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BOOK REVIEWS

O. Pfirrmann and G. H. Walter (eds)
Small Firms and Entrepreneurship
in Central and Eastern Europe: A Socio-economic Perspective
Heidelberg and New York: Physica-Verlag, 2002, 321 pp.

The book fills a gap in available literature by focusing itself on small- and medium-sized enterprises (SMEs) and looking at what prospects they might have for growth in Eastern Europe. The book presents papers given during a conference held in Karlsruhe, on 17 and 18 November 1999 by the Fraunhofer Institute for Systems and Innovation Research and the Centre on Policy and Technology at the Free University of Berlin.

Moving away from a Schumpeterian view of large enterprises acting as the main growth producers through their innovations, Western experience instead demonstrates the enormous potentialities of SMEs in *any* economy's growth. At the beginning of the nineties SMEs played marginal role only in economic growth; yet when a restructuring of heavy state-owned industries occurred, the relevance of SMEs within the overall business framework grew. The study here asks whether such potential could be given further room to manoeuvre within the framework of an improved transitional environment – as the picture of SMEs (especially in the manufacturing sector) does, at the present time, seem to be less promising than might have been expected. The aim of local entrepreneurship, the regional dimension of relevant strategies, the creation of tech-centres and science parks and, finally, the needed public policy support can all contribute to stimuli prompting the operations of enduring and competitive, high-tech, innovative SMEs.

Papers included in the book align themselves within three broad arguments. The first part is on the Western experience of SMEs and questions arising with regard to Western industrial modernisation; the second part deals with the development of entrepreneurship as it is taking place in many countries in a state of transition – here in the case of Central/Southeast Europe; while the third part goes on to explore individual issues pertaining to the environment of SMEs and to examine feasible future policy strategies. A summary of works and a broad discussion about issues requiring future research serve to bring the book to a conclusion.

In the first part, Audretsch provides an overview of the great amount of literature on SMEs in Western Europe. His main conclusion is that SMEs offer positive contributions, as agents of change. There is a continual process of entry for new firms into a dynamic industrial framework – and this is reflected in the perseverance of an asymmetrical firm-size distribution, one biased towards SMEs. The business environment in general most likely matters as much as regional factors. In addition, the role of public policy towards business can be seen here.

The chapter by Heering and Pfirrmann draws attention to the requirements of definitively securing property rights and ownership choice. A simple privatisation process represents only a first step, one ensuring a proper functioning of the system; for stable economic institutions and a secure business environment are equally important when it comes to giving a boost to the (still unsatisfactory) performance of SMEs in Eastern Europe; also needed is an exploitation of endogenous resources undertaken by "local industrial elites predominating as driving forces of the process of modernisation" (Kandil and Walter, p. 74).

In the second part of the book a few country studies are presented. The countries analysed range from South Eastern Europe (Hungary, Slovenia, Romania and formerly Yugoslavia) to Poland and Russia. It emerges that private SMEs account for the majority of firms; and a big share of employment and production occurs with SMEs. Such a phenomenon indeed came up in the first part of the transition, though it now seems that this growth rate has become reduced – and some sort of a consolidation effect is presently taking place. Moreover, a difference can be seen between small and medium firms. In Romania and Russia – as reported in the works by Piturescu and Kovaleva, respectively – the employment take-up of small firms is low – even "micro-firms" are able to generate fewer jobs than medium-sized firms. Nevertheless, Kovaleva argues that, in the Russian experience, statistical figures might be underestimating the relevance of small firms; a high degree of regional differentiation is observable here, and public support in favour of small business has been stepped up (even if it is lacking in great financial support). In addition, a lack of efficient co-ordination puts constraints on the obtaining of positive results. By contrast, however, the realisation of programmes at the Russian regional level is to some extent better.

The third part introduces the reader to the most favoured aspects of innovation and entrepreneurship. In general, SMEs have been unable to strongly innovate or to drive technological change; they depend on outsourcing and subcontracting – and the greatest capacity to innovate and make advances is being shown by large firms (Müller, Zenker and Dőry) today. Long-term support for innovation rests on its having the most suitable institutions and infrastructures.

