Value Capture in Non-Markets.

Integrating the Social Domain in Business Models.

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ABSTRACT

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Summary:
Increasingly, value capture by dynamic business models are facing challenges from innovation is open communities that do not allow for full integration of ownership on the firm level. Co-creating collaborative networks distribute ownership to products and services to benefactors that may not even form part of the co-creating process themselves. By allowing distributed ownership to assets, shared decision making and non-financial reward systems to develop, a non-market circumstance is established on the basis of previously firm-specific assets commoditizing into (privately produced) public goods. By a non-market governance replacing marketplace and firm level governance structures, resources and assets become consolidated out-side firm-boundaries, which introduces a major challenge to “the nature of the firm” in a networked economy. By the weakening of the dependency of a proprietary strategy, the concept of a networked information economy is introduced, which is characterized by decentralized individual action and new and important cooperative and coordinate action carried out though radically distributed, non-market mechanisms. Incumbent responses must be viewed against firm-level based resources and collaborative capabilities across whole industries. It seems however, that a true response to value capture under non-market circumstances require some sort of integration of the social domain into the conventional business models, and this paper is targeting possible working hypothesis that may allow for adaptive business models to be developed by incumbents or new entrants that operates within the intangible product industries.

Keywords:
Distributed innovation; Dynamic responses; Value Creation & Value Capture; Commoditization; Ownership & Coordination Integration; Collaborative Networks; Networked Information Economy; Non-Markets
<table>
<thead>
<tr>
<th>No.:</th>
<th>CONTENT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>2.0</td>
<td><strong>Research Themes</strong></td>
<td>6</td>
</tr>
<tr>
<td>2.1</td>
<td>Firm-Market</td>
<td>7</td>
</tr>
<tr>
<td>2.2</td>
<td>Collaborative Networks</td>
<td>8</td>
</tr>
<tr>
<td>2.3</td>
<td>Non-Markets</td>
<td>9</td>
</tr>
<tr>
<td>2.4</td>
<td>Research Questions</td>
<td>9</td>
</tr>
<tr>
<td>2.5</td>
<td>Model</td>
<td>10</td>
</tr>
<tr>
<td>3.0</td>
<td><strong>Introducing a wider Theoretical Context FIRM-MARKETS</strong></td>
<td>11</td>
</tr>
<tr>
<td>3.1</td>
<td>Classical Theory</td>
<td>11</td>
</tr>
<tr>
<td>3.1.1</td>
<td>Neo-Classical Theory</td>
<td>12</td>
</tr>
<tr>
<td>3.1.3</td>
<td>Transaction Cost Theory</td>
<td>13</td>
</tr>
<tr>
<td>3.1.4</td>
<td>Competitive Forces</td>
<td>14</td>
</tr>
<tr>
<td>3.1.5</td>
<td>Ressource Based View</td>
<td>15</td>
</tr>
<tr>
<td>3.2</td>
<td><strong>Introducing a wider Theoretical Context COLLABORATIVE NETWORKS</strong></td>
<td>16</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Challenges for Innovation</td>
<td>16</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Integrating Learning</td>
<td>17</td>
</tr>
<tr>
<td>3.2.3</td>
<td>Modularity</td>
<td>17</td>
</tr>
<tr>
<td>3.2.4</td>
<td>Dynamic Capabilities</td>
<td>18</td>
</tr>
<tr>
<td>3.2.5</td>
<td>Alliances</td>
<td>18</td>
</tr>
<tr>
<td>3.2.6</td>
<td>Networked Information Economy</td>
<td>19</td>
</tr>
<tr>
<td>3.3</td>
<td><strong>Introducing a wider Theoretical Context NON-MARKETS</strong></td>
<td>20</td>
</tr>
<tr>
<td>4.0</td>
<td><strong>Cases &amp; Analysis Part 1 Firm-Market</strong></td>
<td>22</td>
</tr>
<tr>
<td>4.1</td>
<td>Case Example: The Music Industry</td>
<td>23</td>
</tr>
<tr>
<td>4.2</td>
<td>Analysis: Firm-Markets &amp; Resource Assets</td>
<td>29</td>
</tr>
<tr>
<td>4.3</td>
<td>Introduction</td>
<td>29</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Comoditization</td>
<td>30</td>
</tr>
<tr>
<td>4.3.2</td>
<td>Business Model</td>
<td>33</td>
</tr>
<tr>
<td>4.3.3</td>
<td>Rival Designs</td>
<td>34</td>
</tr>
<tr>
<td>4.3.5</td>
<td>Loss of Core Capabilities</td>
<td>36</td>
</tr>
<tr>
<td>4.3.6</td>
<td>Vertical Disintegration</td>
<td>37</td>
</tr>
<tr>
<td>4.3.7</td>
<td>Product Migration</td>
<td>39</td>
</tr>
<tr>
<td>4.3.8</td>
<td>Enforcement of Property Rights</td>
<td>42</td>
</tr>
<tr>
<td>4.3.9</td>
<td>Part 1: CONCLUSION</td>
<td>44</td>
</tr>
<tr>
<td>5.0</td>
<td><strong>Cases &amp; Analysis Part 2 Collaborative Networks</strong></td>
<td>45</td>
</tr>
<tr>
<td>5.1</td>
<td>Case Example: Incumbent Responses</td>
<td>45</td>
</tr>
<tr>
<td>5.2</td>
<td>Analysis: Collaborative Networks &amp; Core Capabilities</td>
<td>51</td>
</tr>
<tr>
<td>5.3</td>
<td>Introduction</td>
<td>51</td>
</tr>
<tr>
<td>5.3.1</td>
<td>Project Networks</td>
<td>53</td>
</tr>
<tr>
<td>5.3.3</td>
<td>Alliances</td>
<td>54</td>
</tr>
<tr>
<td>5.3.4</td>
<td>Modularity</td>
<td>55</td>
</tr>
<tr>
<td>5.3.5</td>
<td>Hybridization</td>
<td>58</td>
</tr>
<tr>
<td>5.3.6</td>
<td>Collaborative Networks</td>
<td>61</td>
</tr>
<tr>
<td>5.3.7</td>
<td>Part 2: CONCLUSION</td>
<td>64</td>
</tr>
<tr>
<td>6.0</td>
<td><strong>Cases &amp; Analysis Part 3 Non-Markets</strong></td>
<td>65</td>
</tr>
<tr>
<td>6.1</td>
<td>Introduction</td>
<td>67</td>
</tr>
<tr>
<td>6.2</td>
<td>Case Example: Innovation processes in Sound Recording</td>
<td>67</td>
</tr>
<tr>
<td>6.2.1</td>
<td>Incumbent Innovation Processes</td>
<td>67</td>
</tr>
<tr>
<td>6.2.2</td>
<td>Distributed Innovation by New Entsrents</td>
<td>69</td>
</tr>
<tr>
<td>6.2.3</td>
<td>Distributed Innovation in Context of Incumbent Processes</td>
<td>71</td>
</tr>
<tr>
<td>6.3</td>
<td>Analysis: Non-Markets &amp; Value Capture</td>
<td>73</td>
</tr>
<tr>
<td>6.3.1</td>
<td>Introduction</td>
<td>73</td>
</tr>
<tr>
<td>6.3.2</td>
<td>Open Source and Non-Market</td>
<td>74</td>
</tr>
<tr>
<td>6.3.3</td>
<td>Capturing Value from Non-Market Circumstances</td>
<td>80</td>
</tr>
<tr>
<td>7.0</td>
<td>Part 3 &amp; Final: CONCLUSION</td>
<td>82</td>
</tr>
<tr>
<td>8.0</td>
<td>Suggestion for Further Research</td>
<td>84</td>
</tr>
<tr>
<td>8.1</td>
<td><strong>Hypothesis</strong></td>
<td>84</td>
</tr>
<tr>
<td>9.0</td>
<td>BIBLIOGRAPHY</td>
<td>87</td>
</tr>
</tbody>
</table>
1.0 Introduction

In his just published book “Freefall”, Nobel laureate economist Joseph Stiglitz (Stiglitz, 2010) by reference to contagion, challenges “market fundamentalism” as a “quintessential externality”, with disruptive effect on the market as an efficient, self-correcting growth and efficiency maximizing structure. Agency problems and externalities calls – in his viewpoint -for an equilibration between the role of markets and the role of government; – but with “important contributions by non-market and non-governmental institutions”.

What is notable is the expansion of the level playing field to comprise non-market circumstances.

The separation of ownership from control is at the core of agency problems, and influences (to some extent) the boundaries of the firm vs. the market. With contagion and agency problems, the inability of markets to self-correct can be attributed to social- and private incentives not being aligned, which leads Stiglitz to a conclusion of interest to this paper, that for economies to function, “there is no choice, but to have some form of collective action”.

The classical notion of market exchange goes back to the general equilibrium model (Walras, 1874*1), and the power of incentives as the “invisible hand” of the market (Smith, A., 1784*).

Markets are in their theoretical construct liquid, transparent and uniform. The perfect market is (1) risk-free, it is (2) perfect (transparent) and there are (3) no externalities or public goods (or government). By these general attributes a singular set of conditions is defined for a market to be efficient.

It is information asymmetries and distortions to the market equilibrium that calls for “collective action”, but markets being in a permanent condition of information asymmetry, imply that “collective action” becomes a permanent attribute of the market, and that markets are directed by Government or non-market forces.

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1 When citations, theoretical concepts or research conclusions is attributed to original research, but such research is only referred to in this paper as a secondary source, this will be marked with an asterix (*)
While Stiglitz introduces state intervention and regulation to counter market imperfections, a re-conceptualization of the market role as such, is introduced by Harvard-based Yochai Benkler (Benkler, 2006).

Benkler suggests that what is special about the present moment in time is a raising efficacy of individuals and their loose and non-market affiliations as “agents of a political economy”\(^2\). In his view, background market imperfections are not corrected by state intervention (as Stiglitz suggests). On the quite contrary, Benkler’s conclusion is that: “just like the market, the state will have to adjust to a new emerging modality of human action” (Benkler, 2006).

According to Benkler there is more freedom to be gained from the opening of institutional spaces for voluntary and cooperative action by (informed) individuals, than there is from public action though government intervention.

Albeit different means to the same end, both estimated scholars seems to have an issue with the market, and its inability to secure efficient resource allocation. But their differences are mostly of an institutional kind: Benkler argues that a good like information, can never be sold at a positive price and its marginal cost at the same time, and as a consequence is a candidate for “substantial nonmarket production”, while Stiglitz - also considers information a public good-, but chooses state regulation to intervene against market imperfections, as opposed to voluntary and private network structures, as prescribed by Benkler.

Both however question the textbook orthodoxy of market efficiency, either due to conditions of imperfect transparency, or due to a fundamental inability to serve as transaction platform. And both are applying systemic change vocabulary to describe the present state of affairs.

If markets are becoming overtaken by “collective action models”, this raises an interest towards analyzing, under which circumstances such forces takes over, and if they can be identified against empirical evidence.

\(^2\) Although Benkler does not completely discount the role of the state (government), he proclaims that the state itself must adjust to a new emerging modality of human action, with individual choices of market or non-market behavior, which leads to his conceptualization of “agents in a political economy” (Benkler, 2006).
For non-market forces to take over, this seems to suggest that firm specific assets commoditize, and goods and services produced must take on a non-rival nature. If a market commoditizes and the price mechanism is suspended, how will this affect firms and industries subjected to a change of the paradigm itself, and does this leave textbook direction towards the handling of “systemic changes” and “disruptive market behavior” all redundant.

Provided that evidence can be found for such a situation in the marketplace, this also seems to suggest, that conventional governance models must be reviewed under impression of an entirely different set of transaction costs, and that the firm ownership to property rights may be challenged.

Stiglitz and Benkler have for different reasons, and by prescribing different approaches to a solution, both of them directed us towards a need for collective action and the emergence of non-markets.

### 2.0 Research Themes

This paper investigates how enterprises can capture value in non-markets. We question if community driven open innovation, and open-source product development and diffusion platforms, influences the firm-level ability to integrate ownership, as well as the ability to control assets. Proprietary ownership to assets is today forming part of most sustainable business models.

To answer that question we focus on a number of research themes.

In order to structure this paper, we have decided first to focus on the challenges that firms are experiencing in markets under transformation as a consequence of game changing new business models and changed customer perceptions and behaviors. We will investigate incumbent’s response options to negative externalities and firm-level deficiencies.

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3 By allowing distributed ownership to assets, shared decision making and non-financial reward systems to develop (Benkler, 2006) and a democratized network structure to establish itself (Hippel, 2006), a non-market circumstance may become established on the basis of previously firm-specific assets commoditizing into (privately produced) public goods.
Firms operating within intangible product industries are believed by this research to be an appropriate departing point in order to avoid bias from the influence of large capital based infrastructures and industry level entry barriers that can delay transformational processes, but are not the subject of this paper.

To allow a case description to position the analysis within context of a recent market development, we have chosen the music industry for case material as opposed to the alternative of analyzing intangible product industries on a more aggregate level.

We have chosen to label the second part of this paper: “Collaborative networks”, because we will analyze alternative governance models, to allow for the integration of external communities on the firm level, as part of an offensive business strategy.

In the third and last part of our analysis, we will analyze if strategies applied under part two are applicable towards the integration of open-source communities under non-market circumstances.

More specifically each of the sections will focus on the following research themes:

Part 1

2.1 Firm-market.

A central feature of this first section is the risk to competitive advantages being lost as a result of commoditization of resource assets that forms part of any sustainable business model (Teece, 2010).

This will lead us into a discussion of sustainable business models, and how a dynamic management of the value creation and value capture processes must form part of any sustainable business strategy.

Successful business models are commonly wrapped around a dominant design platform controlled by a specific firm, but more frequently by an
alliance of incumbents across an industry. We will research possible consequences from the launch of rival designs, and how core capabilities may be lost under such circumstances.

Any loss of sustainable resource assets on the firm level is supportive of vertical disintegration (Langlois & Robertson, 1995), which conveniently allows us to move on to the second part of our analyses, where we will analyze how resource assets can be pooled or exploited outside firm boundaries.

Part 2.

2.2 Collaborative networks.

Occasionally, new technology or changed market perceptions in one stage of production, necessitates subsequent changes up- or down-stream the value-chain, consequently introducing a systemic type of change across whole industries or - occasionally -group of industries. A challenge to the product- and process architecture of any industry, will force incumbents to develop creative- and radical responses to such a challenge (McGahan, 2004). Integrating and substituting technology in response to a challenge (Stieglitz, 2003), becomes an exercise in strategic innovation using firm-level inimitable resources to create new idiosyncratic synergies by way of vertical integration (Langlois & Robertson, 1995).

Firm-level response to external events, can be measured against general transaction cost considerations and governance objectives, but also a changed governance model of a hybrid nature, by way of the establishment of alliances or joint-ventures across industries or technologies (Williamson, 1991), represents a possible offensive response.

As opposed to a closed system integration platform, an open system introduces job-partitioning among alliance partners and a leveraging of complementary assets within the alliance. The creation of modular product- and process interfaces, allows for dynamic capabilities within an alliance, on the basis of the pooling of residual values, joint exploitation of quasi-rents, and the generation of relational rents within the alliance (Dyer & Singh, 1998).
Innovation can also be moved away from firm control, which allows innovation to become distributed through a network of collaborators (Hippel, 2006).

Part 3.

2.3 Non-markets.

A market leader operating under non-market conditions, will establish itself by moving to still more advanced mediating platforms, which transforms a collaborative circumstance based on a proprietary provided and/or sponsored sharing network (Eisenmann, 2008), to a gradually more distributed solution within a contributing- or co-creating network (Dutton, 2009).

By allowing distributed ownership to assets, shared decision making and non-financial reward systems to develop (Benkler, 2006) and a democratized network structure to establish itself (Hippel, 2006), a non-market circumstance may become established on the basis of previously firm-specific assets commoditizing into (privately produced) public goods.

By a non-market governance replacing marketplace and firm level governance structures (Coase, 1937; Williamson, 1985), resources and assets becomes consolidated out-side firm-boundaries, which introduces a major challenge to "the nature of the firm" in a networked economy.

To accept that ownership to resource assets are not forming part of a business model, and that the central authority of the firm cannot be executed to promote a competitive position, will change the way that business is done.

