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On the Economics of Innovation Projects:  
Product Experimentation in the Music Industry

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### **Abstract:**

The paper is conceptual, combining project and economic organization literatures in order to explain the organization and management of market-based projects. It dedicates particular focus to projects set up in order to facilitate product innovation through experimentation. It investigates the internal vs. market economies of scale and scope related to projects, as well as the issues of governance, planning and coordination related to reaping such economies. Incorporating transaction cost perspectives as well as considerations of labour markets, the paper explains the management of market-organized innovation projects by virtue of localized project ecologies and local labour markets of leaders and boundary spanners. It illustrates its arguments with a case study of the Recorded Music industry.

**Key words:** Project management, product innovation

**JEL Codes:** L23, O31, L82

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## 1. INTRODUCTION

This is a conceptual paper that adds to the project management and organisation literatures by addressing the problem of management in industries that are based upon market-organised *projects*, due to the characteristics of their product innovation processes.

“Projects” are defined here as constituted by different skill-holders (economic agents with specialized and complementary 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).

While the emerging literature on market-organised projects provide ample examples of the effects of such projects, we still don’t know much about what drives this form of organisation, i.e. when and why firms choose to organize projects on the market rather than keeping them in-house. And we know even less about how projects that are organized on the market are managed: Given the absence of asset ownership, employment contracts, and other forms of firm-internal management, how do participants obtain their goals while holding down time and other costs? Some scholars (e.g. Grabher, 2002b; 2002c) give us a hint that the geographical clustering which we see in many project-based industries may play a positive role for market-organised projects, but how such clustering relates to issues of management is still relatively unexplored.

For illustration, consider the Recorded Music industry. Every new music CD can be seen as a discrete product innovation, with new content (and, often, also a new marketing campaign), and is created in a temporary project that brings together, amongst others, musicians, producers, sales and marketing people. But, even if distribution is dominated by major global corporations, product innovation is done in market-organized networks of independent freelancing artists and small specialized firms, often localized in particular cities. Why? And how are such complex and temporary networks managed?

This paper addresses the following research questions:

1. What determines the *organization* of projects (and the boundaries of firms engaged in projects), i.e. when are projects internal to firms and when are they organized on the market?
2. How are market-organised projects *managed*?
3. What is the role of *geographical clustering* for such management?

The paper is, as mentioned, conceptual, and brings together two literatures that potentially have much to gain from each other: The research on project management and the research on industrial organization. Whereas the former literature mostly

originates from within management and organization studies, the latter is a mostly economic research tradition, enquiring into 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).<sup>1</sup> 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.

The paper illustrates its theoretical argument with an empirical case study of the Recorded Music industry. This industry is an example of an industry that, for reasons related to product innovation, is organized in projects, and these projects are predominantly organised on the market. While other Entertainment industries with prominent market-organized projects have been discussed in some length by e.g. Storper (1989); Storper and Christophersen (1987), and Blair (2001), the Recorded Music industry remains an interesting and understudied case. In this paper, we present an analysis of this industry's projects: Why they are organized on the market rather than within firms, and how they are managed. We also discuss why many projects within the Recorded Music industry are geographically clustered.

The paper is organized thus. In section 2 below, we introduce the issues of projects and project-based industries, giving a brief insight into the project literature, but also expanding upon this literature by briefly discussing projects in relation to innovation. We argue that projects are efficient for product innovation within particular industries that innovate through experimentation.

However, the project literature offers little insights into how projects are organized in such industries. In section 3, we tackle this question, by investigating theoretically what we could call "the economics of project organization", i.e. when it is most efficient to keep projects in-house and when market-organised projects are more efficient. We investigate which skill-holders (firms, employees, and freelancers) participate to projects, whether projects are internalized in single firms or market-organised, and how projects are connected inside or outside firms. We argue that supplementing our insights into the internal economies of firms with an understanding of the economies of *markets* allows us to better understand the organization of such industries.

Section 4 addresses the second of our research questions, namely how management of market-organised projects 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. In the section, we take advantage of economic organization literature (notably, transaction cost economics, which has only to a very limited extent been used in the current literature on projects), in order to discuss which mechanisms are available to managers to secure *coordination* among agents — not only within a

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<sup>1</sup> As Langlois (1986: 6) puts it, " The coordination of economic activity is 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".

