The Management of Projects and Product Experimentation: Lessons from the Entertainment Industries

Mark Lorenzen

&

Lars Frederiksen
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Handelshøjskolen i København
Solbjergvej 3, 3. sal
2000 Frederiksberg
Danmark
The Management Of Projects And Product Experimentation: Lessons From The Entertainment Industries

Mark Lorenzen & Lars Frederiksen
Copenhagen Business School
Department of Industrial Economics and Strategy
Solbjergvej 3, 5. Floor
DK-2000 Frederiksberg
ml.ivs@cbs.dk & lf.ivs@cbs.dk

ABSTRACT

The paper analyses management of product innovation in project-based industries, offering a view on management not only of firms, but also of markets. It first argues that projects are prominent in industries where the nature of consumer demand means that product innovation takes place as experimentation. Then, the paper argues that if skills needed for projects are very diverse and projects are complex, there are few internal managerial economies of projects, and the scope for management then transcends the boundaries of firms. In these cases, markets become organized in combinations of people, contracts, and other institutions, in order to facilitate the coordination of market-based projects. While contracts play a role, a continuous, active role of knowledgeable managers (leaders and boundary spanners) is also often necessary. Such managers — and thus (core parts of) whole industries — are embedded in project ecologies at particular places, which is why we see geographical clusters in many project-based industries. The paper is mainly conceptual, but develops its argument by drawing examples from the Entertainment industries throughout.

Keywords: Project organization, product innovation, portfolio management of projects, entertainment industries

JEL Classification: L22, O31, L82
1. INTRODUCTION

We have heard it before: We are entering into a “New Economy” (e.g. OECD, 1996), where demand uncertainty is on the rise and “old” competitive advantages are fading, as they are copied by more and more firms around the Globe. In such an Economy, we have been told for almost a decade now, the need for flexibility and the economies of speed in product innovation (Galbraith 1995; Hirsch 2000) grows, and new forms of organization are necessary to cope. Ten years ago, we all talked about “networks”, and today, focus is upon “projects” (Hobday, 2000) as such new forms that may provide flexibility and facilitate innovation.

Whether we want to accept the claim that a “New” economy is arising, however, it is true that even late developing countries are now in the process of become increasingly flexible and apt at innovating, even within many high-tech industries (Florida, 2004). Western countries’ advantages within these “last resort” areas of economic activity may be threatened. However, there are still some sectors that grow significantly globally, but more so in the Western economies, namely the Cultural (or Creative) industries, where experiences (Holbrook and Hirschmann 1982; Pine and Gilmore 1999) based upon an certain artistic content (OECD 1997; Castaner and Campos 2002(Castañer & Campos, 2002; Faulkner & Anderson, 1987; Lampel, Lant, & Shamsie, 2000) form a substantial part of the value of products. Some of these Creative industries in the Western countries are constituted by customized services such as design and advertising, and (like other service industries) are not much threatened by global competition. However, it is significant that Western economies have significant global competitiveness within Creative Industries with off-the shelf products, such as music, film, games, and books. Rather than being based upon customization — or high-tech advantages —, the growth of these Entertainment industries in many Western economies seems to be based upon a high culturally specificity of products and the preference of not only Western but also global export markets’ preference for Western Entertainment products.¹

US and UK producers of film and music in particular have managed to profit from this advantage through putting out and exporting an impressive number of new products each year. This high innovation rate is interesting, because the demand for Entertainment products is even more uncertain than for many other global consumer industries. The Entertainment industries are based upon sustained product innovation — each Entertainment product is, in many ways, novel — and this is brought about by organizing the process in temporary projects. Hence, studying how Entertainment

¹ Entertainment products like theatre and concerts is, of course, not exportable on the same scale, although some do tour.
industries manage product innovation problems under conditions of globalization and uncertain demand — conditions that allegedly characterize the “New Economy” — may provide important lessons for a range of other industries.

This is the motivation for this paper. It analyses practices of managing product innovation (what we, for reasons outlined in the following sections, shall call product experimentation) in the Entertainment industries. Because projects in the Entertainment industries are highly vertically disintegrated, the management of them is really management of market processes. The paper analyzes how end producers of Entertainment (such as record companies, or film companies) manage the market in order to facilitate product innovation in projects. One key finding of the paper is that whereas each project may be seen as a short-term solution to a problem of product innovation with related short-term managerial problems within a firm and with its immediate network partners, in the longer, strategic, term, because Entertainment firms manage product innovation under high demand uncertainty through having portfolios of projects, they are challenged to manage the market, with complex and interwoven networks of firms and freelancers, and particular market institutions.

That is why a study of the management of products and projects in the Entertainment industries may allow us to sketch out strategy lessons that may be applied by many other innovation-intensive firms faced with globalization and demand uncertainty.

2. THEORETICAL FRAMEWORK

The paper brings together two research areas that potentially have much to gain from each other: The research on project management (mostly originating from within management and organization studies) and the research on industrial organization (a mostly economic research tradition).

Combining a range of theoretical observations from these diverse research fields, the paper presents an argument about industries and markets: Under which demand and technological contingencies (i.e., in which industries) we find project-based product experimentation, and how this experimentation is managed within or outside the boundaries of firms (i.e., on markets).

Projects are defined here as constituted by different skill-holders (economic agents with specialized competencies) collaborating over a pre-determined time period for completing a pre-specified (and sometimes one-off) complex task. It is precisely the complexity of a task that necessitates the coordination of — typically multidisciplinary — skills that it is not economically efficient to bring together on a permanent basis.

Most of the literature within the research tradition on projects has focused upon projects where (most)
participating skill-holders are individuals employed within the same firm (i.e., “project teams”), and the main managerial question related to such projects has been about internal processes of employment contracts, planning, control, leadership, etc. (Gaddis, 1959; Middelton, 1967). Recently, however, the literature on projects is bulging with perspectives on projects carried out (mainly) in the market (Ekinsmyth, 2002; Faulkner & Anderson, 1987; Robins, 1993; Sydow & Staber, 2002). In such cases, participating skill-holders are employed in different firms, or may be freelancers. This paper focuses upon such market-based projects (i.e., “project networks”) (Grabher, 2002c; Jones & and DeFillipi, 1996; Staber, 2004; Starkey, Barnatt, & Tempest Sue, 2000), and key questions are how different projects arise, connect and are coordinated by particular institutions on the markets for skills.

