The Role of Multinational Firms in Strengthening the Societal Fabric of Capability Development: A Case in Point

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Abstract

It is often argued that multinational enterprises contribute to human capital development in emerging countries by training local staff and supporting political reform processes. Empirical evidence on these effects, however, is rather ambiguous. One reason may be that enterprises pursuing the profit maximization maxim tend to minimize local spillover effects, especially if potential competitors might benefit.

In a departure from previous research on spillover effects, this study focuses on the potential impact of corporate social responsibility-motivated training initiatives on human capital development. From a corporate social responsibility point of view, the scope of these initiatives goes beyond pure compliance with labor standards or philanthropy. Rather, these initiatives usually pursue a more comprehensive approach by aiming at developing country-relevant skills and targeting a wider population.

The study analyzes a case in point by outlining different patterns of involvement, providing a preliminary impact assessment and defining a set of recommendations for both multinational firms and host governments.
Introduction

It has been argued for some time that foreign direct investment (FDI) has effects beyond direct job creation and tax generation (e.g. Marshall, 1920). The resulting knowledge spillovers, among which training was early identified as an important medium (Enderwick, 1985), are said to help improve the business atmosphere (Findlay, 1978), and eventually help create industry clusters (Porter, 1990). Yet, although there is general agreement in the literature that these effects potentially exist, the empirical evidence is ambiguous (Kapstein, 2002; Narula & Marin, 2003).

The primary focus of the extant literature is to distinguish between different types of potential knowledge spillover effects with regards to FDI. First, capability development can take place through forward and backward linkages – that is, the multinational enterprise (MNE) assists its local suppliers and customers (Blomström & Kokko, 2002; Slaughter, 2002). Second, the local labor market acts as a channel through which the MNE contributes skilled employees (Blomström & Kokko, 2002; Narula & Marin, 2003; Slaughter, 2002). Third, the MNE may influence the formal education system in two ways (Blomström & Kokko, 2002): On the one hand, the MNE demand for skilled labor may motivate both the government and people to invest in education and convince capable people to stay in the country. On the other, the MNE may impact the educational system by paying taxes to be invested in education (Slaughter, 2002), by funding scholarships or by providing technical advice.

Empirical studies on these effects, however, remain rare (Kapstein, 2002) and mostly inconclusive (Hausmann, 2000) or may even point “to very limited indirect benefits from FDI” (Narula & Marin, 2003: 7). The discrepancy between potential and empirical effects has been explained in multiple ways. Some scholars attribute the conflicting results to overlooked features of both the multinational firm and the host society. For instance, Slaughter (2002: 16) notes that companies may be motivated “to minimize spillover benefits to local competitors” in line with their profit-maximization rationale. On the

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1 The authors gratefully acknowledge the valuable comments of an anonymous reviewer.
other hand, Kapstein (2002) identifies social and political structures in host countries as potential obstacles. For example, elites may be reluctant to support reforms in the educational system that would be needed to maximize spillover effects. Given this complexity, scholars call for a more holistic approach “that includes governments, firms and non-firms” (Narula & Marin, 2003: 29). Others conclude that “micro-level data on plants, firms, and individuals are really needed” (Slaughter, 2002: 24) for a true understanding of the different effects that come into play.

To take these important considerations into account, we shall focus on a highly specific aspect of spillover effects. Our intention is to complement existing studies by examining the impact of corporate citizenship-motivated initiatives aimed at developing human capital in the host country. This approach is in line with Kapstein’s (2002: 12) call to examine “whether firms might take [the] role [of investing in local human capital] upon themselves, which becomes a particularly relevant question in light of all the contemporary discussion over ‘corporate social responsibility’”. Kapstein (2002: 12) also points out that, whereas the debate “has focused mainly on environmental and labor-rights issues, perhaps it would be very useful to also focus on skills training.” His assessment of the research void is indeed valid: the literature on corporate social responsibility has mainly focused on examining the link between financial and social performance (Carroll, 1999) and conceptual considerations, such as on the responsibilities of multinationals (e.g. Chang & Ha, 2001). As a result, very little attention has been paid to the dynamics of social initiatives and their impact at the receiving end (i.e. society [Margolis & Walsh, 2003]) on the nature and effects of training initiatives particularly.

To analyze these effects in depth, we shall address a particular case because it is in the nature of case studies to provide an in-depth view on complex micro-processes and to assess immediate effects rather than to provide empirical evidence for macro-level

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2 This case study does not intend to provide an overall overview of the relationship of human capital development and FDI. Please see Blomström and Kokko (2002), Kapstein (2002) and Slaughter (2002) for detailed overviews and in-depth literature reviews.
hypotheses (Eisenhardt, 1989). A particularly telling case is that of Intel in Costa Rica. Even at the beginning of the investment process, which resulted in a new USD 400m assembly and testing plant in the mid-1990s, the company was already involved in a wide range of capability development activities. Not surprisingly, Intel Costa Rica gained considerable attention in an array of case studies focusing mainly on the selection process (Nelson, 1999), Costa Rica’s strategy to attract foreign direct investment (Spar, 1998), the importance of clusters (Ketelhöhn & Porter, 2003), enterprises linkages (Ketelhöhn & Porter, 2003) and its economic impact on the Costa Rican economy (Larrain, Lopez-Calva & Rodriguez-Clare, 2000). Yet, although capability development has been mentioned in these studies as an important contextual factor, very little has been said about its underlying dynamics.

This case study is organized around the two conceptual frameworks introduced in the first section; namely, the societal fabric of capability development and the corresponding corporate behavior. The conceptual framework presented hereafter has a twofold purpose: first, it aims at providing definitions of the basic concepts referred to in the case study; second, it guides the subsequent analysis and discussion. The analysis section that follows outlines the nature and dynamics of the Costa Rican fabric and the evolution of Intel Costa Rica, the case in point. The subsequent section discusses the findings of these analyses. Finally, the recommendation section summarizes the primary insights drawn from the study and provides recommendations for both corporate and public decision makers interested in finding effective ways to engage in successful partnerships for developing human capital in emerging countries.

**Conceptual Framework**

The full extent of the dynamics of corporate contributions to human capital development can only be understood by looking at both the macro and micro levels. This focus will be

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3 In 2004, Intel announced another investment of USD 110m in Costa Rica (Fonseca, 2004).
achieved by introducing the two interdependent concepts of the societal fabric of capability development and the corresponding corporate behavior.