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). The embeddedness — in particular geographical locations — of persons with leadership and boundary spanning skills, is an explanation for the notable geographical clustering of projects in a range of industries.

In section 5, the paper illustrates this chain of arguments empirically by taking a closer look upon the Recorded Music industries. This industry is characterized by product innovation through experimentation and project organization. Through a step-by-step analysis of innovation projects (i.e., the invention, production, and sales of new music on CDs), we illustrate how our theoretical framework is useful for understanding why music projects are market-based and how they are managed on the market. Furthermore, our framework provides an explanation of why particular parts of the Recorded Music industry is geographically clustered.

## 2. PROJECT-BASED INDUSTRIES

The “project” — a temporary collaboration of different skill-holders over a pre-determined time period for completing a pre-specified complex task — 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 (Engwall et al., 2003). Projects are deliberate but not fixed organizational designs, and they vary in duration, size, budget, and activity area (furthermore, many projects exceed their deadlines and budgets).

### Projects and product innovation

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. For that reason, projects have also always been used for delivering “change” (Hobday, 2000). To a growing extent, academic attention is now paid to such innovative capabilities of projects. For example, it is debated whether projects are on the rise within some industries with high innovation rates (Hobday, 2000; Gann and Salter, 2000; Grabher, 2002a; Lampel & Shamsie, 2003; Sydow & Staber, 2002).<sup>2</sup>

Even if we also find projects in process innovation, most cases testify to the innovative abilities of projects for *product* innovation (even the pyramids and the Appollo projects can be seen as — admittedly outstanding — products). Projects are of particular relevance for product innovation in industries depending upon the continuous creation of products with *new content or traits*, i.e. not (or to a neglectable extent) incorporating elements of earlier products.<sup>3</sup> We may call such products *product originals*. They come about through “episodic innovation” (Acha et al., 2005), i.e. discrete acts of innovation with the end aim of producing a new product.

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<sup>2</sup> (Ekstedt et al., 1999) argue that projects may be a principle of growing relevance in *all* industries.

<sup>3</sup> Hence, this category of industries are basically different from those based upon *incremental* product innovation, i.e. new knowledge built on top of existing knowledge, often in small steps. Such industries are typically characterized by 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. Examples of such industries encompass machine tools and many consumer goods, such as furniture and household electronics.

A few product originals have radically new functions and are connected to structural uncertainty and the rise of new industries or technological trajectories (Langlois and Robertson 1995).<sup>4</sup> But most product originals contain no radically new functions, rather, they are created in order to fulfil demands on existing markets.

### Customization and differentiation

For this type of products, we may distinguish two main ways of creating originals.

First, product *customization* is when unique first-time solutions are developed to meet the specific demands of a client. Coming up with an original, customized, product in this way is what we often see in the construction industry: Many houses are highly customized products, and the construction of them entails adapting to unique physical condition of the building site and solving a range of unexpected problems. We also often see customization in business service industries (Tether, 2005; Acha et al., 2005), such as design, consultancy, and advertising. Even if it has often been claimed that some advertising campaigns constitute much more original products than many consultancy services (innovated through “applied” rather than “real” creativity)(Hill and Johnson, 2003), we shall refrain from going into a debate of *degrees* of customization here.

Second, product *differentiation* is a way of seeking competitiveness on consumer markets where cost-based competition has been replaced by “values” or “experiences” (Pine and Gilmore, 1999) and where product cycles are short. Differentiation is coming up with a product that satisfies similar consumer demands as incumbent products by almost full substitution (Burke 1996).<sup>5</sup> Coming up with an original, differentiated, product in this way is what we see in for example, Entertainment industries like film or computer games, where products with new stories, designs or functionalities replace older versions, before product cycles turn again and new differentiated films or games capture the demand.

### Experimentation

A common trait of customization and differentiation is that they both often entail open-ended innovation under demand uncertainty (Knight, 1921) or *experimentation* (Nelson and Winter 1982; Rosenberg 1992; Foss and Foss 2002). Experimentation entails trying out a solution in order to find out whether it works or not — in other words, innovating a product without knowing whether it will work or not. In product customization, in many cases, it may be necessary to commence innovation before the customer has communicated her needs and specified her wants to the supplier of the product, because the customer may not be aware of these traits from the outset. In such cases, product customization encompasses experimentation as *search* (Dosi, 2000), where the supplier of the customized product needs to hold possible solutions and product traits open from the outset, and explore them through trial-and-error and feedback from the customer in an iterative process. In product differentiation, in some consumer industries, “nobody knows” (Caves, 2000), i.e., there is high demand uncertainty in terms of unforeseeable changes in consumer tastes. Here, product differentiation 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)).

