



Organizational Process, Strategic Content and Socio-Economic Resources: Small Enterprises in East Germany, 1990–94

Arndt Sorge and Martin Brussig

Abstract

The theory of the firm implies a framework which links up conceptually diverse aspects and approaches. This article tests a specific framework: an interactionist variant of co-evolution theory derived from an article by Hrebiniak and Joyce. Organizations are viewed as enacting different combinations of strategic choice and environmental determinism, which point toward specific market forms and internal processes, through a process of mutual adaptation. Co-evolutionary configurations are hypothesized to have an effect on resource outcomes (profitability and employment). The present article tests this theory, based on a combined qualitative study and standardized questionnaire investigation of a quota sample of 120 smaller enterprises in East Germany. This refers to an environment which, because of the new and rapid emergence of new firms subdivided into different types, can be seen to render the application of interactionist co-evolutionism particularly exigent. It was found that the typology derived according to the framework performed well in predicting and explaining economic performance and employment development. It is suggested that this type of study, linking internal and external organizational characteristics within an interactionist scheme, has potential. It would also help to systematize and control co-evolutionary research on the firm following a coherent research design, going beyond the liberal interpretation of historical information.

Keywords: co-evolution, interactionism, theory of the firm, strategic choice, East Germany, small business

Introduction

The evolutionary theory of the firm brings together contributions from fields as varied as general economic theory, strategy, organization and management theory, and industrial organization and economics. When scholars discuss ‘the firm’, one implication is that ‘the firm’ is the capitalist firm operating within a regulatory framework which in principle makes competition between firms possible in a market economy. Furthermore, the firm is constituted and run following comparatively utilitarian motives and has relatively specific goals. Another implication is that there is a large variety of firm types; firms are not uniformly what a governing order appears to require or promote. Firms evolve into differentiated configurations. There are basically two opposed perspectives to explain how this happens; Hodgson (1997: 92–93) distinguished

Arndt Sorge
University of
Groningen, The
Netherlands

Martin Brussig
Martin Luther
University Halle-
Wittenberg,
Germany

Organization
Studies
24(8): 1261–1281
Copyright © 2003
SAGE Publications
(London,
Thousand Oaks,
CA & New Delhi)

between 'evolutionary and competence-based theories', on the one hand, and 'contractarian approaches', on the other. *Evolutionary and competence-based approaches*, notably the resource-based view of the firm, imply the following:

- A recognition of learning-by-doing as a source of endogenous growth, implying a process of development in contrast to static and equilibrium-based approaches
- A recognition of the role of radical uncertainty, in principle, with regard to fundamental information and knowledge
- A recognition of tacit knowledge, embodied in individuals and social relations within the firm and beyond, and
- Limits to contractibility, for the procurement of resources, because of tacit, idiosyncratic and context-dependent knowledge.

The firm obtains its commercial ability to contract and generate measurable value through path-dependent social construction of endowed resources in interaction with the development of strategic orientation, elaboration of goals and an internal array of routines and regularities (Nelson and Winter 1982). The concrete form of a firm is thus to some extent self-made, but this self-creation is always interdependent with the selection and fashioning of external references (suggested norms or practices, externally supplied resources, and market and financial opportunities).

The *contractarian approaches* mentioned by Hodgson are in a tenuous relationship with what he identified as recent lessons in the evolutionary theory of the firm. They are more focused on measurable results, tangible rather than somewhat elusive factors of production, clear relationships with efficiency and effectiveness, explicit contracts or contracts that can be made explicit between agents, and managerial responsibility. Marris (1997) has grouped, discussed and summarized them under 'managerial theories of the firm'. However, their affinity with industrial economics is greater. In a larger theory of the firm, they are indispensable, although in opposition to evolutionary approaches.

The theory of the firm is thus subject to internal tensions. There have, however, been conceptually significant attempts to try the near impossible and integrate theoretically divergent approaches under a broader roof. A pragmatic synthesis is certainly viable, for which Grandori (1997) has furnished a noteworthy example. Different angles of attack may, however, be chosen. It is also characteristic that competing approaches to a theory of the firm increasingly overlap. Theories of the firm in capitalist market economies tend to combine, with different emphases, the following ingredients:

- Environmental niche properties (competition, input resources, demand, and governance)
- Organization forms (structures and processes)
- Contextual properties (product and process technologies, accounting, and administrative tools), and
- Generic strategies to link together specific selections of the above into one more or less coherent whole.

This set of ingredients is familiar as a classic conceptual toolkit of organization theory, and it has also been posited by 'co-evolution theory', based on the classic and rejuvenated suggestion that organizations basically result from a co-evolutionary interaction between the construction of environmental niches, organizational form and its context, under the auspices of generic strategy (Lewin and Volberda 1999; Lewin and Koza 2001 and other articles that publication). Co-evolution theory has proven a powerful and suggestive programme for researching and explaining how organizations, and notably firms, evolve into specific configurations. The wide scope of this programme, however, also makes it particularly demanding. It goes against the grain of the increasing specialization of sub-fields. What is under-emphasized and ill researched, to date, is the place of organizational form (structure and above all process) in this interaction of ingredients (Oliver 1997). We actually know very little about organizing in a co-evolutionary perspective that comes out of a methodologically controlled research design and collection of information in a systematically comparative approach. Sometimes, explicitly or implicitly, product or service templates are also conflated or confused with organizational form (see contributions in Lewin and Koza 2001). This is an imbalance which the present article seeks to rectify, by bracketing the foundation of co-evolution upon an organized process and investigating this in a comparative and controlled way. This brings back in a processual organizing perspective featured prominently by Pettigrew (1985) and conceptually by Weick (1979). But there is also the intention, according to the demanding programme of co-evolution theory, to link this with strategic substance, that is, types of strategy as represented by standard concepts.

