

## **Implementing a Value Creation Model in a Startup**

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### **ABSTRACT**

In this article, we propose a value creation model based on the principle of the chain of value in corporate management. We particularly endeavor to show the incidence of a relevant allowance of a company's resources on its profitability, by distinguishing on one hand the activities that are directly profitable and on the other hand those which have a support function. This distinction is applied to the study of a services company in computer engineering, in terms of internal balance and potential of development.

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## I. INTRODUCTION: CREATION OF ECONOMIC VALUE

The financial crisis that burst in 2008 is often said to be the cause of numerous flaws in today's economy. However, we can wonder whether this causal relationship between finance and real-world economics really explains the current situation or whether other links exist between finance, production and consumption.

Actually, the financial bubbles, the sub-prime crisis, and also the bankruptcies such as Lehman Brothers, impacted most of the economic sectors (Sieczka et al., 2010). But when going into the analysis in greater depth, it appears that the main mistake, made by many investors and financial organizations, concerns the link between the face value of securities and the represented economic value.

We can therefore consider that, in this case, there was a lack of value created as much as an excess of financial products generated and used (Marceau, 2009). Indeed the purpose of financial markets is not only to provide capital to companies that need to develop in the future, but also to represent daily economic value that is actually available (Marceau and Tremolieres, 2003).

In order to prevent this lack in economic value, we must define its nature and the mechanisms of its creation. Our analysis is set in this perspective. We propose a management model for the development of companies, for their production and their profitability. This global model is used in the following article in order to explain the evolution of a start-up created in the mid 2000's, specializing in software edition and computer services for professionals. The development perspectives of the company are analyzed according to this model.

Similarly to the "chain of value" proposed by Michael Porter in 1980, this model shows the position of each activity within a company; it also permits to track out these activities and to evaluate how each one contributes to the company's profitability. As a global model, it was not specifically designed for small structures or for recently created companies, but it is suitable to study them. The specificity of the version presented here is that it distinctly presents the core business of the company, which largely stands out when the company starts up.

The pattern for value creation and for companies creation we present here aims particularly to determine the conditions of a literally "sustainable economic development", that is to say a context in which human activity is systematically encouraged and can generate an economic value, which sum is growing steadily.

The elaboration of such a context, on whatever scale, includes (1) an accurate definition of the economic value, (2) a description of the mechanism of this value creation, and (3) the application of this mechanism to the companies of the economic system studied, or even to the economic system itself.

## II. FROM ECONOMIC ACTIVITY TO VALUE CREATION

A consumer estimates the value of a good from its use rather than from its cost of production, which is generally ignored. Even if the producer obviously makes a very large margin, the consumer doesn't feel cheated when he buys it, as he is more interested in the use of the good than in possessing the sum that corresponds to its price. From a dynamic point of view, we can observe adjustments before and after the transaction, according to the amount of supply and demand (Walras, 1874).

This application of the law of supply and demand in conditions of competition has a great influence on prices: the profitability of the production activity attracts competitors, while the increase of competitors sends the prices down.

In order to keep a certain control over the prices, the producer can find a way to escape from this phenomenon for the most part by finding a “defensible competitive advantage” (Porter, 1980). Such an advantage can be obtained by differentiating as far as possible his offer from the rest of the market, following the model known as “monopolistic competition”, or by staying ahead on the technological or commercial level as compared to his competitors (Melville et al., 2004). The implementation of these two strategies largely varies according to the sector of activity concerned, as show the models of “generic-based approach” (Porter, 1980) and “competitive systems” (Boston Consulting Group, 1980; Lochridge, 1981).

Obtaining a decisive competitive advantage may also come from the company's management practices (Marceau, 2000), quite independently from its sector of activity, and whatever the flexibility of the prices. Although benchmarking is generally possible for these methods, their implementation can still confer to the producer an increased competitiveness in the long run.

The margin created this way by the producer comes from several activities that enable optimal offer and management to be obtained by (1) examining consumers' expectations in terms of quality, quantity and prices, (2) combining production factors (capital and labor) to develop the determined offer, and (3) elaborating a position and a competitive strategy in the short, medium and long term.

Once the producer has paid his providers and his employees, and he has been paid by his clients, his possible benefit can be regarded as the reward for his activity and for the relevance of his choices. On the reversal, no private company (without subventions) can allow to let go a deficit on a long period, unless it would disappear. In this perspective, achieved benefits are as legitimate as necessary.

