Internationalisation process from a resource network perspective

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ABSTRACT

The aim of this paper is to contribute to the development of the Internationalization Process Model (IP model) through the use of a resource network perspective, based on industrial network theory. According to the IP model, firms internationalize through an incremental path characterized by small steps that are dependent on the firms and the networks resource combination. In this paper, it is proposed that the resources play a key role in the internationalization process of a firm. Resources are heterogeneous (in terms of nature, location and specific characteristics) and they are classified into four categories: products, facilities, business units and business relationships. Firms' internationalization process paths are different from one another because of the different internal and network shared resource structure, the commitment towards specific resources, the influence of different internationalization motives (exogenous and endogenous factors to the firm) and of a firm's choice of entry mode (trade or foreign direct investment). By using a resource interaction and network perspective, we identify how the combination of all the above factors determines the emergence of specific "bridgehead resources". We conclude that, despite possible differences in a new market, a firm's internationalization process is characterized by an incremental and structured resource commitment. This process assumes a cyclical pattern, caused by the firm's change in commitment towards different specific resources. Thus, at each different internationalization phase, the firm's commitment is towards a new specific resource that characterizes each step and constitutes the basis for the following one. These concepts are exemplified through the case of Ericsson's entrance to the Japanese market.

INTRODUCTION

According to the IP Model (Johanson and Vahlne, 1977 & 1990) and the Industrial Network Approach (Håkansson and Johanson, 1988), a firm engages in international operations by committing to a specific market through activities and networking, at an incremental pace. Starting from the assumption that commitment to a new market can be directed to specific external business relationships (new customers and suppliers), to entire networks (new foreign market) and to a firm's internal assets (new products and new production units), we argue that a firm's internationalization process can be considered as a series of specific resource commitments in time. The IP model presents four determinants of a firm's internationalization process: market commitment, market knowledge, current activities and commitment.

Resources are involved in all four factors; for example, market commitment is expressed by different resource commitments and current activities are generated and dependent on available resources. However, resources are not all the same for all the firms and all the time. So, *why would a firm entering a new market commit itself to a certain resource and not to another? What kind of resources can launch a firm into a new market and under which circumstances*? After answering these questions, we identify the different *control and risk levels* connected with the commitment to different specific resources.

Our aim is to *explore* resource commitment in a firm's *internationalization process* by using a *resource network perspective* (resource interaction and interdependencies - Håkansson and Waluszewski, forthcoming 2002). Resource commitment is driven by internal as well as external factors to the firm. The influence of such factors on resource commitment decisions results in different internationalization paths for different firms. Moreover, a firm's commitment to a specific resource (i.e. a bridgehead resource) and to many different subsequent resources is caused by the impact of different internationalization *motives* (internal and external factors to the firm). Resource commitment is then influenced and limited by the entry *mode* selected by the firm (trade or FDI).

Industrial network theory provides the framework to investigate a firm's initial commitment to a new market, to identify *bridgehead resources* and describe their role. It may also helps in explaining the incremental evolution of resource commitment.

We follow the resource classification used by Håkansson and Waluszewski (forthcoming, 2002) and Baraldi and Bocconcelli (2001): *Product (P), Facility (F), Business Relationship (BR) and Business Unit (BU).*

A firm's entry process in a foreign market is influenced first of all by its entry *motives* and secondly, by the selected entry *mode*, which leads the firm to start by committing to the first specific resource, the *bridgehead resource*. With the term bridgehead, we refer to a pioneering foothold, a forward position in a new country, which serves as the basis for further advancement. In other words, it is the firm's first step in a new market (e.g. an agent or a customized product). We define "bridgehead resource" as the first commitment to the new market. It is the single specific resource that constitutes the

foothold and the bases for the firm's expansion in the new country. The bridgehead resource could be a product, a facility, a business relationship or a business unit.

According to the IP model, subsequent commitment steps are based on network-interaction, current activities and experiential knowledge. Thus, resource commitment grows incrementally through resource combination and recombination based on the pool of preexisting resources. Moreover, a firm's internationalization process is characterized by a shift in relevance between specific resources in different steps. An incremental "*resource commitment cycle"* is the result of such a phenomenon.

INTERNATIONALIZATION PROCESS AND THE NETWORK APPROACH

The IP model (Johanson and Vahlne, 1977 & 1990) explains "how" firms enter a new market as an evolutionary incremental process characterized by small steps. It includes every step from the first international deal to the decision to locate ones' headquarters in a foreign country and it involves both buying and selling abroad, as well as producing and cooperating in a foreign market. Our purpose is to look deeper into the firm's establishment chain in a foreign country. Therefore we do not consider firms that just trade or the case of disinvestment.