*Projects* is a efficient way of *experimentation*, whether through searching for customization or testing for differentiation, because projects are organic and flexible

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<sup>4</sup> The innovation literature typically focuses upon radical innovation, in particularly that which is “high-tech” (i.e., based upon high R&D investments).

<sup>5</sup> Hence, a differentiated product is not “novel” in the sense of a radical innovation causing industry turbulence or even rise of new markets and industries. However, like novel product originals, differentiated product originals may create Schumpeterian rents, albeit more temporary.

structures for negotiation and experimentation in the early phases of innovation (Burns and Stalker 1961). This is the reason why industries with product originals and a high rate of innovation are predominantly project-based.

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 (Ekstedt *et al.* 1999; Hobday 2000; Grabher 2002). 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 differentiation, each project *is* an experiment (Goodman and Goodman 1976). In such industries, rather than relying on inputs from buyers (who cannot be involved like is the case in customizing industries), the skill-holders participating to projects have to be 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 unfavourable.

### 3. THE ORGANIZATION OF PROJECTS AND THE BOUNDARIES OF FIRMS

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).<sup>6</sup> A project basically "orchestrates" (Andersen and Miles, 1999) such people and their competencies temporarily, in order to obtain a given goal. 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-organised (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 organisation of a project-based industry — or, put differently, where the 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 software firms and many capital goods producers (e.g. producers of aeroengines) internalize the innovation and production of their products, when film companies leave the production of their core product, feature films, to a wide network of specialized freelancers or small firms?

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<sup>6</sup> 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.

## Project economies of scale and scope

We shall answer that question by looking at the “economics of projects”. Whether projects will be kept within the boundaries of the firms selling the end products in an industry (in the above examples, advertising firms, building contractors, software/capital goods producers and film companies) can be explained by the economic *efficiency* of carrying out projects in-house vs. on the market. We analyse “efficiency” by comparing (Friedman, 1953) the internal vs. market *scale and scope economies* (advantages) of projects (Direrix and Cool, 1989). Let us look at these in turn.

First, *scale* economies of projects are the advantages of undertaking a portfolio of similar projects, either parallel or in succession. One advantage of parallel similar projects is that dedicated resources and specialized labour can be used with little redundancy. Inside a firm, this would mean little idleness, and in a market, low unemployment rates. Another advantage of parallel projects is knowledge spillovers among projects. Inside a firm, such spillovers would take the shape of meetings and consultations among staff with similar tasks, in a market, flows of labor among firms or informal know-how trading among workers from rival firms (von Hippel, 1987). This scale advantage is not just dependent upon a portfolio of parallel similar projects, it is underscored by successive similar projects, because there may be spillovers from one project to the next, and people need experience from earlier projects to be able to learn from a parallel project. A last scale advantage, which is mainly connected to successive projects, is the creation of specialized support institutions to support. Inside a firm, such institutions would encompass routines, as well as technical and educational support structures and various physical facilities catering to particular types of labour. On a market, institutions arising in connection to successive similar projects would be union regulations, specialized education and training offers, public law and insurance regimes, etc. Even if these institutions are built in order to support successive projects, it often also takes a number of parallel similar projects in order for firms or other agents to devote efforts and investments into them.

Second, *scope* economies of projects are the advantages of undertaking a portfolio of different projects, either parallel or in succession. One advantage of different types of projects running in parallel may be that there is less competition for specialized labour and resources than would be the case for similar projects, demanding similar inputs. A more notable scope advantage — of both parallel and successive projects — is a high learning rate: The diversity of information and inspiration spilling among different projects may stimulate project participants to learning from diversity (March, 1991; Florida, 2002).<sup>7</sup> While there are important scope advantages related to resource utilization and knowledge spillovers related to different projects, a high diversity means that there are relatively fewer advantages in terms of common institution-building.

