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***Title:***

**“Strategies and business models of online platforms in CCIs: convergence or  
differentiation in the e-book sector?”**

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## **Theme: a. The Entrepreneurial Spirit**

**Keywords:** creative industries; book publishing industry; platforms; business models; ecosystems; e-book

### **Abstract:**

The economics and competition of cultural and creative industries (CCIs) have been heavily transformed, in the digital age, thanks to the key role of new business models and the organization of new value chains and ecosystems around platforms structuring. These platforms organize the aggregation of content on the supply side and the matching with consumers' interest and taste on the demand side: they modify the traditional intermediation processes and distribution channels. They influence, therefore, the entrepreneurial specificities that might focus on market design rather than on creation process. While this phenomenon has been mostly exemplified in the music industry through the Apple's iTunes App Store, the same dynamic and market design are at stake in all the cultural sectors. The aim of this paper is to investigate the specific role and positioning of these platforms in the French book publishing industry. The results of a factor and cluster analyses on 66 e-book platforms are described and discussed.

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## **Introduction**

The economics of cultural and creative industries (CCIs) has been heavily transformed, in the digital age, by new business models and the organization of new value chains and ecosystems around platforms structuring (Unesco-UNDP, 2013; Abecassis-Moedas, Benghozi 2012; Green Paper, 2010; Benghozi, Paris, 2007). These platforms organize the aggregation of content on the supply side and the matching with consumers' interest and taste on the demand side. They support innovative development, competing and entrepreneurial strategies, and, consequently, modify the traditional intermediation processes and distribution channels. While this phenomenon has been mostly exemplified in the music industry through the Apple's iTunes App Store, the same dynamic and market design are at stake in the cultural sectors and especially in the publishing industry.

This sector is particularly interesting to capture from the urbanization and knowledge-based perspective. Actually, its traditional distribution structure (local booksellers/retailers v. large urban specialized bookstores) is closely linked to the spatial organization of social activities. In contrast, the industry moves from actors engaged in buying and selling books to more complex forms of knowledge-based intermediation where electronic platforms substitute the booksellers as the key drivers. The present chapter investigates the particular case of France. It aims at the identification of business models adopted in e-book platforms for characterizing the strategic assets mobilized by entrepreneurs and economic actors. This investigation is based on 66 platforms, using a factor and a cluster analyses in order to ascertain the competitive resources at stake and the variety of existing economic strategies.

### **1. Theoretical framework: the e-book and the vision of emerging platforms in the scientific literature**

The e-book is a very good illustration of the new economic frameworks at stake in the CCIs. In recent years the traditional book publishing industry has been troubled by unanticipated changes (Greco, 2011; Lebert, 2009; Patino, 2008). The first revolution was brought by a newcomer - Amazon - with the on-line distribution system of traditional paper books. But a second one quickly followed and the e-book, appeared on the market in the 2000s, upset all the phases of the traditional book value chain (Benghozi, Salvador, 2013). New actors emerge: among them, platforms conceived for (e)-books selling and/or consultation is one of the most impressive novelties. These platforms enable to sell only (or also) digital books without (or at the same time of) a physical bookstore.

Such new intermediaries are not specific to publishing industries or CCIs: actually, scientific literature recently focused on industry platforms (Gawer, 2011; Cusumano, 2011; Baldwin and Woodard, 2009). Authors (cf. Gawer and Cusumano, 2013) usually distinguish between internal platforms (providing technological support to innovation versioning) and external ones corresponding to a new position in the value chain, meaning the design of a two-sided market (Rochet and Tirolle, 2003).

Literature exhibits the growing importance of "platform leaders" (Gawer, Phillips, 2013; Gawer, Cusumano, 2002). They control the market but are dependent on other firms that add value, develop innovations and feed the overall ecosystem. While platforms structure and facilitate inter-firm collaboration, they additionally change the nature of the competition: rivalry among platforms stands in for the competition between the traditional economic actors. It raises, especially for the CCIs, an open and important question: is platform leadership available for SMEs or only an option for large companies? Gawer and Cusumano (2008) suggest that two

main strategies exist: “coring” focuses on creating a new platform where one has not existed before; “tipping” aims at competing to build market dominance with exclusive contents and incompatible technologies. For the authors “coring” is a possible option for any company, because technology and architectural leadership are not directly dependent on the company size. Our research aims to investigate these concerns in the specific case of the French e-book “platforms”.

