
Systematic for Increase of the Operational Efficiency from the Allocation of Resources in Intangible Assets

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Abstract. The present article presents a model for the operational efficiency management from the identification and allocation of resources in organizational intangible assets. For that, the identification of the intangible assets that are linked to priorities strategic products are used, considering these last ones as the ones which determine the organization's economic sustainability. Concomitantly, organizational objectives are established that are compatible to the development of performance indicators, linked to intern intangible assets from the organization, classifying them according their contributions for the reach of the goals of the manufacture's section. Besides that, it is aimed at establishing criteria for the application of resources in the elements which form the intangible assets that are considered crucial to the maintenance of the production capacity.

Keywords. Intangible assets, manufacture, operational efficiency and performance indicators.

1 Introduction

It can be observed that the need for better levels of the organizational assets used in the intern context still constitutes an imperative one, once they can raise the performance of the manufacture, adjusting it to the reach of the strategic goals. It is assumed that the compatibility of these goals can be reached by the demonstration of better levels of acceptance of the products offered for consumer market. Furthermore, by the consideration of the profit margins decurrent of the improvement in the execution efficiency of production activities in an operational level. It is aimed at the identification of organizational intangible assets in order to

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reach better levels of operational efficiency and an establishment of evolution indicators of the performance for production processes.

Therefore, present states of the art concerning intangible assets with the justification these same assets have for organization performance, the systematization of a model that promotes the correct application of resources in intern intangible assets considered critical (from the management of operational efficiency levels in the manufacture activities), the application context and future results this job, considering that the intangible assets can characterize competitive differences for products that allow for the reach of the organizational strategic goals.

2 State of the Art

Individual and collective can be augmented by intangible assets, the definition of this is neither concise nor uniform. In order to define the internal intangible assets effect, we shall initially use the taxonomy advanced in [6] which defines internal intangibles as organizational resources that the company utilizes. Their correct application generates results in the form of products (tangible and/or intangible) derived from a specific organizational structure (internal concepts targeting to increased value), applied to the production of goods and services that aim to generating perceived benefits.

The identification of intangible assets for the growth of organizational performance is born out of the need to provide supply differentiation. This supply embodies the perspective of superior value attributed to products and services, derived necessarily from the organizational capacity to contemplate distinct market demands. Thus, it becomes necessary to analyse the way that internal intangible assets energize organizational performance with a focus on the efficiency of production operations. This way it demonstrate the relevance of these assets in maintaining better levels of economic performance of organizational activities.

At the same time, research suggests that there is a need for management methods that are adjusted to goods production (tangible and/or intangible assets) with the goal of providing constant revision of the means to instigate operational efficiency, by identifying potential intangible assets.

2.1 Intangible Assets as Criteria for Organizational Performance

During the development of a business proposal, the valuation of the assets to be used in order to reach the goal of economic ally profitable production obeys a logic of "subjective" rationality, according to criteria defined by the owner of the assets.

However, the sum of individual values in the assets used for pursuing the enterprise mission hardly represents the total value of the organization. Thus, the failure to determine a total value of the organizational assets leads to the appearance of the goodwill that for [13] represents an obstacle to the managers information, and is called "a repository of unexplained values".

Using the observations in [5], the best measure of the performance would be its subjective value in the eyes of the managers. By the observations in [14], from the

perspective of management, the value of the company would be called “intrinsic value of the company”. The subjective concept of goodwill stressing that the interests of the proprietors should not oppose other interests, seeing that all the other interests (stockholders, shareholders and stakeholders) would be residual and would depend on the in achievement. From the perspective of economic management, such an assertion does not lack validity. However, it makes it necessary to consider non-economic interests that also affect the organizational performance [13].

2.2 Composition of the enterprise assets

The intangible asset, when understood systematically, consists of relationships between different forms of assets - tangible and intangible. Thus, the company must be analysed in its entirety, where, as in a system, its parts can contribute to the pursuit of the established goals *a priori* [10].

Additionally, its worth to mention that the composition of the assets and the metrics used for the performance measure does not always accommodate strictly economic and financial aspects. Factors such as maintenance of the competitiveness levels through innovation and also new and better ways for product conception, which allows the development of complementary abilities, also show the need to accountability and parallel management [12].