The evolution of a firm into a foreign market is characterized by the interaction of four components: *market knowledge; market commitment; commitment decisions;* and *current activities* (Johanson and Vahlne, 1977). Market knowledge and market commitment are assumed to impact upon resource commitment and current activities. Market knowledge and market commitment, which are directly affected by current activities and commitment decisions, are also strongly tied to resources. In fact, market commitment is mainly constituted by resource commitment. Market knowledge, which is often included within resources, and is gained through resource interaction, is mainly about the external network (actors, activities and resources). Moreover, commitment decisions concern already existing resources, as well as potential new ones. Activities are based on the existing resources and new ones are originated because of new resource commitment. The process generated in this way is seen as a casual cycle and the interplay between the four factors generates a pattern of internationalization that is identified as *incremental local resource commitment* (internationalization in small steps).

From a network perspective, a firm is seen as an open system that has relationships to the surrounding network. These relationships are part of the firm's network context and constitute a source of impact for the firm (Blankenburg, 1995). Moreover, the firm's entry process into a foreign country is seen as an interactive and long-term unpredictable evolution, during which the firm reacts and adapts to events. The network approach sees the market as a group of actors with different roles, linked to each other by exchange relations (Snehota, 1990). Thus, on one side, there is the market formed by a system of relationships, and, on the other side, there is the firm acting in a network populated by certain actors, resources and activities. These three elements (actors, resources and activities) are the basic concepts describing industrial networks. They are related to each other in the overall structure of networks (Håkansson and Johansson, 1988). The model presumes a cumulative process, where relationships are constantly established, developed and broken. The gradual and stepwise relationship development enables constant learning, a successive reduction in uncertainty, increased trust between actors and further resource commitment. The interdependence of an organization on other entities makes it difficult to disconnect the organization from its network (Håkansson and Snehota, 1989), and it involves increasing resource interaction. This points to the fact that external factors, such as the position within the network and strong business relationships with certain actors, exert great influence upon the firm's strategic decision making. Generally, such decisions are about market and demand screening, segment targeting, products, entry mode, sales and the level of resource commitment.

Interaction with the actors in the network demands a resource commitment (in terms of business relationships, production facilities) and the building-up of strong network resource ties. These can be of a different nature, such as technological, cognitive, temporal, social, economical and legal. Tied resources become interdependent and their interaction involves one or more activities. Thus, within a network, a firm's resources are created, shared, transferred, combined, adapted and transformed (physically and economically).

The resource perspective

The theoretical framework used in this article is inspired by the industrial network approach as in Håkansson and Snehota, (1995) and Johanson and Mattsson (1987).

Moreover, it specifically focuses on the resource dimension. To fulfill the aim of exploring the internationalization process through a resource perspective and thus to investigate firm's commitment towards different specific resources, we use a model developed to map resources (Håkansson and Waluszewski, 2002). This classification groups resources into four typologies: *products*, *facilities*, *business units* and *business relationships*. These four different kinds of resources are described in the following table (Baraldi and Bocconcelli, 2001).

Table 1. The four kinds of resources.

Resource	**Description**
Products (Ps):	Any artifact or service (raw materials, components or finished goods) exchanged between units, facilities or firms
Facilities (Fs):	Technology, equipment and other facilities used to produce or transform (physically or economically) the firm's products. (E.g. production, assistance, research, distribution, storing and retail facilities)
Business Units (BUs):	The organizational structure and the more immaterial type of resources such as competence, knowledge, routines, skills and personnel's ability. In order to be considered as such, a BU requires moreover an identity, financial resources and economic accountability, allowing them to interact with other BUs (and Fs)
Business Relationships (BRs):	The substantial links, ties and bonds resulting from the interaction between different BUs (internal and external to the firm). BRs are explicitly considered as resources because of their value for the involved firms. Moreover, BRs are resources that can be used as strategic tools in order to achieve certain goals in the wider network

According to Baraldi and Bocconcelli (2001), BUs and BRs are *social* resources that organize the more *physical* Ps and Fs. Moreover, Ps, Fs and BUs are seen as a result of interaction processes and BRs connect over time, exchange and interaction episodes between buying and selling units. Thus, a BR brings together interaction patterns where the other three types of resources are involved.

