Entrepreneurship and viral development in rural Western Negev in Israel

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Abstract

Purpose – This paper aims to focus on two main and related issues: evaluating whether the required entrepreneurial capabilities are present according to Gladwell's law of the few in the Western Negev region of Israel and identifying the economic development model that can generate a viral development.

Design/methodology/approach – In this paper, McClelland's classification was used to evaluate the level of motivation in the region and Gladwell's law of the few classification was used to understand the potentially positive effect of each entrepreneur on the others and on economic development in general. To evaluate the personal and business capabilities of each entrepreneur, two groups of parameters, one describing the personal profile and the other describing the business behavior of the entrepreneurs, were used.

Findings – Most entrepreneurs are ready to cooperate with the open incubator and to contribute to generating common business interest, but mavens and connectors have few of the required personal characteristics and business attitudes. Only the salesmen have the required personal profile, but they lack the necessary business attitude. Highly motivated entrepreneurs, at need-for-power level, have both the required personal profile and business attitude. They are the ones who could generate growth, and a portion of them have the characteristics to become mavens, connectors and salesmen.

Practical implications – The willingness to cooperate with a neutral organization and generate common economic interest is present in the Western Negev, but the following actions are required to achieve viral development: persuade and support entrepreneurs at the highest level of motivation to be a part of the few, i.e. mavens, connectors and salesmen; improve the business attitude of mavens, connectors and salesmen; and plan the work program of the open incubator in cooperation with entrepreneurs at the need-for-power level: mavens, connectors and salesmen.

Originality/value – Viral economic development can occur if the few mavens, connectors and salesmen in a given sector or region have the required positive personal profile and business attitude, and if most of the entrepreneurs are ready to cooperate with a neutral organization, the open incubator and join efforts with others to generate new common business interests.

Keywords Israel, Entrepreneurial marketing, Marketing, Innovation, Entrepreneurial capabilities, Achieving viral development

Paper type Research paper

Introduction

In many developed countries, entrepreneurship in rural areas is a challenge. The rural population of the European Union (EU) decreased by 0.8 per cent between 2010 and 2011, compared with a 5.8 per cent growth in the urban population (Eurostat, 2012). To keep the balance between villages and towns, the EU initiated a program called

Journal of Research in Marketing and Entrepreneurship
Vol. 17 No. 1, 2015
pp. 54-66

1471-5201
DOI 10.1108/JRME-09-2014-0023

Leader +, aimed at helping to develop projects that provide employment in rural areas. In a recent document, the European Commission indicated that, despite various programs that encourage employment in the rural areas, these regions represent only 17 per cent of all areas of employment growth in the past decade (E.U, 2012).

The percentage of the rural population in Israel is changing slowly. In 2010, about 640,000 people lived in rural areas, compared with about 510,000 in 1995, an increase of 25 per cent. By contrast, the urban population grew from 5.1 to 7.0 million, an increase of about 37 per cent. In the south of the country, the situation is worse. Between 2012 and 2013, 70,100 people left the region, compared with 66,200 people who arrived (CBS, 2014), a net loss of 3,900 people.

Study objective

The objective of the study is to determine how existing entrepreneurship can generate viral economic development toward a clustering process in a rural environment, specifically in the Western Negev in Israel.

Entrepreneurial behavior

Gilad and Levine (1986) and Verheul *et al.* (2010) distinguished between necessity and business entrepreneurship. They suggested that the former, defined by the "push theory", affects economic development only slightly, whereas the latter, defined by the "pull theory", has a more meaningful effect on economic development. Giacomin *et al.* (2011) examined common types of entrepreneurship in 27 countries and found that the share of business opportunity entrepreneurs, among new businesses, is the largest in the Scandinavian countries (Sweden, Norway, Denmark and Iceland) and in the Anglo-Saxon countries (Britain, the USA and Ireland), followed by France, Germany, Italy, Belgium and The Netherlands. Necessity entrepreneurship is more characteristic of European Mediterranean and Eastern European countries.

Bonnet *et al.* (2011) showed that in the 2007-2011 period, 10 per cent of initiatives accounted for 50 per cent of new employment (business entrepreneurship). This means that if we want initiatives to have a greater effect on economic development, we must identify and encourage entrepreneurs who have a greater ability than others to influence economic development, in other words, entrepreneurs who are business- and not necessity-minded.