By finding common characteristics between the typologies of intangible assets, it is possible to set parameters in order to formulate rules for the recognition of these assets [7]. The considerations of [9] are perfectly adjustable to the goals of identifying this study, as a way of intangible assets that belongs to the organization. However, it is necessary to demonstrate how the intangible assets can work as elements that let the operational efficiency emerge. Next, the stages and steps needed for the proposed model conduction are described.

3 Model Stages Description

The Stage 1 (Preparatory Stage) aims at describing the way of analyzing the portfolio of the company's products to identify which product groups lead to a bigger contribution to the business. In Stage 2 the intangible assets linked to the products considered strategic to the business are identified, which therefore, must be primed. In Stage 3 are goals established and sorted by hierarchy of the manufacture, taking in consideration the levels of operational efficiency for the primed strategic products. Stage 4 proposes performance indicators for the primed strategic goals. Stage 5 finally establishes criteria for allocation of resources in intangible assets which are considered critical.

It observed that the model considers the occurrence of feedbacks between steps/stages/steps that propiciates a better visibility of its goals in the model scope.

3.1 Stage 1 (Preparation Stage) – Analyzing the portfolio of products

This Preparation Stage has the goal to analyze the current portfolio of the company's products. In this case, the positioning map adopted by Siemens [4] will be used, looking for positioning the products in homogeneous groups demonstrating their representation, using the analysis of market tendencies determinant factors and the profit percentage desired for each group.

3.1.1 Step 1 – Define products attraction levels

This step aims at positioning homogeneous product groups that determine a positive correlation between the market tendencies and the desired profits percentage.

3.1.2 Step 2 – Prime strategic products

Having positioned each product that belongs to the analyzed portfolio, the strategic ones that demonstrate a positive correlation between the considered variables (market tendencies and profit percentage) will be considered. It is presupposed that the group (or groups) of products with these characteristics can support the economic sustainability of the business from average to long terms.

The products (group of products) considered more attractive and competitive will be named Primed Strategic Products (PSPs), which will be considered prior having in mind the calculation of its efficiency levels in Stage 2 (Step 5).

It is followed with the identification of the intern intangible assets related to the PSPs.

3.2 Stage 2 – Identifying IIAs from the PSPs

To determine what the intangible assets are, the concept of [10] will be used that defines them as: the generators in the organizational context, the originators of research and development that effectively can represent future industrial or intellectual property rights and the criteria according to the normalization of intangible assets defined by FAS 141 (Financial Accounting Standards) [7]. In a complementary way, for the framing of which intangible assets are considered intern to the company (IIAs), the proposal elaborated by [12] is used due to its concision of separability criteria of the organizational intangible assets.

3.2.1 Step 3 – Identifying intangible assets related to the PSPs

This step has the goal to identify which intangible assets are related to the PSPs. This way, the relations of intangible assets that can generate future profits for the company.

3.2.2 Step 4 – Determining organization IIAs

With this step intended to identify the intern intangible assets that reside in the company. Using the considerations in [10 and 12], it will be distinguished which intern intangible assets belong effectively to the organization.

The calculation of the value referring to the IIAs will be effectuated, having in mind the qualitative variables (human, processes, structural and environmental),

that represent the squares that need to be considered in the value determination of the intangible assets according to the methodology [9].

3.2.3 Step 5 – Calculating levels of efficiency for the PSPs

Yet, considering the presupposed efficiency determination from the intangible assets consideration leads to the below equation 1.

$$\text{Efficiency} = \frac{\text{Tangible Exits}}{\text{Entrances (Tangible Assets + Intangible Assets)}} \quad (1)$$

The goal is to determine the participation of the IIAs in the manufacture of the PSPs, focusing the section efficiency of the manufacture unit. In this case, the levels of efficiency calculation for the PSPs.

Considering the achievement of very distinct section levels of efficiency, it is not possible to establish an average level of efficiency for the sections involved in the PSPs production. This step will serve as a base for the determination of the manufacture and sections goals (SGs) according to what is described in Stage 3.

3.3 Stage 3 – Establishing and sorting the manufacture and section goals by hierarchy

Considering the exposed in Step 4, this stage is establishing and sorting the goals of the manufacture by hierarchy that are directly linked to the maintenance and the improvement of the operational levels of efficiency in the effective use of the intern tangible and intangible assets related to the PSPs, according to what is described in Step 5.