One research tradition that has been developed throughout the last decades to understand industrial organization is the “economics of organization” literature — here, understood as the mainly economic perspectives on how coordination among different economic activities is achieved under different organizational regimes. This tradition has undergone tremendous growth during the last decades, represented by e.g. competence perspectives (e.g. Richardson, 1972), the transaction cost perspective (e.g., Williamson, 1985; Williamson, 2000), and other contract perspectives (e.g., Grossman & Hart, 1986; Holmstrom & Milgrom, 1994; Holmstrom & Roberts, 1998). However, this tradition has largely been preoccupied with the one question of whether different economic activities will be internalized in single firms or undertaken at the market, paying little attention to how markets become organized (and hence come to resemble firms in some respects) to allow for coordination of the many activities that are not internalized (Maskell and Lorenzen, 2004). Furthermore, the economic organization literature has hardly paid any attention to temporary forms of organization, such as projects. In this paper, we seek to remedy this neglect, connecting core arguments from the economic organization literature — i.e., its focus upon institutions such as contracts, competencies, rules, norms, languages and so on — in order to investigate the management of markets in project-based industries.

3. METHOD AND STRUCTURE

Exploratory in nature, the paper is conceptual, but illustrates its argument with a brief analysis of the Entertainment industries, with a special focus upon the Recorded Music industry. The conceptual argument, as well as the empirical example, are, however, based upon extensive fieldwork in the creative industries (a range of literature studies as well as qualitative interviews with Danish and

3 As Langlois (1986: 6) puts it, “The coordination of economic activity in not merely a matter of price-mediated transactions in markets, but is supported by a wide range of economic and social institutions that are themselves an important topic of theoretical economic inquiry”.
Scandinavian managers within the music, film, fashion, and design industries, as reported in e.g. Lorenzen and Frederiksen (2003); Lorenzen and Maskell (2004), Maskel and Lorenzen (2004)).

The argument of the paper is presented in three parts. In the first section below, we discuss which industry types we are most likely to find projects. We argue that project organization is particularly relevant in industries characterized by high product innovation rates, and we identify two types of such industries, customizing and experimenting industries, respectively. We pay special attention to the latter, where high demand uncertainty (often combined with short product cycles) makes it necessary to continuously test differentiated products (what we call product originals) on consumers.

In the subsequent section, we then discuss the scope for management of such industries, i.e., which skill-holders (firms, employees, and freelancers) participate to projects, whether projects are internalized in single firms or marked-based, and how projects are connected inside or outside firms. We argue that supplementing our insights into management of firms with an understanding of management of markets allows us to better understand how such industries function.

The final part of our argument is presented in the next section of the paper, where we discuss how this latter type of management takes place. A key characteristic of project-based industries is that projects rest upon the collaboration of skill-holders with both differing competencies and motivations. In particular, labor markets of freelancers are crucial. Hence, a key task for management is to make sure that the behavior of differing skill-holders participating to projects is aligned. What is addressed here is a core question in the economic organization literature (which has only to a very limited extent been discussed in the current literature on projects), namely which mechanisms are available to managers to secure coordination among agents — not only within a single firm, but on the market. We argue that a project-based industry rests upon a particular combination of complementary coordination mechanisms, some person-embodied, other embedded in particular institutions (e.g. contracts, property rights, competencies, rules, norms, and languages).

Finally, the paper illustrates its argument empirically by taking a closer look upon the Entertainment industries. These industries are generally characterized by high product innovation rates and project organization. Through a step-by-step analysis of one particular Entertainment industry, the Recorded Music industry, we illustrate how we may derive at important strategy lesions by studying these industries that allegedly are at the forefront of the “New Economy”, in terms of how they manage product innovation in market-based projects.

4. PROJECTS AND INNOVATION

In which industries are we most likely to find project organization? First, we should remember that a

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4 See [www.cbs.dk/imagine](http://www.cbs.dk/imagine); [www.nordicedesign.org](http://www.nordicedesign.org); [www.step.no/music](http://www.step.no/music) for more information.
“project” is not a fixed organizational design, and that projects vary in duration, size, budget, and activity area. Rather, organizing different skill-holders temporarily flexibly in a project is an open-ended and dynamic principle of organizing, likely to change in course of the project’s lifetime. This principle has been around since antiquity as a way of organizing one-off activities, or activities not occurring frequently enough to support more permanent organizations — from building the Egypt pyramids to the Apollo space project. However, projects have also always been used for delivering “change” (Hobday, 2000), and special academic attention is now paid to such innovative capabilities of projects. For example, it is debated whether project organization is on the rise within some industries with high innovation rates (Grabher, 2002a; Lampel & Shamsie, 2003; Sydow & Staber, 2002), if not in all industries (Ekstedt, Lundin, Söderholm, & Wirdenius, 1999).

In the following, we shall focus upon how project organization may be relevant to product innovation.

Incremental Product Innovation vs. Product Originals

In industries with parametric demand uncertainty (Langlois and Robertson 1995), i.e., where consumer tastes undergo relatively predictable changes and the technological design space (Stankiewicz, 2000) for products is well defined, product innovation very often takes place incrementally, as additions to, or minor changes of, existing product designs. In such industries, new knowledge is built on top of existing knowledge, often in small steps, and consequently, the rate of creating new knowledge is modest.

Examples of such industries encompass machine tools and many consumer goods, such as furniture and household electronics. In such industries, much incremental product innovation originates within firms, at the shop floor, but relations among firms also play a major role— in particular, long lasting network relations. In the innovation research literature, it has often been pointed out that when specialized firms (“users” and “producers”) interact vertically in such long-term networks, knowledge — as well as incentives for learning— is “pushed” and “pulled” along the value chain (Rosenberg 1972; Lundvall 1985). Many important knowledge spill-overs also take place along the horizontal dimension, where firms with similar competencies monitor the efforts and performance of their closest competitors (Maskell 2001), or informally trade their knowledge (von Hippel 1998).

