require extreme specialisation. This necessitates an efficient self-organisation on the one hand and the ability to communicate and have confidence on the other. Confidence becomes the very precondition for the successful development of new technologies (Blümle/Schoser 2002, p. 267).

6 "At the beginning of the transformation process, people had so little faith in the future that everyone took whatever he could get hold of: Everybody believed that the others would take away the glass panes from the greenhouse - and demolish it by doing so." (Stiglitz 2002, p. 191).

The empirical research undertaken by Zak and Knack (2001, pp. 307-311) shows that the assumed growth effects of trust can be detected econometrically: in their results, "growth rises by nearly 1 percentage point on average for each 15-percentage point increase in trust" (ibid., p. 309). Conversely, "if trust is sufficiently low, growth stalls" (ibid., p. 311). They also found that institutions "affect growth via their impact on trust" (ibid., p. 297). This aspects points at the urgent need for the new institutional economics do devote high and even more attention than until now to the trust phenomenon.

11 Confidence and the Distribution of Income

A number of papers, for which the contributions of Knack (2000) and Knack and Keefer (1997) can serve as good examples, tend to demonstrate econometrically that there is a negative impact from inequality of income distribution on "trust", no matter how measured the latter. Knack and Keefer (1997, p. 1282) regressed trust on income inequality, measured by the Gini index: "the Gini coefficient for income inequality is strongly associated with lower trust" (ibid.). Knack finds that each 4-point rise in the Gini index of income is associated with a 1-point drop in the social capital index (ibid., p. 30). The social capital index in turn was created by taking the mean of three standardised (to have a mean of zero and a standard deviation of one) variables. The first of these is a proxy for trust: "the percentage of a state's survey respondents who agree with the statement that 'most people are honest' "(ibid., pp. 9/10).

But, letting enter the Gini coefficient as a linear variable in a regression equation 'explaining' trust as a part of a "social capital index" is by no means straightforward. The reason for that is easily told (cf. Blümle/Sell 1998, pp. 337/338): suppose you find yourself back in the "real socialism model" of the Soviet Union and its satellites. Where effective, the system had the tendency to bring the Gini index down to sometimes extraordinary low levels, in comparison to market economies. As a result, a climate of envy and distrust ('hell on earth') could be observed, which was not surprising at all, given the obvious dispersion in the distribution of skills and capabilities in any population. Therefore, the variable of the Gini index should be related to the trust phenomenon, albeit in a non-linear, perhaps quadratic form.

12 Confidence and the Business Cycle

As has been described above and as is also to be found in other languages – "that particular form of confidence known as credit – the effective belief in the business trustworthiness[7] and ability of other parties" (F. Lavington 1925, p. 63) – the most fitting image of confidence as a flow is that of an advance payment, that is, a credit. Since, however, confidence (as a stock) can last only if it is mutual, we may well picture it as a network of reciprocal credit relations. This reciprocity is also, and very much so, the factor which reduces the risk for the investors involved. Instead of falling back on securities, creditors may "put up" debts of their own. If the confidence one had so far is shaken or even shattered, this occurrence will have the tendency to cause a breakup of the credit relations described and, in the worst case, will result in a cumulative wave of cancellations of mutual credits which in turn causes a severe economic contraction. Loss of confidence also makes itself felt in that there is less inclination to accept risks elsewhere (production, sales, financing). Whenever the loss of confidence between agents and/or enterprises or between agents and institutions becomes a general phenomenon, we may call this process "*erosion* of confidence".

Conversely, an increased buildup of trusting business relations will easily cause an economic upswing and mobilise forces that enhance the willingness to take risks. This is the business-cycle aspect of the phenomenon of confidence.

13 Confidence as Social Capital

Let us turn now to a question frequently raised in literature, i.e. whether confidence is a certain form of social capital. Robert Putnam (1997, p. 67) has defined social capital as "features of social organisation such as networks, norms, and social trust that facilitate co-ordination and co-operation for mutual benefit". Carter and Castillo (2002, p. 28) say that social capital enhances the "incentive compatibility of non-contractual or legally unenforceable exchange" (ibid.).

If this is supposed to mean that confidence triggers positive external effects (external benefits) in a society – and that the social capital of confidence is therefore always greater than the sum of all individual confidence-based relations – then we may certainly agree to this statement. Also, the concept according to Walter Eucken would apply, who argued that confidence is an element that induces order in social market economies. Without confidence in the system, institutions are limited in performing their tasks in a market economy. Confidence makes regulating superfluous in many cases, especially so if we are faced with over-regulating. The diagnosis of "Eurosclerosis" pro-

[7] "The problem of trust would not arise if it was common knowledge that we were (*at all times*, the author) all trustworthy" (Dasgupta 1988, p. 53).

nounced many years ago by Herbert Giersch is to no small degree a consequence of the lack of confidence – including self-confidence – prevailing in our society.

