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TOWARDS BETTER UNDERSTANDING OF THE SOCIAL ENTREPRENEURSHIP AS THE PRECONDITION OF TECHNOLOGY TRANSFER PROCESS

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Abstract:

The overall research theme in this paper is social entrepreneurship. This is related to and motivated by the growing attention this phenomenon. The first part of the study deal with social entrepreneurship in concept, the second – understanding of technology transfer process. The third part initiates discussion on the role of social entrepreneurship in technology transfer as the precondition of sustainable development pursuit.

Keywords: Social entrepreneurship, technology transfer.

1. INTRODUCTION

Social entrepreneurship is one of the most misunderstood phrases in the nonprofit sector today. Everybody, it seems, has a different definition of what it means. However, the idea of merging mission and money filled with distaste. But the phrase “social entrepreneur” is banded about freely these days. Here is the gist of the problem: Unless a nonprofit organization is generating earned revenue from its activities, it is not acting in an entrepreneurial manner. It may be doing good and wonderful things, creating new and vibrant programs: but it is innovative, not entrepreneurial. Only earned income will ever allow a nonprofit to become sustainable or self-sufficient. It's one thing to design, develop and implement a new program - and quite another to sustain it without depending on charitable contributions and public sector subsidies. The biggest challenge is actively developing forms of technology transfer that will directly benefit the people that needed it mostly. In some relatively rare cases, the utility of a new technology will be enough to reach all levels of society. Various forms of creativity are needed. Some are purely technical others require social innovation - by combining modern science with the practical experience of traditional communities. These activities should not replace conventional technology transfer. Just as countries need new forms of social entrepreneurship to meet the needs of the people, so they need new types of social technology transfer for such entrepreneurship to flourish. The *objective of the paper* is to discuss the preconditions of the involvement of social entrepreneurs in technology transfer processes. The *methods* of the research: In order to conceive the analyzed problem, general methods of scientific literature comparative structural analysis and synthesis as well as those of logic analysis were applied.

2. ISSUES ON SOCIAL ENTREPRENEURSHIP

The analysis of academic literature shows, that the concept of “social entrepreneurship” Has been rapidly emerging in the private, public and non-profit sectors over the last few years, and interest in social entrepreneurship continues to grow. “In light of this, *social entrepreneurship* is emerging as *an innovative approach for dealing with complex social needs*. With its emphasis on problem-solving and social innovation, socially entrepreneurial activities blur the traditional boundaries between the public, private and non-profit sector, and emphasize hybrid models of for-profit and non-profit activities”. The idea of “social entrepreneurship” has struck a responsive chord. It is a phrase well suited to our times. It combines the passion of a social mission with an image of business-like discipline, innovation. The time is certainly ripe for entrepreneurial approaches to social problems. Many governmental and philanthropic efforts have fallen far short of our expectations. Major social sector institutions are often viewed as inefficient, ineffective, and unresponsive. Social entrepreneurs are needed to develop new models for a new century [3]. Defining what social entrepreneurship is not an easy task. This is in part because the concept is complex, and in part because *the literature in the area is rather new* that little consensus has emerged on the topic [1], [2], [3], [4]. Though the concept