Incremental product innovation may also happen in relations that are “flexible” (i.e., of short duration, but repeated with irregular intervals), where shifting market relations among specialized firms serve to spread around an abundance of broad information on different issues facilitating incremental learning and technological changes (Lorenzen and Maskell 2004).

In other industries, the level of creation of new knowledge in products is significantly higher (even if design spaces may still be well-defined). In such industries, product innovation is not undertaken by

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5 Many projects also exceed their deadlines and budgets.
adding to existing products, but rather by creating new \textit{product originals}. Some product originals may have radically new functions and are connected to structural uncertainty and the rise of new industries or technological trajectories (Langlois and Robertson 1995).\footnote{The innovation literature typically focuses upon radical innovation, in particularly that which is “high-tech” (i.e., based upon high R&D investments).} In a range of industries, however, new products may contain no radically new functions, rather, they are \textit{differentiated} (Burke 1996) from incumbent products.\footnote{We may call a product original “differentiated” rather than “novel” when it satisfies similar as previous products by almost full substitution. Like radically novel product originals, differentiated product originals may however also create Schumpeterian rents, however more} Many differentiated products need to be originals (rest upon new knowledge) in order to fulfill demands, and there are (at least) two types of innovation bringing about product originals.

- \textit{Product Customization}. One example is when unique first-time solutions are developed to meet the specific demands of a client, as e.g. in the business service (business-to-business) industries such as design, consultancy, and advertising industries. The process of developing new knowledge to meet a new specific demand with a product original in this manner we may call product customization.

- \textit{Product Experimentation}. Another example is when there is high demand uncertainty (Knight, 1921) in terms of unforeseeable changes in consumer tastes, as in consumer industries such as the Entertainment industries (e.g. fashion, film, and music). With demand uncertainty, product innovation needs to be open-ended invention and new products need to be tested on consumers, over limited (if often flexible) test periods (Raubitschek, 1988; Kekre and Srinivasan, 1990)). This knowledge creation process of constantly creating new product originals and testing them we may call product experimentation (Nelson and Winter 1982; Rosenberg 1992; Foss and Foss 2002).

\textbf{Project Organization}

What is notable about industries with product originals and a high rate of innovation in the guise of both customization and experimentation is that they are predominantly \textit{project organized}, because this organization provides the crucial organic and flexible structure for negotiation and experimentation in the early phases of innovation (Burns and Stalker 1961). In industries with product customization, organizing skill-holders with highly complementary skills in temporary projects is strictly necessary in order to find solutions to a specific customer’s demand within a specified time period (Goodman and Goodman 1976; Ekstedt \textit{et al.} 1999; Hobday 2000; Grabher 2002). It should be noted that in some projects set up to customize a product, the client also needs to participate actively in the project to ensure customization. For example, construction or advertising firms “customize” a temporary group of skill-holders according to the demands of the client they serve, with the clients actively
inputting to the product innovation process.

In consumer industries with product experimentation, each project is an experiment. In such industries, rather than relying on inputs from users (who cannot be involved like is the case in customizing industries), the skill-holders participating to projects are able to create and advance a constant flow of product originals, testing them to see if they match unforeseeable consumer demands through a range of both parallel and successive projects (Lorenzen and Frederiksen, 2003). Hence, economic selection can be made efficient, weeding out unsuccessful products by terminating projects. Efficient selection allows for a high rate of experimentation, necessary in industries where economies of speed (Galbraith, 1995) are important (i.e., industries with short product life cycles and short time-to-market). For example, the production of new films and music CDs in the Entertainment industries is kept constantly high, and these industries are also known to give up on producing (or, if production is complete, marketing) particular products if consumer feedback is unfavorable.

So far, we have stipulated that we are likely to find relatively permanent organization forms (integrated business firms and long-term networks) in industries where production processes and products are relatively standardized, and projects in industries with a high rate of product innovation under uncertainty, because project organization allows for product customization and experimentation.

Let us look next at the scope for management of these projects in the latter type of industries.

5. THE ORGANIZATION OF PROJECTS AND THE SCOPE FOR MANAGEMENT

Where do we find the managerial tasks in project-organized industries with product experimentation? Let us look at the competencies orchestrated in projects in order to answer that question.

In any economy, competencies (or, in Hayek’s (1945) formulation, knowledge) are ultimately distributed to individual skill-holders, i.e., people (Ekstedt et al. 1999). In some cases, all the skill-holders needed for a project can be found internally in one firm (i.e., their employment contracts are permanent relative to freelancers (Alchian and Demsetz 1972)). A project can then be regarded as a project team internal to that firm (Middleton 1967), and the scope for management is internal. Many projects, however, need to incorporate skills held by people who are freelancers or employed in different firms. Such projects take the form of temporary market-based (i.e., traded among legal ”persons” — individuals or firms) networks of skill-holders: Project networks (Jones 1996), and management needs to transcend the boundaries of firms.

What, then, determines the structure of a project-based industry — or, put differently, where the temporary.

8 Just as most scholars view firms as the most basic economic agents, many also refer to firms as the principal holders of skills or competencies (e.g., Richardson, 1972). For our analytical purpose, however, we view individual persons as the most relevant unit of analysis.
skills are found and whether projects will be predominantly team-based or will need to transcend the
boundaries of firms? Why do most advertising firms permanently employ both text writers; art
directors; and controllers to undertake a range of different tasks, when a building contractor contracts
away the execution of all construction work, employing mostly controllers? And why do record
companies internalize sales and marketing functions, but not production of the core product, music?

**Internal Economies of Project Management**

At the most basic level, this is a question of whether the firms selling the end products in an industry
(in the above examples, advertising firms, building contractors, and record companies) enjoy *internal
economies of management* by employing particular skill-holders on a full-time basis.

A first aspect of such internal economies concerns *motivation*. Some skills are so different, and their
holders thus subscribing to such diverse world views and have so different motivations, that they
cannot be efficiently managed by one firm with one dominant set of visions and ideas (Loasby 2000).
For example, Osterloh and Frey (2000) argue that if people with intrinsic motivation (i.e. fun and
learning) as well as people with extrinsic motivations (i.e. contracts and incentives) are integrated in
the same firm, communication difficulties may decrease its performance. The result, they argue, is
that in many firms, extrinsic motivation crowds out intrinsic. Of course, this means that some skill-
holders who are motivated intrinsically cannot be integrated into such firms. In the case where assets
(skill-holders) are so diverse, there are no internal scale efficiencies of connecting them (Direrix and
Cool 1989).