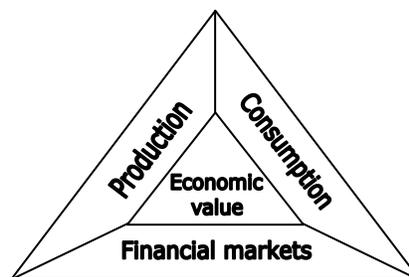
The remaining possible question concerns the level of these benefits. Indeed, journalists and politicians often refer to “super profits” achieved by such and such company. If the previous principles are taken into account and implemented, that is to say, companies not stealing anything, then “super profits” can only result from “super management”.

It is important to remember that good management, or “super-management”, has nothing to do with a quest to systematically reduce workforce, in order to supposedly increase the company's profitability. Even if the evolution of some sectors, namely technological ones, eventually leads to a new allocation of means of production, increasing the capital and downsizing of the workforce, it can be followed by a general growth of employment in the whole concerned economy. Whatever the company, the logics of corporate development consists in bringing together the best abilities and skills in the largest possible amounts, as far as there are commercial opportunities for its production.

These opportunities are the real evidence of the economic relevance and thus of the actual value of the produced goods. When the consumers of a good are ready to pay a higher price than that of its production, then the produced value is superior to the value consumed throughout the production process. Therefore, there is creation of value, which is measurable by a comparison between the value existing before and the value existing after the activity of the company.

The production activities are not the only activities that permit the creation of value. Indeed, trade, as simple exchange, also permits to create new utilities. As we just saw, when a consumer gives a sum of money in exchange for the good he's purchasing, the usefulness of that good is for him superior to that of the sum of money. On the other side, a salesman considers the received sum as being of a higher interest than the sold product. So there is an increase in the level of satisfaction for each economic agent. If we admit that an increase of value comes from the increase of the satisfaction level of at least one person, we thus admit the principle of productivity of trade.

**Figure 1**  
The value at the core of the economic system



Whether it is material or immaterial production, or trade, it appears that the economic value must be defined in terms of utility, satisfaction, or also of well-being. According to Bastiat (1850), the economic and social harmony consists in everyone being at the service of others while finding an interest in the remuneration of one's work.

In what precedes, we have studied several aspects of the economic value: (1) its perception and its reason of being from an individual point of view, (2) its translation and its measure (normally in monetary terms), (3) its role in the management of companies, and (4) its socio-economic role.

Now, we should analyze the process of its creation.

### **III. ENTREPRENEURSHIP AND VALUE ADDED**

In what follows, we deal with the process of value creation within companies, looking at the arrangement and the interaction of its different components. The highlighting of this process precedes its implementation in a startup of SCCE type. We show particularly the logics and advantages of such an approach as a mean to optimize the allocation of this company's resources.

As we saw, the value of a good represents more than the sum of the accomplished work and of the capital used to produce it. However, this calculation is necessary to estimate the profitability and the relevance of an economic activity. Indeed, as the margin obtained by a company allows to measure its value creation, the organizations that generate the largest benefits are, at large, the most useful for the development of an economy. Even before a company pays taxes on its benefits, it

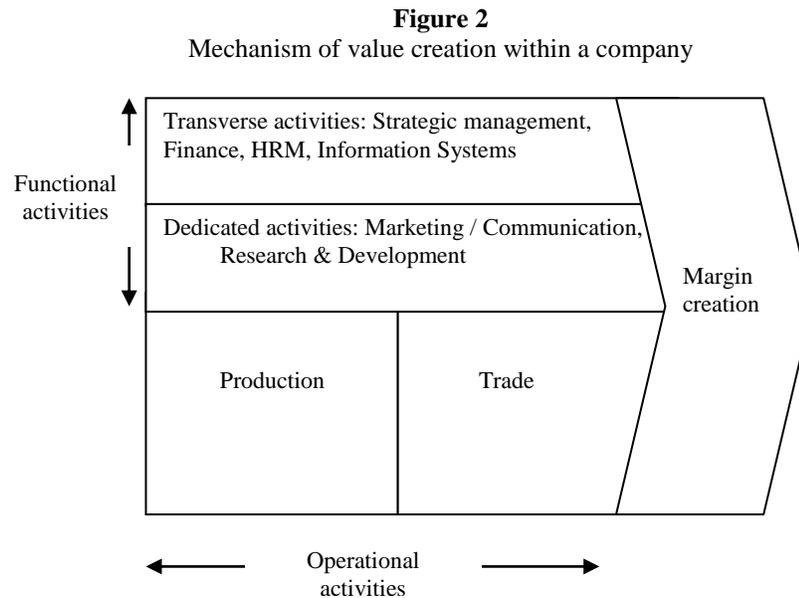
already gives evidence of its contribution to the regional or national economy. Whatever become the benefits, one could indeed say it is “a goose that lays golden eggs”.