## 2. Methodology

The methodology applied in this article is very similar to the one yet tested and used in the press industry (Benghozi, Lyubareva, 2013). More specifically, the present empirical analysis is based on a comprehensive survey of 66 French e-book platforms (see Annex A). This sample represents 43% of an overall list of 155 platforms available on Hadopi Offre Légale<sup>1</sup>. The Internet website of every platform has been carefully investigated (and corroborated with the managers of the platforms) in order to identify its main characteristics. These qualitative features have been transformed into quantitative ones and assembled into the same worksheet. Table 1 provides a list of the platforms’ features transformed in binary variables (1, 0).

**Table 1: Definitions of variables identified on the 66 French e-book platforms**

Var01	Institutional category (1-Publisher, 0-others)
Var02	Site available in several languages (1) or only in French (0)
Var03	Focus only on books (1) or also on other sectors (0)
Var04	Location (1UE; 0 extra-UE)
Var05	General themes (1yes; 0no)
Var06	Only e-books selling (1yes; 0no)
Var07	The site sells other cultural products (1yes; 0no)
Var08	The site sells also e-book readers (1yes; 0no)
Var09	The site has a partnership with an e-book reader producer (1yes; 0no)
Var10	The site has a partnership with a publisher or other book-actors (1yes; 0no)
Var11	Free e-books are offered (1yes; 0no)
Var12	Subscription formula (1yes; 0no)
Var13	Personal space on the website (1yes; 0no)
Var14	Apps (1yes; 0no)
Var15	Space dedicated to the press (1yes; 0no)
Var16	Frequently Asked Questions - FAQ (1yes; 0no)
Var17	Newsletter (1yes; 0no)
Var18	E-books statistics (1yes; 0no)
Var19	Link with social networks (1yes; 0no)
Var20	Read & write comments (1yes; 0no)
Var21	Specific social group of the site - blog (1yes; 0no)
Var22	Publicity sponsor (1yes; 0no)

After excluding some variables for correlation problems, a factor analysis has been performed on the main variables identified (cf. Annex B). The principal component extraction factors is the method chosen and the Kaiser-Meyer-Olkin is the measure of sampling adequacy (providing an acceptable value of 0.6102). To determine the number of components the latent root criterion

<sup>1</sup> <http://www.offrelegale.fr/sites-et-services/categorie/ebook> (February 2014). This website is elaborated by public authorities to collect - and promote - all the cultural content platforms (music, video, books...) legally available on line.

(Eigenvalue > 1.0) has been applied: a three-dimensional solution explaining 66% of the variance is obtained.

In order to ascertain the difference or similarity among the various platforms, the same variables have been further organized into groups by means of the cluster analysis methods (Everitt et al., 2001). Such an approach allows for the identification of groups of objects with small within-cluster variation for discriminating variables and high variation between clusters. After testing various methods, K-means is applied, one of the most widely used partitional clustering techniques.

### 3. Analysis of results

The methodology provided interesting results since it brings to light unpredicted Factors that influence the structure of the offering and two principal homogeneous groups of platforms.

#### 3.1 *Five influential factors that reveal alternative innovative strategies*

The factor analysis results revealed five main Factors (see Table 2 Annex B).

- Factor 1 groups the items relating to the presence of e-book statistics, meaning bestsellers (var18), the presence of FAQ (var16) and the presence of a weekly/monthly newsletter (var17): we labelled it “*Information services oriented*”.
- Factor 2 includes the items pertaining to the presence of publicity sponsors (var22), the presence of Apps (var14) and the possibility to have a personal space on the website, meaning an own library (var13): it can be entitled “*Value added technological services oriented*”.
- Factor 3 includes items that show a link with social networks (var19) and the presence of a specific blog and/or social network site of the platform (var21). As a consequence, we named Factor 3 “*Social networks oriented*”.
- According to Factor 4, if there is a partnership with a publisher or another book actor (var10), people have fewer possibilities to actively participate to the content of the platform through writing and reading comments (var20): it can be referred to as “*Traditional model safeguard oriented*”.
- Finally, according to Factor 5, platforms that sell only e-books (var6) are less likely to sell also e-book readers (var8): we designated it “*Content specialization oriented*”.

While Factors 3 and 5 highlight obvious results (the link with Facebook and Twitter is usually followed by a specific blog of the platform; publishers are more focused on their unique role of selling books), on the contrary, Factors 1, 2 and 4 exhibit interesting aspects related to platform characteristics and business models: these results will be confirmed and strengthened by the following cluster analysis results and they will be discussed in Section 4.