A second aspect is internal economies of *planning*. In the cases where the use of different skills
related to projects can be efficiently planned, internal management may pay. Of course, this depends
on the nature of the skills in question. Skills that are used for the entire duration of projects, "core"
skills (Atkinson John, 1985; Jones, Borgatti, & Walsh, 2003), may be internalized into one firm if this
firm can efficiently plan their use in its successive projects. For example, most consultancy and
advertising firms have weekly planning meetings in order to make sure that consultants and
controllers finishing one project are shifted to a new with as little slack as possible. However, if
project durations are relatively short, uneven, or unforeseeable (for example, if many projects need to
be terminated before time), such planning becomes difficult. Skills that are not used for projects’
entire duration (often, because they are extremely specialized), "peripheral" skills, can still be
internalized in a firm if this firm through planning can realize scope efficiencies of its parallel
ongoing projects, through flexibly allocating tasks from several projects to specialized skill-holders in
order to keep them busy. For example, some advertising firms choose to employ photographers full-
time rather than using freelancers, constantly shifting them around to different photo tasks in different
projects, and this rests upon considerable planning. However, if many re-allocations of tasks are
needed, such planning also becomes very demanding. Furthermore, realizing scope efficiencies does
not depend upon planning alone, it also takes some scale: In this case, a firm needs to undertake a
sufficiently large number of parallel projects. In the case of advertising, few firms are sufficiently big to be able to take full advantage of a full-time employed photographer’s skills. And virtually no advertising firms are so big as to employ film directors full-time.

**Market Economies of Project Management**

With high specialization of skills and complexity of projects, the problems of motivation increase and the costs of planning grow to the point that it erodes the economies of internal management of a range of skill-holders. As noted, there is likely to be fewest advantages of internalizing highly specialized skill-holders. The core employees of the firms selling end products are likely to be those able to work as generalists on several types of projects, because they will infer the lowest planning costs, along with controllers and "boundary spanners" (Tushmann & Katz, 1980) whose function it is to manage and plan projects. For example, many advertising firms employ a core group of generalists (flexible text writers and art directors) along with managers and controllers, the latter taking care of both internal project planning as well as external hiring of freelancing specialists (such as photographers, composers, directors, models, and so on).

Some firms may choose to internalize some highly specialized skill-holders in spite of the lack of internal economies of management, for strategic reasons — in order to ensure easy access to them or to prevent competitors from internalizing them. However, ceteris paribus, the market is a more efficient mechanism than internalization for allocating tasks to highly specialized skill-holders in complex projects. Hence, we can expect industries with such skill-holders and projects to be dominated by project networks rather than project teams.

The structure of such industries is, of course, characterized by relatively small firm sizes and high specialization of firms that constantly participate to a range of project networks. Groups of firms and freelancers with a high abundance of mutual collaboration in project networks — project ecologies — are formed in many project-based industries, and that they tend to keep the majority of their project relations within such groups (Grabher 2002; Engwall 2002; Davis and Brady 2000). Even relatively stable ecologies — with the same firms participating over time — may allow for a high rate of experimentation. Due to project organization, economic selection weed out more projects (products) than agents in an ecology. Such selection operating at project level is both more rapid and cheaper than selection operating at firm level. For example, even with many films flopping in the film industry, most firms and artists survive by spreading risks, participating to parallel projects and thus experimenting with several products at a time. Hence, their managerial and artistic competencies are not lost to the film industry, even with a high rate of product failures. Project organization means that agents who may be tomorrow’s winners are not weeded out together with today’s losers (Carlsson and Eliasson 2001).

Project ecologies encompass both firms and labor. As noted, highly specialized skill-holders who do not participate during the entire lifespan of projects are very often market-based (freelancers), as the
market is more efficient in allocating work to them (they have a portfolio of freelance work), and few firms have the size to alone allocate enough projects to them. Furthermore, many freelancers choose this lifestyle rather than full-time employment in or affiliation to just one firm for motivation reasons (Florida 2000). In a project-based industry, the complementary combination in ecologies consisting of specialized firms and specialized freelancers allows single firms to have access to the appropriate skills with minimal fixed wage costs and hence high numerical labor flexibility (Atkinson, 1985).

6. THE MANAGEMENT OF MARKET-BASED PROJECTS

Above, we discussed the organization of project-based industries, concluding that there is often a lack of internal economies of management, and that means that many projects are carried out on the market. What, then, is the role of management? When market-based projects are faced with a range of potential market coordination problems stemming from information asymmetries, interest conflicts and cognitive distances, what can managers do then?

Coordination problems

While coordination problems may be present in all project types (including project teams internal to firms), they may be particularly severe in project networks that cross firm boundaries. Let us take a closer look at these problems.

- **Time costs.** First, marked-based projects may have a basic problem with allocating tasks at the right time. Without an efficient information dissemination system (which in a firm is often centralized and merged with planning), there may be huge time costs in market-based projects.

- **Governance problems.** Second, there may be governance problems arising from poorly aligned information and conflicting interests (Williamson 1985). Specialized skill holders, besides possessing different skills, also have different sources of information, motivations, and often interests. This may be relevant in the relationship between business firms or between freelancers, but a special problem may arise when the behavior of freelancers with intrinsic motivations and particular, often trust-based lifestyles need to be coordinated with business firms where extrinsic motivation and contract writing is the norm. In order to overcome such governance problems, project participants may have to pay high transaction costs (resource costs of searching, negotiating, and writing market contracts). In projects that are aimed at creating new knowledge (new products) through collaborating with shifting partners, transaction costs, being “dynamic”, may be particularly high (Langlois and Robertson 1995).