In order for a form of organization — in our comparison, either a firm or the market — to reap scale and scope economies, the challenge is to allocate people and other resources between projects with *low costs*. As mentioned in section 2, the notable potential costs of projects are both fiscal (budget overruns) and time (delays). Hence, a comparatively efficient organization form for projects needs to be able to shift people and other resources between parallel projects, or transfer them to successive projects, with low “slack and lag”. In the following, we shall compare the scale and scope project economies of firms and markets, respectively.

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<sup>7</sup> However, limits to how different projects can be for people to learn across projects: With very different projects may provide little new inspirations to each other.



## Internal Economies of Projects

In the logic outlined above, projects are likely to be undertaken within firms — i.e., single firms will build resources needed for projects internally (in particular, employ skill-holders on a full-time basis) — in the cases when firms are comparatively more efficient in reaping project scope and scope economies.

A very basic observation is that firms are generally poor at reaping some types of scale and scope economies relative to markets, exactly because firms are relatively permanent bundles of resources created through dedicated investments over time (Penrose, 1959; Peteraf, 1993). As stipulated in section 2, one of the main advantages of projects is that they, through bringing different resources and skill-holders together temporarily, allow for flexibility and open-ended innovation. But, due to the costs firms sink into their resources and employees (Sutton, 1991), they have to maximize their utilization, employing them as first-choice for any given project. If firms choose to employ only a limited supply of resources and skills for projects, namely those under their own ownership and employment, they often severely hamper the flexibility and openness of their projects. So simply put, if a project entails the need for new and shifting resources and skills, such a project would enjoy a few internal economies.

These limitations stipulated, let us look at the remaining project economies of scale and scope of a firm. A firm is set up to reap particular scale and scope advantages of the activities it undertakes, i.e. use its resources with as high degree of utilization and as little slack as possible. If a firm undertakes projects rather than ongoing activities, it needs to align its portfolio of parallel projects as well as its succession of projects in a way that makes good use of the firm's resources. A firm is basically a mode of organization with particular institutions (Williamson, 1985; 2000). It uses particular mechanisms of governance and planning in order to coordinate and govern labour. It needs to draw upon these to maximize internal scale and scope advantages of projects. But there may be limits to how these institutions allow firms to take advantage of its project portfolio. Let us look at governance and planning in turn.

Concerning *governance*, a firm employs a host of mechanisms such as employment contracts (Grossman and Hart, 1986; Holmstrom and Roberts, 1998) and a dominant set of visions and ideas (Loasby 2000) in order to motivate the skill-holders of its projects: Its employees. However, if skill-holders are very diverse, subscribe to diverse world views, and need to be motivated differently, the efficiency of internal employment contracts and shared visions fades. 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.

A firm is also a arena for internal day-to-day *planning* (Cyert and March, 1963; Galbraith, 1995). In the cases where the use of skills related to projects can be efficiently planned in order to reap the advantages of having an entire portfolio of projects within one firm, internal management may pay. However, if projects are difficult to plan, internal scale and scope advantages erode. Of course, this depends on the nature of the skills in question, as well as upon the length and nature of the tasks encompassed in projects. Skills that are used for the entire duration of projects, "core" skills (Atkinson 1985; Jones et al. 2003), may be internalized into one firm if this firm can efficiently plan their use in its successive similar 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 (Dvir and Lechler, 2004). 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 scale and scope advantages of its portfolio of parallel 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 scale advantages does not depend upon planning alone, it also depends upon the size of the firm's market (Smith, 1776). 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.

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 internal project economies. 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 incur the lowest planning costs, along with controllers and "boundary spanners" (Tushman & 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).

### Market Economies of Projects

We can now propose that the market is a more efficient form of organization for projects under two (not mutually exclusive) conditions:

- When projects need to include new and shifting resources and skills;
- When motivations of skill-holders and the nature of tasks render internal governance and planning inefficient.

Both these conditions apply to complex, open-ended, innovation projects with very specialized skill-holders. Hence, we can expect industries with such skill-holders and projects to be dominated by project networks rather than project teams.<sup>8</sup> 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.