Added to this is something else: A lack of confidence in a society may not only be regarded as a lack of social capital as a potential additional production factor but it requires – according to Fukuyama's studies – “a strict hierarchy and exact controlling, which is an impediment to a dynamic economy” (Blümle/Schoser 2002, p. 265). Accordingly, a lack of confidence (as social capital) induces expenses for controlling at and between the various levels of hierarchy. In this sense, the lack of confidence (as social capital) swallows up scarce resources which are then no longer available for alternative uses, that is, economic growth. This argument put forward by Fukuyama has spread widely, and certainly it is very plausible.

It needs amplification, though. For once, there are authors who restrict or qualify the “enmity towards confidence shown by hierarchies”. For example, Blümle (2002, p. 8) argues that “hierarchies” do in a way protect the individual because they are based on the principle of order, thus making cooperation possible and, to some degree, allowing confidence to develop. But also this argument has to be extended further to fully understand its dimensions. Admittedly, employees with lower/medium qualification don’t feel unhappy with the control of their performance by their supervisors in the first place. The more and the more often their performance is qualified as good or even as excellent, the sooner their self-confidence will grow. At the pace at which their self-confidence increases, they will be willing to be more responsible for their actions and decisions. Hence, they become prepared for organizational structures which are less hierarchical and more based on mutual confidence.

On the other hand, hierarchies do not only have the effect described by Fukuyama but in a very general way make a society less *permeable*. If, however, permeability signals to individuals that they have the opportunity to advance (more) rapidly, it is in any case a stimulant for performance and, in this way, for potentially higher economic growth. Studies on the differences between the political parties in the USA and on the European continent have confirmed that in our system – especially in the social-democratic parties, which have long-standing traditions – you need to “work your way up through the ranks” to assume positions of importance in the party and in government (Hennis, 1998). It is obvious that such framework conditions do have a negative-selection effect as to the range of people who are willing to assume political tasks. This negative-selection effect prevents the “best qualified” in a society – as the philosophers of antiquity so vehemently demanded – from tending to the political affairs of their own country, and – logically – dampens the effectivity and efficiency of the results achieved by politicians.

Can social capital be "measured"? And if so, how? We have outlined above the way Knack (2000) has created a "social capital index" drawing on a proxy for "interpersonal trust" (ibid., p. 9) which was complemented by indicators reflecting "civic responsibility" (ibid., p. 10) and " volunteer activity" (ibid., p. 11). Ideally, social capital should measure the "level of non-legal enforcement within a community, as … people living in areas with high social capital have a lot of opportunities of "punishing" a person who abuses their trust" (Guiso et al. 2001, p. 28). Also, an index should be able to capture the extent to which a community has internalised its own norms and expects the individuals as part of the community to behave accordingly;, then, it could well serve as a proxy for social capital (ibid.).

14 The Lack and *Erosion* of Confidence within, between and towards Business Enterprises and their Managers

As the contributions of Fukuyama (1995), La Porta et al. (1997) and of other authors have impressively shown, "trust is most needed to support co-operation in large organisations, where members interact with each other only infrequently because they are only rarely involved in joint production" (La Porta et al., p. 333). Empirical evidence is strong for the argument that the performance of large organisations (governments, firms, civic organisations) benefits from the existence of trust. Moreover, "trust facilitates all large-scale activities" (ibid., p. 335).

In analogy to the statements made above, a lack of confidence within a business enterprise will very likely have consequences for the company's levels of hierarchy. It is not only the organisation within given forms of businesses that changes with the degree of existing confidence, but even more: the form of the business enterprise itself becomes an endogenous factor depending on the existence or non-existence of confidence. As a tendency, a considerable lack of confidence will lead to a lack of large private-sector enterprises "in which informal conditions must be replaced by a complex control structure and a feeling of belonging together" (Blümle/Schoser 2002, p. 265).