- **Communication problems.** Third, the participants to market-based projects may, besides
possessing different skills, also differ culturally in terms of beliefs, expectations, languages, norms, and practices. The result of such cognitive distances may be communication problems, and ultimately resource costs of misunderstandings (Foss and Lorenzen forthcoming 2005). Long-lasting market relations — such as supplier networks or strategic alliances — often develop strong informal institutions to overcome (some of) the above coordination problems, such as networked trust and shared codebooks for communication (Lorenzen 2002; Maskell and Lorenzen 2004). Temporary in nature, projects cannot develop as strong institutions, because collective experiences and knowledge assets are often dispersed after a project is dissolved. Instead, different types of mechanisms are usually combined on the market in order to facilitate coordination of market-based projects.

Coordination through Contracts

A first type of coordination mechanism may be written contracts. Some project networks are set up by one dominant firm selling the end product of the project (for example, a film company). This firm may, without ownership of the skills involved, take on a role coordinating them through active management — typically, determining the variety range and time allowed for the project, and imposing rules, payment structures, or other governance mechanisms that help to align incentives among project participants, and defining blueprints and standards in order to overcome cognitive conflicts. Some projects initiated jointly by (most) participants and no dominating agent may also seek to solve coordination problems through contracts or other written coordination mechanisms. For most projects, what can be specified are the end tasks of and the conditions for the project, not its processes. There is a limit to specification in the many projects that are set up to produce product originals through customization or experimentation. Many such projects have fluent job descriptions, loose organizational charts, and low authority (Visser & Dankbaar, 2002). In particular, projects set up to experiment need to be coordinated flexibly. In some project networks, not even the tasks or conditions of the project can be meaningfully specified beforehand. Some such projects may encompass tasks that are difficult to codify or formalize, and/or project participants who may shift over time, as the competences needed for the project may also shift over time.

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9 A firm-based project team may also, due to its temporary nature, develop some institutions such as routines, rules, codebooks, and information structuring institutions (such as information gatekeepers), however few and weak relative to those developed in stable teams. Hence, a project team may have to rely upon the general governance and incentive structures in the firm in which it is based, and these may be poorly suited for coordinating the specialized tasks of the project (in fact, the need for alternative coordination mechanisms may be the very reason that a project is administratively separated from the rest of the organization).
Coordination through Management

In such projects that cannot be coordinated by specification in the above manner, what is needed in order to overcome incentive conflicts is not dominance nor specification, but management. A first element of such management is leadership: Persons who mediate interest conflicts among project participants, through facilitating negotiation or through imposing or suggesting rules or actions. Similarly, many communication problems are not alleviated by dominance or specification. What is needed is competent boundary spanning: Persons who spread information and compensate for cognitive distances among project participants, through stimulating mutual learning or through imposing or suggesting solutions to cognitive coordination problems (Foss 2001). Some projects employ specialized boundary spanners or leaders — the project may even have been set up by its leader. And in many cases, the leader and the boundary spanner of a project is one and the same person, having captured sufficient experience from the projects they have participated to earlier, to be capable of coordinating new projects, holding knowledge of (the majority of) the distributed competences and tasks included in particular project types, and all the tasks (and potential problems) related to coordinating them.10

As mentioned, such leaders and boundary spanners are sometimes long-term employed by firms (in order to make it possible for these firm to use external skill-holders for projects). In some cases, however, leaders/boundary spanners are, themselves, independent freelancers. Such “freelancing managers” often specialize in possessing knowledge of which agents may be suitable for new projects (“know-who”), and have access to updated information (typically, through their personal networks) about different agents’ current skills and availability. Hence, such persons are also capable of managing the time aspect of project coordination: If demand opportunities change rapidly, projects need to be set up, changed, or terminated with short time limits.

Some leaders and boundary spanners derive some of the above-mentioned all-round knowledge of the various skills and tasks involved in a project from a scientific logic (Grabher, 2002), achieved, for example, at management schools. School courses need, however, to be highly tailored to specific industries and specific types of projects in order to provide students with the necessary insights. Many leaders and boundary spanners have instead learned from hands-on experience. Many have had jobs that allowed for contact with a range of different specialized skill-holders who typically participate to projects (this is also the way these people build the personal networks that give them access to

10 In a resource-based terminology (e.g. Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Peteraf, 1993), we might say that such people possess dynamic capabilities — i.e., the abilities to constantly combine shifting assets (internal as external) in new valuable ways (Kogut and Zander, 1992; Leonard-Barton, 1992; Teece et al., 1997), through being able to set up, coordinate, dissolve, and set up anew project networks, at the appropriate time and place, while keeping coordination problems at bay.
information). Some have learned about the different skills and tasks involved in particular projects by having been around a range of different functions throughout their career, through employment in a range of different firms undertaking different project tasks.

The Embeddedness of Managers

Some people managing market-based projects (i.e., leaders and boundary spanners) may have worked in different firms around the World, but many have learned how to lead projects and span cognitive boundaries through having an "apprenticeship" in a host of different firms within the same geographically limited area — typically a country, but in some cases, even a district or city where job opportunities within the same industry are particularly abundant. In this way, some of the skills of these managers become place-specific: They concern local skill-holders, under local conditions. Clearly, know-who is relevant only in the “community of practice” (Brown & Duguid, 1991; Wenger, 2000) where it was acquired, but many leadership or boundary-spanning skills may be of highest value in the place where they were acquired. The context specificity of skills and placeboundness of many project leaders and boundary spanners may help us understanding why many ecologies of projects are geographically clustered (Staber et al. 1996; Porter 2000; Maskell 2001; Lorenzen 2002).

Geographical clustering, itself, also facilitates coordination of market-based projects, through the rise of local market institutions (Lorenzen 2002; Maskell and Lorenzen 2004). In a cluster with geographical proximity of people and firms, it is ceteris paribus, unlikely that neither skill-holders nor managers are total strangers before they enter into a project with each other, they may be linked by "weak ties" (personal networks of "friends’ friends" (Granovetter 1973)), and they may be part of a place-specific "epistemic" or "interpretative” community (Grabher, 2002b; Hass, 1992).