The present article is thus built on the premise that organizational success (sustainability and performance) can probably be explained more coherently if it is traced back to the strategy process and how its development in a company was linked with substantive strategy. The long co-evolutionary link (from organizing the strategy process via the substance of strategy, market forms and other environmental conditions, to contextual and internal organizational characteristics) may therefore help to explain the emergence, sustainability and performance of different firm types. Our own contribution within this literature highlights an interactionist foundation as crucial to co-evolution. To the central question about what it is that drives co-evolution of firm types and environmental niches, we therefore suggest an answer: it is a fundamental mechanism of cognitive and practical social construction, bringing about distinctive combinations of constraint and choice, and thereby substantive strategies and insertion into market forms. The operation of this mechanism is interdependent with the construction, selection and tapping of different resources. This happens in ways which are different in emerging firm types; such types are taken to encapsulate process, strategic substance and market form characteristics. Such types are then taken to lead to the creation and annihilation of resources (profits, wages, employment and competence). Resources therefore enter into the process, as much as they figure as outcomes at different stages.

The present article attempts to test this theory, thereby suggesting one possible way of developing the theory of the firm. We do not aim to test the internal consistency of the firm types we generate, though. We limit ourselves to adopting a typology which the literature offers, in all its complexity of processual and strategic ingredients. But we do intend to examine systematically whether the co-evolution between processual and substantive strategic aspects of the organization (its structure, process and context) does correspond with the selection and enactment of environmental niches (markets and market forms) and the generation of resources (profits and employment) in the way that theory tells us. The study consists of an investigation of a quota sample of 120 smaller enterprises in East Germany. These had been classified in a typology derived from Hrebiniak and Joyce (1985), in our view an underutilized co-evolution classic. It was found that the typology performed well in explaining success (economic performance and employment development) and, in addition, the basic characteristics of the internal production system.

East Germany was a unique setting in which small capitalist firms operating in a market economy emerged anew in great numbers during the very short time covered by our time frame (1990–94). This was a moment in history, a critical juncture, when we could watch from close by how an emerging and vast population of new firms took shape and started to operate. Such moments are hardly studied intensively within firms, but they are arguably crucial to look at closely, as co-evolution proponents acknowledge. Note, however, that this particular article is not a sociographic study of what happened in East Germany. It is an attempt to test a general theory in a setting which is at least as generally significant as other prominent, but equally particular ones. That the societal embeddedness of, for example, film industry firms is not taken into account when they are investigated (guess what it would be) does not mean that it is potentially less negligible than that of small East German firms at the time of investigation.

Theoretical Framework

Organization and strategy research have, as John Child (1996: 4,569–4,570) has pointed out, increasingly acknowledged the pertinence of a ‘structuration’ framework: actors do not simply assert their strategic freedom, by making unconstrained choices, nor do they simply enact contingency relationships. Strategic choice is neither determined by ‘outside’ forces, nor is it free from such forces. Child posited countervailing principles such as ‘constraint’ and ‘choice’ as reciprocally interdependent and intertwined in the real world. In the same way that in the sociology of Giddens (1986) or of Elias (1977), actors and structures constitute each other reciprocally, strategic actors enact strategies in such a way that ‘opportunities and constraints’ are always reciprocally interdependent with the deployment of such strategies. The first strong and consistent statement of this perspective in organization theory was probably delivered by Crozier and Friedberg (1977), who had also insisted

on the necessity of seeing actors and the construction of systems as reciprocally constituted. They had even termed this approach 'strategic analysis'. Weick (1979), only just a little later and on a more socio-psychological foundation, proposed a very similar approach. The received opposition between determinism and choice was shown to be unsatisfactory, and in its place came a dialectical opposition including the interdependence of opposites in the very act of organizing. This has led to the examination of interlinked choices and constraints. In the last resort, there is no constraint which is not enacted by the will of actors, and organizational choice is distinctive for revealing and enacting both opportunities and constraints.

This conceptual foundation is also convenient in co-evolution theory, showing how 'external' and 'internal', micro and macro events are reciprocally constituted. The way that Child surveyed the strategy literature also emphasized its processual and cyclical nature. First, there is a need to look at strategies as evolving in a process of construction and reconstruction. Such construction also extends to the 'constraints' that place bounds on the development of strategy. Constraints are 'hard' when they are considered unchanging by the actors themselves, and they are 'soft' when they are tentatively explored, negotiated and enacted. In the case of a positive feedback from outcomes on choices made, strategy, constraints and the socio-organizational patterns that hold these in place become durable. A world which is at first better analysed following the 'evolutionary theory of the firm', then becomes more suitable for the application of 'contractarian approaches' mentioned above. Learning may, thus, either make initially open action congeal into institutions or it may unfreeze institutions and lead on to a new configuration.

Interactionist theory building thus brings together institutional theory, organizational learning, the resource-based approach and strategy theory. This advance has also implied an interest in process. The first detailed and elaborate statement of an interactionist and structurationist framework was provided by Hrebiniak and Joyce (1985). These authors did allow for differences in the degree of both choice and constraint. The extent of both constraint and choice could vary, and combinations of both high and low constraint with high and low choice were admitted. In a simple four-part table, these combinations were identified as fundamentally different options. The deployment of substantive strategies and the creation or existence of industrial-economic environments were considered as linked to combinations of different extents of choice and constraint. Such combinations encapsulate the *action logic* inherent to the organizing process, and are linked to *market forms*, concrete *strategy types* and *economic and social results*, which are coterminous with the creation or annihilation of resources.

Let us recall some of the central graphical representations presented by Hrebiniak and Joyce in order to show and explain their framework. Since high and low constraints and choice were postulated to be combined freely, they could be visualized in the four parts of Table 1.

The action logic of Quadrant I is marked by the combination of low strategic choice with a high amount of environmental determinism. In the

Table 1.
The Relation of
Strategic Choices
and Environmental
Determinism in
Organizational
Adaptation

Environmental determinism	Low	High
High strategic choice	III Strategic choice Maximum choice Adaptation by design <i>Active developers</i>	II Differentiation or focus Differentiated choice Adaptation within Constraints
Low strategic choice	IV Undifferentiated choice Incremental choice Adaptation by chance <i>Passive acceptors</i>	I Natural selection Minimum choice Adaptation or selection out <i>Open adapters</i>

Source: Hrebiniak and Joyce (1985: 339), with additions in italics.

framework the authors use, this does not mean that ‘the environment’ simply ‘is deterministic’; it is, instead, enacted to be such. In this situation, the authors conclude, firms will compete on the selling price, rather than on more qualitative parameters; they will therefore emphasize a strategy of cost leadership; markets will be relatively contestable and open for new competitors, since the absence of strategic choice will help to simplify and standardize business recipes; and there will be little possibility for innovation. This situation of relatively free and perfect competition is also the classic field for applying population ecology modelling.

