A firm's assets as a foundation for strategy. Learning and the grounds to success

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Abstract

Firm assets are the most important element in strategy formulation and implementation. A company's grounds to success can be found here. However, not all are equally important. Some will be considered strategic and others ordinary, depending on how influential they are when it comes to obtaining and appropriating rents, as well as how they hold up during a span of time. This will depend upon their relevance and scarcity, suitability and continuance, as well as on the difficulty encountered when they are to be imitated or substituted. The above features will depend on the characteristics that are intrinsic to the asset itself. These are heterogeneity and transparency, duration and mobility. The connections between the external factors and these internal characteristics will allow the presentation of a written explanatory model of the firm assets in the organisation's success.

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Introduction

Firm assets have a key role in the formulation and establishment of the strategy. Some of them are very important, essential even, while others may turn out to be irrelevant. In this work the causes that explain these differences are analysed. The explanation that is expounded here starts with two fundamental elements:

(1) the strategic character of the asset, which will depend on the effects which it causes in its setting; and
(2) its own internal nature.

The subtle connections between these two essential aspects of the assets will be analysed below.

This analysis is carried out in three stages. In the first place (second section), a brief mention is made of the theoretical reference frame, the theory based on the resources and the meanings of the terms "asset" and "strategic asset" are discussed.

The strategic character of an asset will depend on its compliance with six requisites that ensure behaviour which is in accordance to the company's expectations. In the third section the requisites which are relevance and scarcity, the suitability of the rents that are generated, its continuance in the company, its difficulty to be imitated and its imperfect irreplaceability by other assets, will be justified. These are extrinsic determining factors since they are always related with elements or circumstances that are external to the company itself. For example, scarcity will depend on the existence of the same asset in other organisations, the difficulty with which it can be imitated deals with the competitor's capacity to reproduce the asset and so on.

The thesis that is sustained in this work is that the above extrinsic determining factors will, to a certain degree, depend on the intrinsic characteristics of the asset such as transparency, complexity, mobility or duration, all of which are determined by its behaviour. Therefore, learning should be seen as the development of the internal environment. The fourth section analyses the above. Consequently, the main goal is to explain the effects produced by the asset within its setting and in accordance to its own nature.

Thus, the connections between the extrinsic determining factors and the intrinsic characteristics will explain how and why certain elements available to the company, acquire a fundamental role in the formulation and implementation of the firm strategy. The conclusions are to be found in the last section.

Classification of the firm assets

During the last few years, academic authorities have emphasised the importance of firm assets in order to secure sustainable competitive advantage. From this perspective some new directions from company management, such as the resource-based view, perceive the organisation as a dynamic assets depot, among which knowledge and the capacity to learn hold a prominent position.

Table I, in a descriptive manner, gathers the different types of assets that are available to the company. Physical and financial assets are shown (from left to right), followed by intangible elements. These last elements are assets that are sustained by information, therefore rendering them susceptible to multiple uses while simultaneously being considered as inputs and outputs of the productive activity. Management of the intangibles presents problems as well as special implications for the firm strategy, derived from their character as a public information item and due to the indivisibility of the profits that they generate; they also present exclusion difficulties (Itami and Roehl, 1987).

Some intangibles will appear in the company's situation balance sheet; however, in general, any attempt to carry out an inventory of these elements will run into difficulties that will be practically insurmountable. Among those elements which cannot easily be inventoried the employees' skills and the company's capacities are to be highlighted, as well as the specific manner in which the organisation unfolds and combines its assets, conceived as a framework of co-ordinated connections among the remaining resources.

The capacities can be considered as primary or secondary, the latter also denominated as meta-abilities, meta-competences or meta-capacities. It deals with certain types of capacities that are related with acquisition, management and development of the basic or primary order capacities. Therefore, organisational learning would be the fundamental meta-capacity, since it allows the company to acquire new capacities or to modify those already existing.