Because, as mentioned, specialization depends on the extent of the market (Smith, 1776), specialized firms depend upon a certain minimum number of projects in order to survive. For such firms, the key question of organization is not how big a portfolio of projects can efficiently be managed internally in order to reap scope and scale advantages — rather, the issue is how big a portfolio of market-based projects it is most efficient for the firm to be *involved in* at a time. Grabher (2002a; 2002b; 2002c) refers to a market context with an abundance of parallel as well as successive projects, offering work for specialized firms and freelancers, as a project *ecology*. It is characteristic for such ecologies that its firms and freelancers tend to keep the majority of their project relations among themselves (Grabher 2002a; Engwall 2002; Davis and Brady 2000). Hence, the ecology becomes the arena for what we may call *external* scale and scope economies of projects: Trade among firms in shifting project networks functions to allocate resources among parallel as well as successive projects with little slack and lag,

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<sup>8</sup> However, some firms may choose to internalize some highly specialized skill-holders in spite of the lack of internal efficiency of managing them, for strategic reasons — in order to ensure easy access to them or to prevent competitors from internalizing them.

and firms learn from each other through knowledge spillovers (Lorenzen and Maskell, 2004).

The innovation capacity of market-organized projects is huge, compared to firm-internal projects. Even relatively stable ecologies — with the same firms participating over time — may allow for a high rate of experimentation (Ibert, 2004). Due to project organization, economic selection weed out more *projects* (products), than *firms* 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 also encompass labour. 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, 2002). 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).

Labor market effects in ecologies play an important role for the *management* of projects on such markets. We shall turn to these effects in the following section.

#### 4. 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 projects, and that means that many projects are carried out on the market. What, then, is the scope for management? The organizational economics literature (e.g. Williamson, 1985; 2000) tells us that market-organised projects may be faced with a range of potential market *coordination* problems stemming from information asymmetries and interest conflicts and cognitive distances. What can managers do faced with such problems?

##### 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.

First, market-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-organised projects. Second, there may be *governance* problems arising from poorly aligned information and conflicting interests (Williamson 1985; 2000). 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)(Williamson 1985; 2000). In projects that are aimed at innovating new products through collaborating with shifting partners, transaction costs, being “dynamic”, may be particularly high (Langlois and Robertson 1995). Third, the participants to market-organised 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, 2003).

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)<sup>9</sup>. Temporary in nature, projects cannot develop as strong institutions, because collective experiences and knowledge assets are often dispersed after a project is dissolved. Instead, the market becomes organized (Lorenzen and Maskell, 2004) in other ways in order to facilitate coordination of projects.

### Coordination through Contracts

A first type of coordination mechanism on the market 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 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 task 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.

### 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*, embodied in 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* (Tushman & Katz 1980): Persons who spread information and compensate for cognitive distances among project participants, through stimulating

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<sup>9</sup> A firm-organised 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).

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.<sup>10</sup>

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, 2002c), 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 information).<sup>11</sup> 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.

### **Embeddedness of managers and geographical clustering**

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 firm 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).

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<sup>10</sup> 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. Relatedly, Richard Normann (2001) focuses on firms and people capable of “reframing business” through continuously bundling new resources.

<sup>11</sup> Hence, ‘gatekeepers’ of information in firms or networks are often the same persons who possess project coordination skills.

Geographical clustering of project ecologies, 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; Haas 1992). Such institutions are, thus, an example of positive external project economies that feed positively into the management of future projects.

## 5. EMPIRICAL ILLUSTRATION: THE RECORDED MUSIC INDUSTRY

In the following, we shall illustrate our arguments by looking at an industry that is dependent upon a high rate of product innovation based on projects: The Recorded Music industry. The core product of this 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). Like many other Entertainment industries such as Films or Computer Games, the direct impact of Recorded Music upon many national economies is growing in terms of turnover, employment, and export. The 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). Again similar to other Entertainment industries, the Recorded Music industry has contributed to driving 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).<sup>12</sup> However, Recorded Music also shares the fate of other Entertainment industries in that its organization has so far been corresponded by only modest academic scrutiny (Lampel et al. 2000).

Below, we shall sketch out how product innovation in the Recorded Music industry is based upon projects, and analyse why they are organized on the market and how they are managed. The empirical example is based upon extensive fieldwork during the period 2002-2005 in the Entertainment industries (a range of literature studies as well as qualitative interviews with Danish and Scandinavian managers within the Music, Film, Fashion, Computer Games and Design industries, as reported in e.g. Lorenzen and Frederiksen (2003); Lorenzen and Maskell (2004), Maskel and Lorenzen (2004)).<sup>13</sup>

### Project-based product innovation in the Recorded Music Industry

Product innovation in the Recorded Music industry is project-based because of the high demand uncertainty and economies of speed on the markets for its core product, the music CD.