In addition, knowledge networks and social capital are important as well as the Western concepts of technology centres and science parks (Radosevic and

Walter and Heering). In Hungary, so-called techno-parks date back to the mid-eighties (and, in fact, these parks turned out to be a complete flop). In Poland, also, discussions date back at least to the second half of the eighties. Some 28 techno-parks were operating in Hungary by 1997, 55 grew in Poland (of which 49 are actually pure incubators, i.e. having no technological claims) and 28 were to be seen in Russia. These techno-parks worked better in the Hungarian experience – and were least successful in Russia. For as long as techno-parks remained isolated – and were not put in a network context – they could prove to be of limited usefulness only. Policy measures should serve to support their links with other economic actors, this being the case also with regard to dynamic public-private support networks (Müller, Zenker and Dőry) – and special concern should be given to the difficulties occurring in a transferring of the results of research and development towards industry (Piturescu, Kutlaca). The regional dimension of any transformation has to be strength, with this taking account of Western experiences (Steiner) and acting as a substitute for the insufficient macroeconomic industrial policies (Radosevic and Walter). Nevertheless, the still narrow number of high-tech small enterprises could well become a source of more innovative activity (Matusiak).

Pfirrmann and Walter have here edited a large number of case studies on a topic that is highly relevant to the present-day struggles in Central and Eastern Europe in the move to a market-driven economy. This volume should be seen as being an invaluable reference source, one that offers deep knowledge of the developments in a sector that is promising in terms of job creation, economic recovery and as regards social advancement.

Bruno Sergi

J. Hirshleifer

The Dark Side of the Force: Economic Foundations of Conflict Theory

Cambridge: Cambridge University Press, 2001, 357 pp.

In this volume Jack Hirshleifer has collected together his main contributions to the economic analysis of conflict and Cupertino. Largely neglected by mainstream economic theory, a formal analysis of conflict has recently received much attention, especially with regard to accounting for the interplay between politics and economics. Hirshleifer is undoubtedly one of the prime movers in the field, which makes his book a "must" read for anybody interested in economics, politics, sociology, political economy, even game theory and anthropology.

The author presents his case in the very first chapter of the book: the ever present threat of conflict and struggle makes it rational for economically-minded actors to invest resources in non-productive influence seeking, rent seeking and other activities that might be beneficial in conflict situations. Three categories of activities are labelled by the author as *the dark side of the force* – crime, war and politics. Conflicts and struggles are not solely military in character: in peaceful times economic actors seek a dominance primarily in the political and legal fields. Indeed, such a point seems so clear, and the respective behaviour is so pervasive, that one may wonder why modern textbooks in economics contain accounts of production and welfare enhancing competition *only*. In a controversially sharp way Hirshleifer states his view of economic life as follows:

> "Human history is a record of the tension between the way of Niccolo Machiavelli and what might be called the way of Ronald Coase. According to Coase's Theorem, people will never pass up an opportunity to cooperate by means of mutually advantageous exchange. What might be called Machiavelli's Theorem says that no one will ever pass up an opportunity to gain a one-sided advantage by exploiting another party" (pp. 10–11).

Hirshleifer closes the book with a chapter entitled *Expanding the Domain of Economics*. His own contribution to the expansion, however, is primarily on the Machiavellian side.

Following the "imperialist" aspirations embodied in economic science, Hirshleifer boldly applies the tools of economic analysis to domains *beyond* impersonal market interactions (p. 306); these include warfare, political struggles, litigation, and even biological evolution. The feature had in common by all of these factors is that resources are being rationally devoted to non-value adding activities.

The analysis starts from basics. Chapter 2 deals with what Hirshleifer calls "the bioeconomic causes of war". After analysing the causes of war in terms of strategic options, opportunities, preferences and perceptions, the account moves into a field unexplored by traditional rational choice theory – namely, how actors' preferences evolve. Hirshleifer looks for the remnants of conflict determinants that have been prevalent in the animal world, i.e. sex and hunger drives (p. 39). These two, the author argues, translate into attitudes towards mates and resources and, in an indirect way, into benevolence towards kin and malevolence towards non-kin. A crucial factor in modern day warfare is the distinction between "them" and "us" in its symbolic meaning. Hirshleifer argues that were it not for that symbolic meaning, conflicts over resources would be resolved in a peaceful manner – which is clearly superior to any recourse to warfare.