Table I Types of firm assets

Inventory	Skills	Capacities
Physical	Individual	Primary order
Financial		Secondary order
Intangible		

The elements that comprise a company do not enjoy equal importance. Indeed, an effort has been made to distinguish a special kind of asset, using the adjective strategic, because of its contribution to the company's competitive advantage; they are described as those difficult to sell and imitate, scarce, easily appropriated and specialised (Amit and Schoemaker, 1993).

As a consequence, from the group of assets that are available to a company at a certain moment, a difference can be established between those considered strategic and the remainder of resources and/or capacities, which would be described as normal or vulgar. The first, due to behaviour and characteristics, decisively falls into the securing of competitive advantage. The latter will most probably be necessary or convenient for running the company, although they have certain traits (easily imitated, not scarce, any organisation can acquire them on the market ...) making them non-strategic, normal or vulgar assets.

The relevant matter, which is undertaken in the following pages, is how and why a certain asset acquires the condition of strategic. To this effect the role of the assets in the obtaining and upkeeping of competitive advantages is analysed in the following section.

Strategic assets and the obtaining of sustainable competitive advantages

The strategic character of an asset depends on its compliance with six requisites. It must be:
(1) relevant or valuable;
(2) scarce;
(3) generate appropriable rents;
(4) have continuance in the company;
(5) be difficult to imitate; and
(6) not be perfectly replaceable.

Below the manner in which these conditions influence the company strategy will be

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detailed and, therefore, how they influence obtaining sustainable competitive advantages.

The companies who compete with each other formulate and implant strategies with the aim to be competitive, that is to say, in order to extend or at least maintain their market position, rivaling others that pursue similar goals and maintaining financial profitability. From this perspective it is said that a company has competitive advantage when it is capable of carrying out a strategy which allows it to create value, and when this cannot be simultaneously carried out by any other current or potential competitor (Barney, 1991).

In this sense, obtaining advantages is related to two aspects:

(1) the mechanisms which lead the strategies towards obtaining rents; and
(2) the problem of appropriating rents once they have been generated.

On the other hand, the concept of rents refers to the rewards that the company obtains with its limited resources (Schoemaker, 1990). Thus, the strategy is the peculiar manner of using the assets in such a way that these obtain an adequate rents flow. It must be pointed out that the mere holding of the assets does not insure rents, since these have to comply with the conditions of relevance and scarcity.

Relevance

An asset will be relevant or valuable if advantage can be obtained from these opportunities, and/or if threats from the surroundings can be neutralised (Barney, 1991). However, from the resource-based view, the circumstances which in advance allow the relevance of an asset to be guaranteed have not been described in a general manner. It has been highlighted that the value of a resource depends on the complementary assets that are available to the company itself, as well as the assets held by the competitors. It is easier to solve the matter with hindsight since, once the strategy is carried out, the success obtained will turn out to be an adequate sign of the asset's relevance. As a consequence, this company point of view has been considered circular and redundant (Porter, 1991).

As an example, let us contemplate a restaurant by assuming that we want to establish the relevance of the chef's culinary art. This will be easy once the clientele's reaction to his dishes has been assessed, although quite difficult in advance to such a trial run. Also, value provided by his work will depend on the situation and size of the establishment, on the perfection of the service and on other complementary assets. The competing restaurants will also have their own chefs and the value of their skills will also influence the evaluation of our own chef's skills.

Scarcity

Scarcity is another requisite in obtaining rents, because if a factor is available to all or to most companies, they will be able to exploit it in the same manner, following similar strategies in turn. Remember that the competitive advantage arises when the current or potential competitors try, without success, to reproduce the strategy that created the value. As a consequence, a resource that is relevant, but not scarce, will be an operational prerequisite more than a source of competitive advantage.

To follow up on the above example, if the restaurant bases its advantage exclusively on the chef's skill, skills which are easily obtainable by any company simply by searching the labour market and hiring a person with similar knowledge and skills, then it will be impossible to avoid an infinite amount of competitors who will undermine any kind of extraordinary profit. All things considered, if any restaurant can easily and economically obtain the highest gastronomical skills, these will then become a prerequisite for operating in the sector.