In Quadrant II, high environmental determinism is combined with high strategic choice, ‘defining a turbulent context for adaptation’ (Trist and Emery 1965). Under these conditions, there are certain clear exogenous factors that affect decision-making, but the organization, nonetheless, enjoys choice ‘despite the peremptory nature of external forces and constraints’ (Hrebiniak and Joyce 1985: 340). Examples given are firms in heavily institutionalized environments that leave choice in areas other than those that are institutionalized, as well as organizations which are represented in or have access to multiple niches, each with its own set of institutional constraints. Appropriate strategies would be combinations of differentiation and (multiple) foci, following Porter (1980). Institutionalization could extend to demand patterns and client or customer organization, governmental regulation, standards differing from one context to another, marketing segmentation of niches, and other dimensions. Institutionalization raises barriers, but also makes them calculable. Firms in this quadrant would therefore be analysers following Miles and Snow (1978). This would be an action logic in which strong strategic choice boils down to the selection of constraints prevalent in the niches selected. The appropriate market forms prevailing would be controlled oligopolies and imperfect competition.

Quadrant III shows the relatively advantageous situation of high strategic choice and low environmental determinism. Compared to Quadrant I, firms have maximum choice and a clear measure of autonomy. Their action logic implies a high level of designed and voluntaristic policy-making: while they

are also likely to adopt differentiation and focus, they will, in addition, be prospectors following Miles and Snow (1978). They create idiosyncratically specific and original products or services, which are difficult to contest at this stage (of early mover advantage) and afford a higher mark-up in the price and thereby greater income. Such firms innovate business recipes.

Quadrant IV is both one of the most or one of the least enviable ones. ‘Organizations included here tend to lack strategic choice, despite a paucity of external constraints’ (Hrebiniak and Joyce 1985: 342). They adapt almost by chance. The authors further suggest that ‘they have an array of internal strengths and competences that are inappropriate to external opportunities and conditions’. There is a mismatch of internal resources with the external opportunities the firm is catering for. With a monopoly or other institutional protection of a niche, such as strong patent rights, this situation need not be problematical and can, indeed, be comfortable. However, when the monopoly or the privilege falls away, this situation will turn out to be ‘a relatively unstable context for decision making, action, and the exercise of power’ (Hrebiniak and Joyce 1985: 342).

Hrebiniak and Joyce have summed up their conjectures along a number of major dimensions for each quadrant in Table 2. This gives all the major and well-understood keywords that refer the reader to the appropriate concepts and literature applying to the respective action logic. We would like to stress that despite the determinist ring to the language used, concepts have an interactionist foundation. This makes it clear that they imply meaningful enactment as constituting interrelations, rather than directional causality between

Table 2.
Effect of the Four
Organizational
Types in the
Choice-
Determinism
Typology on
Organizational
Variables

Variable	Quadrant I	Quadrant II	Quadrant III	Quadrant IV
Choice	minimum	differentiated	maximum	incremental
Number of strategic choices	few	medium–high	high	few
Decision emphasis	means	primary: means secondary: ends (efficiency concerns)	primary: ends secondary: means (effectiveness concerns)	means–ends
Generic strategies	defender, cost leader	differentiation focus: analyser	differentiation focus: prospector	reactor
Autonomy Innovation	low (external constraint)	medium	high	low (internal constraint)
Political behaviour Conflict	low–medium	high (inter-organizational)	high	low
Search behaviour	solution- driven	solution-driven, some slack search	slack search	problematic

Source: Hrebiniak and Joyce (1985: 344).

separate variables. Even when they are relatively stable, they are continuously reproduced by what the actors understand a situation to be. For example, a 'passive' firm in Quadrant IV is in that situation through an intertwined mix of reciprocally referenced external and internal characteristics. But firms can also switch quadrants and action logics over time. If they do, they exercise a type of meta-choice, enacting another set of constraints and choice. Particularly on a higher level of choice and constraint, therefore, one-sided ontological emphasis on either is ruled out.

Note that the action logics identified in the quadrants are not the same as industrial sector or industry. A specific market that may have been populated by a particular action logic may witness the entry of firms that assert a different logic successfully, and different action logics may henceforth compete or coexist in what initially was the same industrial niche. But in consequence, what the population ecologists call resource partitioning may occur. While such niches, from a certain level of precision on, are inevitably characterized by one and the same action logic, they are therefore not identical at all times.

Concept, Design and Methods of Investigation

The investigation basically adopts and implements the Hrebiniak and Joyce typology in all its hypothetical complexity, linking action logic in the firm's posture in the face of determinism and choice with substantive strategy. It then examines to what extent the suggested co-evolution with market forms and resource outcomes can be established. The field study was directed at the landscape of newly emerging small firms in East Germany, after the accession of East German states to the Federal Republic in 1991 and the radical transformation of the East German economy which had already preceded the accession. This had led to the disintegration of the former large-scale and vertically integrated state enterprises, and took East Germany from a population of a few large-scale enterprises to one in which small and medium-sized companies abounded and large ones were almost absent in a time span of roughly four years. The radical transition from a large plant and combine economy, in which firms were not just firms but complete institutions covering most societal functions, to a small-firm economy with properly capitalist firms is probably unique in human history. The situation, historical background, development, strengths and weaknesses of these enterprises have been a point of interest and concern in research and policy-making. Such interest and concern have equally focused on commercial, marketing, technical, organization, personnel, and industrial relations issues. We defined 'small enterprise' for the purpose of the present study as including all those with up to 100 employees.