2.4 Research Questions.

On the basis of existing theory, a number of research questions will be investigated:

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By the weakening of the dependency of a proprietary strategy, the concept of a networked information economy is introduced, which is characterized by decentralized individual action and new and important cooperative and coordinate action carried out though radically distributed, non-market mechanisms (Benkler, 2006 and ref. cont. p.17 this paper).
(Part 1) Firm-market:

**RQ 1:** Which factors may contribute to the commoditization of resource assets?

(Part 2) Collaborative networks:

**RQ 2:** How can collaborative networks influence the sustainability of core capabilities on the firm level?

(Part 3) Non-market:

**RQ 3:** Which factors influence value capture in non-markets?

### 2.5 Model

Data has been collected and presented on the basis of external sources.

In absence of own validation and control of collected data, various information may represent biases out-side the control of this project. Case material is consequently presented as stylized facts.

The case descriptions are followed by subsequent analysis, where theory is integrated into the analysis, in order to allow for the deduction of linkages between the case data and prevailing theory.

Research questions have been narrowed down to sub-sections of how firm-level value capture can become aligned with collective action models and non-market circumstances.

It is the primary objective of this paper, to integrate the part conclusions related to the specific research questions into a number of possible working hypotheses. This in order to establish a plausible departure point for further collection of empirical evidence, data and targeted research, in order to establish a coherent academic response to the title issue of this paper, at some later point in time.

This project must consequently be regarded as a working paper to establish the necessary final research focus points, and delimitation of applicable theory.
3.0 Introducing a Wider Theoretical Context.

It seems appropriate to place theories used in our later analyses within the context of the broader theoretical constructs behind.

Part 1.
3.1 Firm-Market.

3.1.1 Classical theory.

Classical economic theory is supported by the types of organizations known in late 19th century Britain. The "Marshallian Industrial Districts" consisted of clusters of vertically and horizontally specialized enterprises, between which competition was guided by price only.

This as opposed to the notion of the "Italian Industrial District", that albeit developed from the same base of organic growth as in the case of the Marshallian Industrial Districts, represented a significantly higher degree of control integration, and approached the market from a basis of product differentiation (Langlois, 1995). Strong specialization persisted, with enterprises operating in small units and with ownership positions taken in independent "satellite firms". Cooperation was common, and spacial clustering allowed for the scaling of more general capabilities.

From a departure point in the mid 19th century pre-industrial economy of the US, Alfred Chandler (1977), introduces the market as a facilitator for demand, and establishes evidence of industrial scope mass production being advanced on the basis of horizontal specialization across whole industries. Chandler assert that horizontal specialization will not secure long term sustainability of an industry, and that it is forward and backward vertical integration, under the central authority of the firm, that allows the "visible hand" of professional managers in laying the groundwork for scale economies (Chandler, 1977). In the first decades of the 19th century numerous transactions occur between
specialized market participants in an agrarian economy. It is new technology (in the form of railroads and telegraph networks), which in the 1840’s transforms the functionality of the marketplace, which combined with more liquid capital markets (capital market investments in railroad-bonds), which together establishes the pre-condition for modern day industrial mass-production.

While market reform moves the classical theory of Adam Smith towards the soon to be introduced neo-classical theory of Marshall, it is however in the words of Chandler: “the shift in strategy from horizontal combination to vertical integration [that] first bought the managerial enterprise to American Industry” (Chandler, 1977). By this contribution, Chandler accurately describes the separation of ownership from that of the management of the enterprise, which is unfolding by the end of the 19th century and the beginning of the 20th century, and represents a defining difference between markets and firms.

3.1.2 Neoclassical theory

By Adam Smith’s introduction of the self interest of “economic man” in the late 18th century, and Alfred Marshall’s introduction of marginalism in the establishing of a market equilibrium, the two principal building blocks of political economy was introduced to shape the agenda for the following century.

Most central propositions of economics rely on the assumption that markets are in equilibrium, which is a somehow theoretical construct of a representative firm reflecting the characteristics of a population of firms as a whole.

Firms exist as an alternative system to market when it is more efficient to produce (and transfer) in a non-price environment (Coarse, 1937). From the shaping of a theory of the firm, markets become constructed on the basis of cumulative, idealized firms forming an industry.
On closer look, the theory of the firm becomes a theory of production masquerading as a theory of the firm (Teece, 1984). Price theory start with firms as production functions, each one identical, and all transforming homogeneous inputs to homogeneous out-puts, which reduces the margins on which firms are operated to price and quantity (Langlois, 2003). The implicit assumption of single-product firms, and the lack of reference to any internal structure of the firm, makes the neo-classical economics\(^5\) a theory, in which “the firm is an entity which barely exists” (Teece, 1984).

The traditional neoclassical theory of the firm “takes the firm as the unit of analysis”, and as a fundamental building block in the construction of a theory of an industry, but with a “simplified and anthropomorphized ideal type of monobrain” as the result (Langlois, 1995). In short the neoclassical conception of the firm, is more like “a recipe for bouillabaisse” (Leijonhufvud, 86\(^6\) ), and subsequent price-theory and the introduction of perfect market circumstances in the 1930’s, does not make any change to those short-falls.

### 3.1.3 Transaction cost theory

Neo-classical theory “assumes that the direction of resources is dependent directly on the price mechanism” (Coase, 1937), but it is the vertical integration that leads to the supersession of the price mechanism: “The distinguishing mark of the firm is the supersession of the price mechanism”, declares Coase, before he ventures out to establish the building blocks of what is later to be labeled “transaction cost theory” (Williamson, 1974, 1981 and 1985).

When contingencies cannot be specified, or decisions are interdependent, then integration of an activity is necessary, and will become subject to authoritative and centralized control within the boundaries of a firm. Agency costs, the risk of “hold-up” and costs associated with contracting does combined represent transaction costs, that as the assets of the firm becomes increasingly specified, are more effectively transferred within a firm as

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\(^5\) Neoclassical economics are distinguished from the classical economy of Adam Smith, by its emphasis on marginal valuations put on different (uniform) commodities by individuals.

\(^6\) Quotation originated from Langlois, 1995.
opposed to transacted in the market place. By eliminating market contracting, the residual rights to assets are transferred to within the boundaries of the firm, and consequently the ownership to such assets (Grossman and Hart, 1986).

Later work on transaction cost theory assigns attributes of governance to appropriate organizational structures (Williamson, 1985 and 1991), and transaction cost economy becomes an important contribution to the analytical framework behind the understanding of ownership to assets, organizational structures, incentive schemes and the authority of control.

3.1.4 Structuralist approach & Competitive forces.

By the establishment of firm attributes by Coase, a wider field is opened by the introduction of a structuralist approach (Mason, 1937*; Bain, 1956*), which in marked contrast to the transaction-cost paradigm, focuses on the economic efficiency of an industrial type of organization.

Market structures are influenced by various fundamental conditions: On the demand side these include price elasticity of demand, substitutability, customer practices etc. On the supply side basic conditions include access to raw materials, technology and processual conditions. Firm conduct and performance is directed by the environment, and not by the costs of transacting in it.

The Mason-Bain structuralist approach is refined in the 1980’s by the introduction of “The Competitive Forces”-approach by Michael Porter (1980). “Besides refashioning existing constructs” (as David Teece frame it in 1984), the 5-forces approach refines the concepts of entry barriers (Bain, 1956*) and mobility barriers (Caves & Porter, 1977*) and the notion of strategic groups (Porter, 1980). The essence of the approach is however to introduce a competitive strategy formulation in which a company is related to its environment, and where rivalry is put at center stage of strategic concerns. In the competitive forces approach, economic rents are monopoly rents (Teece, 1984). Only by impeding the “competitive forces” in an industry will firms earn any rents, which tend to drive economic returns to zero (Teece, 1984). The
approach allows a firm to position itself within an industry, but the competitive forces are directing profit potential towards the industry or sub segment of industry as such, rather than towards the individual firm. Richard Langlois identifies the short-falls of the product-market view from a safe position some 20 years later, by declaring: “he [Porter] pays far too much attention to the environment facing the firm [...] and far too little attention to the firm itself” (Langlois, 2003).

3.1.5 Resource based view.

Turning towards the firm translates into a discussion of which form of organizational structure that can be a source of – not only competitive advantage, – but of sustainable competitive advantage. This introduces the resource based view of competition by challenging the attributes of the product-market based competition theory and its dependence of firm resources being mobile and homogeneous.

For a firm to establish sustainable competitive advantage, assets must become heterogeneous and immobile (Penrose, 1959; Rumelt, 1984; Wernerfeldt, 1984*) and organizational resources must be rare, valuable, imperfectly imitable and imperfectly substitutable (Barney, 1986 and 1991). By this string of theory, firm based specific asset and idiosyncratic firm attributes are established, as a pre-condition for sustainable competitive advantage on the firm level.

What is particularly important is the notion of sustainability. Sustainability does not refer to the calendar time though which a firm enjoys a competitive advantage, but refers to the possibility of competitive duplication (Lippman & Rumelt, 1982*; Rumelt, 1984). Competitive advantage can be established between a number of firms that posses valuable and rare resources, as long as the group of firms that posses this advantage is less than the number of firms needed to generate perfect competition dynamics in an industry (Hirshleifer, 1980*). But for a resource to generate sustainable competitive advantage it must be imperfectly imitable (Barney, 1986).
3.2 Collaborative networks.

3.2.1 Challenges from innovation.

In general, firms that are unable to make transition towards advances in process innovation, are unable to compete effectively, and the lack of adjustments of organizational structures and practices, frequently becomes a source of failure (Utterback, 1994).

It is in particular challenges from discontinuous innovation and changes to a generally applied business models of an industry that explains how “the carpet is pulled away from under the firms” (Tidd & Bessant, 2009). It “is with disturbing regularity, with which industrial leaders follow their core technologies into obsolescence and obscurity” (Utterback, 1994).

The conventional approach to a hypercompetitive environment is adaptation by a reactive and “lean and mean” strategy, focusing on core competencies of the organization, the streamlining of routines and the tightening of resource belts.

However an adaptionist approach is a better fit for prevailing contingencies. Firms that integrate new learning are executing an adaptive strategy, which allows for the creation of sustainable competitive advantages, provided it leads to new inimitable knowledge resources being integrated.

3.2.2 Integrating learning.

The ability of the firm to pick up information from external sources represents the “absorptive capacity” of the organization (Cohen & Liventhal, 1990), and increases firm capacity to fend off inertia (Langlois, 1995).

This introduces the need for a recursive relationship between the (social) structure and action.
From a structuralist point of view, a successful adaptionist approach is based on the multiplexity generated from the number and diversity of relations between actor’s within the organization (Staber & Sydow, 2002), and from an organization’s capacity to maximize the number of non-redundant network contacts to secure “a synergetic network” (Harryson, 2006).

Besides multiplexity and redundancy the organization must be loosely-coupled. In organizational systems this refers to the independency of units and activities from decentralized control (Staber & Südow, 2002).

A structuralist approach to strategy, consequently allows firms to establish dynamic responses though the adaptive capacity established by multiplexity, redundancy and loose-coupling.

3.2.3 Modularity.

A structuralist strategic approach supports the opening of the system, albeit maintained as an integrative response to the evolution in technology.

By allowing for strategic partitioning, the architecture can be decomposed into its functional components, and allow for an open-system modular architecture (Sanchez, 2000). Strategic modularity aligns the technical modularity considerations to the drivers behind firm strategy (Sanchez, 2008). Modularity is obtained by decomposing process activity components, specify their interfaces and by freezing interface specifications. By opening up the system architecture, market and technology mediation can be decoupled from firm based managerial intervention, to become part of a collaborative strategy that traverses the boundaries of the firm.

3.2.4 Dynamic capabilities.

It is at the juncture between a pro-active adaptive strategy, the ability to integrate learning and a choice of an open modular architecture, that dynamic capabilities can be developed.
It is a firm’s asset positions molded against its evolutionary and co-evolutionary paths, that explains the essence of firm’s dynamic capabilities and consequently its competitive (sustainable) advantages (Teece, 1987, Barney, 1991).

It is the ability to organize and getting things done that cannot be accomplished by using the price system (markets) that is distinctive about firms (Coase, 1937, Williamson, 1985 and Teece, 1986). Strategic advantages are building from integrating external activities and technologies. It is control integration on the firm level that allows for the internalization of inimitable asset positions, and the shaping of an evolutionary path. It is however organizational learning though collaborations and partnerships, that represent the dynamic concept of the creation of new capabilities (Teece, 1986).

3.2.5 Alliances.

Firm-base alliance building represents a hybrid position between firm and market (Williamson, 1991).

As firm based assets looses their specificity, interfirm alliances allows for the pooling of complementary assets, and new asset specificity is established on the level of the alliance. Hybrid structures can only produce new sustainable competitive advantage provided that the level of disturbances is limited. Under highly uncertain conditions, governance must be directed from the firm or though the market directly (Williamson, 1991).

Alliance building is consequently and option where ownership control is exercised - and decision making is still exercised - from the firm hierarchies forming part of the alliance.

Alliances are on the path-way towards vertical disintegration, and may for a period of time re-establish proprietary control or ownership to assets, that can be utilized and appropriated upon on the level of the alliance, or re-integrated under firm-based ownership after added value has been established by the participation of alliance partners with complementary capabilities or assets, to that of the individual firm.
Relational rents established though alliances, do not substitute for any of the
etworked alternatives, and represents a governance model that is substantially different from that of the collaborative networks.

### 3.2.6 Networked information economy

The market equilibrium model, and its assumption of full transparency (Arrow, 1951* & Debreu, 1954*), not only has as attribute that firms need (full) information about each other investments (Hahn, 1960*), but as a rather more elusive circumstance, that it also represents a static state in which transacting in the market (ideal) equilibrium, does actually not hold any margin for economic rent to be generated from any additional transactions (Teece, 1984).

Many of the textbook economics referred to above assume fully developed markets, strong property rights, costless transfer of information, perfect arbitrage (options) and no innovation (Arrow, 1974*). This leaves open important issues related to the value proposition to customers (/users), the architecture of revenues & costs, and the appropriate mechanisms to capture value (Teece, 2010). The general equilibrium model “with (one-sided) markets and perfect competition, is a caricature of the real world” (Teece, 2010).

Leaving the industrial information economy behind, and turning towards the networked information economy of intangible product transfers (Benkler, 2006), this predominantly takes place in two-sided market settings, and under circumstances where customers not only want products, but requires solutions to perceived needs (Teece, 2010).

Weakening the dependency on proprietary strategies defines the concept of a networked information economy, which is characterized by decentralized individual action and specifically new and important cooperative and coordinate action, carried out though radically distributed, non-market mechanisms (Benkler, 2006).

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7 However the concept of “perfect competition” is not the legacy of Smith and Marshall, but was introduced by the price theorists of the 1930’s (Langlois, 2003 note 1)
Sustainable competitive advantage is not build only from specific assets and capabilities, but from the value proposition as expressed by the business model of the firm. The business model not only articulates the logic, the data and other evidence of the value proposition to the customer, but also a viable structure for revenues and costs (Teece, 2010).

Dynamic business model creation becomes essential in the pursuit of capturing value from innovation. When customer value is delivered by employing intangible (knowhow) assets of the firm, pricing and value capture becomes a challenge because of the nonexistence of perfect property rights, which exclude the market as an appropriate transaction platform (Coase, 1937, Teece, 2010).

**Introducing a Wider Theoretical Context.**

**Part 3.**

**3.3 Non-markets.**

What initially is managed by a firm as a closed network structure, gradually opens up in order to pre-empt negative externalities, and changes its nature, from a proprietary platform owned by a firm, towards a joint-venture type of hybrid, provided by a firm, but with various other sponsors integrated, in order to capture the full customer value and customer input, throughout the value chain (Eisenmann, 2008).

Central authority is gradually moved from the hierarchy of the firm, toward a bilateral arrangement, which weakens the degree of firm asset specificity created by the collaborative network resources, and transforms the overall governance of the user-interaction, from firm control to a hybrid relationship, that still preserves ownership autonomy, but weakens control and the legal attributes (Williamson, 1991).