Capacity of appropriation

The availability of valuable and scarce assets insures obtaining rents although it does not guarantee that rents will end up in the company. Therefore, in order to complement the above requisites the organisation must be capable of appropriating the rents generated by its resources. Otherwise, the performance that is achieved would not stay within the company ending up with the clients, the suppliers, the asset owners or with those that have the capacity to make them their own.

Thus, the question of appropriation of the generated rents is linked with two related aspects:

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(1) definition of the asset property rights, which are no more than a group of user rights (Jensen and Meckling, 1976); and
(2) the company's negotiation power against the asset owner.

An example of a restaurant will also illustrate this requisite. If the advantage is exclusively due to the chef's ability, his skills being scarce, then he, in turn, will renegotiate his salary to his benefit until he has appropriated a major part of the rent that is obtained. The alternative to his demands would be to lose him as an employee as well as the source of the rent itself.

All things considered, the advantages obtained will allow the company to keep their asset rent and if such were to be the case, make it their own. Now all that is needed is that this situation perpetuates itself in time, even if the competitors try to imitate the strategy and thus compete for the resources, apart from doing so for the final markets. The competitive advantage will be sustainable and will therefore endure with time if the available assets comply with the new additional conditions that avoid or hindrance the adversaries from following up with similar strategies.

Three requisites exist that insure maintenance in time of the rents flow:
(1) the assets should remain in the company;
(2) the competitors should not be capable of imitating the resource; and
(3) different assets with which similar strategies can be carried out should be non-existent.

Continuance

The continuity of the connection between the asset and the company is fundamental in order to maintain the strategy in time and likewise the competitive advantage. If this link disappears the origin of the rents is lost.

Imitation

If the asset is imitated by way of copying, industrial espionage or in any other fashion, then the imitator will find himself in a situation where a similar strategy can be carried out. When this takes place the scarcity of the resource disappears and the competitive advantage is far more difficult to upkeep.

Once again the example of the restaurant allows these requisites to be illustrated. Once again assuming that the clients are exclusively interested in the chef's art, well then, in the first place, if the chef decides to leave there is no reason whatsoever for the clientele's faithfulness towards the establishment simply for the pleasure of enjoying certain dishes. Second, if the competitors learn to prepare the menu with the same skill as our employee, the clients will be able to choose between them and us. The business would lose its distinguishing character and therefore future extraordinary profits.

Substitution

For the same reasons a strategic asset must comply with one last condition, this being that it should not be replaceable by another. If our advantage depends on the competition not being capable to carry out similar strategies due to a lack of adequate assets, the possibility of finding different resources that allow similar strategies would ruin the flow of competitive advantages.

In accordance to that underlined up until now, the strategic assets are those resources that are available to the company and, which being relevant and scarce, generate appropriate and sustainable rents. Appropriate because of the distribution of property rights and due to the negotiation power granted by the asset; sustainable because of their continuance in the company and because the assets cannot be imitated to perfection and are not easily replaced.

In summary, the value of an asset for an organisation will depend on relevance, scarcity, capacity of being appropriated, continuance, possibility of imitation and replacement, all of which make up requisites that become extrinsic factors of its strategic character.

Asset characteristics

The different factors referred to above will depend on the whole of the asset's essential characteristics, these being a manifestation of their own nature, thus the reason for them being denominated intrinsic.

Following we will refer to the degree of heterogeneity and transparency, duration, mobility and tradability value of the assets. Sometimes these characteristics depend on others which will also be analysed, these being the degree of codification, complexity and

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specific nature such as separability and mobility. The connections between each intrinsic characteristic and the extrinsic factors will also be pointed out. Table II shows a global vision of the established connections and these will be described later.

Heterogeneity

As opposed to precedent conceptual points of view, the parting point of the theory that leads the way towards resources is heterogeneity of the assets that are available to the companies, even if these belong to one same industry or sector. If two assets are homogenous, their composition and structure are similar and therefore they have common characters. This circumstance implies that the formulation and implementation of strategies permitted by these assets will be fully coincident.