Such firms are scarcely functionally differentiated, personalized employment relations abound, owner-managers are dominant, and work organization and organization structure are simple. But most of the firms investigated had undergone more or less radical change in enterprise configuration, charter,

ownership, size, products, processes and techniques used, markets, skills and in almost any other aspect of their internal operations, external relations and the institutional fabric of the economy. The firms, or personnel in them, had most frequently been hived off from a previous socialist enterprise of much larger size. Thus, although organizational architecture at the time of the study was not excitingly complex, the process by which the firm had established its products or service portfolio, workforce, market, core competencies and external input and output relations in the transition from socialism to small-firm capitalism was breathtakingly complex and different between firms. It was a paradise for exploring the constitution of the firm, going by what, according to co-evolutionism, is an ideal setting for conducting an enquiry into how enterprises constitute themselves.

The project design highlighted both standardized and half-open collection of data. Collection was controlled by a dovetailed instrument. One part consisted of mainly closed standard questions in order to address corresponding data, such as turnover, clients, suppliers, employment, industrial relations structures, profits, ownership, production system properties and so on. In addition, there was another part with general question prompts to initiate a narrative and dialogue with a top manager about how the firm originated, how and why it was set to develop in the way it did, to acquire the personnel, clients, suppliers and product or service portfolio it had at the time of study. It intensively covered the way leading actors perceived the degrees of freedom, opportunities and constraints that they saw themselves confronting and engaging in the deployment of managerial action during the relatively short life span of the firm. This dialogue was taped and written notes were also kept. Both the standard questionnaire and the open interview guideline were administered to key informants in the companies by a team consisting of at least one experienced research assistant and another person, a trained advanced undergraduate. Enterprise visits normally took up a whole day. The interviews avoided reference to the more academic language of strategy-making or business start-up concepts. We tried to tap into the pool of natural language that actors immediately used themselves, to give a concrete interpretation of the firm's emergence.

Since other research projects had sufficiently illuminated the more formal and quantitative properties of the emerging small-firm sector in East Germany on the basis of more representative surveys and official statistics (see May-Strobl and Paulini 1997; Hinz 1997), our own research was conceived to address precisely those structures and processes which would elude the student administering questionnaires impersonally. We therefore went for a study combining greater depth of data collection, permitted by the presence of theoretically conversant and skilful interviewers, but we also aimed at representativeness. We applied a quota sampling scheme to bear regard to already established sources of variance within the small-enterprise sector. In particular, we focused on three regions of different industrial types:

- One old industrial region with a high density of various manufacturing industries prior to the advent of socialism (Chemnitz/Zwickau)

- One conurbation with a mix of manufacturing and governmental and other services (East Berlin), and
- One old agricultural and rural region, with injections of new socialist enterprises post-1950 (Eberswalde/Schwedt).

Within each region, we applied quotas to capture the following industries: half from manufacturing companies, a quarter from building firms, and a quarter from producer services. We therefore concentrated on activities that were not mainly targeted at the local population and its consumption requirements, but exposed to interregional and often international competition. Firms' goals implied exportable goods and services. Some 124 firms were selected from official listings at random, within the quotas determined, and investigated in the way described. Information from this study is therefore not quantitatively representative with regard to small firms in East Germany at large. But because of its focus on industrially very divergent regions and types of companies (new start-ups, former cooperatives, reformed ex-socialist enterprises or their parts), the empirical base is as diverse as it can be. Also, there was no firm studied that did not experience, during the years covered, a formative and, in principle, open transition. In this sense, there did not appear limits to variation in the data set, despite quota sampling.

A methodological question concerns the way we analysed the qualitative material, rather than the answers to standardized questions, which were transferred into an electronic file in the usual straightforward way. The qualitative interview material exhibited striking differences in the way firms had conceived and cultivated the commodities and services supplied, their access to the market and other business relationships, and internal assets and resources. These differences also had an 'environmental' angle, since the handling of internal assets very much overlapped with ways of handling and perceiving the external environment. The prompts and further questions we had asked in the qualitative interviewing had revolved around those dimensions of Table 2 which can be described as expressing the logic of action between constraint and choice:

- The number of strategic choices considered, and why they were adopted or rejected
- Decision emphasis on different means and ends
- Autonomy and innovation with regard to markets and sales, products, techniques, suppliers, financing and other resources
- Political behaviour and conflict in working out and implementing the path that the firm adopted, and
- Search behaviour.

The categorization of firms within this typology thus followed Hrebiniak and Joyce in their four-part table. Classification of firms in terms of such a typology was based on qualitative interview material. This was done in the following way: the leading interviewers involved, all fully academically qualified, went through *all* the material from every case, independent from one another. They classified each case with regard to the typology; divergent

classifications were discussed with regard to the underlying dimensions put forward by Hrebiniak and Joyce. In the classification and discussion of remaining differences, the more operational criteria shown in Table 3 were used to allocate cases to types. These criteria were therefore an operational bridge between the more abstract choice and determinism dimensions and the empirical interview material.

The distinct types of companies emerging, from our own analysis of responses to prompts related to the Hrebiniak and Joyce categorization, are reflected by a threefold typology, as follows.

- 1 The first type was described as ‘active in specifying a particular path of enterprise development’. Such firms specialized in particular products or services requiring specific human, relational, material and financial assets. This path was constructed over time based on the perception and active selection of opportunities and constraints by ‘dominant coalitions’. For short, the firms were called *active developers*. They conform with the characteristics of Quadrant III in Hrebiniak and Joyce and Table 1: low environmental determination and high strategic choice were enacted. Examples are industrial or service firms supplying products and services ‘crafted’ or developed to suit specific customers with whom they cultivated longer-term relations.
- 2 The second type adapted to perceived demand wherever it could be found, taking demand as given and adapting to its requirements on the basis of unspecific, generally applicable human, relational, material and financial assets. These firms were called *open adapters*. They conform to the characteristics of Quadrant I (high determinacy of the environment and low strategic choice). Examples are general building and construction firms and general suppliers of components with a great and fluctuating number of customers.
- 3 The third type enacted the unenviable situation of low determinism combined with low choice in Quadrant IV. They avoided strategic choice and considered themselves dependent on existing and constraining factor endowments or assets, which they had difficulties in changing. Equally, they had difficulties in finding customers and markets that corresponded with existing assets. Their stance of sticking with past products and services, relations and human and material resources led to the designation *passive acceptors*.