of “social entrepreneurship” is gaining popularity [1] it means different things to different people. Anyway, the definition of the term “social entrepreneurship” must start with the word “entrepreneurship.” The word “social” simply modifies entrepreneurship. If entrepreneurship doesn’t have a clear meaning, then modifying it with social won’t accomplish much, either [4]. The word entrepreneurship is a mixed blessing. On the positive side, it connotes a special, innate ability to sense and act on opportunity, combining out-of-the-box thinking with a unique brand of determination to create or bring about something new to the world. On the negative side, entrepreneurship is an *ex posts* term, because entrepreneurial activities require a passage of time before their true impact is evident. In common parlance, being an entrepreneur is associated with starting a business, but this is a very loose application of a term that has a rich history and a much more significant meaning. The term “entrepreneur” originated in French economics as early as the 17th and 18th centuries. In French, it means someone who “undertakes,” not an “undertaker” in the sense of a funeral director, but someone who undertakes a significant project or activity. Writing around the turn of the 19th century, authors use the term in this way, “The entrepreneur shifts economic resources out of an area of lower and into an area of higher productivity and greater yield.” Entrepreneurs create value [3]. Later on entrepreneurs were described as the innovators who drive the “creative-destructive” process of capitalism. In his words, “the function of entrepreneurs is to reform or revolutionize the pattern of production.” Contemporary writers in management and business have presented a wide range of theories of entrepreneurship [3], [4]. But the common among them is that *entrepreneurs have a mind-set that sees the possibilities rather than the problems created by change.* As most authors notice, We should build our understanding of social entrepreneurship on this strong tradition of entrepreneurship theory and research. Social entrepreneurs are one species in the genus entrepreneur. They are entrepreneurs with a social mission. However, because of this mission, they face some distinctive challenges and any definition ought to reflect this. One argument for this is that only founders of socially beneficial organizations that primarily rely on earned income from paying consumers are social entrepreneurs. Others say that this definition is too narrow – that income should also include contract payments, grants and donations.

In spite of the varying definitions of *social entrepreneurship*, one commonality emerges in almost every description: the *‘problem-solving nature’ of social entrepreneurship is prominent, and the corresponding emphasis on developing and implementing initiatives that produce measurable results in the form of changed social outcomes and/or impacts.*

In light of this, social entrepreneurship is emerging as an innovative approach for dealing with complex social needs. With its emphasis on problem-solving and social innovation, *socially entrepreneurial activities blur the traditional boundaries between the public, private and non-profit sector, and emphasize hybrid models of for-profit and non-profit activities. Social entrepreneurs:*

- ❖ *tackle major social issues*, from increasing the college enrollment rate of low-income students to fighting poverty in developing countries;
- ❖ *operate in all kinds of organizations*: innovative nonprofits, social purpose ventures such as for-profit community development banks, and hybrid organizations that mix elements of nonprofit and for-profit organizations;
- ❖ generate social value-not wealth-is the central criterion of a successful social entrepreneur. While wealth creation may be part of the process, it is not an end in itself. *Promoting systemic social change is the real objective.*
- ❖ see and *act upon what others miss*: opportunities to improve systems, create solutions and invent new approaches that create social value. And like the best business entrepreneurs, social entrepreneurs are intensely focused and hard-driving-even relentless-in their pursuit of a social vision [4];
- ❖ *change agents in the social sector*: they attack the underlying causes of problems, rather than simply treating symptoms;
- ❖ *recognize and relentlessly pursuing new opportunities*: the key element is persistence combined with a willingness to make adjustments as one goes. Rather than giving up when an obstacle is encountered;
- ❖ *engage in a process of continuous innovation, adaptation, and learning*: Entrepreneurs are innovative: they break new ground, develop new models, and pioneer new approaches. Innovation can take many forms. It does not require inventing something wholly new; it can simply involve applying an existing idea in a new way or to a new situation. Entrepreneurs need not be inventors. They simply need to be creative in applying what others have invented [3].

The proposal of this paper—meant to be understood with appropriate flexibility—is that social entrepreneurship is exercised where some person or group: (1) aim(s) at creating social value, either exclusively or at least in some prominent way; (2) show(s) a capacity to recognize and take advantage

of opportunities to create that value (“envision”); (3) employ(s) innovation, ranging from outright invention to adapting someone else’s novelty, in creating and/or distributing social value; (4) is/are willing to accept an above-average degree of risk in creating and disseminating social value; and (5) is/are unusually resourceful in being relatively undaunted by scarce assets in pursuing their social venture [7]. The single most important of these criteria is the first in that it serves, conceptually, to distinguish social entrepreneurship from other forms. There is no exact way of fixing the border below which the importance of social goals fails to qualify something as social entrepreneurship. It is a commitment to providing social value that marks the divide between social and their forms of entrepreneur. As in the case of the social aspect of the target concept, this list represents a catalogue from which particular users of the notion will choose somewhat selectively both as to what they include and how they weight the factors. All these characteristics preserve the distinctive status of social entrepreneurs whom we need to help us find new avenues toward social improvement as we enter the next century. However, these new avenues might be easier found and driven not only by single technologically innovative leaders, but also these ideas admitting actors.