The firms in the Recorded Music industry — i.e., record companies — serves consumer markets, and, contrary to some other Entertainment industries (such as theatres) that are run on a philanthropic basis and/or are subsidized by sponsors or the public and consequently have small audiences and are less dependent upon profits, Recorded Music is big business with global mass demand. Like other Entertainment firms, firms in the

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<sup>12</sup> The Recorded Music industry has also been highly publicly visible and exerted extraordinary influences upon the molding of values, attitudes and life styles in society for many decades.

<sup>13</sup> See [www.cbs.dk/imagine](http://www.cbs.dk/imagine); [www.nordicdesign.org](http://www.nordicdesign.org); [www.step.no/music](http://www.step.no/music) for more information.

Recorded Music industry compete on product differentiation in terms of content, rather than price. Product prices are often standardized so much that competition revolves around product differentiation in terms of artistic content (and, of course, how this content is marketed).<sup>14</sup> Simply put, in order to entertain, record companies have to continuously come up with new and original products, i.e., music CDs. 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 (Negus 1992; Vogel 1998; Huygens *et al.* 2002; Lopes 1992; Shuker 2001). Furthermore, life cycles of the core product, the music CD, are generally short (and even briefer for CD singles) and shortening.

The result of these demand contingencies is that product innovation is organized in projects, in order to facilitate experimentation and product variety. When nobody knows which product is going to make it big, the strategy is to ensure a steady stream of novel CDs.<sup>15</sup> Any release of music CDs is in a sense an open-ended search process, where new products need to be tested vis a vis an uncertain consumer demand, over limited test periods.<sup>16</sup>

### **Why are music projects market-organized?**

The organization of product innovation projects within the Recorded Music industry can be explained by examining their nature of skill diversity and the complexity of innovation tasks.

The Recorded Music industry is, as other Entertainment industries, part of the currently much-focused-upon "Creative" industries (e.g., Caves, 2000). 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.<sup>17</sup> The skill-holders needed for a music innovation project are very diverse. Artists (musicians) undertake the first phase of innovation — what we may call "invention of music" — , i.e., songwriting and performance. However, the innovation of a music CD does not stop there: It also entails production, marketing and sales of the CD. This means that 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 of these tasks, and are characterized by differing

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<sup>14</sup> Such price standardization is a result of national tax regulations in combination with industry interest organizations.

<sup>15</sup> Like in film, the major companies (that can afford it) try to mitigate against uncertainty by engaging mega-stars with a huge following. In some (but not all) cases, this lowers the risk of a few select products, but the failure rate even of those firms and CDs is still significant. The hunt is still on for *tomorrow's* stars: Those unknown acts who sell unexpectedly (such as the film Blair Witch Project; or the band Franz Ferdinand).

<sup>16</sup> The same goes, albeit to a less extent, for new national penetration efforts or marketing methods.

<sup>17</sup> These motivations are of course only stereotyped tendencies.

lifestyles and motivations. There are huge differences between the motivations of e.g. artists and marketing people. Hence, there are *few internal economies of governance* of entire CD projects within firms.

Furthermore, there are *few internal economies of planning* music projects. Innovation of commercially marketed music products is a relatively quick endeavour, with many commercial CD projects running for less than a year.<sup>18</sup> 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 economies of planning them.

The result of high skill diversity and complexity of tasks is that product innovation projects within the Recorded Music industry are *organised 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 undertake search activities (i.e., artist scouting), signs artists and then "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 music industry has a duopolistic industry structure, with the branches of the four global major entertainment conglomerates (EMI, Sony BMG, Universal, and Warner) draw upon the superior distribution and marketing competencies, and small independent record companies using superior innovation capabilities.<sup>19</sup> Focusing upon marketing and distribution, the major 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 (Gander and Rieple 2002).<sup>20</sup> 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

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<sup>18</sup> Of course, product innovation of music out of the commercial mainstream may take many years or even decades.