Mutatis mutandis, this applies also to the relations *between* business enterprises – be it subcontractors, producers of similar products or purchasers of one's own products. A lack of confidence will drastically reduce the willingness to cooperate (more) closely and even the conceivable forming of networks between various enterprises. Synergetic effects, which otherwise might be possible, do not materialise or remain below a satisfactory level. Business enterprises frequently operate based on mutual arrangements that are not laid down in writing, that is, which are based on mutual confidence. Cartels are just not a good example for this, and not only because arrangements between members of a cartel are frequently to the disadvantage of consumers. Something else seems to be much more important: Cartels are hotbeds of distrust. Distrust towards one's partners which are suspected to make clandestine sales beyond the agreed quota; towards potential newcomers who pose a threat to the cartel price; towards the fair-trade commission which seeks to uncover the cartel's subterfuges, etc.

Confidence *in* business enterprises may be seen from various “external perspectives”, such as those of consumers, owners of capital, investors in general, creditors, and even the representatives of tax authorities. Again, we should distinguish between “lack” and the *erosion* of confidence. The *erosion* of confidence is not simply the consequence of a lack of confidence. On the contrary, it may have been that employees, investors, etc. had been “too confident” vis-à-vis the actions of the management in certain companies.

Most recently, the confidence in the business managers of large industrial nations (in the USA these are referred to as chief executive officers, or CEO for short) has been shaken considerably because of various circumstances, including falsified balance statements of large US enterprises (Enron, WorldCom, Adelphia); compensations that reached astronomical levels paid to the top managers of businesses that were subjected to hostile takeovers (Mannesmann); significant increases in salaries which executive boards granted to their members with the blessing of the control boards despite the fact that stock prices were at an all-time low and hardly any dividends could be paid (Deutsche Telekom); insider deals in the stock market made by managers who had privileged access to information (Ivan Boesky); exercising of options on the purchase of shares and selling at high price levels which in part were based on fictitious profits (Samuelson 2002, p. 6) and, last but not least, clandestine pension payments made to top managers, with the interest payments frequently exceeding by far the usual interest rates of the market.

According to a study conducted by Stanford University there were 327 criminal proceedings initiated as early as 2001 against business managers in the USA, which constitutes a 60 per cent increase over the previous year. Experts estimate that this number will again rise considerably in 2002. Meanwhile, legislators in the USA have responded and demand, among other measures, that executive boards (Heilmann et al. 2002, p. 2) should swear to the accuracy of balance statements. Furthermore, there is increasing pressure put on SEC (the USA's stock exchange commission) to provide for a transparent set of rules, including “transparent pockets” of top managers.

Jeffrey Immelt, the successor of Jack Welch, attributed the scandal which occurred at GE and other large US companies to “half-baked business models” and a “miserable corporate culture” (ibidem). This statement sort of “proves” our initial observation that confidence is taken as part of the “corporate culture” in market economies. If we think of confidence as an important element of corporate culture, we might consider the second reason cited by Immelt to be nothing but a "breach of trust" committed against shareholders, tax authorities, etc. The scandals mentioned have destroyed a lot of confidence in terms of social capital [8]. This is what the term "*erosion* of confidence" tends to express. The economies affected now have less resources than before, and this at a time when the economic trend worldwide has hit rock bottom.

15 Summary and Outlook

In this text we have tried to throw a light on the various economic dimensions of confidence. In doing so, it is important to distinguish between confidence as an object of experience and confidence as an object of recognition. Listening and observing will help the economist in approaching the "content" of confidence. This content may be tracked down both on the level of individual economies and that of overall economy. From the author's perspective, confidence is a versatile item which results from investments and becomes a production factor on the one hand, but which can also be a consumer item on the other.

Confidence and optimism are terms often confused. When, for example, research institutes report on the climate of the economy, they draw, among other things, on indices of "consumer confidence" when actually they are interested in the prevailing optimism or pessimism among consumers. As opposed to this, recent empirical contributions on the confidence/trust phenomenon have presented convincing data sets based on national surveys and extraordinarily interesting results from their econometric research.

The explanation of the onset of confidence between two individuals is a question not addressed in many papers, notwithstanding its clear importance and relevance for the matter. In our paper, we have extended a real "island – mainland" story from Brazil to a virtual scenario of two agents and two islands. In this setting, it can be shown that it is the "appetite" for additional earnings which lets the agents engage with and "trust" each other. The parabola also serves to verify the hypothesis that confidence can be "measured" as the time saved for investigation activities.

The contributions to the order of economy, to the business cycle and to growth which come from confidence as a both company-specific and social production factor ("social capital") must not be underestimated. Generally, an increase in confidence goes along with greater governmental and social efficiency (La Porta et al. 1997, p. 336). Even today, "confidence" – understood as social capital – between the acting parties (Blümle/Schoser 2002, p. 282) in different economic regions is

8 "The new ethical problems arise from the fact that investors and employees are tempted into accepting risks which they have not understood and in part have not knowingly accepted. … This has created a moral vacuum that does

even considered as an important factor for positioning oneself in the locational competition which globalisation has fostered so much.