7. EMPIRICAL ILLUSTRATION: THE ENTERTAINMENT INDUSTRIES

Entertainment industries

To exemplify our points, let us analyze the management of products and projects in one particular group of industries: the Entertainment industries. A natural reason for choosing these industries as illustrative example is that projects are very prominent here, and the organization of these industries are already serving as inspiration for organization of other industries where economies of speed in product innovation are also becoming important. Furthermore, the Entertainment industries’ direct

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11 Hence, ‘gatekeepers’ of information in firms or networks are often the same persons who possess project coordination skills.
impact upon many national economies is also growing in terms of turnover, employment, and export, as are these industries’ ability to drive a range of supporting industries (for example ICT industries, the explosion of which is partly propelled by needs for producing, marketing, and distributing digital entertainment products).\footnote{It is also noteworthy that the Entertainment industries are highly publicly visible and exert extraordinary influences upon the molding of values, attitudes and life styles in society.} As a consequence, the Entertainment industries now attract considerable political interest. However, the organization of the industries has so far been corresponded by only modest academic scrutiny (Lampel et al. 2000).

The Entertainment industries are a part of the currently much-focused-upon Creative industries. In these industries, one core issue of organization is how the skill-holders who can provide such content (i.e., ”creative” people, artists) are coordinated with those who hold the ”humdrum” skills, i.e., those of manufacturing, marketing, and distributing products (Caves 2000; Davis and Scase 2000). At the heart of this problem are the differing motivations of these skill-holders, with archetypical artists often motivated intrinsically by a creative urge of communicating a message or a vision, and entrepreneurs or managers typically extrinsically motivated in terms of economic incentives.\footnote{These motivations are of course only stereotyped tendencies.}

Unlike other Creative industries also relying on artistic product content and providing business services (like the advertising and design industries), Entertainment industries serve consumer demands, albeit not always mass demands. Some firms, like many theaters, have small audiences and are less dependent upon profits, as they may be run on a philanthropic basis and/or be subsidized by sponsors or the public. Others, like music or film, are big businesses with global mass demand. Generally, however, all Entertainment firms compete on product differentiation in terms of content, rather than price. Simply put, in order to entertain, they have to continuously come up with new and original products.

How is such product innovation organized and managed? We may distinguish between two types of Entertainment industries, by virtue of the argument developed in the previous sections. First, there is a type of Entertainment industries resting upon incremental product innovation. For technological reasons, products like computer games and other consumer software are developed through combination of existing software modules, adding to, and modifying existing products. Rather than testing different products on markets, many games and other software producers seek to obtain consumer feedback or even participation during the innovation process, in order to target development efforts (von Hippel and Katz 2002; Jeppesen and Molin forthcoming 2005).\footnote{Where information is “sticky” (von Hippel, 1998), it is important to get consumers to participate directly to some parts of the innovation process, as information cannot be efficiently conveyed from consumers to firms. In some software developing industries, firms provide consumers with ICT-based “toolkits” in order to let them suggest product additions}

A key strategic concern in such industries is availability of able programmers, and consequently, these are often long-term employed by firms. For these reasons, the entire product innovation process is managed within single

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\footnote{12 It is also noteworthy that the Entertainment industries are highly publicly visible and exert extraordinary influences upon the molding of values, attitudes and life styles in society.}

\footnote{13 These motivations are of course only stereotyped tendencies.}

\footnote{14 Where information is “sticky” (von Hippel, 1998), it is important to get consumers to participate directly to some parts of the innovation process, as information cannot be efficiently conveyed from consumers to firms. In some software developing industries, firms provide consumers with ICT-based “toolkits” in order to let them suggest product additions}
firms, taking advantage of their stable, long-term networks, (including those to lead users among consumers (Jeppesen and Frederiksen 2004)). Even with division of tasks within firms (e.g. among software programmers, art designers, and sales and management personnel), diversity of skills and complexity of innovation tasks is not so severe as to rule out internal economies of management.

A second type of Entertainment industries is organized very differently. Film and Recorded Music industries are characterized by demand uncertainty, economies of speed, and high skill division and task complexity within product innovation. The result is that product innovation is organized in projects to facilitate experimentation, and that these projects are carried out on the market rather that within firms. This results in a high degree of organization and management of the market, in the guise of active leaders/boundary spanners, social institutions and geographical clustering. Such market organization of the Film industry has been discussed in some length by e.g. Storper (1989); Storper and Chistophersen (1987), and Blair (2001). In the following, we will take a closer look at the Recorded Music industry.

The Recorded Music Industry

The core product of the Recorded Music industry is music CDs, but songs scores (sheet music) and tunes or jingles for mobile phones, etc., also begin to play a role (Andersen and Miles 1999). This industry has grown by 35% during the last decade, with turnovers rising from USD 27 billion to USD 37 billion (IFPI 2001), primarily due to technological and stylistic innovations and globalizing markets. It has players in every country, and even if a handful of major media conglomerates dominate it, local firms in virtually all European countries are profit earners in their own right (Power and Hallencreutz 2002).

Project organization and management of the market within the Recorded Music industry can be explained by examining the nature of the demand for recorded music, and the skill diversity and the complexity of innovation tasks carried out by firms within this industry. Very stylized, we can describe the organization of the industry thus:

- **Demand uncertainty.** The Recorded Music industry rests upon development of product originals. Product prices are standardized so much that competition revolves around product differentiation in terms of artistic content (and, of course, how this content is marketed).\(^{15}\) Even if niche demands continue to exist (and seem to become more profitable with globalization and new technologies for digital distribution of music), the industry is characterized by mass demand. Some products achieve huge sales around the World. However, the problem is that these products are few, and that consumer tastes are so ambiguous that it is not possible to know beforehand which will succeed on a large scale or modifications (von Hippel and Katz, 2002).

\(^{15}\) Such price standardization is a result of national tax regulations in combination with industry interest organizations.
Furthermore, life cycles of the core product, the music CD, are generally short (and even briefer for CD singles) and shortening.

- **Experimentation.** The result of demand contingencies is that product innovation is organized in projects, in order to facilitate experimentation. When nobody knows which CD is going to make it big, the strategy is to ensure a steady stream of novel products. Any release of music CDs is in a sense an open-ended search process, where new products need to be tested vis à vis an uncertain consumer demand, over limited test periods.\(^{16}\)

- **Skill diversity.** The skill-holders needed for a music project are very diverse. The tasks involved in production and marketing of a music CD encompass (at least) songwriting; performance; recording; production, mixing and sometimes remixing; mastering; contract writing and intellectual property rights management; graphical art design (AD); video production; and sales, promotion, and tour management. People holding these skills are usually very specialized within only one or few or these tasks, and are characterized by differing lifestyles and motivations. Hence, there are few internal economies of managing entire CD projects within firms.