Gladwell (2000) argued that socio-economic phenomena can spread like an epidemic if specific environmental conditions are met – those defined by the law of small numbers, stick factor and context.

The law of small numbers is based on three elements: mavens, those in possession of knowledge; connectors, those able to transfer knowledge; and salesmen, those able to persuade others to implement knowledge. A small group of mavens and connectors is likely to affect a large number of salesmen and, through them, create a viral process of economic development, as observed by Bonnet *et al.* (2011). The stick factor creates common interests between connectors, mavens and salesmen, ensuring and improving cooperation between them. The context is built on the incentives provided by a positive business environment.

The literature on entrepreneurs focuses on aspects of their cognitive – perceptual ability and the degree of risk they are willing to take (Pena *et al.*, 2010). Caird (1992)

referred to communication skills, analytical skills, knowledge and the ambition of the entrepreneur.

McClelland (1971) focused on the motivational power of distinct levels of self-actualization and social actualization. He called the first level of motivation the "need for achievement". This level requires personal responsibility, calculated risks, performance feedback and task accomplishment. The second level of motivation is called "need for affiliation", requiring the "approval" of the community and conformity with its "wishes and norms". The third level of motivation is characterized by the "need for power", that is, to exercise control and maintain leader – follower relationships.

According to McClelland and Gladwell, each entrepreneur plays a role in economic development. Their influence varies according to their level of motivation and the role they play, which can be that of a maven, a connector or a salesman.

Entrepreneurship and innovation

Sustainable competitive advantage requires adapting the knowledge capabilities of the firm over time to overcome changes in the technological and market environments. Internal knowledge is no longer the main basis for competitive advantage. External knowledge is required to develop new competitive advantages. The growing mobility of highly experienced and skilled employees and the wider diffusion of knowledge have created new alternatives to the internal knowledge of the firms. In this context, Kaufmann *et al.* (2012) suggested a model that integrates micro and macro factors for generating innovation.

The resource-based view of the firm (Barney, 1986, 1991) explains the conditions under which companies can achieve a sustained competitive advantage based on their bundles of resources and capabilities and internal source of knowledge. Resources are stocks of available factors that are owned or controlled by the firm. Barreto (2010) reviewed and analyzed the diverse research streams on static and dynamic capabilities and suggested a new conceptualization of dynamic capability based on external knowledge as an aggregate multidimensional construct.

D'Aveni (1994) discussed the dynamic context of hyper-competitive environments, and Bourgeois and Eisenhardt (1988) – the dynamic context of high-velocity environments founded on environmental shifts in the competitive, technological, social and regulatory domains. This interest is rooted in the long-standing importance attached to the link between the strategic choices and environmental conditions of firms (D'Aveni, 1994; Eisenhardt and Martin, 2000). Dynamic capabilities are necessary but not sufficient conditions for competitive advantage argued Eisenhardt and Martin (2000). In their view, long-term competitive advantage does not rely on dynamic capabilities but on the resource configurations created by these capabilities and on "using dynamic capabilities sooner, more astutely, more fortuitously than the competition". Teece *et al.* (1997) proposed the dynamic capabilities framework for filling the gap between static and dynamic contexts. They defined dynamic capabilities as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments". Their approach was based on six main parameters: nature, role, context, creation and development, outcome and heterogeneity. The authors categorized nature as an "ability" or "capacity", stressing the essential role of strategic management. They specified the desired end (i.e. the role, context, creation and development, outcome and heterogeneity) of this special capability as integrating or

coordinating, building and reconfiguring internal and external competences. Dynamic capabilities are heterogeneous across firms because they rely on the specific paths, unique asset positions and distinctive processes of the company.

Katila and Ahuja (2002) distinguished between two dimensions of knowledge sources – search depth as the existing knowledge of the firm and search scope as the exploration of new external knowledge. The authors found a linear relationship between search scope and company performance measured in a number of new products developed by the company (Katila and Ahuja, 2002). Von Hippel (1988) discussed new sources of innovation and indicated that they "demand new management tools as well as new organization". He concluded from the analysis of case studies that innovation requires external sources of knowledge at the market and technological levels.