On the macro level, we define the societal fabric of capability development as the nexus of all capability development initiatives and institutions within a given societal context. In order to classify the institutions in terms of their role in capability building, we identify two decisive criteria: their institutional orientation and their value aspiration. In addition, because we feel the dichotomy between public and private institutions as such would be too simplistic, we distinguish between public and private institutional orientation. Thus, we follow Bozeman’s (1987) proposition of classifying institutions according to their level of publicness, defined as the “extent to which an organization is affected by ‘public constraints’” (Mair & Noboa, 2003: 4). Secondly, we define a continuum of value aspirations of institutions whose two poles are economic and social value aspiration. Institutions that aim at generating primarily economic values are positioned closer to the economic value aspiration pole. Other institutions, which may see their primary goal as generating social value, are positioned closer to the opposite pole. This matrix (see Exhibit 1) allows any institution to be plotted with respect to its role, both in terms of structure and contribution. Initiatives, on the other hand, are best understood as activities linking different institutions for the time of the project and thus are conceptualized in our matrix as the linkages. This view allows us to depict the degree of collaboration (Characteristic “Collaboration”). The firm either runs an initiative by itself, partners with other institutions or delegates the activities to an external partner.

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4 This said, we need to acknowledge the inherent imperfectness of any dichotomous categorization given the ambiguity of social concepts.

5 The two value aspirations are not to be understood as dichotomous (i.e. an institution pursues either social or economic value) but rather as an orientation framework in which to posit different types of institutions in terms of their value-creation motivation (i.e. a non-profit organization may be best viewed as 80% driven by social and 20% economic goals, whereas a for-profit firm may be better portrayed vice versa).
On a micro level, we aim to portray corporate capability development behavior. In our understanding, this behavior is best characterized along the beneficiary dimension (Characteristic “Beneficiary”). Here, we distinguish between six beneficiaries, ranging from employees, potential employees, suppliers, and customers to communities and society at large (see Exhibit 2). It is important to note that individuals can belong to more than one of these beneficiary groups, depending on their role in relation to the firm. Linked to this characteristic is the capability specificity dimension (Characteristic “Specificity”), which distinguishes between firm-specific and non-firm-specific capabilities, an important distinction for any discussion of the impact of educational initiatives (Lynch, 1992). A capability is considered firm-specific if it can only be utilized to its fullest potential in the context of a given corporate organization. In Exhibit 2, firm-specific capability initiatives are denoted as generating firm internal effects, whereas spillover effects describe initiatives that promise to develop non-firm specific skills.

Finally, we introduce four further characteristics of such initiatives: type of capabilities developed, motivation, origin and time of the initiative. First, we distinguish between technical and civic capabilities (Characteristic “Type”), the latter being any skills needed to help foster the understanding of and action towards responsible behavior. These may include skills for identifying social problems or execute effective solutions. Technical capabilities, on the other hand, are defined as any skills needed to successfully perform a certain task in the context of an economic activity. Moreover, we assume that either external pressure or enlightened motivation triggers any corporate engagement (Characteristic “Motivation”). It should be noted that we only consider motivation at the decisional level since any corporate behavior could be rationalized by either motivation on an abstract or theoretical level.6 This option is closely linked to the time

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6 On the one hand, it could be argued that every economic rent creation eventually contributes to societal well-being. On the other hand, every corporate social contribution could easily be rationalized as helping to improve the corporate image and thus the corporate economic value.
scope of the investment; that is, initiatives resulting from a reactive motivation tend to be more short-term oriented, whereas pro-active initiatives usually require a longer term orientation. In addition, we distinguish between capability development initiatives originated in the headquarters and those originated in the subsidiary (Characteristics “Origin”) and between different initiation dates (Characteristic “Initiation”).

Adding a dynamic component to the framework requires that the concepts be understood as interdependent. Specifically, the societal fabric of capability development provides the basic ingredient for business activity and helps attract new foreign direct investment (see Effect 1 in Exhibit 3). Corporate capability development behavior, on the other hand, can be an important factor in shaping the societal fabric because corporations are seen as societal institutions (see Effect 2 in Exhibit 3). This view of “the virtuous circle” (Kapstein, 2002) can be best put into perspective through a discussion of its underlying assumptions. As already pointed out, the impact of corporate capability development initiatives on society is rather ambiguous (see Effect 2 in Exhibit 3). The same can be said about the opposite effect (see Effect 1 in Exhibit 3). Even though Noorbakhsh, Paloni and Youssef (2001) show that human capital is a major motivation for investment decisions, it is not the only one; and its importance may vary depending on the specific decision context. Thus, this framework should be clearly understood as a guiding rather than a theoretical framework.

EXHIBIT 3 ABOUT HERE

In a first step, we briefly analyze the emergence and nature of the Costa Rican fabric of societal capability development. In a second, we assess the impact of this specific fabric on Intel’s decision to move to Costa Rica. In a final stage, we examine the impact of Intel on the fabric, with a special emphasis on Intel’s socially motivated contributions.
Analysis

Establishing the Costa Rican Societal Fabric of Capability Development

At the time of Costa Rica’s independence from Spain in 1821, it was mainly an agricultural society. Since then, the 3.8 million people nation has turned into a modern service economy in which about 52% of the workforce generates 64% of the GDP in the third sector. In addition, the agricultural roots are still visible, with about 20% of the workforce employed in the first sector and generating 14% of the GDP. This scenario, however, is in sharp contrast to the 1940s when 86% of all exports were coffee, banana and cacao (CINDE, 2001). With a literacy rate of more than 95%, Costa Rica ranks number three in Latin America and number 45 worldwide in terms of human capital development (UNDP, 2004). This high level of human capital development is also mirrored in the country’s competitiveness, number 45 worldwide, outranked among Latin American countries only by Chile (#32) and Brazil (#34) (World Economic Forum, 2004).

What is behind this transformation? Although a list of possible reasons might range from a preferential geographic location to a small national area that is advantageous for change, we consider the most decisive factor to be a deep commitment to both capability development and collective action.

Commitment to Capability Development

Several examples, some dating back to the nineteenth century, illustrate Costa Rica’s performance in human capital development as a consequence of long lasting, mutually reinforcing policies. With the abolishment of the army in 1948, Costa Rica redirected the freed resources for investment in development of the social sector. Today, 40% of Costa Rica's national budget is dedicated to the areas of education, health, housing and the social well-being of its citizens (WHO, 2002).