3. ISSUES ON TECHNOLOGY TRANSFER: WHAT IS THE COURSE?

The 1960’s began an unprecedented period of science and technology development, which has continued throughout the remainder of the 20th Century. Technology transfer begins with an idea for applying an existing technology in new ways (supply push), or with an idea for improving the features and functions of an existing product by acquiring an existing technology (demand pull). It ends with a new or improved product available in the marketplace. This process spans a wide range of activity, with much of the initial and final stages thoroughly studied. However the crux of the matter—the transformation from technology invention to product innovation—is not well documented or understood. What is technology transfer? Despite the dearth of rigorous analysis and the absence of consensus on a single definition, one can readily focus discussion by identifying the unique value of “technology transfer” that differentiates it from related activities and initially prompted coining the phrase [5]. In the management literature, technology transfer is usually considered within or across firms, such as the dissemination of information through transfers of employees from one division or country to another. Anyway, technology transfer does and should continue to represent a value-added process that encompasses a continuum of related activities from laboratory innovation through market consumption. The phrase “technology transfer” is operationally defined here as:

- ❖ (*what*) the novel application of existing technologies or prototype devices,
- ❖ (*who*) by members of multiple stakeholder groups,
- ❖ (*where*) operating through research and development facilities,
- ❖ (*when*) collectively viewing transfer as a feasible, attractive option,
- ❖ (*why*) to commercialize an innovation,
- ❖ (*how*) through the synergistic matching of capabilities to needs [5].

The academic literature states that technology transfer offers a “win-win” situation for the participants. By implementing an already developed (and already financed) technology in a new and novel application, the originators gain returns from a new market and the appliers meet a need while avoiding the cost of development [5], [6], [8], [9]. Technology developers in Federal, corporate and university laboratories—as well as those working in their garages and basements—are working toward an explicit goal. Whether they succeed or fail in attaining their goal, the process of discovery and invention yields new technologies offering novel capabilities. So called technology developers or the actors or even stakeholders do participate in the technology transfer process which might be described by classical model (Figure 1). Some literature review the further elements of the process after a new technology is being employed in a firm [9], [11] (Figure2).

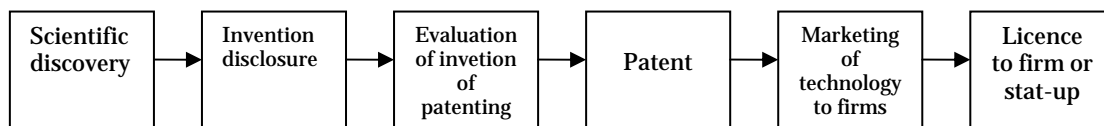


Figure 1. Simplified technology transfer process (according [10])

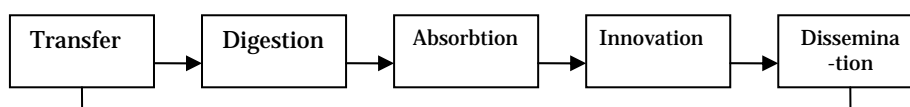


Figure 2. New mechanism for transferring technology [9]

However, the presumptive conclusion here is that the in fact, technology transfer is only in the formative stages of a discipline. There is little systematic analysis of the process of technology transfer,

and empirical data is limited to quantification of intermediate outcomes. This is to be expected from an activity that evolved through application rather than theory, and which is still more widely practiced than studied [3]. Very often the process is analyzed separating the actors (federal governmental agencies, universities, corporations) and their functions as well as responsibility. There is no a standard approach to conducting technology transfer. We lack a common framework for program evaluation purposes. What objectives are achieved and what resources are consumed in the process? Is the process efficient and effective, and how does it compare to different approaches? The questions might be answered by analyzing the technology transfer models so rarely defined in scientific literature. The essential details of the models are presented in Table 1.