The literature distinguishes between external continuous and discontinuous or disruptive knowledge (Christensen, 1999) as a source of competitive advantage. Continuous knowledge refers to the current technological and market environment of the firm. Discontinuous knowledge refers to new market and technology, beyond the scope of the firm. Disruptive knowledge refers to new technological knowledge expanding the current market to new low-end customers.

The choice of such innovation and its efficiency depend on "the ability of a firm to build new technological competences and/or to identify and build relations with new customers". In the context of open innovation, Chesbrough (2003, Chesbrough *et al.*, 2006) holds that the boundaries of the firm become permeable to continuous and discontinuous knowledge from external sources.

Chesbrough (2003) defines open innovation as "the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation, respectively".

Open innovation (Chesbrough, 2003, Chesbrough *et al.*, 2006) combines internal and external knowledge into architecture and systems. Companies have understood that they cannot merely rely on in-house capabilities and resources to compete (Bughin *et al.*, 2008).

The open innovation approach is complementary to the collaboration approaches (DeBresson and Amesse, 1991; Faems *et al.*, 2005; Hagedoorn and Duysters, 2002; Kuppers and Pyka, 2002), consistent with Chesbrough's argument (2003) that innovations are increasingly a result of collaboration efforts with external sources of knowledge. Open innovation, however, requires budgets and capabilities which are often not at the disposal of small and medium enterprises (SMEs).

Entrepreneurship and innovation sustained by the law of the few

Gladwell (2000) suggested that socio-economic phenomena can spread like an epidemic with the aid of a few people who have the relevant capabilities and the ability to influence many others. The law of the few is based on mavens, connectors and salesmen who together generate around them a networking that creates, transfers and implements knowledge. The mavens are in possession of knowledge and able to improve it over time. Their vision is knowledge improvement, and they are ready to share it with others. Connectors are individuals who have connections in many circles. They are appreciated and capable of understanding knowledge sufficiently to transfer it to others. Salesmen have the ability to persuade others to implement knowledge. A small

group of mavens and connectors can affect a large number of salesmen and, through these salesmen, initiate an epidemic process of knowledge and innovation-based value creation by SMEs.

Our research aims to evaluate the ability of mavens, connectors and salesmen in the developing region of the Western Negev to generate epidemic development of SMEs in selected sectors.

Generators of a clustering process

A cluster is a "geographic concentration of competing, complementary, or supporting firms that develop sale-purchase relationships, use the same pool of technologies, and share customers and existing pools of human resources" (Porter, 1998, p. 78).

Firms in a cluster develop competitive advantages based on human capital, the knowledge generated in the environment and local and international demand. But to generate a cluster, an "ignition process" is needed, initiated by private or public interests. Below are examples of different models that could generate a clusterization process.

The incubator

The Silicon Valley cluster started as a technological incubator established by the University of Stanford in the early 1950s. Creative enterprises such as HP and Intel were established there in 1967 by former Fairchild Semiconductors employees. The area became a point of attraction for small and large companies alike specializing in the same fields, such as Sun and Apple.

The biotechnology cluster in San Diego developed around the university and research institutes: the Salk Institute, Scripps and the University of California, San Diego. The initiative began in 1965 with the establishment of Torrey Pines Mesa Biotech, which operated as an incubator. The development of the area into a cluster began with the entrepreneur, Ivor Royston, who, in 1978, founded the company Hybritech, to be acquired in 1986 by Elli Lilly (Bennett, 2008). The success of the Silicon Valley and San Diego clusters is credited largely to the creative entrepreneurship of isolated individuals, at the beginning of their way, who persuaded developers and other firms to follow them.

Industrial district

The industrial district model first appeared in the 1970s in Italy. Industrial districts in the textile industry in Carpi and Prato, the furniture industry in Brianza and Cascina and the footwear industry in Vigevano opened to Italian industry new markets in Europe and Japan (Brusco, 1982). Today, industrial districts in textiles, ceramic tiles and machine tools are concentrated in Northern and Central Italy (Paniccia, 1998).