At the center of its approach to education is a well-established and cherished commitment to the maxim of “education for all”, to which end Costa Rica invests the equivalent of 6%
of its GDP. As a result, schooling in Costa Rica is mandatory from age 6 to 15. At the same time, a set of measures has been taken to promote public education in remote areas, particularly for the least advantaged. For example, President Jose Maria Figueres (1994–1998) declared English and computer science classes mandatory in all of the nation’s public schools. Indeed, the mandatory English training was instrumental in strengthening the competitiveness of the Costa Rican workforce (Hanson, 2000). The creation of the first public university in 1940 marked another major milestone in Costa Rica’s approach to capability development (Rodríguez-Clare, 2001b). This commitment was later reinforced by the creation of three more public universities to train professionals for the different needs of both the public- and the private-oriented sectors of Costa Rican society. Private companies, particularly those in telecommunications, electricity and infrastructure industries, were looking for well-trained engineers and technicians. The educational institutions adapted their curricula accordingly.

Without public sector understanding of the key role that education plays in social and economic development and long-term commitment and consistent investment in education, this successful and sustainable performance in human capital development could never have been achieved.

**Commitment to Collective Action**

Nor would these capability successes have been possible without the full support and participation of the different sectors of Costa Rican society and its citizens. The long-lasting democratic tradition of Costa Rica has played a crucial role in this development by helping establish an environment of trust and relative social stability. This background has proven instrumental in the emergence of trusted relationships between different societal actors and has laid the foundation for effective collective actions.

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7 Despite all these efforts, Costa Rica has experienced some social conflicts in recent years. For instance, the government has faced repeated opposition to some of its reform projects.
One recent example of such collaborative efforts has been the Solidarity Triangle, a public program led by the Vice President of Costa Rica that integrates different levels of government (i.e. community, municipal and state). This program is based on the belief that citizen empowerment and participation is key to successful development and improvement of living conditions. The main contribution of the program is to provide a framework for planning and facilitating the execution of micro programs; therefore, the program does not run any projects under its auspice. Even though it is far too early to conclusively assess the program’s impact, first evaluations indicate that it has reached a substantial number of the populace. For example, a recent study by the World Health Organization found that the program has benefited 41% of the population (WHO, 2002). In addition, the initiative has triggered considerable interest in Central America, where some governments have expressed interest in adopting the program in their own countries (INCAE, 2000).

**Attracting Intel through the Societal Fabric of Capability Development**

**What Was Intel Looking For?**

When Intel, the world’s largest semiconductor manufacturer, generating a turnover of USD 27bn (2003), was looking for a location for a new semiconductor assembly and testing plant in the 1990s, it embarked on a global assessment of more than a dozen different countries, including Brazil, Chile and Costa Rica. Not that this was the first time Intel committed to internationalizing its operations; on the contrary, this decision was part of Intel’s overall global strategy. However, the degree of internationalization differs greatly between the high-end wafer production, 75% (2003)\(^8\) of which is still based in the U.S., and the lower-end assembling and testing, which is mostly performed outside the U.S.\(^9\) (Intel, 2004). This distinction is an important indicator of what Intel was looking for when choosing a new location for an assembly and testing plant.

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\(^8\) The remaining 25% is produced in Ireland and Israel (Intel, 2004).

\(^9\) As of 2003, in Costa Rica, Malaysia, the Philippines and China.
The international business literature distinguishes between four seeking behaviors of internationalizing companies (Dunning, 1988): the search for efficiency, resources, growth or strategic assets “whereby the firm wishes to acquire additional assets, which protect or augment their existing created assets” (Narula & Marin, 2003: 19). In the case of Intel’s search for a new assembly and testing plant location, they were definitively not looking for growth in market size since semiconductors are easily shipped and require no cultural customization. Therefore, the advantages of building such a plant in a promising market were limited. The main criteria for their decisions were far more likely based on a combination of their resource- and efficiency-seeking motives. That is, they sought a location that would provide basic resources in terms of human capital able to produce at comparatively low costs. Thus, they were looking for resources in the form of a pool of human capital and a logistical and manufacturing infrastructure that could be utilized in an efficient manner, one best achieved in a stable low-cost environment.

What Could Costa Rica Offer?

First, Costa Rica could offer an environment that seemed to assure efficiency; in particular, its geographic location close to the important U.S. market, relatively low labor costs and political and legal stability. In addition, the government was willing to provide financial incentives in the form of tax and custom reductions. On the other hand, the resource configuration both in terms of infrastructure and human capital was not optimal: Costa Rica was not integrated into the global logistics network, and its human capital pool, although comparatively well educated, lacked some specific semiconductor-related skills.

Nevertheless, although Costa Rica was unable to provide all appropriate capabilities, it offered a strong enough fabric of capability development to assure Intel that the required capabilities could be quickly developed. Moreover, in their dealings with Intel, Costa Rica did its utmost to show the potential and effectiveness of its societal fabric of

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10 This Export Processing Zone regime allows companies to import all their inputs and equipment tax free and avoid paying income tax for eight years, paying only 50% of taxes due for the next four years.
capability development. Under the leadership of the Coalición Costarricense de Iniciativas para el Desarrollo (CINDE, the Costa Rican Investment Board), all relevant players in Costa Rican society were able to portray themselves as a collective force able to act swiftly and in a determined manner. In doing so, the different social actors recognized that they needed to look beyond their fences to achieve synergies. This collaborative effort allowed Costa Rica to provide pragmatic solutions to challenges presented by Intel and thus turn weakness into strength. For instance, the government committed itself to building new electricity substations, signing open sky agreements with the U.S. and even opening new consulates in Malaysia and the Philippines where Intel had operations and was eager to exchange employees (Spar, 1998). Private firms were fast to enter new businesses created and needed by Intel, e.g. logistics services. On the other hand, any such effort embraced with collective enthusiasm runs the risk of blinding people to calls for caution and objective assessments of potential risks. As a result, critics who warned that attracting such a big player might put the country in a state of high dependency that could be damaging were mostly ignored. Instead, Costa Rica committed itself to considerable investments and concessions to attract a company in a global competition in which the demanders (i.e. the companies) are much more mobile and versatile than the suppliers (i.e. the states). In such a competitive environment, such dependencies may easily harm the state’s bargaining position in future dealings with the firm.