The technicalities of operationalization and validation are described in greater detail by Brussig et al. (1997: 79). On the basis of the criteria in Table 3, an unequivocal and consensual allocation of cases to types could be performed. Although the complexity of Table 3 would lead us to expect difficult or contentious decisions on the allocation of firms, the opposite was the case. After two consecutive rounds of analysis of all the qualitative information, allocation and discussion of the remaining differences by senior researchers, a consensual allocation emerged. Note also that every case was personally familiar to at least one senior investigator. In a more formalized evaluation and allocation setting, one would speak of high ‘inter-rater’

	Open adapters	Passive acceptors	Active developers
Differentiation and breadth of the product/service range	High; broad range of differentiated products/ services supplied	Low; more specific or specialized product/ service supplied	Low; more specific or specialized product/ service supplied
Distinctiveness of the product/service compared to competitors (by innovation, branding, exclusiveness)	Low; product/services not distinguished from those of rivals, open competition	Low; product/services not distinguished from those of rivals, open competition	High; product/services are distinguished from those of rivals by qualitative characteristics
The effect of the internal resource base (capital assets, human resources, core competence)	To the extent that it is significant: positive effect	Negative, in view of mismatches	Advantageous, in view of the match with the resource base required to attract and keep customers
Access to sales markets	Geared to acquire individual and separate contracts	Restricted and dwindling, characterized by lack of customers and unilateral dependence	Geared to achieve long-term and stable relations with customers
Approach to market environment	Demand orientation: supply follows and adapts to perceived acute demand	Demand lock-in: only familiar demand is catered for	Supply orientation: development of products/ services is relatively autonomous, but is geared to mobilizing customers

Table 3.
Operationalization
of Enterprise Types

reliability. This was probably helped by the fact that, in view of the small enterprise size, firms were far from complex conglomerate subdivisions with different histories. In line with this, at the depth we were able to tap into the narratives supplied, these were coherent and uncontroversial.

We do not want to conclude on this basis that there is unproblematic proof for the hypothetical core of Table 2 (a straightforward association between the processual and strategic characteristics of firms). Our research design was not devised to corroborate the internal consistency of this core. As we said earlier, our intention is to examine co-evolution between organizational action, on the one hand, and resource results and market environment enactment, on the other.

The only Table 1 quadrant not reflected in this typology is Quadrant II. There were no firms in our sample that matched its characteristics. This is neither an accident nor a deficiency. Hrebiniak and Joyce had given, as examples of firms operating under such conditions, large diversified enterprises subject to institutional constraints arising from markets regulated by customers, competitors or public authorities. Naturally, our small-enterprises sample did not feature large diversified firms.

The classification into three types reflects the predominant logic of action emerging from a process of several years. It expresses the path of development which the firm worked out itself, accumulating increasing distinctiveness of resources, strategy and niche. The full characteristics of the path may not have been clear at the point of departure. In the earlier phases, there may have been a certain amount of to and fro, theoretically captured by

the notion of learning-by-doing. However, a temporarily stable end result of the path was nevertheless clear, in the sense that consensual agreement about it was not difficult to reach. Thus, path dependency did come forward over time.

Classification of firms as open adapters, passive acceptors or active developers was then added to the data set as a new nominal variable. In this way, it could be used together with the more quantitatively based and standardized variables in the analysis of the data set. With regard to the performance variable 'profitability' in the more standardized part of the enquiry, we decided to use the self-classification of entrepreneurs on a rank scale consisting of loss-making, covering costs, minor profits and satisfactory profits. This is not the most frequent method, but not unusual either. We would have been happy to ask for a rate of return or profitability ratio which could be expressed as a number. However, the accountancy precision in the small firms studied, certainly at the time of the study, was not what it would have been after years of routine activity under capitalism. Related to turbulence and unconventional methods in the start-up or post-unification phase, there was also a reluctance to give figures. However, sensitivity to the profitability problem was acute and self-grading therefore not inappropriate. Equity-to-assets ratios of more than 10 percent were infrequent, and firms were therefore very heavily in bank debt and entrepreneurs were very keenly aware of the value of any profits generated above substantial wage and capital costs. They were invariably quick to respond to the rank-order classification suggested.

Findings and Discussion

A first important prediction implied by the framework is that active developers will exhibit higher profits than the other types, and open adapters will have less pronounced profitability, but not feature many loss-making firms either, because these would be 'selected out' more rapidly under open and free market competition.

This is exactly what appears in Table 4, which exhibits highly significant results. The active developers clearly had the highest percentages of profitable results (66.7 percent), of which 'satisfactory profits' were 30.6 percent. The

Table 4.
Profitability of
Strategy Types

	Open adapters (%) (<i>N</i> = 45)	Passive acceptors (%) (<i>N</i> = 35)	Active developers (%) (<i>N</i> = 36)
Loss-making	2.2	25.7	16.7
Covering costs	24.4	42.8	16.7
Minor profits	51.1	28.6	36.1
Satisfactory profits	22.2	2.8	30.6

Chi Square = 23.143 at d.f. = 6, asymptotic significance (two-tailed) .001
Cramér's *V* = .316

open adapters did indeed have the lowest percentage of loss-makers (2.2 percent). The precarious situation of the passive acceptors shows in the highest percentage of loss-making (25.7 percent), and the overriding importance of those just covering costs (42.8 percent). But that 16.7 percent of loss-makers were among the active developers is also noteworthy; as investigation of specific examples showed, this is very much related to the early stages of specialization, with its initial restructuring, new investment, high debt and learning costs.