Resources are heterogeneous by nature. This characteristic is exploited by the firm through its activities and enhanced through a combination of network resources. In fact, it is only through the interaction with others that a certain resource can be transformed (enhanced, reduced or simply modified in value and/or characteristics). At a general

level within a firm and its network, resources are highly interdependent (e.g. P1 is made under F1 and F1 is adapted to P1 specific characteristics and the specifications made by BU1). *Resource interaction and interdependencies imply adaptations and nurture activities*. These activities can be firm driven if located exclusively within the firm boundaries and if isolated from the influence of external factors. But activities are often shared within the network and dependent on many actors' behavior and on the integration with many other different resources. For example, a certain product's value is affected by its very own nature (e.g. raw materials and their scarcity). However, it also depends on the firm's business relations with certain suppliers (BR1, 2, 3) of raw materials and components. Moreover, the product's characteristics and value depends on the production process performed by a certain production facility (F1). If F1 has an excellent level of efficiency and advanced technology, the value of the product will certainly increase. On the other hand, F1 has to match the characteristics and needs of P1 in order to enhance both its output and contribution to the product value. Moreover, the product may eventually be distributed to the facility (F2) that has to be adapted to the product characteristics. At last, the product might also be adapted through BRs to customers to meet their specific needs. From a network perspective, this can provoke a chain reaction on other actors connected to this dyad (buyer and seller) and especially to the overall combination of resources. This example points out the criticality of resource interdependencies and how a resource changes role and characteristics by "interacting" with other resources.

Resource heterogeneity (Penrose, 1959) and resource interaction (Håkansson and Waluszewski, 2002) are of fundamental importance for a firm when internationalizing. The core issue is how different resource characteristics and the different resource combinations affect the value and role of a firm's resources in the internationalization process, to the point of empowering one specific resource as a firm's "*bridge-head resource"* to the new market.

In this paper, while we do not focus on a specific type of resource, we are interested in that one which acts as a bridgehead into a new market. It can often be the case that a firm penetrating a new market uses more than one resource, but only one of those is determinant and can be labelled "bridgehead". To identify which resource is the bridgehead among the different ones initiating the internationalisation process, it is

possible to proceed first with a chronological investigation and secondly, by identifying the specific effect in terms of market penetration, for each single resource commitment action. For instance, Ericsson could enter steadily into the Japanese network through a specific BR (1989) with a local actor, but without the pre-existing Ericsson business center (1985) located in Tokyo that could not have been done. Thus, it was the Ericsson Tokyo BU, the fundamental resource (both chronologically and in importance) that provided the bridgehead for Ericsson into the Japanese telecom market.

BRIDGEHEAD RESOURCES

The entry process of a firm in a new market is a result of the interaction between the firm and the network. This also means that the process is dependent on the network context (e.g. the firm's role within the network, dependence relations, depth of resource ties) and on the firm's organization and structure (e.g. product typology, level of internationalization, experiential knowledge, amount of resources, technological development, sales and profits). A firm's decision to enter a new market is due to different factors. These internationalization *motives* can be distinguished in exogenous and endogenous factors to the firm and can work in the same direction or be conflicting. In the latter case, one of those forces will be dominant and determine which resource will have the bridgehead role.

Moreover, exogenous and endogenous factors influence the *entry mode* in the new market, which could be either trade or FDI. For example, small firms with limited resources and international experience are often forced by these endogenous factors to select trading as entry mode. Trading could also be the result of exogenous factors such as country risk or limited demand. FDI would be a better option for larger firms or for those countries with particular trade conditions that require direct investments.

Internationalization motives and modes

We may classify a firm's *entry motives* as exogenous or endogenous:

Exogenous factors are externally rooted and are mainly due to network effects and changes in the environment. It can be the case of a firm that follows customer expansion in other countries. In fact, an important client could ask and force the firm to supply it (e.g. open a F or a BU) in new foreign markets where the client has also established its new business (Majkgård, 1998). It could also arise where the firm is discovered by new

customers coming from countries where the firm has no previous contact. In this case, the firm would find itself internationalized into a new market without any previous intention or plan. Other motives that drive a firm into a new market are of a competitive nature. For example, in the case of global players, a single market is considered to be just a step within the globalization process. A firm could also be forced to enter a specific market before the competitors do, in order to enjoy a first mover advantage. Finally, certain resources (e.g. labor force) can be present (or convenient) *only* in certain countries and therefore the firm is forced to enter them to access them.

Endogenous factors that stimulate (or coerce) a firm to enter a foreign country include such factors as the firm's specific advantages (e.g. product, technology) and knowledge-exploiting strategies. Another typical example of an endogenous factor is the excess in production capacity and the need to find new demand. Moreover, there can also be an internal drive to seek new resources. In this case, the firm is looking for resources such as input materials, knowledge and technology in new locations.