By platforms migrating from proprietary control towards shared platforms (Eisenmann, 2008), governance structures becomes bi-lateral and hybrid by nature (Williamson, 1991), and innovation created within these structures transforms to become part of a common pool. By knowledge assets becoming
non-exclusive and in joint supply, the cumulative result that is generated also becomes part of a common pool.

Reward perceptions by the user-innovators changes towards incentric motivation, and with the knowledge production platform becoming increasingly competitive, and a public good in its own sense, innovation increasingly seems to become embedded in a non-market context (Benkler, 2006).

By allowing distributed ownership to assets, shared decision making and non-financial reward systems to develop (Benkler, 2006), a non-market circumstance may become established on the basis of previously firm-specific assets commoditizing into (privately produced) public goods.

Market based exchange is direct between two actors that give and receive from each other, either identical or different goods, either immediately or sequentially (Lévy-Strauss, 1969*).

Non-market exchange is individuals attaining their personal or group goals by engaging in a direct exchange (Homans, 1958*; Blau, 1964*).

Community based non-market exchange is generalized, by not requiring immediate reciprocity or creating any obligation towards a specific benefactor (Ekeh, 1974*).

Consequently social communities transact on the other side of the market under non-market circumstances: Non-market circumstances not only being formed from public goods being transferred in a non-market like fashion, but exchanged on the basis of being privately produced and in absence of any ownership to property rights for the benefit of the benefactor or the platform, from which the production is governed (Benkler, 2006).

From the context into which applicable theories must be viewed, we can extract an over-view of the structure and theoretical domains behind our analysis in the following sections:
4.0 Cases & Analysis.


In intangible product industries\(^8\) commoditization of resource assets can lead to the loss of sustainable competitive advantage. In this first section of our analysis, we have chosen the music industry as empirical documentation of events in an industry affecting the firm-level competitive position.

It is our intention to allow events unfolded, to lead us into analyses of the characteristics of commoditization, and how it affects the freedom to operate, the sustainability of business models and the ability to enforce property rights.

We believe, that commoditization of core capabilities behind an industry wide business model, can lead to the loss of sustainable competitive advantage to the incumbents affected.


A liberal use of the term “information economy” in various permutations has been applied since the 1970s. The term has been used as a response to the

\(^8\) The notion is traditionally applied to the information services industry incl. software, entertainment products etc. Increasingly tangible products on various stages in the value chain, becomes subject to the same influences.
increased importance of usable information as a means of controlling production and the flow of inputs, outputs and services (Benkler, 2006).

Because of its focus around capital-intensive production and distribution techniques the term “industrial information economy” has been used. However, radical decentralization of intelligence in our communication networks, and increased focus on information integration, knowledge exchange and social networking, has introduced a second stage of the “information economy” that more correctly can be labeled the “networked information economy” (Benkler, 2006).

According to Benkler an important aspect of the networked information economy, is the possibility of a reversal of the control focus of the industrial type information economy. It is the very core of “managerial capitalism” (Chandler, 1977) that is challenged by this view. It is – according to Benkler – the technical conditions of communication and information processing that enables the emergence of new social and economic practices of information and knowledge production. By becoming decentralized, socially and commercially, it “promises a deep change in how we see the world” (Benkler, 2006).

Benkler sees the recording industry (among others) as originally build around a physical production (and distribution) model. Songs where produced, and fixed in different means of storage and transmission, so that conventional economics could take over. The recording industry has traditionally been investing large amounts in making small-number (hit-releases) - high production-value – artifacts (musical works), that has been replicated on low-cost copies, broadcasted or distributed though high-cost systems but at low marginal costs (Benkler, 2006).

The recording industry has consequently been nourishing an industrial type of production philosophy, by selling many units of small numbers of cultural artifacts, and at low per-unit costs as opposed to selling few units of many cultural artifacts at high per-unit costs.

In the recording industry (as in other entertainment industries), one core issue is how skill-holders can provide creative content and how they are
coordinated with the process architecture related to production, marketing and distribution. At the heart of this problem are different incentive motivations. Intrinsic motivation is focused towards the use of personal abilities, shared participation, involvement, feelings and accomplishments (Moorman, 1993*), as opposed to extrinsic motivation with its emphasis on adequate remuneration, opportunity for advancement and being praised for job done (Moorman, 1993*). In the entertainment industries the archetypical artist is motivated by a creative urge for communication, while the record-label manager typically is motivated by excentric motivation (Frederiksen & Lorenzen, 2004).

In general the recording industry is characterized by demand uncertainty, “economies of speed”, and high skill job partitioning and task complexity within the product innovation. In relation to demand uncertainty products are few and product life cycles are short. This requires a project type of organization that facilitates experimentation in the market rather than within the firm. The need for skill diversity allows for very few internal economies by vertically integrating all processes, and the open-ended type of product innovation adds project complexity by altering time frames and various (short-term) stakeholders dropping in and out of the teams (Frederiksen & Lorenzen, 2004). As a result of the appropriability by record labels being constructed around the formal position as “publisher”, and consequently the owner of the publishing rights for a defined period of time, the firm advantages in terms of transaction cost efficiency is diluted by a need for detailed and formal contracting in order to protect individual and legally protected intellectual property rights.

The high costs of running fully integrated organizations with a need to ongoing market experimentation in order to single out the low number high-production value artifacts, with mass market sales potential at low per-unit costs, has resulted in a reduction in the scope of experimentation in order to redirect resources to marketing, which process has resulted in reduced product innovation and a general change to the over-all risk-profile of the industry (Frederiksen & Lorenzen, 2004).
Record labels are not only planners, producers and distributors of new album releases. Though publishing rights the industry combined, is in formal control of not less than estimated 7 million songs, which are made available though down-load sales, and are producing substantial revenues from the digital distribution platform.

The large back-log of music tracks available for electronic down-load has been described as the “long-tail”, by referring to the fact that not less than 98% of 10,000 tracks available on E-cast (digital jukebox) are selling at least once in every quarter of the year\(^9\). The difference to the physical world is striking. 90% of music sales from the Wal-Mart’s physical inventory are concentrated on only 200 music titles. On Rhapsody’s on-line sale portal 25% of monthly sales (22 million down-loads!), are related to titles ranked between the position of Nr. 25,000 towards Nr. 100,000. Rhapsody is recording once a month sales of titles, ranking all the way up to Nr. 900,000 (Chris Anderson: The Long Tail, 2006).

The music business has also an advanced B2B position by the licensing of music rights for the synchronization industry, which consist of film- and television production companies, advertising industry and the fast growing screen based gaming industry.

Music is distributed physically and digitally. The first market is shrinking and the latter is growing. Digital distribution covers streaming for web-casting and video-casting purposes, but also transiting music over the digital network for in-store use, ringtones on mobile telephones etc. represents value capture options to the labels.

Even where music is consumed but not delivered or distributed, payments to the labels will take place. If music is distributed over radio or a CD is playing in a shop, this will result in copyright payments to the labels. The same will happen for bundling with devices, or when mobile network operators and broad-band providers allow access to music files. As a consequence record labels are delivering music in connection with an actual sale, or they collect copyright payments from the use of their publishing rights.

\(^9\) From the non-scientific best seller of Wired Editor Chris Anderson, The Long Tail, 2006
The physical- and down-load sales market is what the record industry refers to, when they are expressing their opinion on market size and volume.

Record labels are organized within the International Federation of the Phonographic Industry (IFPI) that covers 1400 members in 72 countries. It is within that organization that the record companies are coordinating and protecting their intellectual property rights (copyrights). It is from this organization that terms and conditions for licensing, distribution channels and copyright pricing is coordinated.

IFPI has historically been split between the "majors" on one side, and "all the others" (independent labels), on the other side. The market shares between these two groups have gradually slipped in favor of the majors over the last decade. From Fig 1 extracted figures 5-years back (2008) and 1. Week 2009 (actual) provides an understanding of the underlying power-structure of the industry. The global market shares are reflected in the figures from the US sound recording industry.

To get an understanding of the challenges the industry has faced in relation to the value capture from the private consumer physical sales and down-load market (since 1990), we have extracted the yearly gross revenues in the US alone, to allow for a comparison that is not distorted by the fluctuations in the USD versus other currencies.

<table>
<thead>
<tr>
<th>Majors</th>
<th>% 2003</th>
<th>% ACTUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal</td>
<td>23.5</td>
<td>30</td>
</tr>
<tr>
<td>SONY BMG</td>
<td>13.2</td>
<td>26.3</td>
</tr>
<tr>
<td>Warner BMG</td>
<td>24.6</td>
<td>21.9</td>
</tr>
<tr>
<td>EMI</td>
<td>13.4</td>
<td>8.3</td>
</tr>
<tr>
<td>Total majors</td>
<td>74.7</td>
<td>86.5</td>
</tr>
<tr>
<td>Independents</td>
<td>25.3</td>
<td>13.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Billboard Magazine based on IFPI figures
Actual based on shares in 1. week 2009

The revenues are related to all sales of music through all channels covering record stores, other stores, music clubs, internet, digital down-loading etc. The figures do not include value capture from increased and fast growing
commercialization from the streaming and licensing markets. Figures cover all formats: full-length CDs, cassettes, singles, music videos and DVDs, digital downloads and vinyl.

<table>
<thead>
<tr>
<th>Year</th>
<th>Current US$ M</th>
<th>Fixed US$ M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>7.541</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>7.834</td>
<td>7.410</td>
</tr>
<tr>
<td>1992</td>
<td>9.024</td>
<td>8.157</td>
</tr>
<tr>
<td>1993</td>
<td>10.046</td>
<td>8.780</td>
</tr>
<tr>
<td>1994</td>
<td>12.068</td>
<td>10.185</td>
</tr>
<tr>
<td>1995</td>
<td>12.320</td>
<td>10.077</td>
</tr>
<tr>
<td>1996</td>
<td>12.533</td>
<td>9.901</td>
</tr>
<tr>
<td>1997</td>
<td>12.236</td>
<td>9.299</td>
</tr>
<tr>
<td>1998</td>
<td>13.723</td>
<td>10.113</td>
</tr>
<tr>
<td>1999</td>
<td>14.584</td>
<td>10.515</td>
</tr>
<tr>
<td>2001</td>
<td>13.740</td>
<td>9.137</td>
</tr>
<tr>
<td>2002</td>
<td>12.614</td>
<td>8.035</td>
</tr>
<tr>
<td>2003</td>
<td>11.854</td>
<td>7.361</td>
</tr>
<tr>
<td>2004</td>
<td>12.338</td>
<td>7.378</td>
</tr>
<tr>
<td>2005</td>
<td>12.269</td>
<td>7.005</td>
</tr>
<tr>
<td>2006</td>
<td>11.755</td>
<td>6.312</td>
</tr>
<tr>
<td>2007</td>
<td>10.322</td>
<td>5.212</td>
</tr>
</tbody>
</table>

US$ M (current vs. fixed sales revenues)
Based on manufactures shipments at suggested list prices
Source: Recording Industry Association of America 2007 Consumer Profile (www.riaa.com)

While the basic figures of the development is provided by Recording Industry Association of America, we have made a recalculation to fixed prices, by adjusting for inflation by using the CPI data (Consumer Price Index) as reported by The Bureau of Labor Statistics (US). Not only has nominal revenues been decreasing over a number of years, but comparing the sales revenues in 2007 adjusted to 1990 prices illustrates, that this industry has seen a contraction in recorded sales in the magnitude of 31% over the last 17 years, and the contraction is continuously taking place. Expressing this development from the top of the market in 1999, only dramatizes the lost value capture even more. The negative impact on gross revenues from 1999 onwards is closely aligned to the spread of the internet, increasing speed (digital subscriber lines) and changed social behavior and moral attributes of the internet community.
The development recorded in the United States, is descriptive of the remaining part of the global marketplace according to local statistical evidence from Europe and Japan, although the latter has seen some quite spectacular results from digital distribution on the vast Japanese mobile market (IFPI, 2010).

What can be extracted about the music industry from the above information is:

- and industry where pricing and distribution conditions are set by an industry wide regulating body;
- assets are pooled to allow for a one-stop solutions for customers;
- 80%+ of the market is governed by 4 majors;
- 1400 other record labels are selling and distributing their products on the terms and conditions set by the alliance to which they have subscribed for membership;
- the combined effort of the industry has seen real-market value going down with 1/3 over the last two decades;
- the combined effort of the industry has failed to capture an untapped down-load volume that the industry themselves estimate to 95% of actual total down-loads.

The reason for this development is by the industry itself explained by illegal down-loading, peer-to-peer file sharing and unregulated markets as in China. The strategy response has been vigorous pursuit of the customers themselves, legal action against illegal web-sites, political pressure to change and enforce more rigid copyright laws, and general political lobbying to fence of national territories that does not comply with US and European copyright legislation.

Anti-trust legislation and legal practices in the US and the European Union to protect free competition, has been made redundant by other legislation and one of the strongest lobby communities around.

What is regulated by law and industry practices, are not product prices and markets, but the enforcement of a rigid copyright legislation with implicit consequences for both prices (cost to use) and markets (access to use). It is
this "second pillar" of the recording industry (government regulated copyright legislation) that provides the legitimate cover for fixing the terms on which all non-physical sales must take place.

For new releases whether physical or digital, a series of royalties are to be paid to composers, songwriters, performing artists and publishers, which are effectively establishing an industry wide price floor. A price floor not defined by the value perception of the customer, but driven by the cost structure embedded in and industry that has taken all the participants into a collective hostage situation to fend of any opportunistic behavior.


Which factors contribute to the commoditization of resource assets?

4.3.1 Introduction

It can be difficult for established incumbents to recognize the appearance of a new dominant technology platform for an industry, if it materialize as a result of open innovation (Chesborough, 2006), and as substitutable technology to incumbents solutions.

Events of this character are typically directed from change events, something inherent in new technology or social and organizational factors (Utterback, 1996).

In the case of the music business industry, it is a new process architecture that represents a discontinuity to the production platform (distributed recording and low-cost master versions) together with discontinuities on the marketing-, distribution- and transaction platforms. The probability expectation of the next new process (Utterback, 1996) can be shifted by the emergence of new technology, and changed behavioral attitudes among customers. Such a shift commonly describes – in the eyes of the incumbent industry – a space of disruptive influence as a result of “creative destruction” to existing process capabilities, representing an occurrence of radical
innovation that: “command a decisive cost or quality advantage, and that strikes not at the margins of the profits and the outputs of existing firms, but at their foundation and their very lives” (Schumpeter, 1942*).

Some of the explanations behind incumbents not integrating new technology as the appropriate response to radical changes in the environment, can be a failed emphasis on change events, the lock-in of existing firms from the burden of sunk-costs in capital investments, and bounded rationality of the strategic managers (Utterback, 1996).

By losing control of new technology, and by failing to integrate new learning in their organizations, sustainable competitive advantages will be lost by the incumbents, as a result of management “following their core technologies into obsolescence and obscurity” (Utterback, 1996).

4.3.2 Commoditization.

Commoditization is conventionally seen as symptomatic of mature market places when the product offered is less or even undifferentiated in the minds of consumers. Conventional strategic theory such as the product life cycle suggests that not only is the process inevitable but it will become increasingly difficult for businesses to compete on anything but cost and/or price as the product moves towards the maturity stage. In industries ruled by a strong dominant design (or standard), products are likely to become more commoditylike and undifferentiated in terms of function and features (Utterback, 1996).

To understand the situation for the music business industry it is important to recall the attributes of a dominant design. The idea of a dominant design is conceptually broader than technical specifications and product features. A number of other factors than technology comes into play, such as the collateral assets, industry regulation, government intervention (and legalization), strategic position taking by other incumbents and the degree of transparency between producers and customers (users) (Utterback, 1996).
As the innovation life cycle moves into its specific phase (Abernathy & Utterback, 1977) products becomes undifferentiated and replicated, and consequently commoditize in the classical understanding of the concept. What is challenging to our analyses of the music industry is basically that any new creative artwork cannot possibly be seen in context of a traditional product life cycle. The unique nature of a creative product in the entertainment industry cannot by definition become generic, and consequently undifferentiated and commoditized in the mature stage of the product life cycle.