#### 3.2 *Two clusters structuring on-line models of platforms*

The cluster analysis divided platforms into several groups. Our results demonstrate<sup>2</sup> that the best partition is the one that provides a division into two groups (see Table 3 in Annex B).

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<sup>2</sup> In order to choose the more efficient of the grouping divisions, the Calinski/Harabasz pseudo-F index was used (Calinski, Harabasz, 1974; Milligan, Cooper, 1985). The analysis of variance (ANOVA) (see Table 4 in AnnexB) highlights the variables that most contributed towards the identification of the two clusters and confirms the reliability of the factors determined above.

It is noteworthy to underline that the size of these two clusters is similar: both comprise 33 elements<sup>3</sup>. Yet, some specific variables do characterize each group more than others. On the one hand, the availability of FAQ (var16), newsletters (var17) and e-book statistics (var18) are the variables that most influenced the grouping in Cluster 1. This result is clearly in line with Factor 1 “*Information services oriented*”. On the other hand, the link with social networks (var19), the possibility to write and read comments on the platform (var20) and the presence of a specific blog on Facebook/Twitter (var21) are the key variables in Cluster 2. This result is clearly in line with Factor 3 “*Social networks oriented*”. Starting from these general considerations, we examined each cluster for other characteristics, both included and excluded from the dataset for correlation problems.

The analysis reveals that some variables have about the same weight in the two Clusters. More specifically, the availability of the website in several languages (var2) is equally distributed in the two Clusters, even if only 20% of the 66 platforms are available in other languages besides French. Furthermore, all but 3 platforms are located in the European Union (var4). Platforms selling only e-books (about 60%) or even printed books are well subdivided in the two Clusters (var6) as well as the 19% of platforms that have a press space (var15). About the presence or absence of links with social networks (var19): 82% have this feature and they are equally distributed in both Clusters. Exactly the same result is observable for the presence or absence of a publicity sponsor (var22): only 15% of platforms provide visible publicity on their website and they are perfectly distributed in Clusters 1 and 2.

Nonetheless, some specificities are also identifiable. First of all, a slight difference is observable in the institutional category (var1): about 20% of the platforms analyzed are publishers, while the others may be retailers, libraries, distributors, diffusers and bookshops. Cluster 1 is characterized by the presence of fewer platforms dealt by publishers. It includes two-thirds of the platforms (23%) focusing not only on books but also on other sectors (var3) and Cluster 1 platforms deal more on general books (var5), while Cluster 2 seems more focused on thematic books (28% of the platforms focusing, in particular, on comics or literature). About 25% of all the platforms sell other cultural products (var7) besides books: most of them –two-thirds– are included in Cluster 1. Only 14% of the platforms sell also e-book readers (var8): they are included all but 1 in Cluster 1, as well as most of the few platforms (about 12%) that have a partnership with an e-book reader producer (var9). Two-thirds of the platforms having a partnership (var10) with a publisher or another actor in the book industry (slightly more than 50%) are also included in Cluster 1. This Cluster has also a predominance of Apps availability (var14), compared to Cluster 2, even if less than 40% of the platforms analyzed have this feature.

Most of the platforms analyzed offer free e-books (86%): Cluster 2 has a prevalence of the few platforms (14%) that do not offer free e-books (var11) but it has also a slight prevalence of the few platforms (17%) offering subscription formulas (var12). Furthermore, it seems that only 40% of the platforms give the possibility to build a “personal space”, meaning a personal library: they are grouped most in Cluster 2 than in Cluster 1. It is interesting to underline that 56% of the 66 platforms have a FAQ (var16): all the platforms that do not have a FAQ are included in Cluster 2, while all but a few of the platforms that have this feature are grouped in Cluster 1. A similar result is observable about the presence or absence of a newsletter (var17): 65% of the platforms send a regular newsletter to the registered users, and most of these platforms are included in Cluster 1. On the contrary, all but few of the platforms that seem not to have a newsletter service are included in Cluster 2. Again, a very similar result is observable for the presence or not of e-book selling statistics (var18): 72% of the platforms provide

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<sup>3</sup> Annex A provides details on the name of every platform and its inclusion in Cluster 1 or 2.

information about the list of bestsellers and they are more included in Cluster 1 than in Cluster 2. This last one includes all but a few of the platforms that do not provide this service. Cluster 2 is also more characterized by the possibility to read and write comments (var20): 56% of platforms clearly have this feature and two-thirds of them are included in Cluster 2, while most of the platforms –two-thirds– that do not have this characteristic are grouped in Cluster 1. As a consequence, about two-thirds of the platforms (65%) that have a personal blog (var21) on social networks are included in Cluster 2, while the opposite result is observable for platforms that do not have a specific social group, so they are included mostly in Cluster 1.