Table 1. Model of technology transfer process (according [3])

Model	Expression
Interactive model	Associated with the “product view” of innovation. This model is best for understanding the motivations and goals of the various participants, and how those evolve and change as the innovation (product view) moves along the diffusion process. The interactive model is a guide for managing change in the stakeholders involved.
Linked-chain model	Associated with both “product view” and “process view” of innovation. This model is best for analyzing how the initial innovation evolves and changes as the diffusion process progresses (process view). The linked-chain model is a guide for managing change in the technology involved
Emergent model	A process view that applies holistic systems analysis to the innovation and diffusion process, because the organizational context is changing along with the innovation. This model considers the interaction of innovative activities with other factors, and its implications for the contextual operating environment. The emergent model is a guide for managing change in the organizations involved.

Noting that actors should employ all three models to manage the technology transfer/innovation diffusion process, to optimize chances for success it is also important to conclude that technology is widely accepted as essential for improving the economy of a nation, especially in developing countries where industrial growth has occupied a very important role. Evidences across many countries, including both developed and developing ones, have shown there is an increasing appreciation that in the long term the ability to master technology and to manage and generate technological change is decisive in determining a country’s international competitiveness and capacity to grow. As world becomes increasingly interdependent, the firms in developing countries are also increasingly seeking global R&D partnerships and Science and Technology collaboration as a way to build their capacity, strengthen their core competencies and expand into technology fields that are considered critical for maintaining social and economic regeneration processes [12] closely related with the sustainable development issues. Generally it is believed, that societal development should not lead to constraints on the chances of future generations meeting their needs. Unfortunately, the current level of uncertainty about the future and about political, economic and ecological development does not facilitate decision making by public institutions, businesses or private individuals. Acting without knowing all (or at least enough) the answers may mean that we purposely shift our focus to those areas where possible solutions do not emerge despite intensive sprawl of technology transferring dynamics. The next chapter initiates the scientific discussion on the abilities of social entrepreneurs to meet the challenge.

3. SOCIAL ENTREPRENEURSHIP IN THE TECHNOLOGY TRANSFER PROCESS: CALL FOR DISCUSSION

Concluding that social entrepreneurship is emerging as an innovative approach for dealing with complex social needs with its emphasis on problem-solving and social innovation, *socially entrepreneurial activities blur the traditional boundaries between the public, private and non-profit sector*, and emphasize hybrid models of for-profit and non-profit activities. Whether they are working on a local or international scale, social entrepreneurs share a commitment to pioneering innovation that reshape society and benefit humanity. Quite simply, they are solution-minded pragmatists who are not afraid to tackle some of the world’s biggest problems (Figure 3).



Figure 3. The object of social entrepreneurship: getting the balance (authors’own presentation)

Social entrepreneurship, seen as a field of experimentation and innovation, has the potential to contribute new insights to the discipline of entrepreneurship, and also to the wider social sector. The

interfaces between corporations, universities and public institutions offer great potential for discovering new forms of collaborative value creation in support of sustainable development [1] and creation of social value. The outcomes of social entrepreneurship are social value creation. The implications of social value creation are that while a for profit enterprise operating in aged care would be able to identify its total outcome as superior value creation. The constraint of forces comprising the environment, the social mission and the need for sustainability produces a unique form of entrepreneurial behavior that is conceptualized as social entrepreneurship (Figure 4) [12]:



Figure 4. Bounded multidimensional model of social entrepreneurship [13]

Whilst the findings confirm the central role of social mission, the role of the relentless effort for sustainability seems to be equally important and technology transfer processes here might act the crucial role (Figure 5).