The crucial part of this collective effort, however, was achieved in the area of capability development. It was “Intel’s most pressing concern, and Costa Rica’s most interesting concessions” (Spar, 1998: 19). The distinct feature of Costa Rica’s approach to education was that it pursued a highly collaborative strategy that integrated Intel into the areas most relevant to the country’s future – science and technology. By doing so, Intel suddenly extended its role from a sole beneficiary of the Costa Rican societal fabric of capability development to an important contributing force.
Intel’s Impact on the Costa Rican Fabric of Societal Capability Development

Bridging the Capability Gap

The most pressing concern in the mid-1990s was to bridge the capability gap. While Intel needed almost 2,000 skilled workers and technicians, the pool of skilled people in tiny Costa Rica was far too small (Nelson, 1999). Therefore, to assure that students would be trained according to Intel’s needs and because of a lack of local expertise, Intel played a very active role in supporting local educational institutions, thereby leveraging the existing educational infrastructure.

Their engagement was initially targeted at two levels of the Costa Rican educational system. On the one hand, in close collaboration with the Ministry of Public Education and the Foundation Omar Dengo, a non-governmental organization specializing in technology training, they helped the technical high schools to strengthen their curricula by providing training support (TS) in the form of curriculum development and teacher training. To this end, they concentrated on training teachers in electronics and electromechanics on both technical and didactical issues.

These efforts are very relevant to us, not only because hard and soft skills are needed in MNEs, such as Intel, but also because 20% of our current employees have graduated from these high schools. We are speaking about 500 people at our company and subcontractors.

Mary Helen Bialas (2004), Academic Relations Manager, Intel Costa Rica

In addition, Intel established the Centro de Innovacion, Tecnologia y Aprendizaje, an innovation center (IC). In the framework of this program, Intel donated 33 industrial robots and other manufacturing equipment to 18 different institutions (Arias, 2004). Intel also expressed the intention to set up more innovation centers in different regions of the country (Bialas, 2004).

At the same time, Intel entered into research cooperation (RC) with the two major universities, the University of Costa Rica in San Jose and the Institute of Technology of Costa Rica in Cartago, a collaboration that took place on different levels. Apart from providing valuable inputs into the design of new courses in electrical/electronics
engineering, computer science, and material science; between 1999 and 2004, Intel helped modernize over 22 laboratories (Arias, 2004). Students were offered internships at Intel, while academics participated in collaborative research programs. The Institute of Technology of Costa Rica subsequently became an Intel associate, which entitled it to take part in faculty and student exchanges around the world and to tap into Intel’s research funds. 

A particularly strong partnership was built with the Institute of Technology of Costa Rica, which alliance resulted in a new high-quality engineering program that also fulfilled the specific technical requirements for Intel. Significantly, all students enrolled in that program eventually became employees of Intel. The following comments throw light on this relationship:

This alliance is a win-win situation. Intel gets people equipped with skills they need. We get extra funding for project development, equipment and curricula development that puts us in the top league of international universities.

Juan Carlos Carvajal (2004), Executive Director, ITCR

In the beginning of our relationship, the government and civil society were looking at us as a resource for funding their projects. It took us some efforts to show them that we can become a relevant and knowledgeable partner.

Mary Helen Bialas (2004), Academic Relations Manager, Intel Costa Rica

**Bridging the Legitimacy Gap**

Up to this point, the entry of Intel to Costa Rica had been received with great enthusiasm and almost no opposition. Costa Rica and its citizens felt very proud to have attracted such a prestigious global player. Nevertheless, in the midst of this widely held public support and pride, some opposition began to emerge from the inhabitants of the Canton of Belen, the area in which Intel planned to build its assembling and testing plant.
The locals, most of whom belonged to the educated middle class, were critical of Intel’s plans to build the plant in their neighborhood. The most relevant concerns were related to Intel’s alleged impact on the environment. In particular, they criticized the fact that Intel had been granted too many concessions, which, in their opinion, did not all comply with Costa Rican law. The discussion culminated in a dispute over an enormous electricity tower built next to the main highway:

*They can do whatever they want with the government but not with us.*

A community member of Belen, 2004

Intel reacted to the visible and growing dispute by implementing a community program (CP) called Buenos Vecinos (Good Neighbors). In the very beginning, because the program was designed under the assumption that the conflicts were due to a lack of information and misunderstandings, the community was invited to visit the plant. As of 2004, approximately 3,000 community members had visited the company and even more were expected to so in the future (Arias, 2004). Besides this effort to improve mutual understanding, Intel became involved in other community projects. For instance, the company trained members of the canton’s Red Cross and financed a local emergency system. In addition, Intel started a process to expand and diversify its community initiative by providing computer training for senior citizens and putting in place an environmental education (EE) program in all primary public schools in the Canton of Belen. In addition to this communication-oriented approach, Intel decided to apply for the environmental certification (EC) ISO 14001 to underline its commitment to environmental protection.

As a consequence of this continuous dialogue, confidence and mutual trust improved. Indeed, one study carried out by the company shows that 78% of the population is familiar with Intel community initiatives and rates them positively (Arias, 2004).

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11 Source known to the authors.
Bridging the Responsibility Gap

Intel Costa Rica, being a subsidiary of a U.S.-based multinational firm, has not only been influenced in its capability development behavior by local conditions but also by the headquarters and its corporate culture. Intel is widely known for its tough and highly competitive market behavior, which has been mainly driven by the inherent win-or-lose nature of the competition in the semiconductor industry. Any missed upgrade to the latest chip technology can result in the demise of the whole company (Burgelman & Meza, 2003). Over the years, however, Intel has adopted a more conciliatory approach due to legal and public pressures (Yoffie, Casadesus-Masanell & Mattu, 2004). This adaptation has been accompanied by a profound change in its corporate culture (Burgelman & Meza, 2003) and its corporate citizenship approach.