The above factors directly influence a firm's overall internationalization processes, both in terms of typology of steps taken and degree of resource commitment. This has also an impact on the firm's choice of entry mode. The firm has several possible *entry modes* into a foreign country that differ from each other mainly in terms of the *degree of control*, the level of *investment*, the *level of risk* and the *degree of involvement* in the foreign network. The entry modes range from trading (exchange of goods or services) to licensing, and from joint ventures to wholly owned subsidiary's (green-field or acquisition). Each of them presents different specific characteristics depending on the specific firm, industry, context and country characteristics. In this paper, we limit ourselves to considering only two extreme cases, trading and FDI. The other two alternatives (JV and licensing) can be considered as intermediate solutions and are excluded because of their very small meaning in the overall argument presented in this paper.

These two different ways of approaching a foreign market lead to different results, especially in terms of control and commitment. FDI provides the company with a much greater degree of control, but requires a much higher commitment to the market compared to trading activities.

Another important issue to be considered when dealing with entry modes is the firm's internal characteristics such as size, amount of resources, degree of internationalization, amount of experiential knowledge, unique competencies, typology of products/services, efficiency and level of profitability. All of these elements delimit the firm's choice of entry mode. For example, it is much easier and less risky for a large multinational company which has large resources at its disposal, unique technologies and knowledge, and that is already present in several foreign markets, to enter a foreign market through FDI, than for a small firm with limited resources (e.g. capital and knowledge) that is contemplating its first attempt at internationalization. What is important to point out is the fact that the overall process of market entry is incremental for all kinds of firms. In other words, all firms proceed step by step, although those steps might differ from one company to the other[1].

The four different bridgehead resources

Firms sometimes are not fully aware of what direction they are taking when internationalizing. In fact, a firm may have entered a foreign market without having even planned it. A firm can be considered to have entered a foreign market when one or a set of exchange relationships are developed in that market; when it has reached a position within the new network; and when it is trusted (Blankenburg, 1995). However, this does not mean that it is always a business relationship that is the bridgehead resource to a new market. The BR is the modality that the firm uses to *institutionalize* in the new network, but it can be another resource (P, F or BU) that the firm uses to penetrate the market. What are the factors that determine what specific resource will be the bridgehead into a new country? What does the specific bridgehead resource mean to the firm in terms of control and commitment?

At a general level, it is difficult to separate cause and effect regarding a firm's interaction with its network, but, by limiting the focus only to the resource dimension, the dynamics (firm's endogenous and exogenous factors) behind the emergence of specific bridgehead resources in different circumstances can be identified. The emergence of the bridgehead resource is dependent on: (1) the dominant entry motive;

[1] For example, a firm with large resources available and long international experience will probably enter in a new market with FDI, but a small firm would start with only a sales agent. Anyway, both firms will increasingly commit to the foreign market at similar pace (proportionate to their initial step and to their overall pool of resources) during their whole internationalization process.

(2) the locus (internal or external to the firm) of such motive; and (3) the most suitable entry mode in accordance with the firm characteristics and possibilities and the network characteristics and pressures (Figure 1).

Figure 1. Bridgehead resources classification.

Choice of entry modes \ *Locus of entry motive*	**Endogenous**	**Exogenous**
Trade (Market)	PRODUCT	BUSINESS RELATIONSHIP
FDI (Hierarchy)	BUSINESS UNIT	FACILITY

In the above matrix, each of the four resources (Product, Facility, Business Unit and Business Relationship) can be seen as a "*bridgehead resource*" resulting from the combination of entry motives (endogenous or exogenous) and entry modes (trade or FDI). For the firm, each of the four resources implies different levels of control and commitment. This has direct consequences on both the firm's future activities in the new market as well as in the home country. Commitment also has to be considered in relation to the overall firm's resources and not by just looking at the commitment within the new market. In fact, resources that are employed for the activities within a certain market can be created and located elsewhere (outside that market and back in the home country – e.g. new production technologies) and must always be evaluated in relation to the overall firm's resource network[2].

Product (P). When the *bridgehead resource* to the new market is a product, there are no on-going or previous BRs with customers or suppliers within that market. The resource

[2] For example, a small firm investing in the home country in new machinery so to double the production capacity in order to be able to serve the new market, has high commitment towards the new market, although no investments or no resources are located within the boundaries of the new country.