On the contrary, two assets are heterogeneous if, due to their diverse composition or structure, the strategies allowed by the first cannot be implementated with the second or vice versa. Therefore, since they cannot be replaced, accessibility to the adequate asset is the key that will allow certain behaviours and strategies.

Heterogeneity falls into determining factor of relevance. Let us remember that, according to Barney (1991), competitive advantage necessarily arises from a strategy that cannot be simultaneously carried out by another competitor and the homogenous assets will only allow similar strategies. If all companies within a market have the same amount and quality of assets available and one of them conceives a more efficient alternative to satisfy the clients' needs, then the remainder of companies will be able to improve their results by imitating the pioneer's strategy. As a consequence, rents generated by any strategy will always have a fleeting character.

However, the resource-based view does not quite articulate the connection between heterogeneity and relevance, since the first does not insure the latter, at least on a short-term basis. However, on a long-term basis, market development does allow convergence between both to be assumed, by way of elimination of the less efficient heterogeneous firms.

Transparency

Transparency can refer to two levels. In the first place, it is understood as the possibility of identifying and describing the available assets at a certain moment. It can be seen that from the whole of elements that the company uses, those for which inventory can be carried out are very transparent, but as we move from left to right along Table I, opacity increases. Thus, physical assets are more easily identifiable, unlike individual skills and even less so in the case of capacities.

In the second place, transparency can be considered as comprehension of the effects that a certain asset or group of assets produces in the company. Lippman and Rumelt (1982) denominate this phenomenon as causal ambiguity, a concept with which they point out the uncertainty when it comes to finding causes or factors regarding management efficiency and which explain how ambiguity is related with the connections between actions and results.

Table II Connections between intrinsic characteristics and extrinsic determining factors

	Extrinsic determining factors					
Intrinsic characteristics	**Relevance**	**Scarcity**	**Appropriation**	**Imitation difficulty**	**Substitution difficulty**	**Continuity**
Heterogeneity	Positive	Without effect	Without effect	Without effect	Without effect	Without effect
Ambiguity	Without effect	Without effect	Positive	Positive	Positive	Positive
Codification	Positive	Negative	Positive	Negative	Without effect	Positive
Complexity	Without effect	Without effect	Positive	Positive	Without effect	Without effect
Specificity	Undetermined	Undetermined	Positive/negative	Without effect	Positive	Without effect
Duration	Without effect	Without effect	Without effect	Without effect	Without effect	Positive
Immobility	Undetermined	Positive	Positive	Undetermined	Undetermined	Undetermined
Inseparability	Undetermined	Positive	Positive	Undetermined	Undetermined	Undetermined
In-tradability	Undetermined	Positive	Positive	Undetermined	Undetermined	Undetermined

Notes:
Positive: The higher the degree of the characteristic, the higher the value of the determining factor
Negative: The higher the degree of the characteristic, the lower the value of the determining factor
Undetermined: Depending on other factors, the characteristic can incide positively or negatively on the determining factor

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The company's assets have three primary characteristics which either separately or jointly produce causal ambiguity (Reed and DeFillipi, 1990):

(1) how tacit or explicit a resource is, or the degree of codification;
(2) its degree of complexity; and
(3) its degree of specificity.

Codification is the ability that the company has to structure its knowledge in a group of identifiable and easily communicated rules and connections (Kogut and Zander, 1992). Thus, information can be codified through the use of different support systems and techniques, such as drafts, texts, diagrams, expert systems, etc. However, it is not possible to store all the information, because a part of it cannot be codified and it will be denominated as tacit knowledge, characterised by being difficult to identify and subsequently reproduce. Indeed, although a certain amount of tacit knowledge can be directly transmitted, most will probably be disorganised, informal and relatively inaccessible, making it potentially not transformable in direct instructions (Wagner and Sternberg, 1985).