Anarchy and its Breakdown (Chapter 6) looks closer into the specifics of human interaction. The model presented explicitly looks into the trade-offs people face between devoting resources to "productive effort" and "fighting effort". Going through the technicalities of the model is worth the effort. Hirshleifer points to sharp, though distinctive implications when it comes to answering a question of when anarchy, a form of spontaneous order, will tend to subsequently break down into "amorphy" or to turn into a hierarchical or other form of organised system. In order for anarchy to be sustainable, the amount of decisiveness within any conflict should be low – for, otherwise, the dominant contender would get hegemonic status. An *equal* effectiveness of fighting technology, on the other hand, implies an increase in the amount of resources being devoted to conflicts and struggle, which in turn implies a lower income for *all* sides.

Related issues are taken up in *The Paradox of Power* (Chapter 3). The emphasis is different here, however, for Hirshleifer now asks what accounts for the fact that in conflict situations it is not necessarily the case that "the rich get richer and the poor get poorer". To put it differently, in many cases of conflict the position of the better-endowed side tends to deteriorate compared to the relatively less well-endowed side. In politically redistributive struggles, for example, the rich often find themselves transferring income to the poor. The answer: the poor side may have a comparative advantage in fighting, the richer side in *producing*. An important implication therefore is that, although wasteful, conflict does lead to a more equal distribution of income. Hirshleifer, however, is careful enough to set limits to these implications. When effectiveness in fighting is disproportionately biased against the poor, the paradox does not hold. In addition to many references to real life examples, in Chapter 4 Hirshleifer presents results gained from a number of simulations supporting his analysis.

Chapter 5 *Conflict and Rent-Seeking Success Functions* is a genuine contribution to the literature on rent seeking and influence-seeking activities. On the technical side, the chapter offers probably the broadest account of contest success functions. In addition to the probabilistic (ratio) functions that predominate in rent seeking literature, Hirshleifer analyses a set of functional forms that depend on the *difference* between players' commitments to the contest. In this more realistic setting the outlays of the players result in increasing returns (in terms of influence or power) only up to a certain point (a point of inflection), after which the returns start to decrease. Moreover, these functional forms allow for outcomes where one of the players can choose a zero outlay, which is an often-observed phenomenon and cannot be accounted for by simple ratio functional forms.

In *Truth, Effort, and the Legal Battle* (Chapter 7), one gets a real life application of the contest success functions analysed at length throughout the book. Relative success in lawsuits (according to this) is a function of the true degree of fault and the efforts invested on each side. In spite of the limitations of the model, Hirshleifer again comes up with a bold and robust normative implication. In systems where lawyers play a minor role in litigation processes or where judges have firm control over what litigants and their lawyers can do, fewer resources are likely to be wasted in lawsuits.

My favourite part of the volume, however, is the one that explicitly relies on game theory for analysing the sources of conflict and Cupertino. The treatment is both deep and accessible – indeed, the style reminds of one of the classical works of Thomas Schelling. In fact, the bulk of Hirshleifer's account is focused on what is considered the most promising frontier of game theoretic analysis, namely evolutionary game theory.

After a short introduction to the problems of evolutionary models and their application at the interface between economics and law (Chapter 9), Hirshleifer gives an extensive critical account of the basic model of co-operative behaviour, namely the *Tit for Tat* strategy, in a repeated Prisoners' Dilemma environment.

Chapter 10 deals with one of the major challenges faced by the traditional rational choice theory: how to account for such "non-rational" aspects of human behaviour such as emotions. In a somewhat special scenario, Hirshleifer shows that anger and gratitude, for example, may be the results of evolutionary selection, as in certain cases they facilitate Cupertino and contract enforcement. In a paradoxical way, through their unintended consequences these "non-rational" drives may serve our self-interest quite well. Again in a scientifically fair manner the author sets his limitations in a stark way. Human emotions are enormously rich, and include envy, pride and shame among many others. All these, however, require a different framework of analysis.