P could be a raw material, component or a simple product, probably sold in large quantities and with relative low unit price (both B2B and B2C)[3]. However, it could be the case of a patented product or a very advanced high-tech product with unique features. In this case, the product itself constitutes the firm's specific advantage and it is the key to access the new market. The driving *motive* is endogenous to the firm. It could be a production overcapacity of a product that is suitable for many different markets without any change (standard) or that is patented, unique or non imitable. The entry *mode* is trade, as there is no need to be present in the market with a BU, because there is no need for direct contact with or assistance to customers, as there is low perceived risk for product imitation or the cost of establishing a subsidiary abroad (BU) could not be justified by the firm. This case of market entrance through the aid of the bridgehead resource P generally does not call for large commitment[4] or investments, but, as a result, it does not provide a high degree of control over the local activities.

Business Unit (BU). When a business unit is the *bridgehead resource*, the *motive* has to be found internally within the firm. Typically the firm is resource or market seeking. Critical is the level of experiential knowledge, which influences uncertainty and risk perceptions related to the new market. The lower the risk perceived, the higher the resource commitment. Entering with a BU shows a clear intention by the firm to keep control over the activities within the new market. The *entry mode* is FDI and it could be justified by the difficulty (because of import/export tariffs) or inconvenience (because of transaction costs) of trading; the need to protect specific advantages (technology, products, knowledge) or to keep control over the activities; or, the wish to be near the market (for learning through direct experience). The degree of control obtained by the firm is rather high and the commitment depends on the size of the BU. To be a true bridgehead resource, the BU should not be derived from an already established BRs or Fs in that country and should not follow any previous trading activity. In other words, the BU should be the first step that the firm ever takes in that country.

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[3] It could be, for example, a very simple, low-tech product such as pencils. A pencil is a standard product that does not need any adaptation for any country it is sold into. No special knowledge of the foreign market is needed and the product characteristics themselves are the key for the firm expansion.

[4] The volume of goods/services sold in the new country is also an important measurement of the degree of commitment to the market. Often, although investments in the new country are small, the firm devotes a big share of its resources located in its home country to the trading activity with the new market. Thus, this has to be considered as a high level of resource commitment.

Facility (F). A facility can be a *bridgehead resource* if the firm does not have any previous BR with any local customer or supplier and no products have been sold in that specific market. Moreover, no BU should have been established in that country before. Examples of Fs are production, distribution, storing and retailing facilities. A F has the function of transforming physically and economically the firm's products[5]. The *motive* is generally a network effect. Often the main driver is the economic convenience in conducting such an activity in-country. For example, for many years, production facilities have been located in different countries on the basis of labor costs. It can also be a result of legal constraints (import/export tariffs) or the necessity to be very close to the resource supplies (natural resources need to be refined in locus). It could also be the result of an acquisition. In fact, it can happen that when large firms are acquired, the buyer gets many different assets and facilities in many different countries. As for the *entry mode*, that is FDI. Whatever kind of facility requires a certain level of investment and resource commitment (capital, technology). As for the degree of control, it is rather high if compared with the other possible bridgehead resources.

Business Relationship (BR). The fourth and last case of *bridgehead resource* is the business relationship. BRs are typically with customers, suppliers or other institutions. A BR is a direct result of the interaction between the firm and the other actors in the network. From the industrial network tradition, a BR is considered as shared resources between more than one actor in the network. They can be measured in terms of intensity, duration, trust and degree of commitment between the parties. For a BR to be truly the bridgehead resource, no BUs or Fs should have been established previously in the new market.

A BR emerges as a bridgehead resource in connection with client-following strategies. However, it could also happen that a supplier establishes a BR with the firm and drives the latter to enter the market. In fact, firms are sometimes firms contacted by a new supplier with unique assets or capabilities that best match the firm's needs and enhance its stock of resources (a new technology or a very convenient product price). All these kinds of *motives* must be considered as having a direct effect on the firm's interaction with the network. The *entry mode* is trading and it is justified by the fact that BRs are

[5] At more micro level, equipments, technologies, IT systems, transportation means, etc. can also be considered as facilities.

generally based on the exchange of products or services. Control and commitment are shared between the firm and the counterpart and they are different from case to case.