To sum up, the cluster analysis identified two groups. These two clusters have specific features despite some shared characteristics. According to the above description, we suggest to refer to them as “*Multimedia store*” (Cluster 1) and “*e-traditional bookshop*” (Cluster 2). Table 5 provides a summary of the main features of the 2 Clusters.

**Table 5: Main features of Cluster 1 and Cluster 2**

<i>Cluster 1 (33 platforms)</i>	<i>Cluster 2 (33 platforms)</i>
<i>Multimedia store</i>	<i>e-traditional bookshop</i>
+ – not only publishers (but also retailers, libraries, distributors, diffusers, bookshops etc.), var1	+ more publishers than other institutional categories (var1)
++ other sectors besides books (var3)	-- other sectors besides books (var3)
++ general themes (var5)	++ specific themes (comics, literature), var5
++ other cultural products (var7)	-- other cultural products (var7)
++ e-book readers (var8) and partnerships with e-reader producers (var9) as well as with publishers/book actors (var10)	-- e-book readers (var8) and partnerships with e-reader producers (var9) as well as with publishers/book actors (var10)
++ free e-books offered (var11) and Apps (var14)	-- free e-books offered (var11) and Apps (var14)
-- subscription formula (var12) and user’s space/library on the platform (var13)	++ subscription formula (var12) and user’s space/library on the platform (var13)
+++ FAQ (var16), newsletter (var17), e-book statistics (var18)	-- -- FAQ (var16), newsletter (var17), e-book statistics (var18)
--- read & write comments (var20) and blog (var21)	+++ read & write comments (var20) and blog (var21)
=	
Only French language (var2)	
Located in the EU (var4)	
Prevalence of e-books selling (than also printed books), (var6)	
Low presence of press spaces (var15)	
Many links with social networks (var19)	
Low presence of publicity sponsors (var22)	

#### 4. Discussion and conclusions

This empirical investigation is not without limitations: the limited number of platforms, the specific situation of the French context, the codification process. Nonetheless, despite these potential restrictions, the originality of this empirical investigation is given by the provision of “original” data and unforeseen generic strategies. Given the lack of reliable official analyses in this emerging field, this research provides primary data and highlights interesting findings. It is useful for better understanding the actual business models of e-book platforms as well as for stimulating further investigation.



As highlighted by Gawer (2009; 2009a), the emergence of platforms outlines new offerings and new forms of competitive dynamics. Our analysis enables to identify several key variables for characterizing the new value proposals and business models of book publishing industries. It reveals that on the one hand, economic actors get the opportunity of the Internet and ICT to enlarge the traditional boundaries of the publishing sector, establishing new relations with customers and trying to diversify their offering for creating value out of their platform. On the other hand, the actors make their best to adapt the traditional bookstore economic model to the Internet, keeping their core value, meaning the section of content. It is significant to underline that these conclusions confirm, in some extent, the results achieved in the press industry (Benghozi, Lyubareva, 2013), exhibiting, putting aside pure players, “a minima digital strategy” vs. “exploring leaders”.

The French e-book platforms seem significantly influenced by a few large actors that play a historical leading position: they are grouped for the most part in Cluster 1. Nevertheless, platform libraries included in Cluster 2 are also demonstrating interesting innovative perspectives, extending on-line the traditional strong relationship of a customer with the bookseller. These platforms are characterized by active interaction and involvement of users: they can read&write comments and participate to the platform blog. The strategy of active participation to platform’s content building by the users seems to be followed more by platforms in Cluster 2 (innovative newcomers) than in Cluster 1. This last one includes, among smaller actors, many leaders that do not need to follow this strategy for achieving more visibility.

As a consequence, these results may sound paradoxical from an innovation and entrepreneurial perspective viewpoint. Actually, Cluster 1 turns to be more closed and traditionally oriented as well as more anchored to the secular and official role played by the book publishing industry. On the contrary, while remaining much closed to the traditional bookstore model, Cluster 2 seems more open oriented with more originality given by the recent emergence of platforms of auto-edition or inspired by the new potentialities given by the use of tools like social networks.

Future research along this line, with an enlarged platforms sample and with a focus on a comparison with other countries, could highlight further features for deeply characterizing the context of e-book platforms and their business models.