The industrial district model requires flexible specialization, of labor between firms, and differentiation of enterprises by process or products (Rabellotti, 1995; Schmitz, 1995; Rabellotti and Schmitz, 1999); inter-firm cooperation generated by institutional meaning systems (Bellandi, 1996); geographic proximity facilitating information externalities (Gamsey, 1998); and social embeddedness through collective learning and resource sharing (Dei Ottati, 1994; Harrison, 1992).

The main feature of an industrial district is the role of the institutions (formal and informal), which can be defined as:

> […] a set of humanly devised behavioral rules that govern and shape the interaction of human beings, in part by helping them to form expectations of what other people will do (Nugent and Lin, 1996).

Spaventa and Monni (2007) distinguished between the following four stages of development of the industrial district:

(1) *Birth*: An at-first scattered handicraft presence in the area constitutes one of the preliminary conditions for the development of this organizational model.

(2) *Preconditions for take-off*: The progressive development of a network of linkages and of a first process of division of labor.

(3) *Take-off*: The development and the strengthening of local institutions.

(4) *Drive to maturity*: The strengthening of the process of internal and external division of labor.

The clustering process occurs only at the third and fourth stages.

The open incubator

Sporadic business activities of several SMEs struggling for survival cannot generate a clusterization process without the support of a structure that helps improve their business efficiency and generate new opportunities based on common business interests with other firms.

Bertolini and Giovannetti (2006) analyzed the internationalization of Italian SMEs, exploring their structure and the role of local institutions in an international competitive context. Their results "have confirmed the economic role of the small producers, while highlighting the dimension of network relationships" (Bertolini and Giovannetti, 2006, p. 298). The authors also stress the importance of institutions that have a strategic function "to protect a conception of quality which includes the cultural values of local know-how" (Bertolini and Giovannetti, 2006, p. 299).

The combination of organization structure, net equity and strategic planning produces important results: a complex organizational structure is related to a developed legal status and a high net equity (Rossi *et al.*, 2014, p. 312). Studies recommend mergers and acquisitions as the means to growth and achieve proportional cost economies (scale and scope).

The open incubator operates as an entrepreneurial incubator and a visionary industrial district, seeking to promote common economic interests based on cooperation agreements and, in the future, on mergers and acquisitions. As an entrepreneurial incubator, the open incubator supports SMEs in their effort to broaden their technological and business perspectives. The open incubator assists in business and technological value creation and value capture of each SME with the experience of the other SMEs. Cooperation between SMEs creates new values and serves as Gladwell's "stick". As a visionary industrial district, the open incubator helps improve the support extended to SMEs by the authorities, including services such as education, R&D and financing (Gladwell's context). The stick and the improved context make external open innovation available to SMEs. The open incubator enables SMEs to advance toward Chesbrough's Types 2-6 groups: targeting segments simultaneously, obtaining access to external technologies, adjusting to customers' future requirements and engaging in joint ventures.

The open incubator is structured as follows:

- A regional board composed of public and private representatives proposes new business and technological perspectives to meet the common interests of all the regional stakeholders and of the selected business/technological sector. The board also decides on the innovation strategies suggested by executive management as far as cooperation between public and private institutions is concerned.
- An executive management board initiates and promotes innovation within each individual SME (strategic innovation plan), as well as joint business and technological activities between firms, in cooperation with business promoters, service suppliers and public and educational stakeholders. The board consists of entrepreneurs representing SMEs in the region and members of the supply chain within the sector, managers (also from large companies in the region, i.e. original equipment manufacturers) and local consultants. The management is selected by the board and reports to the board. Furthermore, it identifies and promotes synergies between the various strategic innovation plans of SMEs and of the supply chain to create internal and external open innovation, value creation and value capture (Figure 1).

Entrepreneurship and open incubator in rural Western Negev

Our research focuses on two main and related issues: evaluating whether the required entrepreneurial capabilities are present according to Gladwell's law of the few in the Western Negev region of Israel and identifying the economic development model that can generate a viral clusterization process.

The sample

In the agriculture sector, we have identified approximately 500 growers in the Western Negev. Of these, we have randomly selected 53, 13 of which specialize in field crops and 40 in vegetables. In the tourism sector, we have selected a sample of 62 businesses, representing 35 per cent of the business population in various specializations: guest houses, agro-tourism, attractions, restaurants and catering. The total sample contains 113 businesses (Table I).