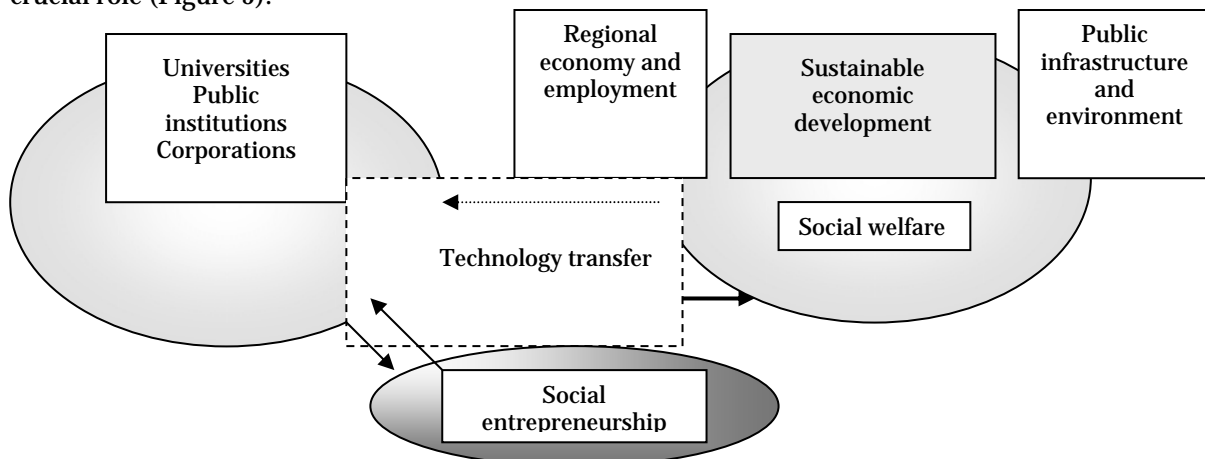


Figure 5. Social entrepreneurship in the process of sustainable development through technology transfer process (author's own epresentation)

However, seeking to pursuit the purpose, the following errors must be avoided:

- ❖ *The early hype error.* In the short term, marketers, promoters and eager inventors seem to overestimate the impacts of any new technology and in the long term underestimate such impacts and consequences;
- ❖ *The replacement hype error* - the belief that new technology will replace the existing incumbent technology & that this will happen relatively fast. In reality competing technologies often coexist over a long period of time;
- ❖ *The enhancement error* - the belief that new technology will only solve old problems & supplement existing technological systems. Instead new technologies, especially platform or core technologies often lay the groundwork for entirely new systems and new resulting systemic problems;
- ❖ *The panacea error* - the mistaken belief that new technology will function as a panacea for various social problems
- ❖ *The patterning and sense-making error* - the difficulty of seeing new important links between seemingly unrelated and different fields of technology, especially in cases where this novel combination of fields is precisely what will offer major accelerated development opportunities;
- ❖ *The social impacts error* - often people who have tried to predict the future have become bogged down in the actual technology and neglected the economic and social aspects;

- ❖ *The prisoners of our times error* - That without realizing it, people tend to be prisoners of the spirit of their times, erroneously believing that the big issues of today will also be the big issues of tomorrow;
- ❖ *The decision criteria error* - The belief that only rational economic considerations are the only factors behind that choice of one technology over another. However, for many people, seemingly irrational considerations determine such choices;
- ❖ *The information gap error* - the information on which science and technology (S&T) foresight studies are based on is often insufficient. Technology development is not linear, transparent or fully predictable, with surprise development coming out of left field such as the secret work that is done in the military or a new startup working in stealth mode before it goes public with a breakthrough. Entrepreneurs have to deal with many unknowns -complexity, uncertainty, equivocally, ambiguity, the trap of dichotomous thinking or dichotomy, contradiction or paradox and info glut [13].

4. CONCLUSIVE REMARKS

In this paper, it was drawn the corruption, economic development, and entrepreneurship and innovation literatures to advance the hypothesis that better involvement of social entrepreneurship in of technology transfer process would allow to obtain so pursued goals of sustainable development and regeneration. It gives the managers of global corporations a unique opportunity to learn and create new collaborative efforts that are in the corporations' own economic interest, while at the same time creating social value for those who need it most. This study has advanced research in social entrepreneurship in a number of ways. The first contribution lies in the development of an empirically derived model of social entrepreneurship identifying the core behavioral dimensions of innovativeness, proactiveness and risk management. The second contribution lies in identifying the optimization constraints within which social entrepreneurs operate and thus how they sharply differ in their operational context from for-profit entrepreneurs. Social entrepreneurship is thus identified as a behavioral phenomenon operating within constraints but promoting the economic development processes through technology transfer. The model also identifies superior social value as the outcome of social entrepreneurship that will be involved in the author's further research.

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