The process of margin or of value creation was particularly highlighted in 1980 by Michael Porter, who entitled it the “value chain” of companies. Hereafter will be presented a scheme inspired by Porter's work, putting the emphasis on the duality existing in this mechanism of creation.

The distinction showed here is between the direct or indirect contribution of the studied activities to the value creation. Activities directly generating a value that will be paid by the clients are called “operational”, whereas the ones that are useful to support and develop the first ones are called “functional” activities, according to the terminology proposed in 1990 by Raymond-Alain Tietart.

As we can see on the diagram below, the operational activities only represent two paramount functions of the company: production and trade. The other activities basically provide the first two a means to operate and to develop.

A subdivision also exists within the functional activities. While there are effectively two operational activities, there are two sets of functional activities: on the one hand those dedicated to operational activities, and on the other hand, those defined as transverse, that is to say those serving the whole structure.



The “primary” nature of operational activities, according to Porter's terminology (1980), can be verified particularly during the creation of a company. Indeed, if the actions and the elements leading to the creation of a company are hierarchized, a double logic can be observed: (1) the logic of the company creator, who starts from an idea of production linked to a certain skill and to means of production, and who then has to confront this idea to market realities; and (2) the logic at the source of marketing

(Butler, 1907) according to which the market must be analyzed first in order to find the most relevant production.

The entrepreneur should thus reverse the order of his actions and place the market at the beginning of his approach, that is to say: think about optimization of sales before optimization of production. Once this order of priorities is established, the entrepreneur does have the necessary elements to launch his activity. Indeed, the two vital functions of the company being settled, he can buy all other functions from a third party. From accountancy to business consulting or recruitment, all the work corresponding to functional activities can easily be externalized as soon as the core activities of the company, determined by its operational activities, is relevant and efficient.

In order to correctly implement this principle, we must notice the relative aspect of the repartition of the activities between operational and functional when we shift from one economic sector to another. Indeed a type of activity does not necessarily belong to one or the other category. For instance, for an industrial company, accountancy can only be a functional activity, but it's different for an accountancy office, which core activities include accountancy. In this case, the preparation of its own accounts is categorized as part of its functional activities, whereas the preparation of its customers' accounts is an operational activity.

This separation not only distinguishes the essential from the accessory, it also constitutes a real tool for management control that permits to identify on the one hand what will generate the turnover and the margin of the company, and on the other hand the activities that, although necessary, will have a cost and won't bring anything in return directly.

We find the same reasoning in analytical accountancy, which purpose is precisely to enable a rational steering of the company. In this area, one distinguishes: (1) principal sections dedicated to production, supply or distribution (both latter aspects representing the business activity of the company) and (2) auxiliary sections whose work benefits the entire company (that is to say its principal or auxiliary sections).

For example, information system activities or marketing activities are not themselves profitable; they consume resources, but they allow profit to be made on operational activities. Also, accountancy and financial management of the company is a necessity that consumes and does not create any wealth. Even if we consider a rentable treasury investment accomplished by the company's finance division, we must interpret it as the choice of occasionally having an operational activity of a financial nature. The frontier between operational and functional activities is not ambiguous and can always be obviously identified.

Also, we must specify that the productive and trading activities are systematically present as parts of the operational activities of a company. Indeed, even an import export company, whose role is basically to buy somewhere and to sell elsewhere, produces services that consist in providing clients with goods they wouldn't have had access to otherwise. In the same way, a company that mainly focuses on industrial production, and that decides to externalize its activity of distribution towards the final customer, still has to sell its products to its distributors and retailers.

#### IV. CASE STUDY: SERVICES COMPANY IN COMPUTER ENGINEERING

This part is dedicated to the study of the accounting data of a company on about 10 years of activity, since it was created. The results of the first seven years were provided by the company's management, whereas the last three were estimated in accordance with it. Even though the fiscal year of the company studied is usually the period from September 1st of each year to August 31st of the following year, the results and estimations provided below relate to calendar years.

This study was conducted in order to show on the one hand, the interest of the above model as a tool for analyzing the balance of benefits and value streams within the company, and on the other hand the ability of this model to provide forecasts of profitability and development.

The Noidland Company (French company) was created on March 22, 2005; its aim was to develop and to market software and communication protocols elaborated by its creator. To these activities were naturally added distribution and computer maintenance, as well as remote applications hosting. This services company in computer engineering grew steadily but very slowly with strong investments in its production tool. The “engineer culture” of its creator naturally led him, during the first years, to focus on his art (essentially represented here by the activity of research & development), rather than commercial prospecting.