Behind the concept of commoditization and the maturing of product offerings is the recognition of a loss of sustainable competitive advantage. For the competitive advantage associated with a product offering to be lost – albeit composed on the basis of valuable and rare resource components (as music) – these resource assets must become subject to imitation by competition (Barney, 1986). But a unique piece of art (as music) is imperfectly imitable, and by representing value (being published) and rare (from the nature of the content), there is no possibility from a resource point of view, that commoditization technically will occur. The product is differentiated, and protected by some basic elasticity of demand advantages in the short life-cycle in which appropriation of economic rent is harvested.

Despite of this fact, the case circumstance does indicate that commoditization has taken place anyway?

To look for an answer to that contradiction between theory on the one side, and the actual market situation on the other, we must analyze the embedded properties of the industry wide business model from which the music business has captured value.

The record labels has though vertical integration accumulated waste complementary assets, that has raised entry and mobility barriers to any outside competition, by submitting any new entrant to well established industry wide rules and government sponsored copyright legislation that effectively, and for many decades, has eliminated the potential of new entry based on any
type of innovation, that in any shape or form have represented a potential threat to “the rules of the game”.

The migration of a private sector appropriability regime, into a government sponsored enforcement mechanism, has protected incumbent’s proprietary revenue platforms, by a massive accumulation of intellectual property rights. As a consequence an oligopoly of incumbents integrated into an alliance - that in any other industry would have been faced with anti-trust litigation -, has been profiting from their integrative capabilities as product assemblers in an essentially modular production structure, and within a well-established and commonly accepted (and by technology protected), architecture of the industry, where it has been virtually impossible to introduce any “game changing” innovation from de novo or de alio entrants (incumbent firms in other industries).

Although the entire process behind the creation, production, marketing and distribution of musical works involves a wide range of agents and processes, the record labels though their ownership to the entire music back-log catalogue, has been in control of a “bottleneck module” (Pisano & Teece, 2007) that effectively have established a basis for the protection of the incumbents.

A dominant design is supported from a platform from which marketing, distribution and sourcing of new content can be directed. The incumbent music industry, being in the mature stage of an open-system modular market (for decades), has individually build strong brands, and simultaneously used their relational capabilities to build a joint distribution platform, but where the weakness of the alliance seems to be the dependence of a single dominant design, that has not allowed for alternative or customer preferred platform designs to provide diversity. The industry has clustered around a uniform business model with limited dynamic attributes.

With marketing, distribution and sourcing controlled by a widely distributed standard, firm or industry idiosyncratic capabilities becomes at risk of transforming into contestable ancillary capabilities (Langlois, 1995), which combined with a technology sponsored lowering of transaction costs, increases
the risk of a proprietary exchange system becoming challenged by transactions being accommodated more effectively by the market directly (Langlois, 2004).

4.3.3 Business Model.

What this means for our analysis is that it may be changed boundaries of the firm, enforced by technological changes, product innovation and changed behaviors by customers that opens for a subsequent attack on the enforceability of property rights, and consequently leads to commoditization of core attributes of the industry wide applied business model.

As the core centerpiece of any appropriation of rent, the business model balances the functions of value creation and value capture (Chesbrough, 2006). Business models must be monitored and managed within the over-all value network of which it forms part. The business model must provide evidence that demonstrates how business creates and delivers value to its customers (Teece, 2010). For a business model to secure sustainable competitive advantage, it must be differentiated (imperfectly imitable). Capturing value from innovation is a key element in any business model design, which demands dynamic repositioning within the value chain, by an on-going review of assets that must be integrated or controlled.

From the attributes and characteristics of the resources behind creative production we have already concluded that it seems unlikely that creative end-products commoditizes, in which case it is the business model of the industry that seems to lose its pricing and differentiating capability, by dropping out of the price system, while at the same time losing its value differentiation.

If that is indeed the case, then the creative resources and its stakeholders becomes hostage and collateral damage of changed circumstances from un-integrated new technology, and not appropriated new value perceptions in the market.
The failure and inability to apply a dynamic perspective to the business model of the music industry, not only leads to the loss of competitive advantage, but also to the destruction of previously rare and valuable production assets.

4.3.4 Rival designs.

As described in the case presentation, the major record labels have established a uniform distribution and price structure affecting the whole industry. Not only the lions share that “the majors” control, but also independent providers of musical content must submit to the same industry wide paradigm.

Virtually all transactions up until about year 2000 was handled by the firms forming part of the alliance. It has been a well-designed system that has minimized losses from externalities. In order to maintain market control we must understand some of the principal drivers behind exercising such control: In a modular system like the music business, rights must be defined properly, so what happens in one module (or bundle of rights) does not affect what goes on in another with the risk of losing coordination control of the systems overall performance. If such a system design is not put in place, the system will be subject to externalities (Langlois, 2006). It is by relating transactions to maintaining the system of property rights, that one of the principal drivers can be identified for internalizing market transactions within firm boundaries in order to minimize the cost of externalities. By the treatment of property rights as a “negative right”, the firm boundary will establish the exclusion zone towards the external environment and property rights can become encapsulated under the governance of a firm (or alliance).

A defining quality of the firm is its ability to substitute a single (big number) contract into many individual (small number) contracts in a transaction cost efficient way (Coase, 1937). A defining attribute of the firm is consequently its ability to allow task and transfers to take place in a cost efficiently manner within a module, and it is only when transfers cross module boundaries they take the character of becoming transactions. For transfers to become
transactions, they must be standardized, counted and compensated (Baldwin & Clark, 2003). This theoretical distinction is an important help in explaining the loss of market control:

New distribution technology has allowed for the decomposition of musical works from previously being sold in bundles (Jewel box CDs) towards being distributed on a track-by-track basis. Under the design rules of the incumbent music industry, products where transferred within a tightly controlled distribution system, and it was not an technological option to allow for music to be distributed and sold on a track-by-track basis.

By the invasion of new technology, new distribution channels has gained force (i-Tunes, Rhapsody, Amazon Music), which has accommodated a market demand for music CDs to become de-bundled, and as a consequential circumstance has allowed for single-track transfers to become standardized, counted for and compensated. The entry of new distribution channels based on new technology has introduced marketization on the basis of music being sold by way of liquid, transparent and uniform market based transactions. The force of new technology has introduced a rival design challenging the previously dominant design of the incumbent firms and their market control.

By this – quite remarkable development – it seems to be the general attributes of the platform for the marketing and distribution of music that commoditizes, introducing a difficult to overcome externality to the prevailing business model of the music industry. In an industry so heavily dependent on complementary assets being controlled within an alliance of very few content providers, the emergence of a rival dominant design challenges the ability of the incumbents to differentiate and price their end-products.

4.3.5 Core capabilities.

Besides the increasing problem related to the incumbents ability to protect the ownership integration of assets, the industry has been facing a simultaneous challenge in relation to the firm level coordinated integration.
Coordination integration refers to rent-generation being secured on the firm level by making resource inputs more valuable (rare and imperfectly imitable) than would otherwise be the case, if used individually or in other combinations (Williamson, 1985). Firms and other types of formal organizations with sustainable competitive advantage must contain an intrinsic core that includes resource assets that are idiosyncratically synergistic, inimitable and non-contestable (Langlois, 1995).

An idiosyncratic synergistic resource that binds organizations together represents forms of knowledge that is difficult to acquire, and to communicate based on their often tacit nature.

As a result of this, idiosyncratic knowledge becomes of core value to any organization. However both the intrinsic core and the idiosyncratic capabilities are underpinned by knowledge, and will eventually become subject to change (Langlois, 1995).

It is from the dynamic capabilities of resource assets that firm level competitive advantages are protected. Dynamic capabilities are resident in the firm processes, asset positions and path dependency. It is how combinations of competences and resources are developed, deployed and protected, that a dynamic capability of an organization is established (Teece et al., 1997).

By the lack of dynamic capability, and a simultaneous loss of idiosyncratically synergistic resources on the firm level, the risk increases that competition may be introduced by de novo or de alio entrants.

In particular de alio entry order follows a decision rule based on observations of sector and firm general characteristics (Giarratana, 2008). A dilution in the quality of firm idiosyncratic capabilities may be a first – and potentially strong – signal to the environment, of organizational myopic\(^\text{10}\) inertia indicating an incumbent inability to recognize potential links between existing capabilities and new business opportunities, and an incapacity of organizational resource assets to allow for sufficient speed of reorganization to meet external conditions of change (Giarratana, 2008).

\(^{10}\) The term “myopia” was introduced by Liventhal & March (1993) in assessing problems with change and innovation: “Problems that are not seen do not exist” (Giarratana, 2008).
4.3.6 Vertical disintegration.

Some parts of theory sees vertical integration as a defensive move in declining industries (Stigler, 1951).

Behind this assumption are basic observations concerning the division of labor, and the expectation that high-growth eventually will lead to horizontal specialization (Chandler, 1977).

But the division of labor is at its base a matter of production costs alone, but production efficiencies says nothing about organizational form (Langlois, 1995).

A conclusion towards less horizontal division when markets are contracting, does consequently not justify a conclusion, that this is identical to vertical integration, because this ignores the transaction cost perspective and introduces implicitly a long-run perspective (Langlois, 1995).

If a long-run perspective is applied explicitly, the spread of knowledge, and consequently the principal driver behind idiosyncratic firm level capabilities, makes them contestable, and migration towards ancillary capabilities will take place, which –ceteris paribus – will lead to a fall in associated transaction costs and the promotion of vertical disintegration (Langlois, 1995). But as transaction costs are reduced based on the loss of idiosyncratic capabilities, this implies that sustainable competitive advantages also is being lost, and as a consequence an industry will be put on a trajectory of lower growth, resulting in vertical disintegration to occur when markets are contracting, and not the opposite way around (Langlois, 1995).

This bit of transaction cost theory is a potential help in our pursuit of explaining another phenomenon facing the music industry.

If we accept the transaction cost viewpoint, this may explain that assets are dissimilating in the more mature phase of the product life cycle, with vertical disintegration as a result.

In our analysis so far, it has been the assumption that the music industry has indeed been in its mature phase for a while, with the loss of previously core capabilities as a result, along with the design platform of the industry
being challenged by a new market architecture supported by rival design platforms and new technology.

Accepting that the vertical disintegration promoted by the loss of industry core capabilities has resulted in the loss of sustainable competitive advantage, and that complementary assets has turned towards an ancillary nature, this may explain commoditization of previous rare, valuable and imperfectly imitable assets, which instead has been transformed into un-differentiated, low-value generic types of resource assets.

This adds just another element to the dissimilation of the industry wide business model.

We have seen that the enforceability of property rights has been challenged by a rival (market based) design platform, and that an inability by the incumbents to adjust organizational resources from reasons of myopic inertia, has delayed appropriate responses. In addition, another explanation can be found from an exhaustion of sustainable competitive advantage, which has accelerated industry wide vertical disintegration, resulting in a separate commoditization of firm-level and industry wide resource assets on its own.

Although we have a pretty good idea of what has happened, it remains an issue why this has been allowed to take place. And which factors has contributed to such a development. To understand this, we must look a bit closer at product migration and its challenges to any business model, and in particular that of the music industry.

4.3.7 Product migration.

To introduce the discussion in this section, we must pause for a moment, in order to focus on the nature of music, and its basic product features.

The human capacity for selective attention, allows our system to direct attention to subsets of inputs for further processing. However capacity limits does exist in relation to sound perception and sound encoding, but once
codified (learned) there appear no limits to our ability to re-call sound-based items. Connectivity is established though heir-cells at the periphery, to single neurons in auditory cortex and onwards to large-scale neural networks in the auditory system.

The sinusoid is the basic building block of sound, and includes aspects of frequency, intensity and time. Frequency is wave vibration, and timbre is the actual quality of the note. Frequency (cycles pr. second) corresponds to the psychological OR perceptual "quality of pitch". Pitch describes the perception of loudness. From an acoustic and cognitive point of view, a sound that reach the eardrum, results in a percept based on pitch height, pitch croma, timbre, intensity and roughness (Koelsch & Siebel, 2005).

The notion of sound scale refers to the use of small subset of pitches (up to seven), and the existence of scale is forming the minimum basis for perception and the establishment of (long-term) memory. Sequentially presented tones do not form chords that are the building blocks of harmony. They are established from simultaneously presented tones, and we have moved from the notion of sound to the concept of music. Rhythm in music is derived from time relations with respect to duration and beat.

This small section\textsuperscript{11} on the nature of sound is important when we turn towards the challenges facing the music industry and its alignment with a networked on-line community of users.

By identifying the core characteristics of the components shaping music products, this instantly allows us to conclude, that what is being produced, distributed and transacted, are small frequencies of computer code – software – and it allows us, without much further analysis, to conclude that products with such attributes are ideally stored, transmitted and transacted in an on-line setting.

From a transaction cost perspective, there seem no justifications for other forms of distribution network.

\textsuperscript{11} The section has been extracted from a short-project by the author of this paper: "A Third Dimension to the Digital World. Is Music an Option?"(MIB, 3\textsuperscript{rd} semester CM140). The bibliography to this paper includes a number of references marked (note 11) with relevance for this section.
Turning to conventional micro-economy, costs in the short run rises with increasing output due to the law of diminishing returns. The rising marginal cost curve of neo-classical micro-economic theory is a pre-condition for the equilibrium market theory.

In the real world of network economics reality is constructed differently. As cumulative volume increases, the pr. unit cost falls and marginal production costs are decreasing. This reality has been displayed in research as the “progress function” (Teece, 1984), which express a reverse relationship between volume and costs, as unit costs will fall as the learning curve and scale economics allows for a more efficient production economy.

In the networked economy, we assume that the “progress function” may be established from other attributes than those of the industrial economy. A networked - computer-mediated - communications environment, allows for a networked information economy by (1): the removal of the physical constrains on effective information exchange; (2): the rise of non-market production and (3): large scale cooperative efforts (Benkler, 2006).

That the marginal cost of production goes towards zero, will in conventional price theory not allow a positive unit price at the same time, and consequently no scope for a market. What we are indeed witnessing is a music industry, build on value capture from incremental creative innovation encapsulated in software code, that can be stored, distributed and transacted, but at falling marginal costs, and towards a selling price of zero:

From the IFPI\[12\] Digital Music Report (2009) it follows that E40 billion music files was illegally down-loaded in 2008, which translates into 95% of total music industry down-loads.\[13\]

Cultural content can be seen as part of a “creative commons” (Tapscott & Williams, 2006). Music holds the same properties as information, software and other IP-based products, which products are usually seen as non-rival (indivisible).

\[12\] International Federation of Phonographic Industry (US)
\[13\] Estimated in IFPI Annual Report 2009.
A good that is joint-in-supply is indivisible, and consumption by one does not diminish availability to others. If a good is available to one, when available to everyone else, it is considered non-exclusive. A good that is non-rival and non-exclusive at the same time, is considered a public good. But a public good can be privately produced (Mahony, 2003), and once such a good has been produced, no more social resources are needed in creating more of the good in order to satisfy further consumption. That the goods are termed “public”, is because the market will not produce goods, if they can only be priced at their marginal cost, which is zero.

Goods that are produced at zero costs are not transacted in a market, but are exchanged in a non-market setting.

What this mean to our discussion on product migration is, that the basic product characteristics of music, allows for “game changing” new attributes of the infrastructure and complementary assets of the industry, on the basis of new technology and new customer value perceptions. Commodityization and vertical disintegration together promotes a music product migration, from that of products being transacted within the price system, to most products being transacted in a non-market setting. This change the nature of the music products from being privately produced and made for a profit, to “publicly” produced, and made for free.

Not only, as we saw in the part of our discussion related to commoditization, is proprietary ownership integration being eroded by the emergence of new business models, but the new business models are themselves advancing changes to the product attributes, that accelerates commodity and the loss of value, to the products themselves. This development also eliminates previous control integration of most of the alliance based complementary assets, which previously formed part of the music industry’s strategy for market control.
4.3.8 Enforcements of property rights

The critical opponent will now consider, that transactions are in fact taking place at a positive market price every day – albeit only in a fraction of the potential size of the market –, and that non-market circumstances consequently is rooted in copyright infringements, which if not taking place possibly not lead to production costs of zero.