*Today, business is one of the most powerful forces in the world. With that influence comes responsibility.*

Paul S. Otellini, President and Chief Operating officer, Intel (2004)

Although Intel has always considered corporate citizenship part of its identity and a way of understanding the role of a corporation in any given society in which it operates, it, like many other multinational firms, has increased the number of its new programs in recent years. For example, in 2003, the Intel Foundation made contributions of more than USD 100 million (Intel, 2004). At the local level, two different budgets support the programs: a national education budget of approximately USD 1 million, and a local community budget of USD 180 thousand, which, however, does not include contributions of used computers or volunteering (Bialas, 2004). Education is considered the most important of the five thematic pillars of Intel’s approach to corporate citizenship. Not surprisingly, Intel Costa Rica is also primarily involved in corporate citizenship initiatives in the area of capability building. In addition to company-wide programs, which they try to adapt to local conditions, Intel Costa Rica also runs a set of programs initiated at the local level.
We always take advantage of our organizational and professional competences and match them with the needs of the Costa Rican society in our initiatives.

Danilo Arias (2004), Corporate Affairs Manager, Intel Costa Rica

Within the context of the framework used in this paper, Intel’s capability programs in Costa Rica follow two major objectives. On the one hand, they aim at developing what we call economic capabilities, in particular technical capabilities. A second category of programs, on the other hand, is directed at improving what we term civic capabilities.

Developing Technical Capabilities

Intel is an active participant in the National Program for Educational Informatics (NPEI), a technology training (TT) initiative run by the Omar Dengo Foundation. The NPEI includes two sub-programs, the NPEI for Elementary Schools, which benefits students from kindergarten through sixth grade, and the NPEI for High Schools, which aims at students from seventh through ninth grade in public high schools. Intel’s contribution is the Intel Teach to the Future program that introduces the different possibilities for the application of digital technologies in education. In this context, learning is associated with the development of specific competences and skills. The whole program is implemented in 30 different countries. More than one million teachers have been trained worldwide since its launch in 2000 (Intel, 2004). Although Intel does not aim for short-term returns from their investments in corporate citizenship related initiatives, some figures suggest a net increase in computer sales of 65% among teachers who have participated in the programs (Arias, 2004).

Another company-wide initiative adapted to the Costa Rican context is the Intel Computer Clubhouse (CC), a non-formal community education model developed by the Massachusetts Institute of Technology Media Lab in cooperation with the Museum of Science. The local clubhouses provide computer equipment for young people and promote the use of technology to enable them to develop confidence and acquire problem-solving skills. In Costa Rica, the facilities are managed by the Center for Salesian Studies, a religious organization in Alajuelita, south of the capital.
Finally, Intel collaborates with the National Science Fair Commission and the Ministry of Science and Technology in Costa Rica in the science fair (SF) initiative. Elementary and high school students attending one of the 20 regional or the annual National Science and Technology Fair are informed about the relevance of math, science and technology and encouraged to pursue a career in these fields. Over 40% of the K–12 student population has participated in these science fairs (Cardena 2004). As a consequence of this success, the government decided in 2003 that every public school of the country must hold a Feria Cientifica, which event has even been incorporated into the official school calendar. In addition, Intel invites the winners of the National Science and Technology Fair student competition to participate in the Intel International Science and Engineering Fair, the world’s largest pre-college science competition.

*I am very thankful for the donation that Intel has made and for the social responsibility work that Intel carries out with our educators for the benefit of the country.*

Dr. Astrid Fischel, former Minister of Education, Costa Rica (Intel, 2004)

*Developing Civic Capabilities*

Another set of capability building initiatives aims at creating a better understanding of societal needs. On the one hand, Intel encourages its employees to participate in the Active Intel program, a corporate volunteering (CV) initiative. Community involvement performance has even been integrated into the company’s individual performance evaluation process.

Intel also attempts to share the experience gained with its environmental program (EP) with other companies by involving key stakeholders in the development phase. Intel has consulted with an array of institutions, including the Ministry of Labor, the Occupational Safety and Health Council, the Electricity Costa Rican Institute, the National Bank of Costa Rica and community groups. Intel’s interactions with its suppliers have been quite forceful. For instance, all suppliers have to adhere to Intel’s standards of security and
health protection. In addition, the company provides training sessions and conducts health and security audits on their suppliers on a regular basis (Bialas, 2004).

In addition, Intel has founded the Belen Environmental Industrial Committee, a local business committee (BC) whose primary purpose is to organize the National Environmental, Health and Safety Conference. The annual conference, in its third year in 2003, was attended by community members and representatives from non-governmental organizations, companies and the government interested in learning best practice in the management of environmental, health and safety.

*With the organization of this conference, Intel ratifies its commitment to our country and our workers. It is a model that is highly satisfactory and, we hope, stimulating for other companies.*

Ovidio Pacheco Salazar, Minister of Labor, Costa Rica (as cited in Arias, 2004)

**Discussion**

So far, this paper has stressed the importance of different levels of analysis in order to better understand the nature and dynamics of corporate capability development initiatives. In discussing the findings, we shall put a special emphasis on these linkages. We will analyze the impact of corporate capability development initiatives by first discussing the micro-level dynamics – i.e. corporate capability development behavior – followed by an elaboration on the macro-level dynamics – i.e. societal framework of capability development.

**Micro-level Dynamics: Corporate Capability Development Behavior**

In discussing the initiatives, we shall refer to the eight characteristics identified at the beginning (see Appendix for an overview). Whereas the characteristics beneficiary, collaboration, motivation and specificity guide our discussion of the corporate capability development behavior, the characteristics initiation, origin and type assist us to elaborate on longitudinal patterns.
A comparison of the 12 corporate capability development initiatives along the four dimensions mentioned above reveals two main groups of initiatives (see Exhibit 4). Group 1 encompasses the five initiatives research cooperation (RC), training support (TS), science fair (SF), innovation center (IC) and computer clubhouses (CC). The remaining six initiatives, community program (CP), technology training (TT), environmental education (EE), corporate volunteering (CV), environmental program (EP) and business committee (BC) build Group 2. Whereas the initiatives belonging to Group 1 are primarily designed to develop firm-specific capabilities and thus are targeted towards present and future employees, the initiatives belonging to Group 2 aim to develop non-firm-specific capabilities for a wider range of beneficiaries. In addition, the initiatives of Group 1 seem to be approached in a more coherent and sustainable way, which may indicate that corporate capability development behavior depends on how well an initiative is perceived to be aligned with corporate interests. Better-aligned initiatives appear to be managed in a more coherent and sustainable manner. A combination of two alternative explanations may offer some clues. On the one hand, it can be argued that a company is better at running an initiative that develops capabilities of which it has plenty and that it is experienced in managing. On the other hand, the company may feel more motivated to develop capabilities that are relevant for its future performance. Interestingly, no real difference in terms of collaboration can be identified. Two thirds of all initiatives are run in collaboration with other parties.