Complexity arises from the interrelation between the company's assets and therefore will increase with the number of people, technologies, routines, etc. The connections between assets will grow more than in proportion to them, in such a way that with an arithmetic assets' increase the complexity will geometrically rise.

Specificity can be understood in two different ways (Grant, 1995):

(1) the value of the asset is less after a transfer since its productivity diminishes (Caves, 1971); and
(2) long-lasting investments that are committed in a specific transaction (Williamson, 1975).

In this sense, Klein *et al.* (1978) understand specificity as the dependence of one part of the rents generated by an asset with respect to other assets. In both cases, specificity implies that a good part of the economical value of the assets is conditioned to continuity of the managerial connection to which they are related.

Ambiguity or a lack of transparency, and likewise its three related characteristics, lack of codification, complexity and specificity present an important effect on several of the extrinsic determining factors of the assets.

Starting with ambiguity, this characteristic falls in the determining factors of appropriation, capacity to be imitated, substitutability and continuance. In the first place, the possibility of appropriation of generated rents increases as transparency is lost, because ignorance of the contribution caused by a factor to the value created by the company provides the same with an improved position for negotiating its reward. In the second place, the possibilities of a certain asset being imitated or replaced diminish if knowledge of what is to be reproduced is not exact. Finally, the competition's efforts to capture the resource that is generating rents will also encounter difficulties which, in time, will favour its continuance within the organisation.

So let us go back to our restaurant. Previously we assumed that the generated rent was due to one single chef's skills and therefore, relevant and scarce. We also considered the remaining factors as being non-significant. Let us remember that the company had difficulties in the matter of appropriation due to the monopolistic situation of the employee. As a consequence, salary demands would equal the level of rent generated by the worker who, in turn, would leave to another company if he were not satisfied. Let us observe how the situation changes if "causal ambiguity" exists. Since the connection between the chef's skills and the success obtained is not known, salary demands are more difficult to justify. Salary negotiation would use points of reference that would differ from "what the restaurant is earning and what it would no longer earn if the employee left", and they would be about "the market price for labour, with specific qualifications". Also, since his worth is unknown by third parties, it would be unusual for him to receive employment offers that would be more favourable.

Codification works with different effects for each determining factor, to such an extent that occasionally it can even be paradoxical (Kogut and Zander, 1992). On the one hand, if the asset were valuable then codification would easily allow its replica to be made within the company, thus promoting its relevance and increasing its continuity in the organisation. It also facilitates rent appropriation, since it alters the resource's

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property rights, as happens when an individual skill is codified and becomes an organisational capacity. However, when confronted with these positive effects other negative ones appear. Thus, competing companies more easily imitate codified knowledge and therefore it easily loses its quality of scarcity.

Let us continue with our example. The policy of maintaining an updated menu can be followed, one which within reasonable possibilities gathers the chef's knowledge. This presents diverse effects. First, the company could open more establishments to the public in other geographical areas with similar possibilities of success, which would increase the relevance of the codified knowledge; thus, due to this growth, a simple restaurant would have the opportunity to become an important restaurant chain. Second, the negotiation position with the employee would be strengthened in such a way that if he does finally leave the company, his decision will not imply a catastrophe. In this new situation, if another ideal chef is not found the trade can be taught to another person. Third, the menu can be copied and sent to the competitors, this action resulting in devastating consequences for the business.

The most immediate incidence of the complexity is how the difficulty to imitate increases, because it is much easier to reproduce a simple connection between resources, rather than a group of links that are highly integrated and structured on several levels. Although it also influences in appropriation of the generated rent, since it gives the company increased negotiation power because the organisation's role as manager of complex connections is perceived as being more important than that of an isolated factor.