- **Project complexity.** Innovation of commercially marketed music products is a relatively quick endeavor, with many commercial CD projects running for less than a year.\(^{17}\) Compared to many projects in other industries (such as construction projects), there are also relatively few participants to music projects. As creating a new product is a complex patchwork of tasks, few participants partake to the entire project’s lifespan. In the production of a music CD, some skill-holders (e.g. those carrying out AD, promotion, and tour management) participate only at some stages, whereas performers remain in the project throughout, as they are needed not only for creating the musical content of the CD but also for marketing it through live and video performances. Often, product innovation is so open-ended that it brings a need for flexibility. Consequently, its time frame may be altered, and some project participants, like musicians, producers or art designers may be fired from a project if it shifts course. With such shifting participation to CD projects, there are few internal managerial economies of planning them.

- **Market-based projects.** The result of high skill diversity and complexity of tasks is that product innovation projects within the Recorded Music industry are undertaken on the market. One economic agent, the record company, typically establishes and manages projects and is involved in all aspects of them. The record company first signs artists and then

\(^{16}\) The same goes, albeit to a less extent, for new national penetration efforts or marketing methods.

\(^{17}\) Of course, product innovation of music out of the commercial mainstream may take many years or even decades.
“pushes” the music through the other parts of the value adding process by signing on firms and freelancers with supplementary skills. Often, a publishing firm takes care of payments (collection of royalties) to artists and record companies after projects are over and may also sometimes be actively involved in signing artists and finding music content. Different record companies play different roles in music projects. The branches of the four global major entertainment conglomerates (EMI, Sony BMG, Universal, and Warner) draw upon the superior distribution and marketing competencies of these multinational corporations.

Focusing upon marketing and distribution, these record companies assign the task of finding and signing artists to specialized Artist and Repertoire (A&R) personnel within their organization. Often having only modest skills with respect to music performance and production, and placed under heavy budget constraints, this A&R personnel often have difficulties in discovering, signing, and developing innovative artists. Smaller and independent record companies, on the other hand, often purely local in scope, typically have modest marketing skills, and very few have internalized distribution. However, they do have abundant internal skills and the personal networks needed to find, sign, and mature innovative artists, as some of their personnel often are artists themselves. As a result, on many national markets, the branches of the major global record companies use the national independent firms as “external product innovation labs”. Local firms may release national artists on their own, while artists perceived to hold great (global) sales potential are also licensed to major firms in order to utilize their larger marketing power and global distribution channels and sales networks (Darmer 1999; Power and Hallencreutz 2002; STEP 2003).

- **Coordination and management of markets.** Some coordination of projects is taking place on the basis of contracts. In particular, the major record companies use contracts to coordinate projects. In spite of a tendency of implementing still more contracts, e.g. in order to protect intellectual property rights, some tasks in music projects are still not subjectable to efficient contract coordination, and for many freelancers and independent record companies, handshake deals is still the preferred mode of collaboration. This is made possible by the fact that the market for skills within the Recorded Music industry is highly organized into distinct project ecologies, within which record companies, publishers, AD, media and event firms keep most project relations when producing new CDs (Power and Lundequist 2002; STEP 2003). Within such Recorded Music ecologies, new project partners can easily be found, because many have worked together in earlier projects. As a result of the high number of

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18 Consequently, most independent record companies keep marketing efforts at a minimum and rely upon networks (alliances) with each other and specialized distribution firms.
19 It should be noted that compared to many other industries, there is a higher minimum degree of formalization within the Recorded Music industry, due to the importance of Intellectual Property Rights, which necessitate formalization in contracts and stipulations to a higher extent than in more traditional industries.
finished projects in such ecologies, there is abundance of people who are skilled in managing music projects (i.e., A&R-responsible in the record companies, as well as a number of independent project coordinators). Such experienced managers, with know-how and know-who specialized to music projects, are central to coordination (and sometimes also initiation) of CD projects.

- **Geographical clustering.** Recorded Music ecologies are typically clustered in the major cities of the world (Scott 1999; 2000)\(^20\). Here, we find national branches of major international record companies and publishers, the bulk of AD, media and event firms plus related legal and financial services, as well as many independent record companies and artists.\(^21\) The record companies alone are often found within a few hundred meters, in the city cores or in other high-prestige areas of the urban cluster (STEP 2003).\(^22\) One effect of this clustering is of course that it lowers time costs when running projects. However, the major positive effect of the clustering of managers with accumulated experience with project coordination is their many weak ties and frequent interactions in the city space, making information about people’s and firms’ skills and availability accessible to all local firms. Furthermore, a relatively high level of social trust, facilitated by the frequent local interaction and information sharing among people within and around the industry, plus sets of canonical conventions for good and accepted conduct, which is safeguarded by reputation effects, lowers the transaction costs when new CD projects are initiated (Power and Lundequist 2002; Lorenzen and Frederiksen 2003).\(^23\)

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\(^{20}\) Beside the national capitals project clusters in the Recorded Music industry are found in selected “creative cities” that are able to attract specialized and highly qualified “creative” labor (Florida, 2002). This pattern of urban clustering is something the Recorded Music industry has in common with other Entertainment industries.

\(^{21}\) Many young artists want to live in the cities, but many of the highest grossing artists and/or songwriters dwell in the countryside, with no clear localization pattern. These artists are more self-contained in their creative process and entertain fewer project relations (depending more on long-term network relations to record companies and publishers), and consequently less dependent on urban location. By contrast, younger artists often have more different project relations, shifting between labels, bands, performing often, and needing an abundance of weak ties to other artists to inspire their creative process.

\(^{22}\) For example, a recent study of the Scandinavian Pop Music industry showed that, when labor market data is used, in Denmark, Pop Music firms cluster in the Greater Copenhagen, accounting for no less than 46% of all Danish firms within Pop Music (as defined by the NACE codes specified above). This is significant, as the general concentration of firms — meaning, Copenhagen's share of all Danish firms — is only 19%. A minor cluster of firms was also found around the second largest Danish city, Aarhus accounting for 12% of all Pop Music firms (STEP, 2003).