Copyright based license fees in a market, functions as a tax, and will shift demand accordingly. The unique position of the music business industry, which has allowed for public legislation imposing “transaction tariffs” when creative content is traded (or used), could introduce a Pigovian tax-perspective to the analysis of the market pricing.14

However, a more appropriate theoretical junction for our consideration may probably be the Coase-Theorem (Coase, 1960) asserting that in an environment with no transaction costs, and clearly defined property rights, the transaction space will become absorbed by the party that profits the most from its utilization.

In the music industry, commercial control has effectively been lost of a distribution and transaction platform 20 times the size of the legitimate exchange platform, with heavy dilution to the value of property rights as a result. With such an effective loss of the enforcement capability of property rights, the Coase theorem does not seem applicable for the situation either.

Neither property rights (Coarse theorem) nor licensee fees (Pigou taxes), can change the interpretation of the new market circumstance, and a non-market has been allowed to replace the price system. Where prices do exist, they are the result of a Pigovian-tax type of substitute, but have in the larger context of all transactions taking place, been “negotiated” away by way of substituting transaction technology.

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14 Arthur C. Pigou (Wealth & Welfare, 1912) introduced government taxes and subsidies as a way to correct negative market externalities.
One concern should be addressed at this point. It relates to the influence on creative production, if no (or very little) economic rent can be generated from producing, market and distributing it.

Eventually the license fee regime in itself is not promoting an efficient information economy (Benkler, 2006) but must be seen in the sole perspective of assuring that the creative producer of a non-rival product is secured proper incentives to continue producing. When 95% of transactions are not subject to license fees and the 5% remaining must be seen against de-bundling and lower prices pr. track sold, this should raise some serious doubts on the future availability of content.

This concern is valid, but must be seen within the framework of transaction costs. Content produced and distributed by firms has been reduced dramatically, and as the production, transmission and transaction capabilities of the music production itself becomes subject to commons-based peer production, this results in the loss of other specialized resource assets. The conventional transaction platform is being replaced by new platforms where the creative producers can display content in one place, and transact it on another. Transactions is moved outside firm boundaries of the “majors”, or any other record label for that sake, to become displayed with another – wobbling- 20M bands in – say - the MySpace universe, and with direct transaction options with a platform like iTunes.

So while the creative commons may represent serious disincentives for labels to engage in the production of new content, this may not be the case for the creative producers themselves.

As a matter of fact, there are many indications of just the opposite.

4.3.9 Part Conclusion RQ 1: Which factors may contribute to the commoditization of resource assets?

We have started our analyses by identifying challenges facing enterprises on the firm-level, and by focusing on the music industry we have selected an
industry that produces intangible products. Intangible product industries and the firms operating within them will from time to time be challenged by technological change, product innovation and changed behavior of the customers, which affects the boundaries of the firm governance, and can lead to a weakening of the enforceability of property rights.

Even in an industry as the music industry, where ownership based vertical integration has accumulated waste complementary IPR-assets, and the private sector appropriability regime has been integrated into government sponsored enforcement mechanisms, this has not established sustainable competitive advantages. The uniform business model around which the industry incumbents have clustered, has lost its ability to capture a significant part of the value creation across the industry.

Among other developments, it is the emergence of new distribution channels based on new technology that has introduced a marketization on the basis of music being transacted in an open, transparent and uniform market, as opposed to the previous standardized and licensee based transfers. The new rival design has eliminated the ability of the incumbents to differentiate and price their end-products.

Sustainable competitive advantages from core capabilities have been lost due to organizational myopic inertia. The loss of sustainable competitive advantage has accelerated industry wide vertical disintegration, resulting in commoditization of firm level and industry wide resource assets.

5.0 Cases & Analysis.

5.1 Part 2: Collaborative Networks.

5.2. Case example: Incumbent Responses

In a changing environment with such massive consequences for the asset structure and business models of the incumbent music industry, it becomes of interest to discuss, why it went wrong?
To introduce that discussion it seems appropriate to study industry level responses.

As could be expected, the incumbents have relied on the scope of their complementary assets and IP-protection regime to fend off challenges to “the rules of the game”.

Quite descriptive of “the cognitive barriers” of the incumbent major labels, is the PR-blow-out hitting SONY-BMG Music in the late fall of 2005.

SONY wanted to take steps to protect their IPR against customers that following the purchase of a jewel-box CD, subsequently copied it to their PC for re-distribution via the internet to family & friends. In 2005, the primary distribution channel of new music was still perceived by the labels to be the physical distribution channels, but it was a mounting threat of dilution to the effectiveness of those sale channels, which became the target of interest to SONY.

Their solution became rooted in industrial economy thinking: They decided to embed “root-kit” software on all their conventional music CD’s, so when customers (quite legitimately) plopped a SONY music disc CD into their CD-disc drive, the CD buried SONY proprietary software deep within the customers PC operating system. The DRM-software (“digital right management”) restricted the ability to copy any music CD in more than 3 copies. The software was integrated on all globally produced and distributed music CDs, but with no publication of the fact, no marking of the CD’s or any pre-warning during the installation process.

This distribution of computer-crippling digital rights management software, in a covertly fashion, promoted though the use of conventional distribution channels, burst into a worldwide public relations firestorm, as use-groups and print-media bursted into flames. Not only did SONY have to recall in millions of physically distributed CDs, but valuable distribution channels became redundant over night.

The nightmare for SONY expanded as it turned out, that millions of private PCs from the cloak-and-dagger software, had been exposed to viruses and
that the removal of the embedded root-kit risked nuking the users Windows operating system.

A plan thought out by the industrial engineers of SONY (some of the smartest in the world), and in pursuit of SONY legitimate property rights, turned into a marketing nightmare for SONY, offending global customer groups at the hard of their perceived privacy, and creating a confrontation with the combined internet community.\textsuperscript{15}

This case concerning SONY is a display of incumbent thinking as late as the end of 2005.

To fully understand the challenges facing the recorded music industry it seems appropriate to make a short review of the nature of demand in the retail music market, the need for skill diversity in the industry, and the complexity of the innovation tasks that is performed on a regular basis (Frederiksen & Lorenzen, 2004).

The demand uncertainty was addressed in our section about markets, where we defined the market around few product originals sold in a mass market driven by the creative content and artistic quality of the end-product. In a given time frame the market is driven by large sales of few titles that all have short live-cycles.

To deal with demand contingencies, the industry is experimenting in the marketplace in order to identify product candidates that may profit from extended use of wide-ranging collateral marketing assets. This is typically done by the use of conventional trial & error search processes, which due to substantial reject rates, concentrates total costs on the few more widely distributed new releases.

The skill diversity needed can be understood when various steps in the process are listed: composers and songwriters; performing artists; recording; production with mixing and re-mixing; A&R support; mastering; contract management and IPR management; graphics; video production and then sales; promotion and tour-management. Beside of all this is the social support function of artists and bands, commercial management of sponsor contracts

\textsuperscript{15} The event is recollected in Tapscott, D. & Williams, A., "Wikinomics", Portfolio (2006).
and merchandizing. There are probably even more, when each of the above
skill sets are further decomposed.

The project complexity resulting from the task list makes the product
innovation process open-ended with a need for flexibility, and with project
participants entering and leaving the various stages, and as a result does not
leave much room for internalizing any economies (Frederiksen & Lorenzen,
2004). In essence, record labels are product assemblers of specialized skills.
However the industry is organized into distinct project ecologies that facilitate
the inclusion of project partners on terms of “hand-shake” deals (Frederiksen
& Lorenzen, 2004).

The record industry is geographical clustered in very few big urban areas
(LA, NYC and London). This supports the open-system modular architecture of
the innovation process.

From this list of details, it comes as no big surprise, that systemic innovation
and technology integration have not been promoted from within. The
disruptive force that has hit the industry is a typical case of skills and
competences in one industry, migrating into the system architecture of
another industry, by the introduction of new technology and process
innovation.

What seems most surprising, and a valid departure point for our discussion, is
that the major labels appears to “being stuck” all the way though this
transformative phase of their industry, and up to this day. This impression
builds, when we study a number of initiatives by the incumbents over the last
couple of years, along with a number of uncertainties that have been
eliminated with regard to technical solutions, new user behavior and changes
to the application of the copyright regime.

As late as March 2008 (Business Week Online) a defining battle was played
out between copyright owners on one side and Apple i-Tunes, Amazon.com,
EMusic, RealNetworks, Rhapsody and BestBuy on the other side. After years of
arm twisting it became the CopyRight Royalty Board (US) that had to
intervene in order to straight out licensee fees disputes in relation to digital downloads. While the digital distributors had struck a deal with the Recording Industry Association of America (the “majors”), this agreement had been challenged by songwriters and composers, whom are represented by their own respective collection agencies. The non-alignment between publisher interests on one side (record labels), and the creative producers (songwriters and composers) on the other side, had resulted in a disproportionate part of the over-all royalty being collected by the publisher corresponding to 70% of the global sales value, while the songwriters and composers was only collecting less than 10%. The dispute that eventually ended up in the US Court of Appeals and Congress, maintained a status quo for years in relation to an appropriate framework for royalty distributions, and took the on-line distributors hostage in a dispute involving various copyright entitled interest groups. As an analyst was concluding at the time: high prices only bring one result, which is “everyone is going the other way - which is free!”

The IPR-owners, in their pursuit of harvesting on their asset base, was not only restraining internet distribution channels from developing a sustainable market structure, but was probably at the same time losing a last minute call for a legalized platform structure to become the dominant solution to a long term problem.

At the same point in time (February 2008)\textsuperscript{16} the four major labels decided to lend support to CBS established Last.fm, that shortly before had introduced free on-demand listening supported by a “recommendation engine” that guides the listeners towards music they are likely to enjoy, based on prior user-behavior and selections. The free service was advertising supported, and the record labels were paid on the basis of a risk-sharing model. The service was a streamed service, and content was not transmitted by way of downloading.

By this move the labels collateralized their royalty incomes. At the same time as they charged independent on-line distribution channels 70% of a fixed

\textsuperscript{16} Wired On-Line http://www.wired.com/listening_post/2008/02/free-music-boos/
and agreed minimum sales price pr. track, and simultaneously was digging-down the entire (legal) on-line distribution community in an in-flight with other collection agencies, they themselves turned around, and allowed for their IPR-assets to be made at the free disposal of a proprietary transaction platform, where they effectively accepted to receive compensation on a “split-risk” formula.

By reversing their royalties into subsidization of an alternate pricing formula, they effectively established a double whole-sale standard in the market: One for distribution channels with the participation of the incumbents in the ownership to the platform, and another for everyone else.

A year later (2009) the incumbents, although in a less public way, decided to support internet darling spottify.com in Sweden. Now free down-loads was allowed but still supported by an advertising revenue model, as in the case with (now hugely popular) Last.fm. The silver-lining was, that due to Scandinavian enforcements of copyright regulations (Spottify.com being Swedish), the songwriters and composers was not entitled to any licensee (as with Last.fm) in connection with publisher supported electronic down-loads (that substitutes a sale). The songwriter and composer collection agencies were left out of the loop, in this revenue model.

With reference to the increasing use of advertising based distribution platforms, an editorial in Billboard Magazine17 (July 2008) declared outright: “Add-supported content isn’t working”: Large catalog owners demand upfront catalog fees that don’t tickle down to the artists.

From Last.fm an example of the band Spiral Frog’s pro-rata revenues was acidly commented by Billboard on the basis of the band receiving an effective pay-per-play rate of USD 0,0005:

“That’s three zeroes, on the wrong side of the decimal. For an artist 2,000 plays just buy a 99-cent cheeseburger...assuming it is a solo act that receives 100% of the royalties”, the editorial lamented.

17 Billboard Vol. 121 Issue 28
The labels succeed in other revenue areas by way of licensing deals, but those markets are not, and have never been, inter-linked with the revenues generated from the private down-load market.

From mobile-based digital-music ringtones, master ringtones and full-track down-loads to mobile handsets, some distribution is allowed under a legalized basis and with impetus to growth. In Japan such advancements is nearly off-setting the declines in physical sales in 2007\(^{18}\).

Later in 2008\(^{19}\) the incumbents again act in consort and within their alliance. Along with SanDisk, a global memory chip maker, a micro sloth memory card is introduced that carries 1 GB of data - which capacity is just enough to store just one single album - and with a price tag as a music CD at USD 14, 95. The drive did not bring much success at the time: Apples iPod and iPhone did not include memory card slots, and the market itself had moved towards down-loading single tracks and not albums, and storing not single albums, but whole music libraries of (mostly illegal) music tracks, on different devises.

By the end of 2008\(^{20}\) the incumbents as part owners of MySpace Music JV (with Rupert Murdock), entered just another deal based on a revenue sharing model from advertising revenues, as in the case with Last.fm.

In January 2009\(^{21}\) “a-la-carte-downloads” (read: i-Tunes) is taken on by the four majors that introduces “all-you-can-eat” against a flat fee subscription model. The initiative is launched with mobile giant NOKIA that bundles handsets with unlimited access to the major’s music catalogue. The business model is based on consumers buying a new hand-set every 12-18 month. The music is streamed, and royalties are distributed on a pro-rata basis based on actual usage. US producers of mobile hand-sets do not enter the major’s offer, from fear of clocking up network capacity.

In Denmark TDC strikes the first ever (test market) deal with the major’s, and buy unlimited market distribution rights of the “back-log” catalogue against a

\(^{18}\) BillBoard, Vol. 120 Issue 33
\(^{19}\) Business Week Online 9/22/2008, p.11
\(^{20}\) BillBoard Vol. 120 Issue 40
\(^{21}\) Billboard Vol.121, Issue 1
flat fee. The music is made at the free disposal of broadband customers, and customer churn rates are subsequently reduced with about 60% according to TDC estimates. In the first week after the introduction, the weekly down-load sales in the Danish marked of estimated 150,000 tracks are replaced with 1,9 million registered free down-loads.

It seems, that the TDC deal in one strike, captured a significant slice of what the music industry was otherwise estimating being illegally down-loaded.

At this point our recapitulation of recent events has no further purpose and is representative for (known) incumbent responses as per May 2010.

5.3 Analysis: Collaborative Networks.

How can collaborative networks influence the sustainability of core capabilities on the firm level?

5.3.1 Introduction

On the firm level competitive advantage is a result of dynamic capabilities. Firm-specific capabilities can be a source of advantage from combining competences and resources that are further developed, deployed and protected (Teece, 1997). We recapitulated earlier in this paper, how a competitive forces approach with rents flowing from privileged product market positions (Mason, 1937*; Bain, 1956*; Porter, 1980), could be replaced by a more resource based orientation, emphasizing firm-specific capabilities and assets, as the fundamental determinants of firm level performance (Penrose, 1959; Rumelt, 1984; Teece, 1984; Wernerfeldt, 1984*; Barney, 1986). Even though the incumbent alliances in the music business industry, and the de-facto oligopoly established throughout a number of decades, seems an appropriate departure point for analyzing how the generation of economic rent is an issue related to the industry or subsector level of industry, this application of competitive strategy by the music industry, more serves as a
description of what has happened (and consequently the previous part of this paper), rather than an appropriate explanation of why it happened.

In discussing what should have been done, we must view the distinctive firm ability to organize its activity in a nonmarket-like fashion.

What is distinctive about firms is that competences and capabilities to getting things done, in particular with respect to a dynamic capability in relation to skill acquisition, management of knowledge/ know-how and integration of learning, all provides important contributions to strategy (Teece. 1997).

To deal with environmental challenges, firm processes are one of the distinctive competences and dynamic capabilities. Under transformational circumstances the ability to reconfigure becomes of particular importance. In dynamic environments – as the music business industry is facing, narcissistic organizations are likely to be impaired (Teece, 1997). There seems little doubt, that the response pattern we have seen in the cases above, all bear the hallmark of incumbents relaying on existing ways of getting the job done and bounded rationality from established asset positions. The explanation behind this apparent inward lock-in on inferior technology (Arthur, 1989*) is path dependency (Teece, 1997), where actions taken become a function of incumbents current positions, shaped by the path already traveled.
From theory the diagnosis seems pretty clear of some of the reasons behind the lack of dynamic responses to ongoing events.

5.3.2 Project Net-Works.

With rapid response strategies, it might have been possible to establish coherent defensive responses, by establishing temporary forms of project net-works between the major labels building on the industry wide existing framework, but focused on adaptation to changing circumstances (Frederiksen & Lorenzen, 2004; Staber & Sydow, 2002).