<sup>19</sup> The reason for such massive concentration in the distribution and marketing activities in the industry is that the sunk costs (Sutton, 1991) in these activities are much larger than in innovation activities. Global marketing and distribution entails endogenous sunk costs (which are fixed and which any firm wanting to play that game need to pay), whereas sunk costs in innovation activities are mainly exogenous (variable), and decreasing due to technological changes in music recording and production (see Bakker, 2005, for a discussion of similar phenomena in the film industry).

<sup>20</sup> Consequently, most independent record companies keep marketing efforts at a minimum and rely upon networks (alliances) with each other and specialized distribution firms.



distribution channels and sales networks (Darmer 1999; Power and Hallencreutz 2002; STEP 2003).

### **How are market-organised music projects managed?**

Some coordination of music projects is taking place on the basis of contracts.<sup>21</sup> 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 Lundquist 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 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.

### **What is the role of geographical clustering in the Recorded Music industry?**

Recorded Music ecologies are typically clustered in the major cities of the world (Scott 1999; 2000)<sup>22</sup>. 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.<sup>23</sup> 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).<sup>24</sup> 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

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<sup>21</sup> 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.

<sup>22</sup> 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.

<sup>23</sup> 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.

<sup>24</sup> 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).

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).<sup>25</sup>

This brief sketch of the organization of the Recorded Music industry suggests that we find geographical clusters in the industry because clustering allows for the management of 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.<sup>26</sup>

Above, we have not attempted a full-scale analysis of the Recorded Music industry, nor a comparison to other project-based industries. Whether we may draw any general lessons about project organization and management from the Recorded Music industry — for instance, for other Entertainment industries, or merely industries that have high innovation rates — is not relevant here. The point of our analysis is an *illustration* of the theoretical argument outlined earlier. Through the example of the Recorded Music industry, 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-based, why they are market-organized, and how they are managed.

## 8. CONCLUSION

In the paper, we presented a framework for explaining the organization of projects and the management of projects organized on the market. Particular attention was paid to the organization and management of projects set up to facilitate product innovation in the guise of experimentation. The paper has answered three research questions:

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<sup>25</sup> 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 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).

<sup>26</sup> 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.

1. *What determines the organization of projects?* We are likely to see projects organized on the market rather than inside the boundaries of firms when projects need to include new and shifting resources and skills; and/or motivations of skill-holders and the nature of tasks render internal governance and planning inefficient.
2. *How are market-organised projects managed?* 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.
3. *What is the role of geographical clustering for such management?* Managers undertaking leadership and boundary spanning on the market are embedded in project ecologies at particular places, which is why we see geographical clusters in many project-based industries.

We undertook an analysis of the Recorded Music industry in order to illustrate our theoretical framework. This industry is 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 than within firms. This is an efficient form of project organization only because of a high degree of organization and management of the market within the Recorded Music industry, in the guise of active leaders/boundary spanners, social institutions and geographical clustering in particular cities.

The paper basically deals with disintegrated industries where neither Smith's (1776) "invisible hand" nor Chandler's (1977) "visible" hand apply. We analyse how, in some industries, not just firms, but also *markets* are organized and managed (Langlois, 1986), facilitating project-based innovation. The paper provides 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 market-organized *portfolios* of projects, and this necessitates management of the market. The economies and management of portfolios of projects is not often addressed in the project literature, focusing mostly on stand-alone projects (Söderlund, 2004).

The paper's combination of two diverse research traditions, i.e. the research on projects vs. the economic organization tradition has allowed us to address some issues that, even if obviously central for project organization, nevertheless have been little analyzed in a theoretical perspective.

First, 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.

Second, this led us to analysing an aspect that has been addressed earlier in the literature on projects, but never analysed in relation to the management and innovation issues of this industry: *Labour markets*. In our argument and empirical illustration, localized labour markets are centre stage for management of market-based projects as

well as of innovation. 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.

Third, the analysis of labour markets allowed us to address the issue of *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 in combination with our focus upon particular people on the labour market has allowed us to explain this clustering, and to point towards its role for management.

Finally, through incorporating *transaction cost economics* (which has only to a very limited extent been discussed in the current literature on projects), the paper raised points pertaining to institutions and organization that may be of interest to scholars within both the project and economics of organization traditions. Foremost, rather than maintaining the classic dichotomy between firms (or, in Williamson's (1985), term, hierarchies) 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.

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