Let us assume now that the chef's skills, however important, are not the only ones that contribute to the firm's success. The person in charge of supplies obtains exceptional produce. Service is fast, refined and exquisite. The establishment is remarkably located in the town centre and a well kept, pleasant atmosphere is achieved in the spacious salons, with decoration being frequently renovated. Also, the members of a sports club and their followers visit regularly because they feel emotionally attached to the place. Altogether, although it is quite clear of the firm's success, the complexity of factors does not allow us to distinguish exactly which ones are the motives. As a consequence, a salary request from the chef which exceeds the market price has no reason of being. On the other hand, the competition's attempts to imitate will not be limited to a simple menu, but will extend to an ample group of assets and their connections, which is always far more difficult.

Specificity is another characteristic that plays an important role in appropriation, since future rent depends on continuity of the firm connection; however, as specific knowledge of a particular company is developed, dependence will be mutual and a bilateral monopoly situation will take place in the sharing out of rent. It also influences substitutability, since the difficulty of finding interchangeable resources will be greater if these are specific rather than generic, a higher degree of specificity will imply fewer possibilities for substitution.

In our restaurant there is a kitchen assistant who is in charge of making the "targine sauce", a variety of tartar sauce that has made the fish dishes quite famous. Although he started out by assisting the sauce course, the knowledge that he needed in order to execute the necessary mix for this preparation has been arrived at after years of searching and accumulating experience. The result is a characteristic base taste, base of the most famous delicacies that can only be tasted in this establishment. In order to carry out this single task, the kitchen assistant has the aid of a complex kitchen robot that the company purchased through his urging and which was assembled by the manufacturer according to his specifications. It is a construction with many arms and accessories that only he knows how to programme.

This is the situation in which the appropriation problem arises. On the one hand, the worker is the exclusive holder of what has become an essential skill for the organisation, the elaboration of the "targine sauce", therefore finding himself in a privileged situation for negotiating. Although, on the other hand, no other restaurant has interest in elaborating this type of sauce, because they do not perceive its importance, their menu is already organised in a different manner and they would not be willing to incur the costs of such specific equipment. A change of job would mean starting his professional career from scratch, thus wasting the work he has accumulated over the years. As can be seen, a bilateral monopoly situation is created between the company and the worker, in such a way that a salary negotiation is not foreseeable.

Duration

Duration of the assets varies enormously according to the nature of the asset. Physical assets, which are normally subject to obsolescence processes, suffer depreciation, while immaterial, such as corporate image and brand, once they are obtained their value can be maintained and increased with relative ease. Duration of individual skills will depend on the holders' continuance in the company; however, if the company has the adequate codification procedures or organisation training available then the skill will not depend on a specific individual. As of this point, organisational routines tend to remain in time and even improve, as operational experience is obtained.

Duration of an asset is an intrinsic characteristic, which will fall in its continuance within the organisation, otherwise its disappearance would mean that the company would lose it along with the rent it generates.

Mobility

Mobility is understood as the possibility of transferring the resource from one unit to another within the company or from one company to another. This characteristic manifests a fundamental difference in the assets based on information, since moving tangible assets means not having them available in their origin, while, in general, intangibles can be moved about by way of replica, transfer or imitation without forsaking them in the origin unit.

Immobility of some assets insures heterogeneity in their distribution between companies. Since they are not instantly accumulated the need of time insures persistence of differences when it comes to the supply of resources, at least on a temporary basis.

Separability and tradability are facets of one same characteristic, mobility. An asset is not separable if its existence is only explained by integration in another group of assets. The possibility of separating the resource from the rest of elements in a company, while maintaining its essence, is typical to physical and financial assets, while in the case of intangibles it will depend on their nature. In general, resources are less separable as we move towards the right in Table I.

Tradability of a resource is the possibility of it being purchased or sold in a factor market. It depends on the definition of the asset's property rights and the existence of organised markets (Barney, 1986). Strategies that require certain assets can only be implanted if the strategist has said assets available. If they cannot be obtained on the market the acquisition methods will be reduced and along with them the possibility of executing the strategy. It can even mean that the only way to obtain them is through an internal accumulation process, which can be slow and expensive (Dierickx and Cool, 1989).