INTERNATIONALIZATION PROCESS FROM A RESOURCE PERSPECTIVE

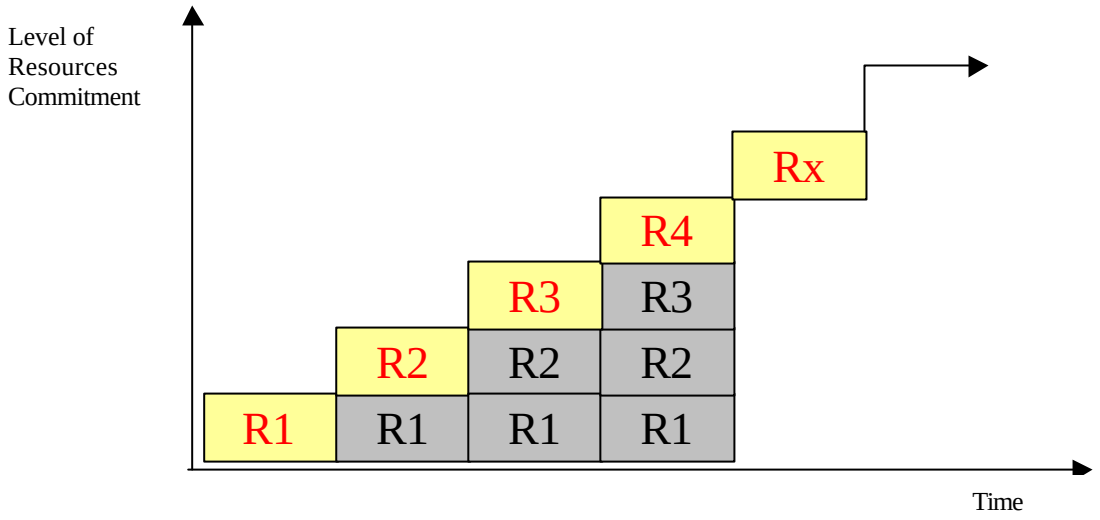
Resources are heterogeneous by nature (Penrose, 1959). Their value, role and features depend on their level of idiosyncrasy and on their combination with other resources. Generally, resources are interdependent; they are influenced by the firm's activities, commitments and network relations. As a consequence, resources and their roles constantly change because of new combinations with other resources.

The issue of resource heterogeneity is very relevant within the process of internationalization. Each resource is conditioned by the firm's own resources and organizational settings (routines, IT systems, corporate culture), and by the resources location in the external network where the firm is embedded. The firm's network activities and resource network interactions constantly provide the firm with growth possibilities that represent opportunities to internationalize. A *firm's possibility to internationalize is provided by the network and particularly by network resource interaction*. Moreover, *resources can be seen as key tools for internationalization*: as a market entry tool (bridgehead resource) and incremental growth tool (cycles of different resource commitments and the emergence of new activities).

We conceptualize the internationalization process as an evolutionary process characterized by the firm's interaction with the surrounding network and by an incremental resource commitment. Such is a process that depends on the firm's actions and the network's reactions and vice versa, and on the combination and recombination of specific resources. Committing to a certain resource (e.g. a BR) has consequences for both the firm and for the network. For the firm, resource commitment means the disclosing of new opportunities and the starting of new activities. Both these elements have a clear relevance for the firm; new opportunities mean new possibilities for growth. Resources are the tools used and activities allow learning and experiencing. Learning reduces uncertainty and has a positive effect on the perceived risk. Thus, decision-making, based on the experiential knowledge gained through current activities and the perceived market risk, entails greater and greater resource commitment for each

new internationalization step. The result is an *incremental resource commitment process*, as illustrated in Figure 2.

Figure 2. Incremental resource commitment in the internationalization process.



We argue that interacting resources condition each other and that a new resource commitment is always based on the already existing stock of resources. The commitment to a new resource is primarily caused by the firm's prior resource commitments (path dependence), which provided the opportunity for the new step. For example, a close BR with a customer can create the possibility for the development of a new product based on the knowledge gained through that BR. Another example is the excess of production capacity of a facility that drives further expansion (demand-seeking) and commitment to new BRs (customers).

The process described in Figure 2 is in accordance with the IP model and describes the pattern of such a process as incremental commitment to the market. However, we define this commitment in terms of specific resources. Every single resource-commitment action is focused on just one of the four resources (P, F, BU or BR). The commitment to a first specific resource will be the basis of the commitment to a successive one. In this way, resources built on each other and their value changes accordingly to their always-new combinations. Thus, it is possible to *identify and classify each step of a firm into a new country according to which new resources the firm commits to and to the overall level of the current resource commitment*. By describing the steps into a new market in

terms of commitment to specific resources, it is easier to understand the degree of control held by the firm and the level of perceived risk.

Moreover, the different steps and the commitment to different resources generates changes both within the firm and in the surrounding network. By committing resources, the firm positions itself in the new market and assumes a specific role within the network. As new BRs are established, new Fs are probably needed due to increased demand. BUs will also grow accordingly and so on. This is an illustration of the on-going interaction between the different resources.