Such differences in profitability are much more apparent than those with regard to the recent development of turnover (see Table 5). Most of the firms across the board had turnover growth, even the passive reactors (52.8 percent). This is, as expected, much less than the turnover growth of the open adapters and the active developers (both in excess of 80 percent). And, as expected, the passive reactors experienced declining turnover in 22.2 percent of cases. The relatively positive picture of our small East German firms with regard to turnover growth was not unexpected at the time of the study, characterized as it was by a macro-economic boom in post-unification Germany. However, turnover growth could not readily be translated into satisfactory profits. The strategy process explains why this happened. To the extent that active development of assets and market niches had occurred, turnover growth led to greater profitability. On the other hand, passive reaction prevented it, which led to more substantial losses or just breaking even, while the purer competition associated with open adaptation kept a rein on profitability.

This picture thus points toward precarious business development among the passive reactors; good business development in open adapters, but with smaller margins and a higher risk of being selected out; and more sustained, although initially risky, business development among the active developers. The question is whether this picture holds up when the social goals of the enterprise are considered. A primary social goal, notably in East Germany after the collapse of socialism, is employment. Table 6 depicts the employment performance of the firms in the recent past. Differences are visibly in line with those pertaining to profitability: open adapters and active developers had growing employment in the majority of cases (of about 60 percent), whereas passive reactors in more than half the cases had employment reduction. But the differences between open adapters and active developers, on the one hand, and the passive reactors, on the other, are striking. The

Table 5.
Development of
Turnover by
Strategy Type

	Open adapters (%) (N = 45)	Passive acceptors (%) (N = 36)	Active developers (%) (N = 37)
Growth	82.2	52.8	83.8
Decline	2.2	22.2	5.4
Stagnation	4.4	11.1	5.4
No trend	11.1	13.9	5.4

Chi Square = 15.376 at d.f. = 6, asymptotic significance (two-tailed) .018
Cramér's V = .255

Table 6. Recent Evolution of Employment by Strategy Type

	Open adapters (%) (N = 45)	Passive acceptors (%) (N = 36)	Active developers (%) (N = 37)
Has grown	60.0	27.8	59.4
Has fallen	20.0	52.9	16.2
Has stagnated	6.7	11.1	16.2
Fluctuated	13.3	8.3	8.1

Chi Square = 17.942 at d.f. = 6, asymptotic significance (two-tailed) .006
Cramér's V = .276

Table 7. Planned Employment by Strategy Type

	Open adapters (%) (N = 45)	Passive acceptors (%) (N = 36)	Active developers (%) (N = 37)
To remain constant	62.2	48.6	48.6
To grow	20.0	28.6	45.9
To fall	8.9	14.3	0.0
Unclear	8.9	8.6	5.4

Chi Square = 10.752 at d.f. = 6, asymptotic significance (two-tailed) .096
Cramér's V = .214

active developers do not exhibit any sizeable differences with regard to the open adapters.

This picture changes somewhat as we look at the relation between firm type and planned development of employment in the future (see Table 7). Here, it is the active developers that stand out from the rest: they announce growing employment in 45.9 percent of cases, whereas only just above or below a quarter of the firms do that among the other types. Also, note the smaller difference between the types in terms of planned employment reduction: 14.3 percent of the passive acceptors against 8.9 percent of the open adapters and, above all, none of the active developers. This confirms the picture of more sustainable opportunities for success among the active developers. To this extent, prospects with regard to economic and social goals appear not to diverge. However, it would be far-fetched to generalize from this association.

It is probably important to consider the general and cyclical setting of the firms investigated at the time of study. This was just before the post-unification upswing in growth in East Germany came to a more or less predictable end. Without going into the reasons, the growth, employment and profitability patterns shown here cannot be taken to be associated with firm types across the board more generally. A better interpretation would be the following. In a socio-economic landscape marked by an imminent cyclical downturn after a boom due to catch-up effects, public subsidization and deficit spending, it is predictable that more sustained profitability and growth of employment would occur in the types in which they were observed. Active developers are hypothesized (Table 2) to be less cost sensitive and threatened by price competition; they are more geared up to evolve toward new business

opportunities and better implanted within more stable customer relations; and their profit margins are presumably greater. They have been launched onto an evolutionary path which gives them a more sustainable position in a world marked by a requirement for high productivity, because of high wages, and an interregional and international division of labour. This is in accordance with the hypothesis put forward in Table 2 that active prospectors would exhibit differentiation strategies combined with focus and prospecting of new opportunities.

To this extent, the economic rationale of active development is clear: it rests on the profitability of specializing in the earlier or rejuvenation phases of the product life cycle and on the margins made possible by attending to the specific requirements of individual customers with whom more stable relations were built up. This would imply a certain opposition with regard to economies of scale and cost leadership (compare Table 2). According to Hrebiniak and Joyce (1985), the cost leaders, driven by economies of scale, would be the open adapters in Quadrant I. We therefore also examined the consequences that firm types might have for the production or service-generation systems of the firms. Such aspects can roughly be divided into two main sorts: production systems may vary in the extent to which they cater for the requirements of specific customers (customization) and they may vary in the extent to which the product or service is standardized and brought forth in a standardized form (standardization).

Interestingly, most of the small companies investigated replied that their product or service was produced 'according to the specific requirements of individual customers' (the wording of the question in the questionnaire): this ranged from 86.7 percent for the open adapters, through 82.4 percent for the passive reactors, to 64.7 percent for the active developers. Most likely, this commonality originates from small firm size and interregional competitive exposure combined, that is, from the definition of the population to be studied. But it is remarkable that, contrary to the hypothesized association between active prospecting, differentiation focus, 'slack search' and more customized manufacturing or service provision, it is the active developers that are the least customized of all. It appears that most small companies are customizers, but those that are economically and socially more sustainable are relatively less keen on customization.

A different picture emerges with regard to standardization. Table 8 demonstrates that the passive reactors have in the majority weekly standardized products or services. The open adapters separate into a strongly standardizing (31.8 percent) and a weakly standardizing (50 percent) group. The polarization into opposed groups is all the more remarkable for the active developers, nearly 46 percent being strong standardizers and exactly the same percentage weak standardizers. Sustainable active development and, to a lesser extent, open adaptation appear to thrive on a clear decision to follow either high or low standardization, rather than something in between.