If we look at the different initiatives as they have developed over time, three main thematic waves can be identified. The technology wave kicked off with the two initial and still ongoing programs to support the training of future employees at both technical high schools and universities. The technology focus was strengthened with later initiatives, such as the Science Fair, Teach to the Future or the Computer Clubhouse, which all originated in the corporate headquarters. The community wave emerged early in the existence of Intel Costa Rica. The initial Good Neighbors program has been

12 Environmental certification (EC) does not really fit either group.
complemented with the creation of new community initiatives like the corporate volunteering program Intel Active or, more recently, the Belen Industrial Council. The third main thematic focus, the *environmental wave*, has emerged more recently and is closely linked to Intel’s approach to environment, health and safety. Initiatives such as the environmental education or the business council have assured that insights gained in this area are shared with other parties.

The parallel existence of these waves shows that different capability development themes are understood to be complementary. As a result, the number of initiatives has increased. Although existing themes remain relevant, the emergence of new themes has led to a shift of emphasis. Whereas the early initiatives aimed only at developing economic capabilities, some later programs put civic capability development at their center. As a result, the approach to corporate capability development has become more comprehensive.

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**Macro-level Dynamics: Societal Fabric of Capability Development**

What do these observations say about the impact of Intel on the societal fabric of capability development? Three implications emerge. First, as seen above, Intel’s approach has changed over time from a solely economically oriented to a more comprehensive capability development approach, promoting both economic and civic capabilities. Thus, Intel’s *civic capability development orientation* has been strengthened over time while still remaining strongly embedded in the economic orientated sphere (see Effect 1 in Exhibit 6).

Secondly, the number of corporate capability development initiatives has increased over time. Given that two thirds of all initiatives involve some kind of collaboration and the relative number of initiatives involving collaboration has not changed significantly over time, we can derive an increased *number of linkages* (see Effect 2 in Exhibit 6). Yet interestingly, there is a common perception in some parts of Costa Rican society that Intel behaves like an alien unwilling to integrate into the Costa Rican society:
Intel is like an island. They sometimes get closer to society, but generally speaking, they remain holding an outsider perspective.

Citizen of Costa Rica, 2004

Nevertheless, this opinion is held primarily by people who have no direct dealings with Intel. Moreover, there is evidence that this perception changes as soon as institutions or individuals become involved in a collaborative program (Carvajal, 2004; Arias, 2004; Lobo, 2004). Thus, we can assume that the **bounds** have become stronger overall (see Effect 3 in Exhibit 6), meaning that the societal fabric of capability development has apparently been strengthened by Intel’s contributions. Yet, what does this mean with regards to the impact of Intel’s initiatives?

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**Impact of Intel’s Capability Development Initiatives on Costa Rica**

A fully fledged impact analysis of the highly complex capability development mechanisms would be beyond the scope of this case study. Nevertheless, we can provide anecdotal evidence that is best observed at the beneficiary level. Thus, we will structure this analysis along the beneficiary dimension introduced earlier.

On a first level, Intel has provided extensive firm internal training to **current employees**, partly by exchanging workers between its different assembly and test plants. Nevertheless, the low turnover rate makes potential spillover effects from this kind of training rather limited (Rodríguez-Clare, 2001b).

As shown above, the main focuses of Intel’s initiatives have long been technology and young people. These emphases gives some indication of the importance attributed to

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13 Source known to the authors.

14 As this case study only looks at a specific angle, any impact analysis can only be partial. Particularly in the case of social corporate initiatives, the assessment may appear one-sided because underlying causes that may have motivated certain corporate behavior are usually not part of the assessment.
future employees as a relevant target group. However, Intel has realized more recently that training young students is not enough to attract them into the company: some graduates who participated in an Intel funded business program have decided to pursue careers outside of Intel upon graduation (Carvajal, 2004). Nevertheless, the initiatives so far have reached 7,500 primary and high school teachers who received computer training (Escalante, 2004). Another 1,080 teachers have been trained to assist students in preparing their projects for the science fair (Escalante, 2004) attended by 400,000 students in 2003 (Escalante, 2004; Cardena, 2004). In addition, more than 1,000 young people have gained access to computer facilities (Cardena, 2004). Some indirect effects can also be observed. First, the growing interest of young Costa Ricans in electronic engineering has been primarily attributed to Intel’s cooperation with the public universities. Three years after Intel came to Costa Rica, the number of graduates in electronic engineering, which had represented less than 1% of all graduates in the early 1990s, increased by 100% at the University of Costa Rica and 200% at the Instituto Tecnologico de Costa Rica (Carvajal, 2004). This increased interest allowed the universities to set higher admission standards (Carvajal, 2004; Gross, 2004), which in turn contributed to a quality improvement of both teaching and research.

In addition, Intel has reached out to its suppliers and customers. Since 1996, more than 220 suppliers have been trained on topics such as management, innovation or health and safety (Carvajal, 2004; Gross, 2004), a figure that corresponds to the assessment of Larrain, Lopez-Calva and Rodriguez-Clare (2000) who found that 35% of service and 17% of input providers had received training by Intel.

On the community level, Intel has reached out to all high school students in the Canton of Belen with its environmental education program. With more than 600 employees participating in the Active Intel program in 2003 (Arias, 2004), Intel employees shared some of their expertise with people living in the neighborhood.

Finally, it can be argued that the initiatives have also had an impact on a societal level. Whereas, as stated earlier, this paper does not intend to assess Intel’s overall impact on the Costa Rican society; it is important to put the initiatives in a societal context along two lines – i.e. the company’s size and its impact beyond these 12 initiatives. Social
contract theory suggests that corporate responsibilities need to be assessed in light of the relative importance of the social actor (quantitative role) and its overall impact (qualitative role) (Bowie, 1983). Given Intel’s relative size and relevance for the Costa Rican economy, the impressive number of beneficiaries might be viewed in a different light. That is, Intel’s intention to widen the range and number of beneficiaries of its initiatives (Arias, 2004) may be an indicator that this deficiency has been recognized.