A sort of resource cycle takes place in the expansion process of the firm in the new market. The commitment to a certain resource set the basis for the next one. This mechanism is driven by imbalances in resource capacity and utilization. In this resource commitment cycle, though, there are no predefined orders. In other words, it is not always a business unit that follows a business relationship, or a facility that is built-up because of a new product. The order in the sequence of resource commitments is determined by the specific firms' and the network's characteristics. But, a firm's network context constantly changes throughout the internationalization process due to continuous network interaction. Thus, resources change and combine differently as a result of the interaction with the network. Each different step of the internationalization process is dominated and characterized by a different resource.

This cycle differs from firm to firm and its characteristics change depending on: (1) the specific combination of exogenous and endogenous factors that drove the firm's entry process; (2) the specific bridgehead resource used; (3) the current resource combination; and (4) the firm and network characteristics. A representation of the resource commitment cycle follows in Figure 3.

At each new internationalization step, there will be a shift towards a new type of resource. The other resources at this point are already institutionalized and activities and routines are established among them. The new resource is still under exploration and a lot of effort is required to set it into the existing resource network.

Whereas different exogenous and endogenous factors affect the choice of the bridgehead resource, the latter will influence the next resource that the firm commits to the market. In the same way, at each successive step, the firm's new resource

commitment and the resulting new network resource combination stimulate and provide the basis for the further growth of the firm.

Figure 3. Resource commitment cycle.

THE CASE OF ERICSSON'S ENTRY INTO THE JAPANESE MOBILE PHONE MARKET

In 1985, the deregulation of the Japanese telecommunication market started and NTT, which had held a government monopoly on domestic telecom services in Japan since 1950s, was privatized. Japan introduced its first mobile phone in 1979.

In the beginning of the 1990's, Japan ranked as the second largest market in the world for mobile telephones. At that time, there were approximately 15 million mobile telephone users in the world and 40 percent of these were connected to Ericsson's systems within 48 different markets.

In 1990, Telefonaktiebolaget LM Ericsson (founded in 1876 in Sweden) employed over 70,000 employees and generated sales in excess of MSEK 63,000 around the world. The markets outside Sweden accounted for 90 percent of business. Ericsson was structured in five different business areas; the one devoted to the mobile phone business was called Radio Communication Business Area. Ericsson had been designing cellular radio systems since the end of the 1970's and it supplied all the world's leading international systems.

Ericsson enters the Japanese market

Ericsson did not have business contacts in Japan until 1985 when it decided to establish a *technical office* in Tokyo for the purpose of monitoring market development. Ericsson hoped that the local office, staffed by only two people at that time, would help in inspiring confidence among potential customers and partners. In the following couple of years, the Japanese market proved to be very dynamic and new licenses were granted to new telecom service companies. As a result, more potential customers were available to Ericsson, but, at the same time, the competition with other global players had increased (Motorola and NEC). In 1989, Ericsson's Japanese subsidiary began to cooperate with NTT's R&D laboratory. This close contact with NTT led to Ericsson being considered as a minor supplier within an NTT project. This was considered to be a good opportunity to tie-up local telecom players. In that same year, Ericsson was invited to participate in a committee for the establishment of the national Japanese standard for mobile telecommunication.

In 1991, a new business unit called Nippon Ericsson K.K. was established, which employed only 28 people. It was a merger between Ericsson's Japanese subsidiary and General Electric's purchasing office, which had recently been acquired by Ericsson. By the end of 1991, TDP (a local telecom player) had chosen Ericsson as official supplier. The contract was very big and meant a high involvement as well as risk for both parties. One of the conditions imposed by TDP was that Ericsson had to join up with a Japanese partner. Toshiba was chosen and a JV company between the two was formed by the end of 1992 (Ericsson Toshiba Telecommunication System K.K.). As the next step, local offices were opened in Nagoya and Osaka in order to support negotiations with other potential customers. In the following years, Ericsson's expansion continued at an increasing rate as well as its product and service demand and the competition.

Resource network perspective on Ericsson internationalization process

Ericsson's *motives* for entering the Japanese market were mostly endogenous. In fact, there was an internal wish to be present in that particular market because of the desire to find new demand and to gain knowledge about the local market. *No significant relationships* were in place before Ericsson established its first local office. Afterwards, during the initial phase (1985-90), another important factor which heavily influenced the firm's decision was the risk of being left out from one of the most important markets

in the world and thus jeopardizing the future of the entire Ericsson Radio Communication Business Area, leading to adverse consequences in other markets.