This finding is reminiscent of Porter's (1980) dictum about the dangers of being 'stuck in the middle'. However, at least for our small firms, it is a danger inherent to the construction of the production or service-provision system.

Table 8:
Standardization of
Products or Services
by Strategy Type

	Open adapters (%) (<i>N</i> = 45)	Passive acceptors (%) (<i>N</i> = 34)	Active developers (%) (<i>N</i> = 37)
High (1.2)	31.8	28.6	54.9
Medium (3)	18.2	25.7	8.1
Low (4.5)	50.0	45.7	45.9

Standardization equals the response on a five-point Likert scale of agreement to the statement: 'We offer products or services standardized to a far-reaching extent, and we make them in large numbers or very frequently.'

Chi Square = 5.156 at d.f. = 4, asymptotic significance (two-tailed) .272
Cramér's V = .149

It is not apparent as a danger inherent to the combination of generic cost leadership and differentiation strategies. The majority of active developers are unequivocal customizers, which implies a differentiation strategy, but they then fall into groups of standardizers (exploiting economies of scale and cost advantages) and non-standardizers (exploiting returns on flexible production or service delivery). This finding thus modifies the theory put forward by Hrebiniak and Joyce. Probably, the construction of the strategy process does not translate straight into clear implications for the production and service-delivery system. Also, depending on type of strategy process, it seems to have more or less sharply dovetailed implications for the standardization of the product or service and its generation.

Conclusions

Our findings show that an interactionist perspective, which had fed into the construction of qualitatively based firm types, appears to work well in predicting the generation of resources (profits and employment). The analysis could have been expanded to explain wage levels, as another resource generated by firms, but this would have driven the article beyond the allowed limit. Interactionist types appear to work well for predicting organizational viability and performance within a pattern in which the strategic process and its substance co-evolve with market forms. Despite the increasing specialization of research into separate fields, such as industrial economics, strategy process, substantive strategies and the socio-organizational texture of firms, a general theory of the firm still appears a viable proposition. This appears to hold for a situation characterized by relatively evolutionary openness, at a time when a wholly new population of firms was emerging at a critical juncture. This would also be the moment when co-evolution theory comes into its own.

Some caveats are, however, in order. There is a limit to which generic strategies, as put forward by Porter (1980), are associated with processual types, defined by the enactment of choice and constraint combinations. Generic strategies may also dovetail into different production and service-system implications. Thus, the active developers, following a differentiation

strategy, went for one of the contrasting options for constructing the product or service and its generation, pointing either to a more customized system of production or service provision or a more generic and branded product or service supplied at a greater scale of operations. But this bifurcation implies more refined patterns, rather than more random variation.

We have not discussed the specificities inherent to the institutional transition from state socialism to capitalism in East Germany. What we put forward is therefore not a model which, with the frequency of types established, can be considered valid for any other transitional situation. East Germany is a striking example of a capitalist and social market economy context being imposed in one fell swoop by the governing order into which East Germany acceded. Still, despite the rather radical extinction of large conglomerates and government influence on the running of enterprises, a great number of social safeguards, such as state employment schemes for the unemployed, unemployment benefits, rapidly rising collective agreement standards and protective legislation was applied. Also, firms had to market their products and services abroad at a deutschmark currency level, which more or less ruined any possibility of retaining networked customers in the former Comecon countries, whose currency values had dropped radically. This greatly increased the cost pressure and the overall competitive intensity for the firms studied. It may be that these macro and institutional specifics of the transition in East Germany were partly responsible for the better profitability of the active developers. But even if this is so, it only attests to the particular pertinence of the strategy and market form nexus of co-evolutionism in a social market economy characterized by social guarantees and wage standards.

In a different transition from state socialism to capitalism, in which the currency value dropped and social safeguards were less quickly introduced than market principles, firms would probably turn themselves into different types with different frequency distributions. Eastern neighbours of East Germany would probably therefore feature higher frequencies of open adapters and passive acceptors. Further research could try to test this proposition. But we would also surmise that new, small, East German firms lead to equally general propositions as any other population studied. Any population of firms is necessarily environmentally and contextually specific, and when it has been studied, this calls for replication.

It is not our task here to discuss the socio-economic situation and socio-economic policies in East Germany as such. It would certainly be recommendable to extend the analysis to take account of how far the development of the firm takes different courses depending on the societal order in which it is embedded (Maurice and Sorge 2000). Here, it is sufficient to point out that a theory of the firm concentrating on the co-evolution of internal organizing, context and environment is one viable and important proposition. Such a theory is useful because it avoids one-sided treatment of and specialization in finance, marketing, production, development, strategy, or social texture. It is particularly in situations of radical and rapid change of an economy and society that such an embracing theory of the firm appears to be needed, that is, when basic configurations become differentiated from one another.

Our study struck a compromise between breadth and depth. We opted for a design that went for a number of firms investigated that was not small, but that still allowed for the capturing of information about such firms' origin and formation, and was stratified according to salient sampling criteria. In addition, an important explanatory concept could be based on qualitative research methods. This combination of qualitative and standardized quantitative analysis appeared appropriate, given the conceptual impetus of the study. Its advantage is that it enables a controlled and coherent research design. This is comparatively rare in co-evolutionary research, being based on the more liberal interpretation of information historically collected beyond the control of the investigating researchers. Measures of significance obtained were mostly high or acceptable, except for the last table. But this was on the development of production and service-delivery systems within firms, rather than on more generic firm types. On the whole, therefore, the explanation we have proposed has some strength.

Needless to say, we would be happy for others to improve on what we could do. On the whole, the Hrebiniak and Joyce framework appears to offer a useful basic conceptual tool for co-evolutionary research and theory-building applied to the explanation of generically different firm types. It is a specific framework, but it opens the door for others. We are not concluding that our study shows that it is the best overarching framework for a theory of the firm. But it works well in explaining what happens at a critical juncture in the development of a population of firms. In due course, an 'unpacking' of firm types into process characteristics, initially disposable resources and how they were viewed by actors, substantive strategy and other elements would certainly be appropriate.