The results and estimations corresponding to the period studied appear in the detailed table below (expenses, revenues and margins below are indicated in euros).

**Table 1**  
Achieved and estimated results of the SCCE Noiland from 2005 to 2015

Year	Transverse activities. <sup>1</sup>	Research & Dvpt. <sup>2</sup>	Marketing <sup>3</sup>	Production costs <sup>4</sup>	Distrib. costs <sup>5</sup>	Revenues <sup>6</sup>	Margin <sup>7</sup>
2005	6,970	4,634	1,998	30,485	993	49,744	4,664
2006	7,783	17,150	4,492	9,398	1,492	40,586	271
2007	8,039	27,305	1,541	2,442	1,892	43,710	2,491
2008	8,261	26,978	1,549	5,527	2,544	45,630	771
2009	7,999	27,643	2,069	7,649	2,035	44,875	-2,520
2010	8,129	27,824	2,073	2,526	2,050	46,225	3,623
2011	7,224	26,687	1,868	2,034	8,196	58,168	12,159
2012	11,302	18,408	6,270	3,088	36,609	99,509	23,832
2013	9,059	17,960	7,320	4,225	41,970	108,092	27,558
2014	10,815	17,486	7,803	6,045	42,435	184,406	99,822
2015	11,023	17,622	7,565	6,470	44,282	203,999	117,037

**Table legend:**

1. Expenses related to transverse activities: general administration, finance, human resources management and internal information system.
2. Expenses linked to the research and development activity: elaboration of computing development tools, development of applications and protocols.
3. Expenses linked to the marketing activities: market studies, elaboration and implementation of commercial policy, commercial tools, commercial and institutional communication.

4. Purchase of distributed equipment, depreciation of equipment used to offer distant services, specific development and adaptation of applications, maintenance, hosting of applications and of databases.
5. Distribution costs: salaries and equipment of the sales force, communication and travelling expenses.
6. Total revenue excluding taxes: operating revenues, among which turnover and subventions, financial and exceptional revenues.
7. Net profit: benefit or loss.

As a functional activity according to our model, the research & development actually increased the profitability potential of the company, whereas this potential remained quite largely underexploited. This resources allocation can explain the modest development of the company between 2005 and 2011. The start of turnover and profits growth in 2011 coincides very clearly with the achievement of its principal projects of computing developments and with the concomitant resources reallocation, principally in favor of its sales force. The confirmation of this new policy in 2012 appears already as successful and the management is now planning to take advantage of the company's technological advance and independence, so hardly obtained, to overtake its main competitors, at least in matters of profitability. Indeed, the initial investments in research and development enabled the company to reduce its production costs in a very significant and sustainable way.

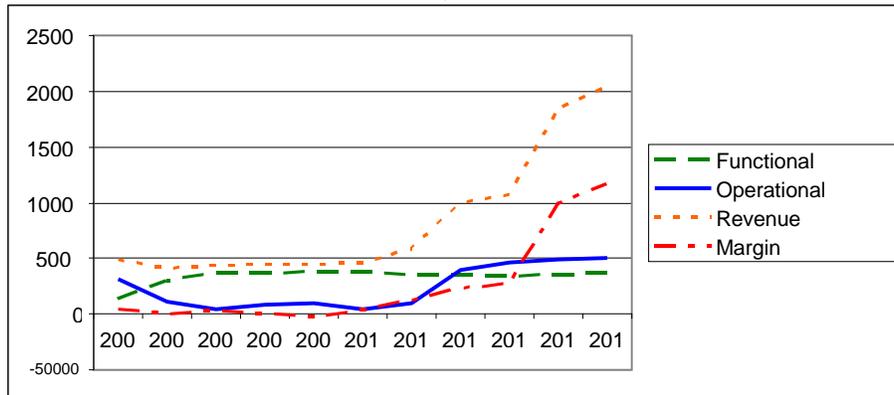
Noidland now offers its customers complete applications, with entirely mastered functionalities, without having to pay license costs to other editors, nor needing to buy very powerful and expensive servers equipment. The treatment and memory capacity required by the applications developed by Noidland are extremely modest, whilst their performance is superior to their competitors'. Therefore, the production costs of the company now represent a major competitive advantage.

The data of the previous table are resumed and synthesized below in order to present a clearer graph.