Project net-works are a temporal hybrid structure, where activities undertaken are neither internalized on the firm level, nor undertaken by the
market. In industries with high innovation rates, project organizations are common enablers of learning integration, but – from our analysis in the previous section - the music industry can hardly be characterized as an innovative industry, when it comes to the business models applied and technical solutions used to distribute and transact.

The creative processes behind the products themselves are innovative (by the on-going creation of new product originals), and are indeed solved as default by project organizations, but this capability has not been “scaled” to other managerial levels of the larger record labels organizations: Regrettably one may add.

Project organizations are an important strategy option, because they provide the crucial organic and flexible structures for negotiation and experimentation in the early phases of innovation (Burns & Stalker, 1961*). An appropriate response by setting up a number of project networks, would have allowed the inclusion of a number of specialized skill holders, as opposed to the apparent internalization of the search process for solutions and responses we have seen. Incumbents have each developed own responses the remaining major labels subsequently have subscribed to. Mutual collaboration around project ecologies would have allowed for a higher rate of innovative responses.

By the major labels being the “gatekeepers” to possible changes to the copyright regime, the same major labels could, by faster integration of technology and a new approach to the industry wide business model, have been in a position to raise significant mobility barriers in the marketplace, and could potentially have established an out-ward lock-in of customers, instead of an inward lock-in of themselves.

The inability to move to networked innovation and fast learning integration, by either enforcing internalized dynamic response capabilities, or externalized though temporal but fast integrative project ecologies, is a possible explanation behind insufficient strategy responses.
5.3.3 Alliances.

One may argue that the incumbents of particularly the music business industry, actually represents one of the strongest and long-term alliances across a specific industry, which consequently challenge the critics just brought forward.

Firms already embedded in alliance networks, leverages preexisting networks when searching for prospective partners (Gulati & Gargiulo, 1999*). What seems to be the case is however, that it appears that the long-term alliance between the “majors” within the music industry has become an alliance with a distinct degenerative disposition from the incumbent network partners themselves. A degenerative trait from the simultaneous dilution in the market position and a loss of resource specificity of all of the participating partners in the alliance, with the result that they individually, and the alliance as a whole, gradually has degenerated.

It is a recognized fact from research, that preexisting ties and resource endowment, makes it much easier for organizations to initiate – or leverage – collaborations with their current partners (Gulati, 1999*; Gulati & Gargiulo, 1999*). Organizations form alliances on the basis of a mutual fit of resources, but in industries with competition among potential alliance partners, possible conflicts of interest often lead to firms internalizing resource development within the hierarchical governance of the firm itself, as opposed to externalizing within an alliance (Wang & Zajac, 2007*). The way that the music industry has raised entry barriers and created a mutual set of distribution assets, have in fact restricted competition among themselves to differentiation on product originals. The resulting status quo between the incumbents seems to be the probable reason for no one raising any concerns against further leveraging on the existing alliance. If –by any measure – alliance effectiveness is evaluated though traditional out-come variables as: firm growth, survival and performance (Mitsuhashi & Greve, 2009), then the music industry hardly –by any standard-, can be viewed as successful by an approach to simply leverage on their existing alliance, as opposed to creating new ones.
Firm advantages – or disadvantages – can be rooted in the network of relationships in which a firm is embedded. For any alliance to generate competitive advantages, this must happen from “joint idiosyncratic contributions” of the alliance partners (Dyer & Singh, 1998). This will happen by synergistic combination of assets, knowledge and capabilities, but as opposed to the dynamic resourced based view, the unit of analysis is the alliance as such, and it is the joint capabilities of the alliance that must allow for the generation of relational rents, by producing results that could not be produced by any individual part of the alliance alone. One of the central objectives behind alliance formation must consequently be a combination of complementary assets within the alliance. Research indicates that firms with complementary resources also are more likely to collaborate (Chung, Singh & Lee, 2000*).

Of particular importance to leveraging on joint complementary assets is, when alliances include partners with market access that is different from that of other alliance partners. Market complementarity (Gimeno, 2004*) is consequently spanning not only the boundary of the firm, but potentially also the boundary of the industry or sub-segment of industry.

5.3.4 Modularity.

For firms to generate economic rent based on alliance structures, an open modular system architecture is needed. The basic aspect of a new technological infrastructure has been covered earlier in this paper, but we must shortly address the organizational incentives behind introducing modularity, and step a bit further to fully understand which firm responses can be directed towards introducing modularity as part of the strategy forming process.

Incentives towards a modular approach in the music industry could gain impetus from demand- or supply side factors (Sanchez, 2002). On the demand side a new approach to the over-all system design could have allowed for the early introduction of greater product variety, preparedness to better serve
multiple market segments as they un-folded, and faster up-grading of technological capabilities. On the supply side consolidated demand within the existing framework under control of the incumbents, would have allowed for lower pr.unit cost of the valuable product originals making it to the market, and a lowering of the relative cost of new product development as measured against total revenue generating production.

An approach to establish an open modular system architecture is however not a simple one. Traditionally modularity is introduced in context of product design (Sanchez, 2002), but this rather practical approach will not solve our problem in the music industry.

The industry actually has a very effective and traditional modular approach in the “production process”, and product development is directed on the basis of an open system setting, when it comes to the creation of product originals, which process also is subject to a dynamic approach and networked innovation. But modularity must be seen within a wider framework of the over-all system design (Langlois, 2006), and should not be limited to practical production considerations.

By a wider perspective we must view decomposable structures (Simon, 62*) as a means to justify modularity itself. All systems are in essence modular, in the sense that they comprise parts, subsystems of parts, and relations among parts and subsystems. The real issue is which parts belong in which subsystems, and the relationship between them (Langlois, 2006). A decomposable system is a system that assigns parts to subsystems (modules) in order to minimize the total number of interactions among the modules\(^{22}\). If a system design results in complete decomposability, it is of little interest as a system, because the modules will not perform any transfers across modular boundaries. The real world will by default be more similar to what can better be described as a “nearly decomposable system” (Langlois, 2006): A modular structure forming a decomposable system design, based on integrated coordination of all modules, and with visible design rules (Baldwin & Clark, 1997).

\(^{22}\) Frictions across modular boundaries is not transaction cost efficient (Langlois, 1995)
Coordination can take many forms: it can be the firm itself or standards (alliances) or the price system (market). Irrespective of governance model, all modules must act on a coordinated basis with each other, on the basis of visible design rules that must consist of a system architecture that assigns all parts of the system to modules; there must be defined interfaces which govern the connections between modules; and there must be standards, which sets criteria to measure the compliance of the modules, with the overall open modular system design (Baldwin & Clark, 1997).

The visible design rules must be commonly shared, and it becomes the ability to define and distribute such a system design, which becomes the core objective of any modularity approach forming the basis for externalized resource endowment by an alliance with other partners. And it is the objectives of the coordination- against which all modules are acting within the system design - that shall connect and integrate an open modular system design.

The theoretical detour on explaining the nature of decomposability and modularity in a broader setting, allows us to return to the discussion about the effectiveness of existing alliances within the music industry, and what should have been done in that respect.

Assuming that alliance building is the right strategy, the success criteria is around which objectives that coordination is integrated across the alliance. In the music industry the alliance of the incumbents has been coordinating all efforts around their IPR-leverage, and has defined standards from the existing copyright protection of their assets and has defined all interfaces in alignment with their ownership of those assets. The whole architecture has been set up and coordinated on this basis, and the visible design rules has been governed by the respective alliance partners mutual interest in protecting their ownership to intellectual property rights. This objective by the incumbent industry, has by itself excluded integration of new complementary assets from becoming part of a revitalized alliance.

What seems to be the case is in fact, that what mistakenly could be understood as an alliance between the incumbents, is not an alliance of an
equilibrium kind (Williamson, 1991)\textsuperscript{23}, but rather a joint-venture type of cooperation, that consequently has not allowed for either an open modular system to provide innovative impetus to the industry, nor provided an organizational form, allowing the individual firms to establish alliance based complementary advantages.

For the incumbents to have leveraged on their existing alliance would not only have required a modular architecture at the firm level to be implemented top-down, but also a significant change to the governance model of the individual partners of the alliance, that could potentially have allowed for the integration of complementary assets from out-side the industry, while at the same time having introduced open innovation on the basis of a new organizational setting.

5.3.5 Hybridization.

What seems to be the problem for the incumbents in the music industry is a misalignment between the level of environmental disturbances, and the governance structure chosen to deal with those disturbances.

The concept of the “discriminating alignment hypothesis” holds that transactions are aligned with governance structures, which differ in their cost and competencies in a (transaction cost) discriminating way (Williamson, 1991). Governance structure must be selected from a number of considerations related to legal issues (ownership protection), adaptability to changing circumstances, organizational incentives and control (degree of central authority). While adaptation in the neo-classical sense (Hayek, 1945*) can be located to the market and the price mechanism, another autonomous adaptation can be directed from a position within a formal organization and firm based hierarchy (Barnard, 1938*).

What is of interest to us however is, that other types of disturbances shall not be governed from a position in the market, or a position from within the firm, but requires a more coordinated response.

\textsuperscript{23} Williamson refers in this sentence to “hybrids”, but for the sake of not introducing “hybrids” at this junction, we have maintained “alliances” as point of reference, which does not challenge Williamsons own definitions.
As a need for coordinated investments increases, and a need for uncontested and coordinated realignments increases in frequency and consequentiality, adaptation of a coordinated kind is the appropriate response (Williamson, 1991). But with such a response the attributes of the governance structure is affected. In our case what this means is, that due to an increased need for coordinated investments among the incumbents, and a need for coordinated alignments to an increasing frequency of disturbances in the market, the incumbent should have established a coordinated response in the form of a hybrid relationship, and such a response would have affected the governance structure of the industry in a way, that did not take place. And by not have taken place, has not allowed a real coordinated response to gain ground, with appropriate organizational adaptation being implemented as a response to the building of competitive pressures.

In discussing the appropriateness of establishing a hybrid governance structure, the central properties of governance in relation to ownership control and central authority (fiat) is of importance, and probably behind some of the reluctance behind the major labels not transforming their governance model. Property rights are established from the ownership to assets, which in turn establish the right to use, appropriate returns and the right to change such assets (Furubotn & Pejovich, 1974*). The owner collects the residual value of an asset, and in that capacity exercises the property right. Value of specialized knowledge and information may leak by being appropriated by rivals (Williamson, 1991), constituting a security hazard to the asset base by way of expropriation by commerce (rivals, suppliers and customers). This risk is amplified under weak appropriability regimes (Teece, 1986), and will increase the costs associated with hybrid contracting as opposed to firm level control.

With the music industry in control of one of the strongest appropriability regimes in the world, this should actually lend force to organizational processes towards hybridization. That this has not been the case is probably, because for a hybrid structure to serve any purpose, this will only carry results, if complementary assets are pooled in the alliance. It seems probable, that the need for asset pooling, integrating at the same time out-side
partners, has been seen as a threat to the firm ownership to property rights, and consequently a weakening of the incumbent appropriability regime ex-post.

Another issue is off-course that hybrid adaptations cannot be made unilaterally (as with market governance), or by central authority of the firm (fiat), but requires mutual consent. In this specific relation, it seems probable, that the major labels, not only has been reluctant to form hybrid structures across industry boundaries due to the risk towards the appropriability regime of the music industry becoming diluted, but that any hybrid structure based on mutual consent, has fall victim to bounded rationality of the top-managers in these organizations.

In this analysis of the attributes of hybrid structures, it seems that some guidance can be found from the lack of willingness to form new organizational structures and allow for changes to the governance model of the industry.

Hybridization as governance model, as opposed to market- or firm governance, falls in between the two other polar modes (Williamson, 1991). As firm assets becomes less rare, less valuable and mobilized a response to a certain level of frequency in market disturbances, may be for a firm to move towards market governance, by entering into alliances with other owners of complementary assets, to stop short of a full market based governance structure. By this consolidation, and as long as the frequency of market disturbances does not increase dramatically, it will be possible to reestablish value to assets that would otherwise commoditize on the firm level.

What however seems to be the case is, that albeit major record labels has been facing rapid depletion of their complementary assets, they have apparently stepped back from establishing hybrid structures with de alio new entrants, from a consideration to protect their ownership to all publishing rights concerned.

From this reality it seems fair to conclude, that nor leveraging on existing alliances, or the creation of a new hybrid structure integrating vital knowledge resources and complementary assets from outside the music industry, has
been possible due to the lack of willingness by the incumbents to transfer ownership to whole or part of their existing or future IPR assets. By this stance, the incumbents have avoided that such assets would become part of a shared market circumstance, which in their view also would result in a weakening of any control coordination, from a changed governance of the entire music industry.

5.3.6 Collaborative networks.

In order for the music industry to response effectively to the challenges we have described, a core understanding of the industry business model is important. This requires a full understanding of the respective incumbents and their position in the value network, combined with their dual capability for value creation and value capture (Chesborough, 2006). The business model is the appropriate framework for converting technological potential into economic value. Intellectual property (IP) assets can by being linked to the business model and the innovation process, be managed to create value, and not simply capture value. In the prevailing literature (Chesborough, 2006 and others), IP is traditionally seen in context of setting new standards, that by becoming visible and open, can establish an “intellectual commons” as a safe-harbor for development where knowledge is held in common (Chesborough, 2006), but with the result that it may enhance participating firm-sponsors own business models.

This way of thinking cannot be applied directly to the music industry, because the IP-assets of the industry does not establish a dominant design there can be developed against, and as a common platform allow for the integration of distributed innovation to enhance the intellectual commons.

However, it seems central to our discussion and analysis, that it is the IP-assets against which the existing business model is based, that has become part of the problem towards establishing a long-term sustainable business model in the music industry.
The way of thinking in the open-innovation communities, could in fact have lead the incumbents out of their unsustainable business model and path dependency.

In many ways the incumbents – probably not realizing it themselves – are in the exit stage of the IP-cycle model (Chesborough, 2006), where the legal protection of their IP is extending well beyond its value in the first place. IP-assets protection, and appropriation against such assets in the music business, is only made possible from a position within a strong legal framework protecting accumulated IP-assets (for up to 50-80 years), and by choices made, those assets are kept insulated from other developments in the environment, and excluded from supporting or being part of, higher value and more sustainable business models being developed elsewhere, notably outside the music industry’s own boundaries.

There is no inherent value in technology per se, but its value may be determined by the business model used to bring it to the market. When a company lacks an appropriate business model at the outset, IP-protection is secondary to the strategic mission of finding the business model that can commercialize the technology (Chesborough, 2006). In our case this is paralleled by incumbents in the music business holding back on their IP-assets, and in doing so, diluting and delaying other formative events driven by new technology and changed market perceptions, and as a result – or collateral damage - that sub-optimization in one industry has cascaded costs and losses into other – and more progressive - industries.

The incumbents have become a negative externality to progress.

The incumbent music industry has developed into a de-facto monopoly. By its centralized setting on standards and pricing everyone else producing and supplying musical content, has been made subject to the same conditions with respect to appropriating revenues. Record labels sole way of differentiation has been though their ability to innovate by means of product originals, and – probably – luck.

From such traditions the industry is excused to fall victim to an understanding of the ability of supply to drive demand. But in fact, product
originals if made available on other terms could form part of a two-sided market.

In a market characterized by different customer groups (in the music business you have private consumers, syndication of music, licensing, B2B delivery and integration of audio on various technological platforms), a multisided platform can be developed. For a multisided platform to serve any purpose, it must produce a benefit from connecting or coordinating distinct user-groups (users replacing the concept of customers), and at the same time make the user-groups better of (Evans et.al, 2006). By using a platform to integrate customers in the innovative process, firm-level innovation is advanced to integrate lead-user enabled distributed innovation (v.Hippel, 2006), and by the use of a firm-sponsored platform as an on-line interestment object (Akrick, 2002), the boundaries becomes blurred between product development on the one side, and marketization on the other (Callon, 2002).

Multisided platforms of this nature serve as matchmakers, they build audiences and they reduce costs by introducing shared facilities (Evans et.al, 2006). By subsidization or substantial investments, one side of a platform becomes sponsored in order to establish “marquee buyers” (Rochet & Tirole, 2003*), who are considered valuable to customers on the other side of the platform. The platform provider consequently becomes mediator of transaction exchanges between two sides of a multisided platform.