References

- | | |
|--|---|
| <p>Brussig, Martin, Karin Lohr, Klaus Semlinger, Arndt Sorge, and Udo Strohwald
1997 'Bestandsbedingungen und Entwicklungspotentiale' in <i>Kleinbetriebe in den neuen Bundesländern</i>. Martin Brussig et al. (eds): 17–290. Opladen: Leske & Budrich.</p> <p>Child, John
1996 'Strategic choice' in <i>International encyclopedia of business and management</i>, Vol. 5, 4,556–4,571. London: Routledge/International Thomson Publishing.</p> <p>Crozier, Michel, and Erhard Friedberg
1977 <i>L'acteur et le système</i>. Paris: Editions du Seuil.</p> <p>Elias, Norbert
1977 <i>Über den Prozess der Zivilisation</i>. Frankfurt: Suhrkamp.</p> | <p>Giddens, Anthony
1986 <i>The constitution of society</i>. Berkeley and Los Angeles: University of California Press.</p> <p>Grandori, Anna
1997 'Agency, markets and hierarchies' in <i>IEBM Handbook of organizational behaviour</i>. A. Sorge and M. Warner (eds), 64–78. London: International Thomson Business Press.</p> <p>Hinz, Thomas
1997 'Neugründungen von kleingewerblichen und mittelständischen Betrieben – vergleichende Analysen' in <i>Kleinbetriebe in den neuen Bundesländern</i>. M. Brussig et al. (eds), 357–410. Opladen: Leske & Budrich.</p> |
|--|---|

- | | |
|---|--|
| <p>Hodgson, Geoffrey M.
1997 'Evolutionary theories of the firm' in <i>IEBM handbook of organizational behaviour</i>. A. Sorge and M. Warner (eds), 88–94. London: International Thomson Business Press.</p> <p>Hrebiniak, Lawrence G., and William F. Joyce
1985 'Organizational adaptation, strategic choice and environmental determinism'. <i>Administrative Science Quarterly</i> 30: 336–349.</p> <p>Lewin, Arie Y., and Mitchell P. Koza, editors
2001 'Editorial special issue: Multi-level analysis and co-evolution'. <i>Organization Studies</i> 22/6: v–xi.</p> <p>Lewin, Arie Y., and Henk Volberda
1999 'Prolegomena on co-evolution: A framework for research on strategy and new organizational forms'. <i>Organization Science</i> 10: 519–534.</p> <p>Marris, R. L.
1997 'Managerial theories of the firm' in <i>IEBM Handbook of organizational behaviour</i>. A. Sorge and M. Warner (eds), 79–97. London: International Thomson Business Press.</p> <p>Maurice, M., and A. Sorge, editors
2000 <i>Embedding organizations: Societal analysis of actors, organizations and socio-economic context</i>. Amsterdam: John Benjamins.</p> <p>May-Strobl, Eva, and Monika Paulini
1997 'Das Gründungsgeschehen in den neuen Bundesländern: Wachstumstypen und Beschäftigungsbeitrag' in <i>Kleinbetriebe in den neuen Bundesländern</i>. M. Brussig et al. (eds), 323–356. Opladen: Leske & Budrich.</p> | <p>Miles, Raymond E., and Charles C. Snow
1978 <i>Organizational strategy, structure, and process</i>. New York: McGraw-Hill.</p> <p>Nelson, Richard R., and Sidney Winter
1982 <i>An evolutionary theory of economic change</i>. Cambridge, MA: Belknap Press.</p> <p>Oliver, Christine
1997 'Sustainable competitive advantage: Combining institutional and resource-based views'. <i>Strategic Management Journal</i> 18: 697–713.</p> <p>Pettigrew, Andrew M.
1985 <i>The awakening giant: Continuity and change in ICI</i>. Oxford: Blackwell.</p> <p>Porter, Michael E.
1980 <i>Competitive strategy</i>. New York: The Free Press.</p> <p>Trist, Eric L., and Fred E. Emery
1965 'The causal texture of organization environments'. <i>Human Relations</i> 13: 21–32.</p> <p>Weick, Karl E.
1979 <i>The social psychology of organizing</i>. Reading, MA: Addison-Wesley.</p> |
|---|--|

Arndt Sorge

Arndt Sorge is Professor of Organization Studies at the Faculty of Management and Organization, University of Groningen. He has mainly worked in international comparisons of work, organization, human resources, technical change and industrial relations. This has led to a succession of positions at several universities and research institutes in Germany (his native country), The Netherlands, Britain and France. In Berlin in 1992–97, he coordinated an enquiry into the development of small

enterprises in East Germany. As well as specialist publications, he has also edited volumes in the *International Encyclopedia of Management and Organization* and most recently *Organization* (2002).

Address: University of Groningen, Faculty of Management and Organization, PO Box 800, 9700AV Groningen, The Netherlands.

E-mail: a.m.sorge@bdk.rug.nl

Martin Brussig Martin Brussig graduated in Sociology from the Humboldt-University Berlin (1994). After completing his PhD (1998), he has worked at the Zentrum für Sozialforschung Halle at Martin Luther University Halle-Wittenberg. He has researched industrial and organizational restructuring, networks, globalization and socio-economic developments in East Germany. Recent publications include *Konflikt und Konsens. Transformationsprozesse in Ostdeutschland* (Conflict and Consensus: Transformation in East Germany), co-edited with Raj Kollmorgen and Frank Ettrich (2003), and 'Die Entwicklung von Globalisierungsstrategien von KMU, theoretisch fundiert und empirisch untersucht' (The Development of Globalization Strategies in SMEs: Theoretical Foundations and Empirical Analysis) in *Managementforschung*, Volume 13, with Uta Wilkens (2003).

Address: Zentrum für Sozialforschung Halle an der Martin-Luther-Universität Halle-Wittenberg, Emil-Abderhalden-Str. 6, D-06108 Halle/S, Germany.

E-mail: brussig@zsh.uni-halle.de