Putting these particular initiatives into the context of the overall impact of Intel on Costa Rica, we may have to reassess their real relevance. Existing research into Intel in Costa Rica has stressed the creation of 2,000 new well-paid jobs (Rodríguez-Clare, 2001b); a series of infrastructure investments (Spar, 1998); the emergence of new electronics and software firms, some directly funded by Intel (Rodríguez-Clare, 2001a), and a psychological effect (Rodríguez-Clare, 2001b): The mere fact that Intel participates in these programs may have strengthened the collective vision of Costa Rica to become a competitive high technology cluster able to attract new high tech companies and thus lessen its dependence on Intel. On the other hand, some expectations have not been met. Only a few of Intel’s suppliers have opened small satellites in Costa Rica, leading UNCTAD (2002: 233) to conclude that “Costa Rica remains weak in embedding export-oriented FDI in the local economy. There is yet little evidence of linkages, clustering effects of the upgrading of domestic supplier capacities (...).” Other important aspects, such as the impact of these initiatives on national wealth and income distribution, still remain to be analyzed.

15 That is, the expectations for a small actor are not the same as those for a larger actor, and an actor whose business is considered socially or environmentally harmful (e.g. oil or tobacco industry) is expected to contribute more than an actor who is engaged in a business that is seen as beneficial to society (e.g. education or the health care industry).


17 Most of Intel’s suppliers, such as RVSI, NTK, Philips, Alphasem or ESEC, did not invest in Costa Rica on a large scale but only opened small satellites in the country (Rodríguez-Clare, 2001b).
Despite the lack of a comprehensive assessment, it can be said that these particular initiatives have had a lasting impact on the Costa Rican society for three primary reasons. First, it is in the nature of educational initiatives that their impact will be lasting. Even if a company were to leave the country or reduce their involvement in these initiatives, beneficiaries (i.e. trainees) would still able to reap the benefits. Second, the broad scope of the initiatives – reaching students at different levels, community members and workers – may help motivate people to embrace a journey of life-long learning, which fosters the sustainability of these initiatives even more. Finally, the close collaboration between the firm and the government and nongovernmental organizations is an important prerequisite for making such activities self-running and sustainable. These insights may provide relevant lessons on how multinational firms can help strengthen the societal fabric of capability development.

Conclusions

This study of a particular case in point allows tentative conclusions to be drawn as to the motivation (why), scope (what), process (how) and impact (how much) of corporate social responsibility as it relates to capability development initiatives.

Motivation: The fact that most of the initial initiatives analyzed were motivated by and are targeted at fostering firm-specific capabilities – i.e. technology skills – does not imply that no spillover effects exist. On the contrary, there is some anecdotal evidence that a focus on firm-specific capability development leads to a larger effect. That is, if a company focuses on initiatives that are closely related to its core business, it will be able to transfer more capabilities at lower costs. At the same time, the perception of a blended value proposition can be pivotal to gaining legitimacy for such initiatives within the organization. Both these elements are instrumental in making the initiatives a success.

Scope: Successful initiatives are the most important driver for the emergence of new initiatives and extended areas of involvement. In this particular study, a first wave of initiatives centered on strengthening technical capabilities was the starting point for initiatives that resulted in spillover effects of civic capabilities, i.e. community and environmental-related skills.
**Process:** Civic capabilities proved to be instrumental in building new and strengthening existing partnerships between the multinational firm, government and civil society. These alliances are pivotal to assuring sustainability of the initiatives because they enable people and institutions outside the firm to gain relevant capabilities. At the same time, partnerships facilitate the integration of initiatives into the existing societal fabric of capability development.

**Impact:** Despite anecdotal evidence that gives some support for the hypotheses presented above, given the inherent complexity of the mechanisms, no conclusive statement on the overall impact of such initiatives can be made either for this particular case or in general terms.

In conclusion, corporate social responsibility related initiatives make multinational firms more aware of the potential impact they have on society. These firms are then motivated to think beyond the development of purely firm-specific skills and reflect on how they can impact the societal fabric of their host country. Furthermore, such initiatives may signal to other multinational firms – as well as to domestic players, whether the government or civil society – that they need to become more involved in capability building partnerships.

**Recommendations**

The case of Intel Costa Rica illustrates the interdependences between the societal fabric and multinational firms entering a country on different levels. Even though human capital considerations are pivotal to foreign direct investment decisions, at the same time, multinational firms have the opportunity to contribute to a nation’s capability development efforts. Based on this case study, four recommendations can be made for decision makers from host governments and multinational firms along the four stages of the foreign direct investment process: strategic leverage building, comprehensive decision taking, adaptive initiative integration and sustainable initiative development (see Table 1).
**Strategic Leverage Building:** Capability development can be considered a valuable leverage factor for both multinational firms and host governments negotiating foreign direct investment. The *host government* increases its attractiveness for investments if its societal fabric of capability development is able to develop needed capability in a fast and flexible manner. This development requires a strong commitment to capability building over a long period and the willingness to collective action. The latter is best achieved by establishing a culture of trust between all relevant players in the societal fabric. The *multinational firm*, on the other hand, is advised to portray itself as a strong capability developer that is able and willing to become a pivotal player in the societal fabric. A clearly defined corporate capability development strategy embedded in the firm’s approach to corporate citizenship can be an important first step in this direction.

**Comprehensive Decision Taking:** The parties should not only try to leverage their own capability development capacity but should also be willing and able to understand the potential contributions of the other side. Thus *governments* might choose to look not only for short-term investment but also at the long-term impact on the societal fabric of capability development. Potential corporate contributions to the fabric should be an important decision criterion. Governments can use this analysis to actuate new policies that may facilitate the strengthening of the fabric by corporate contributions. The *multinational firm*, on the other hand, can gain much by not focusing too much on the current national capability performance but rather looking at the potential that the societal fabric holds and how the firm could help enhance this potential through its deliberate corporate capability building behavior.