Platform provision can be undertaken by a single firm or can be shared between groups of firms, which allow the market to mediate around a defined standard controlled by these firms. The allocation of technology and “gate keeping” to the platform can be sponsored by other firms. If provision and sponsoring is undertaken and controlled by a single firm, the platform becomes proprietary. If many firms are engaged in the mediation of the platform from a position of joint technology, the platform becomes shared (Eisenmann, 2008). In a mature networked market circumstance, the mediation will commonly be served by a single platform. If such a platform is proprietary it constitutes a monopoly, but if the platform is shared, it simply constitutes the fact that all users in a market are essentially relying on one locus of mediation (Eisenmann, 2008).
From what is known in the market, one way to capture value across shared platforms, is to limit the size of the provider peer group to eliminate rivalry, and to allow the platform providers to earn (a competitive) licensee fee from their intellectual property rights, which in turn requires a governance structure that balance cooperation and competition (Eisenmann, 2008).

One of the solutions mitigated by platforms is, that instead of making complements (extensions) internally (integration), or acquire it from a third party (contracting), platform providers induce a third party to supply the complement directly to another third party in need of it, and generates a revenue from mediating the transaction, matching the complementary qualities, in a hybrid way of governing the market.

5.3.7 Part Conclusion RQ 1: How can collaborative networks influence the sustainability of core capabilities on the firm level?

Describing theory behind two-sided market structures, networked mediating platforms and the transaction cost perspective of such approaches, has send us in the right direction.

Early on in this paper some space was assigned to describe the nature of music, and how it can be assimilated to software exchanges elsewhere in the market. Space was also assigned to describe the nature of the creative production of product originals, and the distributed and open modular architecture of that particular part of the music industry. Bearing those details in mind, the distance suddenly becomes short in wondering, why the incumbents of the music industry have not embraced new technology and the potential for extended market reach, and instead of a fully vertical integrated ecosystem under firm control, has moved towards a vertically disintegrated hybrid position of sharing a mediating platform, allowing transactions of music files to be exchanged directly between the two sides of the network: the creative producers (the subsidy side) and the users of music (the money side). This in a process allowing for pro-active integration of platform sponsors
outside the music industry (de alio entrants), and not least: their complementary assets.

The answer unfortunately becomes the same as the answer to the lack of hybridization:

Even though we introduce the final component in any appropriability objective – the revenue producing end-users - by the possibility of migrating the industry level alliances to a shared platform within the networked information economy, this apparently does not represent an attraction strong enough for the record label executives to loosen up the control hierarchy, or accepting dilution to existing and future ownership to assets created in their industry.

The music industry has been stuck in its governance model.

6.0 Cases & Analysis.


6.1.1. Introduction.

In the previous two sections of our analysis, we have been covering the firm-market relationship and found possible explanations to the erosion of the music industry wide business model, and the reasons behind commoditization of core attributes of previously competitive advantages.

We have also seen how the weakening of the value capture across the industry has resulted in collateral damage affecting the creative productive environment itself by forcing end-products out of the price system.

We have analyzed to which extent some collaborative circumstance could have pre-empted the emergence of rival design platforms and diluted the effects from new technology, by incumbents setting up project-networks (instant defensive response options), joint-venture type of alliances or even hybrid relationships integrating new complementary assets from de alio
entrants into new alliances, and with a substantial change to the governance model of the incumbent industry.

Despite of the analysis performed, it seems that we must turn elsewhere to identify possible contributions to a possible solution to the challenges this particular industry has been facing for the last decade, and which may provide direction for future responses under similar circumstances.

In the case descriptions related to our analysis in Part 1 and 2 we focused on the incumbent industry, its responses and challenges from de alio entrants. Although new platforms (Amazon Music) and new technology (iTunes) has represented serious challenges to the incumbents, most of them has been dealt with on the basis of a contractual relationship (Coase-Theorem), and within the institutional framework of a market economy and its enforcement mechanisms. Hostage taking, gaming, barricading and all tricks of the trade have been used, but by the end of the day Apple Inc. does comply with conditions agreed with Sony Corp.

Our previous sections has consequently only dealt with the consequences of what have happened, and what could have been done - from an incumbent industry perspective - to integrate new developments, as opposed to stone walling it.

But the “fight of the titans” has left the battlefield wide open for new entrants. What they are doing, and how that is affecting de alio entrants waiting in the wings, may potentially spell big trouble, not only for the battled incumbent music industry, but also for some of the newly integrated solution providers, that themselves may fall victim to the “innovators dilemma”.

When we look towards novel solutions outside the music industry, we are forced out in the wilderness of the internet.

We will be in pursuit of any indication of the creative producers of music content, cutting the existing value chain of the music industry short, by producing, distributing and capture value themselves, indicating that any future use of system integrators (i.e. the major labels) may become
redundant, and that such a development simultaneously will make a number of other assets of the music industry redundant as well.

6.2 Case example: Innovation Processes in Sound Recording.

6.2.1 Incumbent innovation processes.

To allow us to decompose our search for new entrants, it serves a purpose to first describe the innovation process of record labels, to fully understand the stages in a chain-linked type of innovation process, by applying the different tasks within the framework of a classical innovation process (Rosenberg & Landau, 1986):

If we apply chain linked innovation to a traditional record company, the “beta-phase” (Rosenberg & Landau, 1986) is the point at which a label is soliciting for demo bands while the “final product phase and testing” is where record companies apply A&R(i.e. Artist & Repertoire) capabilities and production support.

Where “de-bugging and design changes” in the industrial world may be directed though lead user product placements, focus group talks or market experimentation, the record companies in this phase of the innovation process, will “cut” a hit-single from a coming album release, and have it
circulated to collect market feed-back, frequently achieved though the radio promoters within the organization.

Feed backs are used to change, adapt or re-prioritize the album and “final product launch” (Rosenberg & Landau, 1986) is made by the use of the industry sponsored and controlled distribution platform.

All these processes - from demo-band to release - are managed on the basis of general organizational know-how, just as in the case of industrial type product innovation.

Where the innovative input in an industrial model is originated from research, science or guided emperism, the record companies will define new music-designs though the top-layer knowledge platform within the company, or though the open system architecture of the creative production side of the major record labels.

A major difference is however, that new innovation is subjectively defined in the world of creative industries, while innovation in the industrial world, more often is defined though objective criteria and science, but the processes and feed-back loops, are essentially the same. In the sound recording industry, the subjective interpretation for new product designs will seek guidance from final market feed-back, and relay the interpretation to the organization, though proposals for new directions and the selection of future demo bands.

All the above processes and routines are handled by a hierarchical organization, and all routines and choices are made within the boundaries of a traditional organization. Abilities may be delegated though-out a diversified organization, but selective intervention from the knowledge platform will always be present.

Because of the human intervention the process of the incumbent sound recording industry is slow, biased, costly and geared to a creative workshop, more than an industrialized music production entity.

6.2.2. Distributed innovation by new entrants.

If we turn towards recent developments on the internet a different traction is gaining force.
This paper will not venture into a comprehensive description and analysis of all the various services being offered on the internet, but will only present a few short introductions, in order to allow us to establish a description of how a changed approach to innovation out-side the boundaries of the incumbent music industry (and affiliated partners), may introduce potential changes to “the rules of the game”.

**Jamendo.com.**

In less than 3 years (since Dec 2007) Jamendo has amassed 804,590 music users, of which 35,867 has up-loaded full album releases for free distribution under a “creative commons”24 license.

Bands are up-loading music, and any third party can license the music for synchronization with video, web-streaming and other audio-streaming purposes.

Anyone is free to down-load an album, under the terms of the license.

The platform is an *extensive library* of un-published and un-validated new music content.

**TrackTesting.com**

During the last 4 years (since January 2007) TrackTesting has introduced a validation engine, where in excess of 54,000 bands from 130 countries have signed up for A&R-type feed-back. By the use of a global community of music interested individuals, all music is tested, rated and filtered, leaving a rated music library in excess of 6,000+ music tracks.

Music is for a limited amount of time made available as license free content, where it can be used in public areas without any copyright payments to any collection agency in the world. Incomes from that distribution are split between the company and the bands. After availability on the license free platform, the tracks are moved for publication and down-loads.

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24 The characteristic of commons, as opposed to property, is that no single person (physical or legal) has exclusive control over the use and disposition of any particular resource in the commons (Benkler, 2006).
The platform is a validation and rating platform, and bands are re-directing their tracks for other distribution channels when published.  

**iSound.com**

iSound.com has over the last 4 years (since 2006), introduced a comprehensive service platform, from which un-signed bands can market and distribute their music.

The service platform is linked to a number of on-line distribution platforms, but also provides storage for data, ringtone distribution options, mp3 deep-linking/audio hosting from any position on the internet and portable mp3 solutions for bands FaceBook, MySpace and other social profile pages.

The service is including accountability options, settlement gateways and marketing tools for various internet platforms and web-sites.

The platform is a service management platform for un-signed bands.

**Google Music**

Google Music is in 2010 introducing cloud based computing for music distribution.

By this move, the application based iTunes is challenged by a new comprehensive global distribution platform, where any user anywhere in the world can access music from whatever devise, platform or linkage of own choice.

The solution replaces the existing on-line distribution standard used by iTunes, Amazon Music and Rhapsody which are all forcing users to down-load applications and store music on their client computer, by a Google solution based on seamless access to music stored on a centralized computer, and accessible on demand.

The Google Music move, will allow music to be distributed without being published. By storing the music centrally all delivery is streamed, and publication is not constituted by down-loading.

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25 As a matter of record, the author of this paper is the founder- and 87% owner - of the referred web-site.
By this choice Google Music will become independent of any collection agency, as long as music distributed has not previously been published. By this structure not only the principal applications of the incumbent on-line distributors becomes redundant, but also the incumbent record labels copyright regime is derailed.

The platform is a distribution, storage and transaction platform that (probably) allows for direct distribution of music between the copyright owner and the user at whatever commercial terms agreed between the parties.26

6.2.3 Applying the chain-innovation framework to distributed innovation.

From the presentation of the four different web-based initiatives (selected between many more), we can integrate the capabilities of these platforms into the same chain-linked innovation process, as we used to describe the innovation process of the incumbent sound recording industry:

While the underlying innovation process in record companies are managed and directed from the know-how base within an organization, the networked solutions represented by Jamendo, TrackTesting, iSound and Google, is distributing the various stages of the innovation process in various degrees though a platform mediated community.

As we saw under 6.2.1 the record companies are selecting demo-bands though an internal stage-gate type of process, while the networked solutions instead allows artist & bands to up-load their tracks directly on all platforms, for a community based review.

Where the record company is performing A&R and post-production control by human intervention, the networked solutions validate the tracks by intervention of a distributed community of end-users.

Where record companies cut’s singles and advances a new hit-single to the playlists committees of radio stations, the network solutions embeds the validated tracks in widely distributed objects, in the form of hit-lists, playlists,

26 At the time of dead-line for this paper, Google had not provided final guidance to strategy. The description is consequently based on various third party comments and indications from the company. There may be substantial changes to the final strategy, when the service is launched in the autumn of 2010.
libraries of different sorts, and other direct access options to single tracks and compiled versions.

Where record companies launch a selected album though the conventional distribution channels, the networked solutions makes the single tracks available to other networks, or instantly diffuses the music across a number of direct customer distribution- and promotion channels, or as bundling options.

In is not the purpose of this paper to go into an analysis of the innovation processes as such, and the above description only serves to provide a presentation of, how distributed communities of various sorts, are providing services and solutions that parallel and match the existing capabilities of the music industry.

What is however within the range of this paper is to engage in an analysis of which attributes can be associated to networked solutions, and how firm based value capture across the value chain, potentially can be withhold under such changed conditions.

**How to capture value in non-markets?**

**6.3.1 Introduction.**

By way of distributed innovation within collaborative networks, new technology has been developed and exchanged, effectively establishing an open platform for the exchange and distribution of music files, and platforms where there is no claim to proprietary ownership to the IPR (i.e. music content) transacted on the platforms.

This has introduced market substitutability options to the distribution and transaction platform of the incumbent music industry. Substitutability normally takes two forms, either as “similar resource replacement” or “different resource comparability” (Barney, 1991). What we are witnessing in relation to platform sponsored solutions by the new entrants, is the application of different resources (means) towards the same ends. Technologically not only substituting existing appropriation platforms of the incumbent industry, but with additional innovative features that can be considered disruptive to the entire business model of the music industry, and introducing a shift in degree of technology integration.

In this analysis of what has taken place in the market, we must turn towards end-user behavior and systemic changes that have a reach far beyond transaction cost efficiency and the intra-firm strategic management of valuable resources.

As we already know from the transaction cost theory, ownership integration within firm boundaries allows the firm to capture the residual value and collect the quasi rents on its assets.

A position of a strong appropriability regime, as institutionalized in the music industry, “allows firms the choice of a closed or open business model” (Pisano & Teece, 2007). Open IP enabled business models have been introduced with
reference to a number of cases, such as Qualcomm, UTEK, Intellectual Ventures and others (Chesborough, 2006). Notable absentees from this empirical study are the entertainment industry.

Not only did the music business industry allow commoditization to dilute the value of their complementary assets, but incumbent firm resource heterogeneity and immobility has become compromised by substitutability options to the industry promoted distribution platform, with irreversible damage to the sustainable competitive position of incumbents as a result.

Another thing that has happened, and will equally become the focus of this section of the paper is, that creative products produced from an uncompromised base of highly specific resources of substantial value, has been pulled from the safe position of an alliance controlled transfer platform, not to an open market distribution platform, but to a free exchange setting, where the products of the music business industry to an increasing degree is becoming part of a common pool.

Uncontrolled substitutability to the incumbent’s distribution platform, and migration of private product features to that of a public good, has combined established a non-market circumstance.

We have already under Section 2 of our analysis of incumbent response options, covered the various possibilities related to an engagement in platform provisioning and/or sponsoring, and how two-sided markets can be promoted, and how firm-based continued ownership integration or ownership control can be whole or partly maintained.

Many of the new entrant based offerings are also under firm based ownership and governance (i.e. TrackTesting, iSound and Google from the examples chosen), but a common feature seems that none of the more successful web-based solution offerings, are 1): integrating or controlling property rights to the high value IPR, 2): none of them exercises any form of fiat towards their primary source of revenue generating musical content, 3): none of them have definite influence on any form of long-term incentives towards the bands in question, and 4): the legal framework is loose, with little
or no contractual obligations besides usual terms & conditions (primarily legalizing the relationship and establishing custom responsibility limitations).

With such a set of principal governance features, the immediate impression becomes that of a market guided governance model (Williamson, 1991). But as we will understand from our following analysis related to features associated with open source development communities and non-market circumstances, we may probably have to accept, than in light of the price mechanism being suspended, or subject to a case-by-case assets utilization or asset transfers on ad hoc negotiated (if any) conditions, it may not even be appropriate to use the classical notion of markets as reference point.

6.3.2 Open Source & Non-Market.

We have already used a good deal of space in describing how specific assets become substitutable, how assets forming a central part of the dominant design across an industry can commoditize and how creative commons may replace property rights. We have also described the firm-level coordinated sharing proposal on one side, and the two-sided contribution network structure as an alternative option.

To move on we must decent on human nature, and how that is affecting network structures and appropriability regimes, in light of the digitalization over the last 10-15 years, and how this is impacting the strategic options of firms operating within the networked information economy.

Innovation has to an increasing degree been bought into context of innovation communities (v.Hippel, 2006). In various research, lead-user generated innovation has been used as example of user-innovation as a pre-stage to user-manufacturing, and the well know cases of windsurfing, skateboarding and snowboarding (Franke & Shah, 2003) has been widely quoted. Other literature has focused on firm-sponsored user innovation related to the design of smokestacks (Allen, 1983*) as one of the pioneering studies, but later with a number of cases in relation to large corporations involving themselves in the open-source communities.
Without going into further analysis and discussion of these theories, we will focus on the component important for our paper, which is the nature of free-revealing.