Chapters 11 to 13 deal in a critical way with Axelrod's seminal *The Evolution of Cupertino* (1984). What is the precise importance of the *Tit for Tat* strategy that proved so successful against other strategies in the repeated Prisoners' Dilemma game, and is so widely discussed in the evolutionary models of Cupertino? Hirshleifer shows us that, in fact, a number of idiosyncratic conditions of the setting contribute to the robustness of *Tit for Tat*. First, it has been applied to the Prisoners' Dilemma game only, although this is not the only relevant strategic environment. Second, Axelrod's setting does not allow for any stratification among players where certain groups of participants do *not* interact with other groups. Third, many social settings involve elimination tournaments and not a continuous interaction. Finally, there is a richer set of strategic combinations that should be tested against *Tit for Tat*.

Allowing for any of these relaxing assumptions will change Axelrod's results dramatically. In particular, *Tit for Tat* may not be the unquestioned winner in terms of payoff maximisation. Via the designing of a number of simulations Hirshleifer shows that the evolutionary forces might lead to rather surprising outcomes, ones that do not typically coincide with the traditional Nash equilibrium concept of game theory. His results contribute to the ongoing debate about equilibrium selection criteria that remained unspecified in Nash's (otherwise ingenious) equilibrium formulation. It is not only the case that the majority of interesting strategic situations have multiple equilibrium points – for, under specific conditions of repeated interaction, the play may converge to give an out-of-equilibrium outcome. In addition to the above elaboration, Hirshleifer tries to expand the traditional game theoretic view or Cupertino and conflict beyond the kinship and reciprocity accounts typically given in formal analyses of social processes. Chapter 13 starts with an analysis of the circumstances under which kinship and reciprocity might lead to Cupertino. The argument continues, however, by pointing out that in the real world it is never the case that a single strategy prevails consistently. In fact what we see is a coexistence of different populations, each with its own distinct survival strategy. Hirshleifer's model captures this phenomenon by showing some of the routes that lead to such coexistence. These include the ability to commit or control one's future behaviour in a credible manner, various punishment strategies (including punishing a player who fails to punish when required), etc.

In conclusion, one needs to say here that this volume has appeared at the right moment to counter the sceptical mood prevailing these days with regard to a formal economic theory that is blind to real life facts. Hirshleifer, in the reviewer's opinion, addresses problems that are pertinent not only to countries with working market economies but also – indeed perhaps primarily so – to developing countries and transition economies. It is clear today that in order to be able to comprehend the problems of economic performance one has to explicitly account for the struggles between the major stakeholders who can block reforms, and also for the specific features of political contexts. This volume nicely accounts for these struggles, though solely at formal level, which is probably one of the major reasons for any concern or criticism here. One can justly argue that what we need at present are not formal models but extensive empirical studies that capture in an open way the specifics of each country. Also, what might be questioned in the overall tone of the book is the superiority that Hirshleifer attaches to economics compared to other social sciences (see especially p. 11). The limitations of armchair reasoning are obvious and should be fairly admitted – although my own, personal opinion is that empirical investigations and logically consistent reasoning should go hand in hand, enhancing our knowledge by mutually reinforcing each other.

Svetoslav Salkin

Reference

Axelrod, R. (1984): *The Evolution of Cupertino.* New York: Basic Books.

I. Bélyácz
Theory of Investment
Pécs: Publishing House of the University of Pécs, 2001, 665 pp.

The author, after textbooks concerned with corporate finance, has here put out a summary work looking into the main scope of investment theory.* As he writes, he does not endeavour to achieve completeness – instead, his principal purpose here has been to review the lines of the theoretical foundations that cannot be ignored.

The novel train of thought occurring in this book can be seen in the fact that investment problems are depicted with their fundamental building blocks and showing a connection with progress in time. The author starts from recognition of the fact that the theoretical bases of business investment have developed gradually during the 20th century. In the book, we are able to keep track of developing processes starting from formulation of a decision rule based on net present value – and ending with revelation of the decision-making inherent in real options. Showing the path of the theoretical development here also displays the sophistication of investment decision criteria at the same time. The book utilises the international results of econometrics research. This research proves that risk analysis, optimal investment decision-making, utility analysis, the investigating of capital structures etc. are impossible without the application of modern mathematical-statistical methods. Figures, measurements and the elaborated and detailed case studies support the use of much statistical matter.

The development of investment theory gives a historical overview – so, among other aspects, the theory of efficient capital markets, portfolio theory and option pricing theory are also shown. In depicting the series of fundamental building blocks, the author displays first of all the relationship between time preference and net present values; and he demonstrates the most optimum investment decisions in the field of consumption, investment and finance decisions and additionally proves that net present value should be defined as the first – and one of the most important – building blocks for investment theory. This chapter of the book proves, in demonstrative manner, that net present value should be regarded as a universally applicable decision criterion within the world of investments.