**Adaptive Initiative Integration:** Capability development initiatives can also play a crucial role in better understanding and adapting to the societal environment. *Host governments* can support this process by facilitating the integration of multinational firms into the fabric at an early stage because much time is needed for both parties to establish a trust relationship. *Companies* must be open to adapting their strategies as they discover the needs and structures of the host country: they should always be willing to break new ground while remaining firmly focused on their goals.
**Sustainable Initiative Development:** The final goal of any capability development activity must be its sustainability. In the long run, institutions will only be able to support initiatives whose results are aligned with their own interests. *Host governments*, thus, should always consider their main objective – to serve the public and try to contribute to the collective efforts those assets they possess and can best use. *Multinational firms*, on the other hand, keeping in mind their own interests, should aim at bringing in their comparative strengths – i.e. technology and management capacities. The pivotal challenge is to establish trusted relationships in order to better understand and act on the other party’s interests and its complementary resources and capacities.
<table>
<thead>
<tr>
<th>Recommendation for Host Government</th>
<th>Strategic Leverage Building</th>
<th>Comprehensive Decision Taking</th>
<th>Adaptive Initiative Integration</th>
<th>Sustainable Initiative Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show strong commitment to capability building and collective action</td>
<td>Look for capital investment and impact</td>
<td>Integrate multinational firm fast and early into the societal fabric of capability development</td>
<td>Consider public interest and contribute complementary capacities</td>
<td></td>
</tr>
</tbody>
</table>

| Recommendation for Multinational Firm | Develop corporate capability development strategy as cornerstone of corporate citizenship approach | Look for capability performance and potential | Adapt capability development strategies to local needs and structures | Consider private interests and contribute complementary capacities |

| Conceptual Reference | Societal Fabric of Capability Development and Corporate Capability Development Behavior | Thematic Waves of Corporate Capability Development Initiatives | Groups of Corporate Capability Development Initiatives |

| Empirical Reference: Host Country (Costa Rica) | Long tradition of capability development and collective action | Comprehensive strategy to attract Intel so as to become more competitive as a nation | Collaboration with Intel from the beginning | Public education system as a framework for corporate initiatives |

| Empirical Reference: Multinational Firm (Intel) | Education as the key focus of corporate citizenship strategy | Commitment to support the capability development process | Swift reaction to skepticism in local community by initiating community program(s) | Focus on capability development initiatives closely related to core competence |

**Table 1:** Recommendations for Decision Makers from Host Governments and Multinational Firms
## Appendix

**Corporate Capability Development Initiatives of Intel Costa Rica**

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
<th>Date</th>
<th>IMCSSB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Research Cooperation (RC)</strong></td>
<td>Cooperation in terms of faculty training, internships and research collaboration with the two major universities to strengthen engineering skills, particularly in the fields of electrical/electronics engineering, computer science, and material science.</td>
<td>1997</td>
<td>2 3 2 1 1 1</td>
</tr>
<tr>
<td><strong>2. Community Program (CP)</strong></td>
<td>The Good Neighbors program aims at improving the relations between the corporation and the community in which it is located.</td>
<td>1998</td>
<td>2 2 2 3 2</td>
</tr>
<tr>
<td><strong>3. Environmental Certification (EC)</strong></td>
<td>ISO 14001 certification</td>
<td>2002</td>
<td>2 1 1 1 3 2</td>
</tr>
<tr>
<td><strong>4. Technology Training (TT)</strong></td>
<td>The Intel Teach to the Future program aims at convincing teachers about the effectiveness of integrating technology in education.</td>
<td>2000</td>
<td>1 3 3 2 4 2</td>
</tr>
<tr>
<td><strong>5. Training Support (TS)</strong></td>
<td>Intellectual and material assistance of technical high schools in order to improve the training in electronics and electro-mechanics.</td>
<td>2000</td>
<td>2 2 2 1 1 1</td>
</tr>
<tr>
<td><strong>6. Science Fair (SF)</strong></td>
<td>The International Intel Science and Engineering Fair aims at creating interest among elementary and high school students for math, science and technology. It is organized in 20 regional and one annual national event.</td>
<td>2000</td>
<td>1 4 3 1 1 1</td>
</tr>
<tr>
<td><strong>7. Innovation Center (IC)</strong></td>
<td>The Centro de Innovacion, Tecnologia y Aprendizaje aims at providing technical and financial assistance to educational institutions focusing on training future technicians.</td>
<td>2001</td>
<td>2 3 3 1 1 1</td>
</tr>
<tr>
<td><strong>8. Computer Clubhouse (CC)</strong></td>
<td>The Computer Clubhouse program provides access to information technology to underprivileged young</td>
<td>2001</td>
<td>1 3 2 1 1 1</td>
</tr>
<tr>
<td></td>
<td>Initiative</td>
<td>Year</td>
<td>Impact</td>
</tr>
<tr>
<td>---</td>
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<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>9</td>
<td>Environmental Education (EE)</td>
<td>2001</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>The Environmental Protection School Center program consists of sponsorship of recycling points in all local schools and workshops for nearby technical high schools.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Corporate Volunteering (CV)</td>
<td>2001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>The Active Intel program aims at promoting the participation of Intel employees in volunteering programs in their communities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Environmental Program (EP)</td>
<td>2002</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>The Corporate Environment, Health and Safety program consists of the publication of reports and booklets and the organization of an annual conference.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Business Committee (BC)</td>
<td>2003</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>The Belen Environmental Industrial Committee aims at training other local businesses in managing environmental, health and safety performance, effective meeting organization and communication skills.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend

I Initiative Initiation: 1997-2003

O Initiative Origin: 1 Headquarters; 2 Subsidiary

M Initiative Motivation: 1 Only reactive; 2 More reactive; 3 More proactive; 4 Only proactive

C Initiative Collaboration: 1 Done by Intel; 2 Done by Intel in cooperation with partner; 3 Done by partner in cooperation with Intel; 4 Done by partner

S Capability Specificity: 1 Firm; 2 Non-firm

B Initiative Beneficiary: 1 (Future) employees; 2 Business partners; 3 Community; 4 Society

T Initiative Type: 1 Technical capability development; 2 Civic capability development
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The interviews are referred to in the paper as (Name, 2004).
References


INCAE. 2000. Boletin del Centro LatinoAmericano para la competitividad y el desarrollo. San José, CR.


Rodríguez-Clare, A. 2001b. Costa Rica’s development strategy based on human capital and technology: How it got there, the impact of Intel, and lessons for other countries.


Exhibit 1: Conceptual Framework of the Societal Fabric of Capability Development
Exhibit 2: Conceptual Framework of Corporate Capability Development Behavior
Exhibit 3: Conceptual Framework
Exhibit 4: Intel’s Corporate Capability Development Behavior
Exhibit 5: Longitudinal View of Intel’s Corporate Capability Development Initiatives
Exhibit 6: Impact of Intel’s Corporate Capability Development Behavior on the Fabric of Societal Capability Development