\(^{23}\) It should also be noted that artistic inspiration and stylistic information related to production and marketing of music heavily depend on global pipelines of people and information, and such pipelines are in practice indispensably urban. Specialized educational institutions supplying new artistic talent, such as conservatories, or management schools
This brief sketch of the organization of the Recorded Music industry suggests that we find geographical clusters in the industry because clustering lowers the costs of coordinating experimental projects on the market. It seems paradoxical that such a local organization of the market facilitates a global industry. However, it is a fact that products developed through local projects are marketed and distributed globally through non-local networks. Whereas independent record companies, AD and event firms typically keep their relations local, major record companies participate to many clusters simultaneously and serve to connect them in global networks of distributing and selling products that have been sourced locally (Power and Hallencreutz 2002; STEP 2002). Allegedly, such local product sourcing in combination with global marketing is what has made the global major entertainment conglomerates so successful — even if products have been sourced mainly from a few countries.24 Above, we have not attempted a full-scale analysis of the Entertainment industries nor the Recorded Music industry. Rather, we have sought to illustrate the argument outlined earlier. Through this example, we have rendered likely that our framework — focused upon the nature of product innovation and the skills and tasks this encompasses — allows for a fruitful analysis of why particular industries are project organized, and how they are managed. We hope to have thus illustrated that understanding management of product experimentation and projects in Entertainment industries — and, more generally, in industries with high innovation rates under demand uncertainty — is a complex analytical task in need of taking both firm-internal and market-related problems into account.

8. CONCLUDING REMARKS

In the paper, we have presented a framework for analyzing management of product experimentation in project-based industries. The basic arguments of the paper are:

- We are likely to see project organization in industries where the nature of consumer demand

offering “Project Management” or “Music Management” courses targeted at the Recorded Music industry, are located in major cities only. Furthermore, qualified labor is attracted by the diversity and global nature of large cities; and its skills are enhanced there (Maskell and Lorenzen, 2004).

24 However, there are signs that this local-global system is now under duress with respect to Recorded Music. Due to a strategic race of acquiring independent companies, the global major record companies have become very dominant in a range of national Recorded Music industries, curbing the local innovative potential. Furthermore, as result of a temporary global drop in CD sales (often ascribed to piracy), the global majors have now cut back on their local sourcing of music and focused upon marketing a narrow range of mainly US and UK music globally. Such increased emphasis upon only some aspects of music projects (marketing) and a disconnection of the product “food chain” from independent record companies to global majors is, of course, likely to limit the extent of experimentation within the Recorded Music industry.
means that product innovation takes place as customization or experimentation.

- If skills needed for projects are very diverse and projects are complex, there are few internal managerial economies of projects, and the scope for management then transcends the boundaries of firms, because projects are market-based rather than internal to firms.
- Markets become organized in combinations of people, contracts, and other institutions, in order to facilitate the coordination of market-based projects. While contracts play a role, a continuous, active role of knowledgeable managers (leaders and boundary spanners) is also necessary. Such managers — and thus (core parts of) whole industries — are embedded in project ecologies at particular places, which is why we see geographical clusters in many project-based industries.

The paper has offered a view on management not only of firms, but of projects, and ultimately, markets. Hence, it has also provide insights into both short and long-term, strategic aspects of the management of product experimentation and projects. Whereas each project may be seen as a short-term solution to a problem of product innovation (with related short-term managerial problems), in the longer, strategic, term, firms may manage product experimentation under high demand uncertainty through portfolios of projects, and this necessitates management of the market.

There are some distinct advantages of the paper’s combination of two diverse research traditions, i.e. the research on projects vs. the economic organization tradition. First, it has allowed us to address some issues that, even if obviously central for project organization, nevertheless have been little analyzed in a theoretical perspective. One such issue is how management of innovation relates to labor markets. Existing research on labor has focused upon freelancers with “project careers” (DeFillippi & Arthur, 1998; Faulkner & Anderson, 1987; Grabher, 2002a; Jones, 1996), and “core” vs. “peripheral” labor, but rarely discussed how projects often rest upon the collaboration of skill-holders with both differing competencies and motivations, and how managers may address this problem. Another issue is geographical clustering of many projects. Even if this clustering is easily empirically observable (see e.g. Scott 1999; 2000; Grabher 2002c), theoretical accounts for it within the project literature have been sparse indeed. Our use of arguments from the economics of organization literature has allowed us to explain this clustering, and to point towards its role for management.

Secondly, the paper has raised some points that may be of interest to scholars within both the strategy and economics of organization traditions. Foremost, rather than maintaining the classic dichotomy between firms as “institution” and markets as merely price signals among anonymous buyers and sellers, the paper has demonstrated that we can view markets as highly organized and subject to management in stable and semi-stable institutions. Understanding these institutions is as important in order to account for the organization of an industry, as it is to understand economies and diseconomies of internalization. The paper has also discussed another dimension of time than what is usual in this tradition. Whereas organizational economics scholars readily refer to e.g. evolutionary
economics in discussing long-term evolution (and devolution) of institutions, little has been said about
the impact of short-term demand fluctuations and the length of product life cycles within a single
industry upon the nature of the institutions arising to coordinate economic action. Whereas the
economics of organization often stipulates that industry uncertainty creates a need for efficient firm-
internal institutions and management, our observation is that short product life cycles do create a need
for efficient institutions and management — but on the market, rather than in firms. Furthermore, the
paper has devoted more attention to the nature of competencies (skills) than what is usual in the
economics of organization literature. In this literature, it is a key assertion that institutions arising in
order to coordinate different competencies determine industrial organization. In particular, Richardson
(1972) argues that if competencies are complementary, they may be internalized in firms in order to
facilitate their coordination. We unpack “competencies” somewhat further and argue that it is not just
whether competencies are complementary or not that influences which institutions are needed to
coordinate them. The different motivations and cognitive frames held by agents who hold the
competencies in question also influence industrial organization. In particular, we point out that
intrinsically motivated skill-holders may avoid internalization into firms even at substantial cost.

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