As is demonstrated by the scandals of the formerly flourishing “New Economy”, the abuse of confidence is often sanctioned by introducing or tightening control systems and, for the time being, by greater distrust on the part of the individuals. There is a considerable risk that distrust spreads throughout the economy and finally leads to the *erosion* of confidence. The price to be paid by society tends to be high as it is a long and costly project to reinstall confidence in the economy as social capital.

Reversing the argument, that is, inferring that confidence makes control mechanisms (and thus, indirectly, some sort of distrust as well) superfluous if there is confidence in individuals and in society, is something that perhaps should best be avoided. Complex systems like modern service societies and democracies can probably not go without a certain measure of “institutionalised distrust” (Blümle 2002, p. 13) – which also serves as a protective wall against taking risks that are too great (ibidem). Democracy, perhaps, is a good example how to organize “institutionalized distrust” vis-à-vis to politicians.

The “ruse” applied by the writers of wise constitutions and legislations that are workable (for the state as a whole but also for the economic sector and for civic activities) possibly consists in the fact that for those very situations where confidence has been abused by politicians or individuals in the economic field a solution or a “way out” is formulated which is both practical (sanctions are taken against misbehaviour) and does not question the social context and the social capital as a whole.

not draw a clear line between acceptable and unacceptable risk” (Seifert/Voth 2002, p. 8).

Bibliography

Acemoglu, D./Scott, A. (1994): An Exploration of the Effects of Pessimism on Doubt Asset Returns, in: *Journal of Economic Dynamics & Control*, Vol. 26, No. 7/8, pp. 1075-1092.

Albert, M. (1999): Comment on T. Ripperger, Die Effizienz des Vertrauensmechanismus bei der Organisation internationaler Transaktionen, in: K.-E. Schenk et al. (eds.): *Globalisierung und Weltwirtschaft*, Tübingen, pp. 292-301.

Alesina, A./La Ferrara, E. (2002): Who trusts others? In: *Journal of Public Economics*, Vol. 85, pp. 207-234.

Allen, F./Faulhaber, G. R. (1988): Optimism Invites Deception, in: *Quarterly Journal of Economics*, Vol. 103, No. 2, pp. 397-407.

Berg, J. et al. (1995): Trust, Reciprocity, and Social History, in: *Games and Economic Behavior*, Vol. 10, pp. 122-142.

Bissels, S. (2002): *Zwischenmenschliches Vertrauen. Eine datenverankerte Theorieentwicklung* (Dissertation Neubiberg), research reports from the fields of psychology/organisational psychology, Berlin.

Blümle, G. (2002): Economic Style: Impediment or Comparative Advantage in the Globalisation Process? Reflections on the Example of a Comparison between Germany and France. *Discussion Paper No. 27*, Institute of General Economic Research, Mathematical Economics Division, University of Freiburg.

Blümle, G./Sell, F. L. (1998): A Positive Theory of “Optimal” Personal Income Distribution and Growth, in: *Atlantic Economic Journal,* Vol. 26, No. 4, pp. 331-352.

Blümle, G./Schoser, C. (2002): Vertrauen in Herkunftsbeziehungen und Verbraucherpatriotismus: eine explorative Deutschland-Frankreich vergleichende Studie, in: T. Würtenberger et al. (eds.), *Wahrnehmung und Betätigungsformen des Vertrauens im deutsch-französischen Vergleich*. Studies by the French Centre of the Albert-Ludwigs University Freiburg, Vol. 10, Berlin, pp. 263-282.

Bowles, S./Gintis, H. (2002): Social Capital and Community Governance, in: *The Economic Journal*, Vol. 112, November, pp. F419-F436.

Burdekin, R. C. /Langdana, F. K. (1995): *Confidence, Credibility and Macroeconomic Policy: Past, Present, Future*, London.

Camerer, C./Lovallo, D. (1999): Overconfidence and Excess Entry. An Experimental Approach, in: *The American Economic Review*, Vol. 84, No. 1, pp. 306-318.

Carter, M. R./Castillo, M. (2002): The Economic Impacts of Altruism, Trust and Reciprocity: An Experimental Approach to Social Capital. University of Wisconsin-Madison, Department of Agricultural & Applied Economics, *Staff-Paper No.448*, Madison.