The second building block (as named by the author) is a versatile presentation of risk and uncertainty. The author, starting from basic elements, shows the content of this important pair of concepts and their role in investment decisions. Since

* Iván Bélyácz is a Professor in the Faculty of Business and Economics at the University of Pécs, he held a Széchenyi Professor Scholarship between 1997 and 2000, and the book dealt with below is the result of the research work accomplished during this period.

all business decisions are justified or refuted in the uncertain future, so the importance of risk measurement can hardly be overestimated. The author argues, in a convincing way, that taking risk into account modulates decisions based on the maximisation of net present value.

The third building block in this work is the utility defined as the synthesis of risk and return. In this chapter, a convincing argument occurs in favour of expected utility, i.e. which needs to have the most exact criterion pertaining to an investment decision, instead of the maximising of net present value and a minimisation of risk.

The fourth building block of investment theory is the world of portfolios. As investments do not appear in an individual form in the modern business system – but, instead, come in various combinations of investment opportunity, so – from the middle of the last century – the relationship between risk and return has been investigated on the basis of portfolios. This part of the book well illustrates the efficient role of portfolio-composition in the moderation of risk.

Depiction of the equilibrium models of capital asset pricing represents the fifth building block in the train of thought proceeding through the work. This investment theory part puts on show one of the greatest achievements of the theory's development process in recent decades. Capital asset pricing models give pattern to an assessment of any individual or portfolio investment. The worth of a security or material capital project can be determined when set in relation to all other investments existing on the market and the performance of the market portfolio directly affects the required return.

The sixth building block of investment theory is capital structure theory. In addition to displaying the relationship between capital structure and the cost of capital, this chapter also portrays the relationship between a capital asset pricing model and capital structure theory.

The closing chapter extends application of portfolio-principle to the field of material capital projects; the roles played by the certainty equivalent and option component also come up within this framework. A plentiful bibliography, list of abbreviations and tables of normal distribution complement the book.

This textbook discussion of the theorems of investment theory is, basically, a university textbook; additionally, professionals might read it and gain benefits. The book is not light reading, for describing the world of investments is not possible without some methodological argumentation; nonetheless, models and formulas are present in the smallest degree necessary, i.e. when they are absolutely required for an understanding of investment decision criteria.

Béla Sipos

UNCTAD: *World Investment Report 2002 – Lessons for Central Europe*
New York and Geneva: UNCTAD, 2002, 345 pp.

The United Nations Conference on Trade and Development (UNCTAD) publishes a yearly report on investment. The 2002 issue of the *World Investment Report*, as its subtitle indicates, concentrates on Transnational Corporations (TNCs) and Export Competitiveness.

Overseas investment activity increased considerably throughout the nineties. According to the report there are about 65,000 TNCs in the world today. Outward foreign direct investment increased from $1.7 trillion in 1990 to $6.6 trillion in 2001. The largest TNCs are to be found in the telecommunications, energy and automotive sectors.[*]

The period between 1980 and 2000 saw a continuous and accelerating increase in the worldwide flow of FDI, which was followed by a sharp decline as recession set in, in 2001. This decline has been uneven in terms of geography. It primarily concentrated itself in the developed economies (–59%), this comparing with a less significant decrease (–14%) in developing economies. Inflows to Central and Eastern Europe as a whole have remained stable. This region's share of world FDI inflows actually rose from 2% in 2000 to 3.7% in 2001. Five countries – Poland, the Czech Republic, the Russian Federation, Hungary and Slovakia – accounted for more than three quarters of the region's inflows in 2001.

UNCTAD has tried to assess the different countries of the world in terms of their potential for attracting foreign investment, as compared to their *actual* performance in this respect. It thus developed the *Inward FDI Performance Index*, which compares the ratio of a country's share in global FDI flows to its share in global GDP. The EU has had the highest score for this index (1.7), and Japan gets the lowest (0.1). Central and Eastern Europe attained a score close to one. Another index, UNCTAD's *Inward FDI Potential Index*, takes a handful of structural characteristics into account in order to estimate a country's potential for attracting FDI. The Visegrad states have marked high on both potential and performance, while Russia marked high on potential but low on performance.