Mobility, separability and tradability will influence in two extrinsic determining factors, scarcity and appropriation. Indeed, the difficulty or impossibility of obtaining a resource on the market is a necessary condition so that it will be scarce, because if it is susceptible to marketing it can be acquired through purchase. In which case its price would be an obvious sign of its degree of relevance and scarcity. However, an organised market requires the possibility of freely transferring the property rights of a factor, which would therefore then be well defined. Consequently, we would say that if the asset is mobile, separable and/or marketable the possibilities of generating rents and/or appropriation are substantially reduced.

Table II offers a global view of the incidence that the fundamental characteristics have on the determining factors of the assets. The positive or negative effect is pointed out in the table. Occasionally the influence of the characteristic on the determining factor will depend on some aspects that have not been taken into account in this work; in said case it has been considered indefinite.

Conclusions

Firm assets have a tremendous explanatory capacity of the ultimate causes of competitiveness in the company. However, from among all the available assets only some of them will provide competitive, sustainable advantages in time, due to their strategic character. This will depend on six requisites which we have denominated as extrinsic determining factors, these being relevance, scarcity, appropriation conditions, continuance in the company and the imitation or substitution possibilities of the competition.

In turn, the role of the mentioned determining factors is linked to the fundamental or intrinsic characteristics of the asset, as is represented in Figure 1, in which the polyvalence of codification stands out.

From this perspective if the reasons that lead an asset to be strategic are reviewed, it will be observed that the less it is sustained on material elements the more possibilities it has to acquire this characteristic. Without doubt in the measure that it is dematerialised it will gain in heterogeneity and in ambiguity, it will be more complex and specific, its duration will increase and its mobility will decrease.

Finally, it must be pointed out that as a consequence of all of the above, the map for firm assets will take on the shape that is shown in Figure 2. As can be seen, a physical asset would not acquire the quality of strategic unless it is with difficulty. Above all, sustainable advantages will be based on capacities; in particular, those of a secondary order, such as organisational learning, followed by the employees' skills and inventory due to their importance.

Figure 1 The link between non-strategic and strategic assets

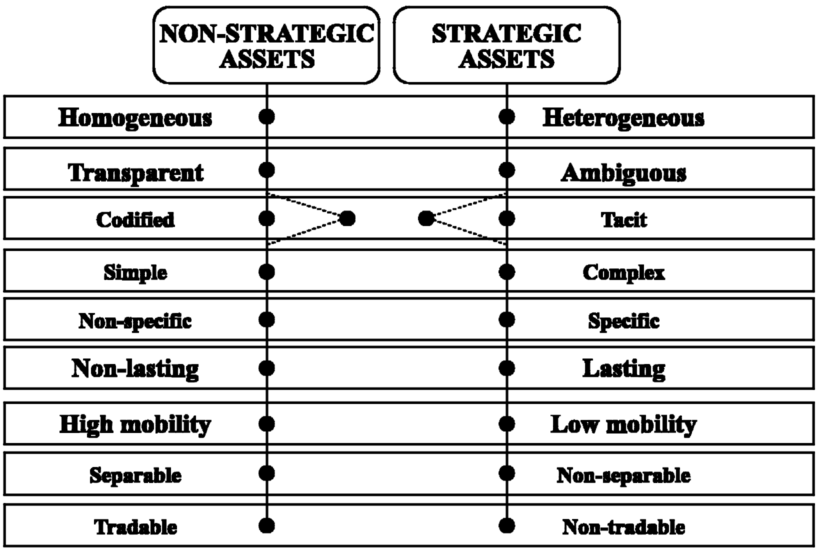
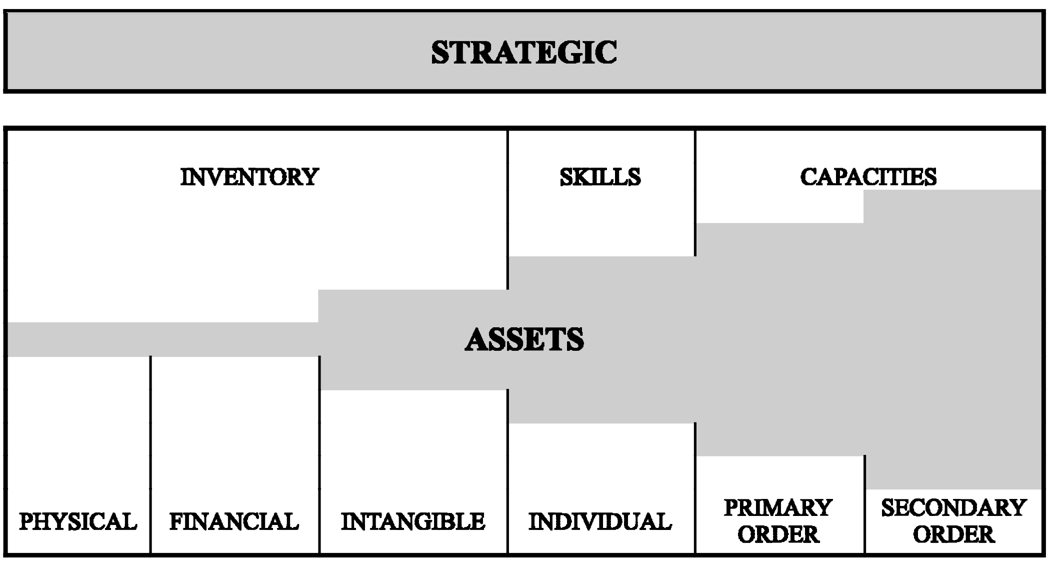