3.3.1 Step 6 – Determining the goals of the manufacture for the production of the PSPs

This step determines and sorts the goals of the manufacture by hierarchy in order to reach the operational levels of efficiency close to 1 (one) for the PSPs with related IIAs.

The order of the hierarchy of the manufacture goals (MGs) will obey the higher punctuation obtained in a decreasing scale. Obtaining equal punctuations, the hierarchy will be established by the relation of the goal with the manufacture section in which the PSP obtained the smallest level of efficiency.

3.3.2 Step 7 – Establishing manufacture section goals

Through an agreement between the section's managers of the units that compose the manufacture related to the execution importance of each MG established in Step 6. This way, reaching the manufacture goals will be accomplished by section actions, from now on determined SGs.

3.4 Stage 4 – Proposing performance indicators of the manufacture (PIs) related to the IIAs for the manufacture sections

This stage aims at proposing PIs that are related to the IIAs. For that, it must be considered the occurrence of different indicators for each kind of PSP and also having in mind the different form of utilization of the same IIA by the involved sections.

3.4.1 Step 8 – Proposing indicators related to the IIAs for the manufacture sections

To define the relations of PIs with the section goals in the production of the PSPs, considerations obtained from [15] will be used for the determination of the performance indicators of the manufacture with adaptations. Therefore, haven adopt as a reference the following question: “The performance indicators of manufacture have any relation with the IIAs?”

3.4.2 Step 9 – Establishing importance levels for Performance Indicators for the Intern Intangible Assets (PIIIAs)

The procedure is adopted from the importance level identification of each PIIIA, based on the “Source of Relations between the Manufacture Goals and the Performance Indicators Related to the Flexibility” [15]. Parallel to that, determining the level of importance of the indicator to be adopted by the section, using the information contained in Step 7.

3.4.3 Step 10 – Calculating levels of criticality and contribution margins of the IIAs

With the goal of using the IIAs as effective instruments of the growth of the manufacture operational efficiency, it is necessary to effectuate the calculations of its contribution margins and levels of criticality for the reach of the SGs.

3.5 Stage 5 – Establishing resources application criteria in critical IIAs

With this stage the allocation of resources in IIAs considered critical to the raise of the efficiency levels in the manufacture context, in a way that these IIAs proportionate the more rational utilization of other tangible assets categories. For this, a prioritization order must be established for the use of the IIAs with the necessities pointed by the manufacture managers.

3.5.1 Step 11 – Defining elements that forms critical IIAs

The goal of this step is to identify elements that supply the elements necessary for the creation and maintenance of the IIAs in the manufacture context. These elements are: human resources, processes, organizational structure and environmental factors [9].

3.5.2 Step 12 – Priorizing the allocation of resources for the elements that form the critical IIAs

With the calculations of the contribution margins of each element that compose the IIAs and that are considered critical to the manufacture (by section), it is aimed for

information that can help to establish priorities in the application of resources in the elements that form the IIAs.

4 Development Context

Nowadays, the prioritization form of portfolio of products is a very complex skill, due to different knowledge about concepts of the value of choice for different segments of the market. Working with the perception that intangible assets can be used as competitiveness criteria, for the units of manufacture is necessary knowledge about intangible assets to consider better levels operational efficiency. This way, the described model can be applied in manufacture context. It is the intended to inquire the significance in the improvement of intangible assets in better levels of internal efficiency.

5 Theoretical and Pratical Results

This section demonstrates the importance of the relations between intangible assets and processes of production for new tangible and intangible assets. However, the intention is to diagnose the contribution of the intangible assets for development indicators of the enterprise, considering the presents theoretical and pratical instruments that support this task. The principal practice objective is knowledge for manufacture units managers of the effective contribution of the internal intangible assets are considered strategic for maintaining the economy of business.

6 Conclusions

This study developed a managing model of the operational efficiency from the allocation of resources in intangible assets in the manufacture of products context (commodities and services). Furthermore, criteria for the allocation of resources in intern intangible assets considered critical to the production activity were established, incorporating the organization's aim for knowledge of the market's preferences to be attended, as well as taking advantage of opportunities with consequent alterations in the general pattern conceptions, in the fall or raise of profits that result in significant oscillations in the consume power.

This way, through the consequent model's application is expected to obtain a superior development of activities connected to the manufacture segment through the destination of intangible assets resources.

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