Free-revealing is closely connected with non-rivalry and the establishment of intellectual commons. In the absence of rivalry collective innovation becomes free and promoted by open revealing of knowledge, within loosely bounded collectives, as opposed to firms or other formal organization (Levine, 2004). What drives free-revealing, without any immediate extrinsic rewards, is attributed to the reaping of reputational effects, better professional placing (Lerner & Tiorle, 2002*), and the human nature of the “rational fool” (Sen, 1977*).

Most collectives operate on the basis of the division of labor, detailed information exchange, uncompensated support between un-related parties and a high degree of coordination. If community based undertakings should only be explained by individuals in search of own reputation and learning, it remains unexplained, how organization becomes part of any collective action (Levine, 2004).

Besides the emergence of free-revealing as a principal driver behind user community based innovation, the absence of “free-rider” problems is notable. By innovation communities contributing to the creation of non-rival products (and services) – and consequently increments to a pool of commons – conventional wisdom would expect “the tragedy of the commons” (Hardin, 1968*), by the lack of incentive structures leading to defection and the collapse of the system. Free-revealing from one side, and the risk of free-riding from another side, constitutes a well know consideration for firms internalizing the resource endowment on the basis of general risk considerations.

In an open community the risk-scenario more takes the character of that of a “prisoner’s dilemma”, where all will do well working together, but defectors will be better of hijacking the common pool, and transform it into a proprietary advantage. However research shows, that at least some individuals are cooperative (O’Mahoney, 2002) despite the risk of defection by others (Fehr &
Value Capture in Non-Markets

Fishbacher, 2003*), and are willing to suffer the cost, in order to punish those behaving unfairly. Apparently it is not the non-rivalry nature of goods and services produced that creates reaction to defection, but the conception of violated fairness (Fehr & Gächter, 2002*).

We are moving from the past of resource based contingency planning by the firm, to the future of social punishment by your peers.

Collectives operating in concert accomplish innovation goals, by real products being created, services becoming offered and economic rents appropriated or lost (Levine, 2004). To get to that point, besides the qualities of collective action mentioned above, the open-source framework must be based on a generalized exchange, and an institutional mechanism must provide for coordination and governance (Levine, 2004).

Market based exchange is direct between two actors that give and receive from each other, either identical or different goods, either immediately or sequentially (Lévy-Strauss, 1969*). Non-market exchange in this context is seen as individuals that attain their personal or group goals by engaging in direct exchange with others (Homans, 1958*; Blau, 1964*).

Community based non-market exchange is generalized, by not requiring immediate reciprocity or creating any obligation towards a specific benefactor (Ekeh, 1974*). The incentives behind free-revealing in generalized exchange, does not carry any of the implicit rewards that is affiliated with free-revealing in other organizational settings. To explain individual preparedness for free-revealing and generalized exchange, a number of reasons have been attributed to that effect, from altruism (Sahlins, 1972*), social norms (Ekeh, 1974*), individual notion of fairness (Takahashi, 2000*) and rational choice (Granovetter, 2002*), to mention a few.

Besides the generalized exchange, the informal setting of these free-revealing communities must be coordinated and governed from some form of institutional framework (O’Mahoney, 2002; Franke & Shah, 2003). The settings are all consolidated within some sort of legal entity, albeit often in non-for-profit social enterprise structures, and they all work from a designated
virtual meeting point (Franke & Shah, 2003). There is a centralized collection of knowledge, and a designated forum that “meets” and produce.

With our combined knowledge of the qualities of two-sided-platforms combined with the qualities of open-source communities as described above, we approach the concept of co-creating network structures (Dutton, 2009).

First it may serve a purpose to pause and lend some reflection to the role of “the manufacturer”. Per se the record labels in this paper.

Manufacturing is the role of making and the transferring of goods (Baldwin et.al, 2006). The manufacturer makes multiple copies of the design (production) and they transfer new designs to users who don’t want – or are capable of – designing themselves. Conceptually the two roles can be separated, especially in the case of information products (music). Once the information product has been digitalized it doesn’t require physical or other intervention to be “manufactured”.

In this case the traditional manufacturer must concentrate on the role of “design transfer” and emerge with the functions to sort, collate, evaluate and transfer designs between users (Baldwin et.al, 2006).

The manufacturer transforms under such circumstances to a platform based mediation role. However, leaving room for a firm based manufacturing in the networked information economy, only makes economies of scale if high-capital investments can lead to lower pr. unit costs, creating a competitive space that allows firm-based manufacturing, to take over from user-manufactures, that prevails from a base of low investments and (generally) higher pr. unit costs (Baldwin et.al, 2006).

What makes open-communities particular disruptive in the information products industry is, that neither the initial setting up of production, nor the following production and distribution, represents capital investments of any significant scale.

What bring us from the industrial information economy, to the networked information economy, is not only the commons based institutional framework of the free-revealing communities, but also the scope and existence of a core
common infrastructure that includes the basic resources necessary to produce and exchange (transact) information, at little or no cost to the individual (Benkler, 2006).

The core functionalities of processing, storage and communications are widely owned throughout the population of users. It is the technical conditions of communication and information processing that has enabled the emergence of these new social and economic practices to unfold. These circumstances allow for the radically decentralized, collaborative and nonproprietary characteristics of “commons based peer productions” (Benkler, 2006).

“Peer production” (not to be confused with peer-to-peer file sharing), is the central cornerstone in these social open networks. All commons-based production locates its production modality outside the proprietary system, in a framework of social relations. The term “peer production” must be understood in context of individual action that is self-selected and decentralized, rather than hierarchically assigned (Benkler, 2006). These attributes of commons based peer production results in collective action practices that do not rely, either on the price system (the market) or a managerial structure for coordination (the firm).

What we are experiencing by many of the new web-enabled service offerings, is not a production system that is exchanging information and producing outcomes to be transacted in the market or between firms, and it is not a hybrid structure as we have previously discussed.

The social communities transact on the other side of the market under non-market circumstances: Non-market circumstances not only being formed from public goods being transferred in a non-market like fashion (as we discussed previously in this paper), but exchanged on the basis of being privately produced and in absence of any ownership to property rights for the benefit of the benefactor or the platform, from which the production is governed.

By this structure the IPR becomes embedded in the co-created product (Dutton, 2009), where the product in this context to be understood as a validated, tested, distributable, transactable and manageable music file.
Establishing another type of collaborative network around the (more simple) sharing of information instead, only makes sense in context of firm-based integrated innovation, where the IPR becomes appropriated by the firm, and subsequently sold or integrated as a proprietary extension to existing products offerings of that firm (Dutton, 2009).

By a firm establishing a sponsored platform with other sponsors and providers (Eisenmann, 2008), the one-to-many characteristic of the shared collaborative network become replaced with a many-to-many architecture, but the nature of outcome, will only be of a contributing kind, and the locus of IPR is shifted to the platform itself (Dutton, 2009).

6.3.3 Capturing value from non-market circumstances.

As we have seen, platforms may be under proprietary control of a firm, or an alliance of firms, and can be owned and operated from a position of a hybrid relationship between partners pooling complementary assets, and may represent a plausible response option for firms that desires to establish sustainable network ecologies on the boundaries of the firm governance model.

What however seems to direct resent developments is not firm based sharing networks or contributing platform options, owned by firms or sponsored by firms or alliances of firms.

It is co-created collaborative networks, where the many distributes to the one, and where the IPR has become embedded in a freely distributed product or service, by way of a nonproprietary social model, rather than a proprietary market model, that is represented by the successful web-based network ecologies.

From such recognition, it seems that our analysis has bought us to a point, where we are forced into a consideration of social domains versus business models, and that we must answer the question towards value capture under non-market circumstances, by considering possible synergistic relationships between user communities (being social) and enterprises (being commercial).
Such a pursuit only seems feasible if some of the characteristics of the social domain can be successfully integrated into a hybrid form of business model.

Accepting that the strategic prerogative behind success traditionally is based on ownership to – or control of – assets, does raise questions towards how value creation and value capture is balanced, if innovation takes place in open communities.

Openness is defined from the pooling of knowledge for innovative purposes where the contributors have access to the inputs of others (non-rivalry), and no-one can execute exclusive rights (non-exclusivity), and manifest itself in relation to open innovation and/or open coordination (Chesbrough & Appleyard, 2007).

Various web-based initiatives challenging the conventional business models of corporations can be grouped along the degree of being in-house or community sponsored (value creation) or subject to being appropriated by a firm or a wider ecosystem (value capture) (Chesbrough & Appleyard, 2007).

Analyzing the various advances from Microsoft and Google in the one end (firm ownership and in-house development), to Linux and Wikipedia in the other end (community sponsored development with value capture across a wider ecosystem), allows for the identification of a number of “open business models”. These can be condensed down to basics characteristics representing deployment capabilities (added services), hybridization (proprietary extensions), complements and self service models (Perr et.al, 2006*; Chesbrough & Appleyard, 2007). Whichever model is pursued in order to capture value from open innovation, one of them must be deployed if companies will profit from their innovation activities in sustainable open initiatives (Chesbrough & Appleyard, 2007).

Integrating the social domain with (for profit) business models, simply by advocating a number of applications that somehow will align whole or part of the results of open innovation into a proprietary business model of a private enterprise, seems an appropriate suggestion by 2006 or 2007, but it seems an unlikely final strategy on the basis of more recent developments.
This brings us back to Stiglitz and Benkler from the introduction to this paper, and their proclamations that not only must a collective action model form part of any sustainable paradigm (Stiglitz, 2010), but it will most likely be based on a “new emerging modality of human action” (Benkler, 2006). Such challenges are rarely solved by quick-fixes, work-around or short-cuts.

7.0 Part Conclusion RQ 3 & Final Conclusion:
Which factors influence value capture in on-markets?

From a study of recent events in relation to the global music business industry, it appears that traditional firm level responses and industry wide preparation to meet disruptive new technologies will seriously be impeded from the effects of open-source- and commons-based peer production.

On the firm-level, asset specificity - and consequently sustainable competitive resources, may become redundant at increasing speed, as the value of complementary assets becomes challenged by market originated distributed design platforms.

Industry wide alliance structures may become victims of the bounded rationality of management in the firms partnering in such alliances, and their reliance of past governance structures may constitute a serious risk of such alliances not being opened up, in order to integrate new knowledge and new technology.

Existing alliances seems to develop only as incrementalized adjustments to existing structures and governance, and hybridization consequently does not provide a new platform between the poles of open market transactions and firm managed transfers.

As firms only with difficulty can integrate new knowledge and technology with the speed required, and within alliances that operates with notable degenerative traits, firm specific and coordinated responses, apparently does not allow for an efficient offensive strategy based upon vertical disintegration. It seems probable, that vertical disintegration rather is a forced circumstance, than a planned process. Empirical studies indicate that incumbents are unlikely
to submit to any dilution of ownership to assets or shared decision power on a voluntary basis.

What in particular seems to represent a serious challenge in the information services industry is, that the ability to produce, store and distribute information, can be manufactured by just about everybody, and that everyone has access to a low-cost global infrastructure, diluting the competences and resources of firm based interventions.

A production among peers, on a mutual and openly accessible production platform, is allowing for a transformation of the industrial network economy towards a networked information economy. An economy where the marginal costs of production falls with increasing volume, and where entry barriers are eliminated rapidly.

With production costs narrowing zero, the price mechanism becomes invalidated, and goods produced becomes non-rival and non-exclusive. Privately produced public goods, are opening up for a new governance model defined from a position of a non-market circumstance. The networked information economy is vacating the spaces of resource specificity, considerations towards firm-specific dynamic capabilities, and transaction cost considerations. Resources are not perfectly inimitable, dynamic capabilities are becoming constituted by distributed knowledge creation, and transaction costs are eliminated, because there are no (measurable) transaction costs.

In a commoditizing market, ruled by non-market governance, ownership to assets becomes distributed as well. The wealth creation model of enterprises is becoming challenged by knowledge resources that are mobile, interconnected and operating from a base of shared ownership. Shared ownership to assets, and distributed ownership to the use of such assets, will result in the residual rent becoming embedded in the structures themselves, by no pre-defined condition for the appropriation of economic rent.

With innovation moving to distributed structures, with fast and seamless access to resources of knowledge, new products and services are spun off in a
scale, which makes it hard to compete against from a basis within a traditional firm level hierarchy, irrespective of governance being firm-based or hybrid. Proprietary structures in search of new innovation will as a result be forced to integrate themselves with open-communities, and subject themselves to new appropriability regimes.

In the past, enterprises were looking to integrate innovation.
In the future, innovation will be looking to integrate firms.

8.0 Suggestions for further research.

To identify possible strategies to capture value under non-market circumstances, and to introduce a viable solution to the integration of the social domain into business models, this can be approached from our analysis of recent events confronting the music industry.

To carry forward evidence for such a strategy however, will only be possible after further empirical studies and expanded research. This paper has only bought us in the right direction, but not to the final destination.

We can consequently outline a number of tentative working hypotheses, which in our judgment can form the basis for further research and final consideration:

8.1 HYPOTHESIS

The nature of distributed innovation in open communities is creating impetus to innovative processes.

Networked collaborators will participate on the basis of incentric rewards, instead of eccentric based compensation.

Although open innovation communities being based on joint ownership to a common pool of goods and services produced, this will not exclude any collaborative network from engaging in various types of enterprise models.
To align a for-profit enterprise with an open community, there seems reason to expect, that the mission focus of the enterprise will have to become aligned with that of the community, rather than the other way around.

It may be easier to integrate enterprise partners into a community, than to integrate a community into an enterprise.

Kang and Wood (1995) challenged the wealth-creation model (Caroll, 1979*), which assumes that a corporate social dimension is subject to the for-profits mission of the enterprise. They suggested an inverted version of the Caroll-Pyramid, where the departure point of the enterprise becomes the moral foundation from which social responsibility and economic responsibility is derived.

By this suggestion, they moved the moral and social dimension of the enterprise to the very basics of the corporate mission focus, and integrated the social dimension into the core framework of the business model, as opposed to a wealth creating corporate vehicle.

By including theory related to the corporate social dimension, we establish a possible goal-post for a true definition of social behavior, and responsibility within a corporate context. Not based on rivalry and competitive context, but based on a true moral obligation as the founding cornerstones of the enterprise.

If we assume, that the community based complementors themselves, are not supporting, advancing or promoting concepts that forms part of a traditional firm-based wealth creation model, it makes it intermittently difficult for existing corporate structures to mobilize external community resources, unless their mission statements are aligned with those of the open communities.

It also makes it unlikely, that for-profit enterprises can integrate into open communities, unless they align their enterprise model, governance structure and allow for ownership disintegration.

Conventional enterprise models are indeed possible, and probably also feasible, but in relation to the effective use of community based innovation
platforms, and the full exploration of the options it entails in relation to gaining access to a sustainable innovation trajectory, access to voluntary work and community wide contributions, it seems probable that only enterprises that becomes part of the community will succeed in making the community part of the enterprise.

To integrate the social domain in for-profit business models, and to establish a possible synergistic framework for cooperation between enterprise (private) and community (public), we consequently hypothesis that:

H1: By knowledge resources being widely distributed, and by technology and infrastructure allowing for fast and cost-efficient integration, we expect to find evidence for sustainable innovation platforms being originated and maintained, out-side firm boundaries.

H2: From a need to integrate towards open innovation, enterprise mission statements and objectives will be increasingly aligned with social values imported from various stakeholder groups.

H3: Integrating the social domain will introduce a new dimension to the model around which the business is directed, and will result in dynamic non-market hybrid relationships between public and private.

H4: Open communities that fails to allow integration into firm-based hybrid business models, will not be sustainable themselves, and will either be competed away or migrate into independent enterprise models of their own.

While the impetus for the hypothesis can be extracted from our previous analysis, it is out-side the limitations of this paper to introduce and motivate each of the specific elements included in the hypothesis.

Copenhagen 18th August 2010.
9.0 Bibliography

References in this paper are made in Harvard style. If more than two authors to articles, reference is only made to the first contributing author et.al. References in this paper may be to (secondary) sources that do not form part of any direct research, but are referred to in order to establish appropriate credits to original contributors to concepts and theory. Such references are marked with (*) in the reference box. Below list only include books and articles, that has been material for this paper, and the reference list does consequently not include a full listing of all articles and literature referred to in the paper. The list also includes certain sources that has formed part of the general research, but have not been referred to in the paper.

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