From the beginning, FDI was chosen as the entry *mode*, although the investment was very low in the beginning (only 2 employees). This choice was specifically connected with the *motive* of getting better knowledge about the telecom market, actors and technologies in Japan. Valuable knowledge and experience could not be gained only through trade operations. Moreover, telecommunication products cannot be sold and purchased as if they were raw materials or simple components, because they are very complex systems. They are supplied as a package, together with other connected services and continuous assistance. For these and other reasons (high risk of imitation, highly customized solutions, specific competence and expertise, technology complexity), FDI was the best choice for Ericsson. This entry mode could provide Ericsson with a rather high level of control, which meant better access to knowledge and the possibility of reducing market uncertainty through networking. With FDI, the level of risk is proportionate to the level of commitment. In the case of Ericsson, having only one office and only a few people employed, the risk level was low.

The *bridgehead resource* used by Ericsson was a "business unit": the local technical office. At the beginning, the BU was very small and few activities were taking place. It is not until 6 years after its establishment that the BU assumed a major commitment from the LM Ericsson group (about 30 employees and more than one office). Certainly, the role of the first BR (with NTT) was decisive in opening up the local network of actors to Ericsson. We see how Ericsson's expansion steps into Japan, according to the *resource commitment cycle*, moved from one resource to another: First, the BU (the technical office) was established in 1985, and then the BR with NTT was initiated in 1989 which signified a totally new moment of development for the firm. The BU was the basis for and led to the emergence of the BR. Afterwards, the P (the new "Japanese standard" telecom component) was the focus for Ericsson. This last step influenced the future of both Ericsson's product development and market potential. It is important to pinpoint how the possibility of participating in the development of the Japanese standard (the P) was directly connected to the BR with NTT, in the sense that it was only through the relationship with NTT that Ericsson gained sufficient image and trustworthy reputation to be chosen as a participant in the standardization committee.

The BR commitment was the basis for the P commitment. On the other hand, that BR could have not been established if there had been no BU creating the contact with NTT.

Because of the collaboration with NTT and the efforts in the definition of products standards, Ericsson set up a specific research facility (an F). As the telecom sector was boosted during the first half of the 1990's, Ericsson was again establishing new BRs with new actors entering the market, with suppliers and competitors. A new, much bigger BU was created as a consequence of the commitment to the new BRs. In this process, it is clear that Ericsson went through an *incremental path* of internationalization characterized by *increasing resource commitment* that began with the bridgehead resource BU. At each different step, the commitment was toward a different resource, based on and as a consequence of previous resource commitments.

CONCLUSION

The aim of this paper was to explore the issue of internationalization from a resources network perspective.

We argue that firms enter new markets through one specific bridgehead resource that can be a *product*, a *facility*, a *business unit* or a *business relationship*. Which is the bridgehead resource is determined firstly by the sum of certain endogenous and exogenous forces to the firm: the *entry motives*. The second set of elements that impact on the bridgehead resource is the *entry mode*.

A firm's internationalization process is characterized by an incremental resource commitment to new resources. Firms commit to different resources (products, facilities, business units and business relationships) within each different step of the internationalization process. The shift of a resource's relevance and role from one internationalization step to another, generates a sort of resource commitment cycle. This cycle is characterized by the firm's change of interest and commitment to new specific resources. The new resources, committed to a specific market, are influenced by the *stock of current resources* and by their *current combination*, both within and outside the firm. Previous resources are themselves providing the possibility and opportunity for the new commitment. In this way, resources directly contribute to the firms' internationalization into new markets and they also supply the *stimulus and tools* for further growth.

The control held by the firm over its activities in the new market may vary for each different resource and at each different step of internationalization. When a product or a business relationship is the bridgehead resource, the firm has a much lower possibility of control than with a facility or business unit as a bridgehead resource. In fact, the firm's control stops at the borders of a market in the case of product trading and in the case of a business relationship (because it is shared with the counterpart). A facility provides instead, direct control over certain activities. Finally, a business unit is the alternative that can offer the firm the highest degree of control. Thus, control changes in relation to which entry mode is adopted. FDI (entailing commitment to a BU and a F) provides a much higher possibility of controlling the activities in the new market than trading (done by means of a P and a BR). This has consequences also in terms of commitment and risk perception. The higher the perceived risk, the lower will be the firm's commitment to the new market. The perceived risk varies for each of the four types of resources. Products call for less commitment and thus present less risk than a business relationship. The latter, usually requires less commitment and represents less risk if compared with a facility or even less with a business unit.

These and other issues will be developed in further research, digging into the issue of how incremental resource commitment develops along the internationalization process. This will be accomplished through the investigation of the relationship between different bridgehead resources and different paths of evolution (including "Milestone resources"). This will describe why and how a firm's commitment shifts from one resource to another depending on: (a) what was the bridgehead resource; (b) the endogenous and exogenous factors; and (c) the firm's degree of internationalization (Holm 1994). These arguments will also be tested by means of a quantitative method also entailing differences between industries and countries.

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