Dasgupta, P. (1988): Trust as a Commodity, in: D. Gambetta (Ed.), *Trust. Making and Breaking Cooperative Relations*, Basil Blackwell/New York, pp. 49-72.

Delorme Jr. C. D./Kamerschen, D. R./Voeks, L. F. (2001): Consumer Confidence and Rational Expectations in the United States Compared with the United Kingdom, in: *Applied Economics,* Vol. 33, No. 7, pp. 863-869.

Demougin, D. (1999): Comment on T. Ripperger, Die Effizienz des Vertrauensmechanismus bei der Organisation internationaler Transaktionen, in: K.-E. Schenk et al. (eds.): *Globalisierung und Weltwirtschaft*, Tübingen, pp. 302-310.

Fehr, E. et al. (2003): A Nation-Wide Laboratory. Examining Trust and Trustworthiness by Integrating Behavioral Experiments into Representative Surveys. *CES-IFO Working Paper No. 866*, Category 2: Public Choice, Munich.

Fukuyama, F. (1995): *Confidence: The Social Virtues and the Creation of Prosperity*. New York.

Glaeser, E. L. et al. (2000): Measuring Trust, in: *The Quarterly Journal of Economics*, Vol. CXV, No. 3, pp. 811-846.

Glaeser, E. L. et al. (2000): An Economic Approach to Social Capital, in: *The Economic Journal*, Vol. 112, No. 4, pp. F437-F458.

Goodhart, C. (2002): Myths about the Lender of Last Resort, in: Goodhart, C./Illing, G. (eds.), *Financial Crises, Contagion, and the Lender of Last Resort. A Reader*. Oxford University Press, Oxford, pp. 227-245.

Goodhart, C./Illing, G.,(eds.) (2002), *Financial Crises, Contagion, and the Lender of Last Resort. A Reader*. Oxford University Press, Oxford, 558 pp.

Güth, W. et al. (1982): An Experimental Analysis of Ultimatum Bargaining, in: *Journal of Economic Behaviour and Organisation*, Vol. 3, pp. 367-388.

Güth, W. et al. (2000): Co-evolution of Preferences and Information in Simple Games of Trust, in: *German Economic Review*, Vol. 1, No. 1, pp. 83-110.

Guiso, L./Sapienza, P./Zingales, L. (2001): The Role of Social Capital in Financial Development. Center of Research in Security Prices, *Working Paper Series*, Chicago.

Heifetz, A./Spiegel, Y. (2000): On the Evolutionary Emergence of Optimism, *Working Paper No. 24-2000*, The Eitan Berglas School of Economics, Tel-Aviv University.

Heilmann, D. et al (2002): Werfen Sie die Leute ins Gefängnis. Interview with Jeffrey Immelt of General Electric, *Handelsblatt*, 28.10.2002, No. 207, p. 2.

Hennis, W. (1998): *Auf dem Weg in den Parteienstaat. Aufsätze aus vier Jahrzehnten*. Stuttgart.

Hennis, W. (2001): *Griechentum und Pessimismus: Max Weber und Thukydides*, Mimeo. Freiburg i. Br.

Hvide, H. K. (2002): Pragmatic Beliefs and Overconfidence, in: *Journal of Economic Behaviour and Organization*, Vol. 48, pp. 15-28.

Kelly, K. (1999): *Net Economy: Zehn Radikale Strategien für die Wirtschaft der Zukunft*, Stuttgart.

Kinsey, J./Collins, M. I. (1990): The Consumer Sentiment Index: Rational Expectations and Behaviour, in: R. N. Mayer (Ed.): *Enhancing Consumer Choice:* Proceedings of the Second International Conference on Research in the Consumer Interest, American Council on Consumers Interests, Columbia, pp. 205-218.

Knack, S./Keefer, P. (1997): Does Social Capital Have an Economic Payoff? A Cross-Country Investigation, in: *The Quarterly Journal of Economics*, Vol. 112, No. 4, pp. 1251-1288.

Knack, S. (2000): Social Capital and the Quality of Government Evidence from the U. S. States. *The World Bank Policy Research Working Paper No. 2504*, Washington, D. C.

La Porta, R. et al. (1997): Confidence in Large Organizations, in: *American Economic Review*, Papers and Proceedings, Vol. 87, No. 2, Papers and Proceedings, pp. 333-338.

Lavington, F. (1925): *The Trade Cycle*. London.

Luhmann, N. (1973): *Vertrauen. Ein Mechanismus der Reduktion sozialer Komplexität*. 2nd edition, Stuttgart.