Hungary, Poland and the Czech Republic are all inside the first twenty countries that gained most in terms of export market shares in the years 1985–2000. All of the Visegrád countries are very much open in terms of their share of for-

[*] E. g. Vivendi, GE, ExxonMobil, GM, Royal Dutch Shell, BP, Toyota, Telefonica, Fiat, etc. – ranked according to foreign assets. The largest firms in Central and Eastern Europe are Lukoil, Novoship, Latvian Shipping, Primorsk Shipping, Hrvatska Electroprivreda, Gorenje, Far Eastern Shipping, Podravka, Pliva, Atlantska Plovidba, Krka, Mol, TVK, Adria Airways, and Petrol Group.

eign affiliates within their exports. Especially striking is the situation in Hungary, where the percentage of such exports in the year 1999 was 86% in manufacturing and 80% for all of its industries! This is an unusually high number in a global comparison, and is only matched by only one other state, Ireland. This single figure demonstrates well how Hungary has benefited from the presence of TNCs since transition, but also how exposed its economy has become. (The corresponding figures for Poland were 52% and 56% respectively, and it was 47% in the Czech Republic for manufacturing.) In addition to the sharp increase in market share and the opening up of their economies, the countries of Central Europe have also experienced a shift in their export structure away from non-dynamic to dynamic products and from low technology to medium and high technology activities. In fact, many of these countries have relied on FDI to generate their most dynamic exports – much like China, Ireland or Mexico. One of the key factors of the success of Central European countries, according to the report, has been their preferential access to a major market – in this case the European Union.

The report argues that export competitiveness can facilitate the development of countries, and that the global value chains of TNCs can play a role here. The most dynamic products in the world today are found mostly in non-resource-based industries such as electronic, automotive and apparel. TNCs tend to focus more and more on the knowledge-based, less tangible parts of the value chain, such as product definition, R&D, managerial services, marketing, and brand management. In consequence, the number of service manufacturers has grown rapidly. These firms carry out the lower value-added production for well-known firms in the world, and without their name appearing on the finished product. As an interesting new phenomenon, TNCs have also been entering recently into joint innovation agreements with suppliers, buyers, research laboratories and even competitors. The result is that the emerging global production system is increasingly open in terms of ownership.

Specialisation in the different segments of the international production chain brings assorted benefits. Specialisation in the labour intensive segments is undesirable for a number of reasons. It brings few advantages in terms of training and technology and few spill-overs for the local economy; also, the comparative advantage of low costs disappears as wages rise. So it is to a country's advantage if it turns its labour surplus towards labour intensive exports if it is unable to make use of this surplus in more economically desirable activities. The question is whether such countries can, in the longer run, upgrade and sustain their exports.

There are a growing number of policy tools that can help countries achieve this, yet they are only really effective if they are used in a coherent and targeted manner. They include an analysis of corporate strategies affecting the choice of location, the identification and targeting of production niches, the establishment of investment promotion agencies, memberships of free trade areas, preferential trade schemes, clusters of economic activity, industrial parks, etc. It is important to make sure that what is targeted through investment promotion is in line with the country's broader investment and development strategies. Incentives have to be focused in such a way that encourages TNCs to invest in strategic activities. Host countries should try to involve the foreign affiliates of the TNCs in the upgrading and development of human resources while sharing in the burdens of the state – which has a primary responsibility for creating the necessary conditions. High quality infrastructure (including even specialised infrastructure, such as science parks) is essential. Finally, host countries should aim their support at domestic enterprises, suppliers and for cluster development. One of the key benefits from FDI could be the spill-over effect into the local economy through such arrangements, though domestic agents need to play a role in facilitating the establishment of these links. Thus, the challenge for countries is to attract export-oriented FDI – and to tap the potential of these TNCs by making their locations more conducive to the specific kind of export activities they wish to foster. Indeed, the most important recipient countries of export-oriented FDI now need to *upgrade* their economies to handle the effects of rising wages and to maintain competitiveness with their export base.

These tasks, evident lessons from the *2002 World Investment Report,* are all too familiar for the successful transition states of Central Europe.

Zoltán Pogátsa