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## Annex B:

**Table 2: Factor analysis results**

```
Factor analysis/correlation           Number of obs = 66
Method: principal-component factors   Retained factors = 5
Rotation: (unrotated)                Number of params = 60
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.50729	0.37381	0.1791	0.1791
Factor2	2.13348	0.36039	0.1524	0.3315
Factor3	1.77309	0.23547	0.1266	0.4581
Factor4	1.53761	0.26931	0.1098	0.5680
Factor5	1.26830	0.36632	0.0906	0.6586
Factor6	0.90199	0.13191	0.0644	0.7230
Factor7	0.77008	0.13142	0.0550	0.7780
Factor8	0.63866	0.10632	0.0456	0.8236
Factor9	0.53235	0.03204	0.0380	0.8616
Factor10	0.50030	0.10988	0.0357	0.8974
Factor11	0.39043	0.01468	0.0279	0.9253
Factor12	0.37574	0.02903	0.0268	0.9521
Factor13	0.34672	0.02276	0.0248	0.9769
Factor14	0.32396	.	0.0231	1.0000

LR test: independent vs. saturated: chi2(91) = 201.10 Prob>chi2 = 0.0000

```
Factor analysis/correlation           Number of obs = 66
Method: principal-component factors   Retained factors = 5
Rotation: orthogonal varimax (Horst off) Number of params = 60
```

Factor	Variance	Difference	Proportion	Cumulative
Factor1	2.20852	0.18683	0.1578	0.1578
Factor2	2.02169	0.20678	0.1444	0.3022
Factor3	1.81492	0.19773	0.1296	0.4318
Factor4	1.61718	0.05972	0.1155	0.5473
Factor5	1.55747	.	0.1112	0.6586

LR test: independent vs. saturated: chi2(91) = 201.10 Prob>chi2 = 0.0000

### Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Uniqueness
var2lang	-0.0383	0.5070	0.2465	0.2810	-0.0489	0.5994
var5theme	0.4845	-0.2561	0.1557	-0.2693	-0.5080	0.3449
var6ebook	0.1366	-0.0340	0.0481	-0.0946	0.8398	0.2636
var8read	0.3451	0.3092	-0.0429	0.0330	-0.6018	0.4201
var10partii	0.1904	0.1326	0.1807	0.6743	0.2668	0.3876
var13space	-0.2209	0.6506	0.3310	0.2142	0.0809	0.3659
var14app	0.1649	0.7172	-0.1516	0.0182	-0.2413	0.3768
var16faq	0.7517	0.0299	-0.1072	0.3974	-0.0328	0.2636
var17news	0.6445	-0.1378	0.1738	0.2830	-0.0930	0.4467
var18stat	0.8259	0.0899	-0.0534	-0.1920	0.0812	0.2634
var19link	0.1532	-0.0197	0.8547	0.0560	-0.0269	0.2419
var20comm	0.0096	0.1504	0.2969	-0.7569	0.2648	0.2461
var21blog	-0.1888	0.0331	0.8336	-0.1839	0.0682	0.2299
var22pub	0.0231	0.7713	-0.0507	-0.2646	0.0414	0.3302

**Table 3: Results for Calinski/Harabasz pseudo-F index**

Number of clusters	Calinski/Harabasz pseudo-F
2	11.48
3	9.11
4	8.55
5	6.25

**Table 4: ANOVA results for the grouping into two clusters**

	Number of obs =	66	R-squared =	0.8699
	Root MSE =	.205131	Adj R-squared =	0.8342

  

Source	Partial SS	df	MS	F	Prob > F
Model	14.353975	14	1.02528393	24.37	0.0000
var2lang	.044368562	1	.044368562	1.05	0.3093
var5theme	.057769984	1	.057769984	1.37	0.2468
var6ebook	.050958857	1	.050958857	1.21	0.2763
var8read	.020550224	1	.020550224	0.49	0.4878
var10partii	.23416894	1	.23416894	5.56	0.0222
var13space	.121834963	1	.121834963	2.90	0.0949
var14app	.03270268	1	.03270268	0.78	0.3821
var16faq	3.68215097	1	3.68215097	87.51	0.0000
var17news	.233612284	1	.233612284	5.55	0.0223
var18stat	.051326383	1	.051326383	1.22	0.2746
var19link	.002875952	1	.002875952	0.07	0.7948
var20comm	.066723526	1	.066723526	1.59	0.2137
var21blog	.074908829	1	.074908829	1.78	0.1881
var22pub	.116995656	1	.116995656	2.78	0.1016
Residual	2.14602496	51	.042078921		
Total	16.5	65	.253846154		