Maaß, H./Sell, F. L. (1998): Confident Expectations, Rational Expectations and the Optimal Conduct of Monetary policy, in: *Economic Modelling*, Vol. 15, No. 4, pp. 519-541.

Matsusaka, J. G./Sbordone, A. M. (1995): Consumer Confidence and Economic Fluctuations, in: *Economic Inquiry,* Vol. 33, No. 2, pp. 296-318.

Odean, T. (1998): Volume, Volatility, Price, and Profit When all Traders Are Above Average, in: *The Journal of Finance*, Vol. LIII, No. 6, pp. 1887-1932.

Putnam, R. D. (1995): Bowling Alone: America’s Declining Social Capital, in: *Journal of Democracy*, Vol. VI, pp. 65-78.

Reinermann, H. (2002): Kann „Electronic Government“ die öffentliche Verwaltung verändern? In: *Verwaltungsrundschau 5/02*, pp. 164-169.

Richter, R./Furubotn, E. G. (1999): *Neue Institutionenökonomik*, 2nd edition, Tübingen.

Ripperger, T. (1998): *Ökonomik des Vertrauens: Analyse eines Organisationsprinzips*, Tübingen.

Ripperger, T. (1999): Die Effizienz des Vertrauensmechanismus bei der Organisation internationaler Transaktionen, in: K.-E. Schenk et al. (eds.): *Globalisierung und Weltwirtschaft*, Tübingen, pp. 257-291.

Samuelson, P. (2002): La Podredumbre de la gestión empresarial estadounidense, in: *El País*, 25. August 2002, Negocios, p. 6.

Schwarz, A. J. (2002): Earmarks of a Lender of Last Resort, in: Goodhart, C./Illing, G.(eds.), *Financial Crises, Contagion, and the Lender of Last Resort. A Reader*. Oxford University Press, Oxford 2002, pp. 449-460.

Seifert, W. G./Voth, H.-J. (2002): Die Nullrisiko-Anlage ist nicht zu haben, in: *Handelsblatt*, 12. November 2002, No. 218, p. 8.

Sell, F. L. (1991): Discussion of "Unification of Official and Black Market Exchange Rates in Sub-Saharan Africa: Monetarism in the Tropics?" by Brian Pinto (The World Bank), in: E.-M. Claassen (ed.), *Exchange Rate Policies of Less Developed Market and Socialist Economies*. Second International Conference FU and Landeszentralbank Berlin, San Francisco and Panama, pp. 351-356.

Sell, F. L. (1997): Political Business Cycles within a (European) Monetary Union, in: *Rivista Internazionale di Scienze Economiche e Commerciali (International Review of Economics and Business, RISEC)*, Vol. 44, No. 1, pp. 1-22.

Sell, F. L. (2001): *Contagion in Financial Markets*. Cheltenham (UK) and Northampton, MA (USA).

Sell, F. L. (2002a): *Optimism, Pessimism and the Unforeseen: Modelling an Endogenous Business Cycle Driven by Strong Beliefs*, Discussion Paper, Bundeswehr University 2002-1, Munich.

Sell, F. L. (2002b): Gravierende Folgen des Mangels an Vertrauen. Ökonomische Betrachtungen zu einer psychologischen Kategorie. In: *Neue Zürcher Zeitung*, 25./26.05.2002, Nr. 118, p. 14.

Sell, F. L. (2003a): Confianza: una variable cláve para la sociedad y para la empresa. In: *Instituto de Estúdios Económicos (Hrsg.), Revista del Instituto No. 1/2003: La Empresa Espanola en el Siglo XXI. II: El Gobierno Corporativo*. Madrid, pp. 71-86.

Sell, F. L. (2003b): Vertrauen: Auch eine ökonomische Kategorie, in: G. Blümle et al. (Hrsg.), *Perspektiven einer kulturellen Ökonomik.* (= Schriften zur kulturellen Ökonomik; Bd. 2), Münster, Hamburg, Berlin, pp. 3-12.

Sinn, H.-W. (1986): Risiko als Produktionsfaktor, in: *Jahrbücher für Nationalökonomie und Statistik*, Vol. 201, No. 6, pp. 557-571.

Stiglitz, J. E. (2002): Die Schatten der Globalisierung, German Edition of "*The Shadows of Globalisation"*, Berlin.

Zak, P. J./*Knack, S.* (2001): Trust and Growth, in: *The Economic Journal*, Vol. 111, April, pp. 295-321.