Figure 2 Strategic assets map



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References

Amit, R. and Schoemaker, P.J. (1993), "Strategic assets and organizational rent", *Strategic Management Journal*, Vol. 14, pp. 33-46.

Barney, J.B. (1986), "Strategic factor markets: expectations, luck and business strategy", *Management Science*, Vol. 32 No. 10, pp. 1231-41.

Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Caves, R.E. (1971), "International corporations: the industrial economics of foreing investment", *Economica*, Vol. 38, pp. 1-27.

Dierickx, I. and Cool, K. (1989), "Asset stock accumulation and sustainability of competitive advantage", *Management Science*, Vol. 35 No. 12, pp. 1504-11.

Grant, R. (1995), *Contemporary Strategy Analysis. Concepts, Techniques, Applications*, Blackwell Publishing, Oxford.

Itami, H. and Roehl, T.W. (1987), *Mobilizing Invisible Assets*, Harvard University Press, Cambridge, MA.

Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behavior, agency cost and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-60.

Klein, B., Crawford, R.G. and Alchian, A.A. (1978), "Vertical integration, appropiable rents and the competitive contracting process", *Journal of Law and Economics*, Vol. 21, pp. 297-326.

Kogut, B. and Zander, U. (1992), "Knowledge of the firm, combinative capabilities, and the replication of technology", *Organization Science*, Vol. 3 No. 3, pp. 383-97.

Lippman, S.A. and Rumelt, R.P. (1982), "Uncertain imitability: an analysis of interfirm differences in efficiency under competition", *The Bell Journal of Economics*, Vol. 13, pp. 418-38.

Porter, M.E. (1991), "Towards a dynamic theory of strategy'', *Strategic Management Journal*, Vol. 12, Winter, pp. 95-117.

Reed, R. and DeFillippi, R.J. (1990), "Causal ambiguity, barriers to imitation, and sustainable competitive advantage'', *Academy of Management Review*, Vol. 15, pp. 88-102.

Schoemaker, P.J. (1990), "Strategy, complexity, and economic rent", *Management Science*, Vol. 36 No. 10, pp. 1178-92.

Wagner, R.K. and Sternberg, R.J. (1985), "Practical intelligence in real world pursuits: the role of tacit knowledge'', *Journal of Personality and Social Psychology*, Vol. 49, pp. 436-58.

Williamson, O.E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications*, The Free Press, New York, NY.