**Table 2**  
Synthesis of results and estimations of the SCCE Noidland, 2005-2015

<b>Year</b>	<b>Functional Activities</b>	<b>Operational Activities</b>	<b>Revenues</b>	<b>Margin</b>	<b>Margin %</b>
2005	13,602	31,478	49,744	4,664	9%
2006	29,425	10,890	40,586	271	1%
2007	36,885	4,334	43,710	2,491	6%
2008	36,788	8,071	45,630	771	2%
2009	37,711	9,684	44,875	-2,520	-6%
2010	38,026	4,576	46,225	3,623	8%
2011	35,779	10,230	58,168	12,159	21%
2012	35,980	39,697	99,509	23,832	24%
2013	34,339	46,195	108,092	27,558	25%
2014	36,104	48,480	184,406	99,822	54%
2015	36,210	50,752	203,999	117,037	57%

**Figure 3**  
Graphic representation of the synthesis of results and estimations of the SCCE  
Noidland, 2005-2015



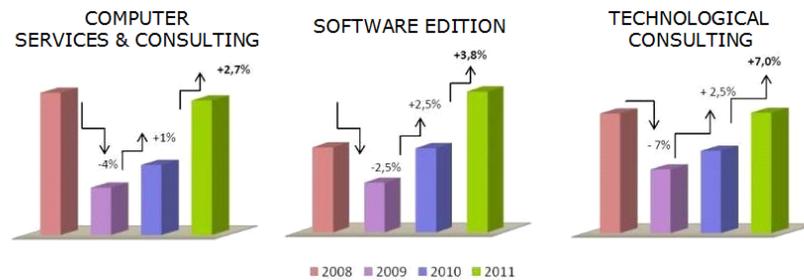
We can observe on the above graph that the profitability increases significantly only after the operational costs curb went above the functional costs' one. Indeed, in spite of the global increase of the company's expenses, the change in the structure of these expenses has a clear cut impact on its sales and on its margin. The consequence of this impact is twofold: first, the increase of the expenses affects the margin curb, and second, the effort on operational activities (commercial and productive) causes a fast and strong growth of the margin, as well as of the turnover.

The functional activities accomplish the role they are normally given, which is to provide support and development capacities to the operational activities. In more detail, the distinction between functional dedicated activities, compared to those of a transversal nature, enables one to identify which type of support is concerned. The investment first concerned the functional activity dedicated to production (research and development), then and to a lesser extent, the emphasis was put on marketing. The re-establishment of the balance in favor of the operational activities (production tool and sales force) enabled the company to increase its capacity, while limiting its costs. The economic concept of "roundabout production" (Von Böhm Bawerk, 1888) is therefore verified, and also supplemented by the preceding principles of value creation.

It is noteworthy that the most significant results attesting the rise of Noidland are still to come, as these results essentially appear on the three coming years; however, except for any conjunctural hazard, this forecast seems realistic as long as it presents a strong relevance in terms of internal balance. From an external or conjunctural point of view, the main business domains of the SCCE seem globally well protected from the ongoing crisis, and especially so on the French market, despite a small downturn as compared to last year, this market is indeed steadily increasing in 2012 (Biseul, 2012).

**Figure 4**

Evolution of the principal SCCE markets 2008-2012 (source: Syntec Numérique - IDC)



## V. CONCLUSION: ENTREPRENEURSHIP AND ECONOMIC PERSPECTIVES

In what precedes, we have mentioned the worrying nature of the financial crisis over the last years, also showing how the disruptions from which the financial markets suffer appear more like a consequence than a cause of the economic crisis.

Considering that the coherence between finance, production and consumption depends on the values created and exchanged, we have placed the value creation at the core of the economic problematic. In this perspective, we have recalled the principal economic definitions of wealth and studied its link to the companies which generate it. We have then detailed the mechanism that generates margin or added value, following an entrepreneurial approach.

To this purpose, we have elaborated a synthetic corporate management model that we have then applied to the case of a SCCE. This application enabled us to highlight internal balances of the company and to achieve estimations based on its development potential and on economic perspectives in its economic sector. The balances showed dealt principally with the development of operational activities as compared to investments done in favor of functional activities. In the case studied, the visible overinvestment that marked the first years was finally justified in terms of competitiveness and of production capacities.

In contrast, we can easily imagine using the same model that a company that would have focused on its internal organization, accounting and operating procedures, without producing or selling any goods, would have bankrupted immediately. We could then have said that this company, in focusing on its functional activities, would have forgotten its operational activities.

What appears as self-evident in the field of corporate management could be used in economics on a larger scale as a way to analyze national economic policies. Such a transposition would allow one to highlight some imbalances in countries in which the over important administration contrasts with the weakness of the productive and effectively profitable sectors.

On the opposite of this example, and in all likelihood, the loss of value of securities exchanged on financial markets can and must be bridged by the

multiplication of companies whose logics of development are based on a maximization of the economic value creation.

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