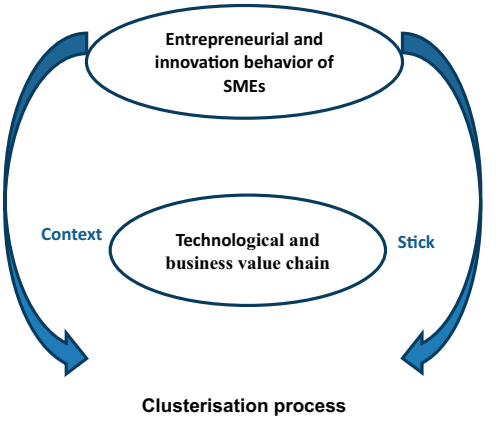

Figure 1.
The open incubator

Agriculture	Sample	Estimated population	(%)
Field crops	13	40	33
Vegetables	40	460	8
Total	53	500	10
Tourism			
Guest house	23	44	52
Agro-tourism	8	23	35
Attractions	17	64	27
Other	12	60	20
Total	60	176	31

Table I. The sample

Questionnaire and hypotheses

To generate viral development, entrepreneurs must be willing to cooperate with each other under the umbrella of a local open incubator. This has the potential to improve their businesses and generate new common economic interests.

In total, 81 per cent of the agricultural entrepreneurs and 93 per cent the entrepreneurs in the tourism sector expressed their willingness to join in an effort to cooperate for the purpose of improving costs and revenues.

The entrepreneurs agreed that a third (neutral) party had to become involved in this process and act along the entire value chain of the sector, articulating a multi-level vision that takes into account the interests of the entrepreneurs, of the sector and of the region as a whole. The open incubator can play this role.

The questionnaire checked also whether mavens, connectors and salesmen have the required positive personal characteristics and business attitude and whether entrepreneurs at the different level of motivation have the necessary personal characteristics and business attitude. We determined the features that are relevant to each of the above:

- *Connector*: Brings people together, has a wide range of contacts, participates in events, consults, likes challenges, is curious, is ready to cooperate and likes to socialize;
- *Maven*: Finishes the job, plans, solves and takes a different view; and
- *Salesman*: Is able to convince and is close to customers.

Because it is necessary that the few have a high motivation level and the correct business attitude, we used the three McClelland motivation levels and formulated questions related to business and personal attitudes based on the studies of Pena *et al.* (2010) and Caird (1992), as follows:

- *Personal attitude*: Readiness to take risks, plan, cooperate, join forces, solve problems, consult, convince, transfer responsibility, acquire knowledge, understand customer needs, socialize, develop relations, participate in events, innovate and open up new horizons.
- *Business attitude* – Readiness to invest in the current business in marketing and sales, training, management, export, new trends, financing, the brand, negotiations and a new organization.

Answers concerning each parameter were provided on a scale of 1-5, with 1 representing the lowest level and 5 the highest. Some parameters required a yes (1) or no (0) answer:

H1. A maven is a professional, at least at the need-for-affiliation motivational level. The business and personal attitude of the maven can be at an intermediate level.

H2. A connector is motivated by the need for affiliation and has a high level of personal and business attitude.

H3. A salesman must be able to persuade, needs a strong business and personal attitude and must be at the necessity motivational level.

H4. Businesses at the need-for-power motivational level have strong personal and business attitudes.

H5. Businesses at need-for-affiliation motivational level are seeking new trends in business and are ready to cooperate with other businesses.

H6. Businesses at the need-for-achievement motivational level have average personal and business attitudes.

Results and discussion

Mavens are at the high motivational level of need for affiliation. We did not find any statistically significant personal or business characteristics (Table II).

Connectors are at a need-for-affiliation motivational level. We found one significant business feature, seeking new trends, and one significant personal feature, being ready to take risks (Table III).

Salesmen are also connectors. Their significant positive personal characteristic is being ready to take risks and a family focus; we found no significant business attitude (Table IV).

Entrepreneurs at the need-for-achievement and need-for-affiliation motivational levels have a positive personal characteristic, bringing people together and two positive business characteristics: seeking new trends in the market and being ready to invest in training (Tables V and VI).

Entrepreneurs at the need-for-power motivational level have even more positive personal characteristics than those at the need-for-achievement and need-for-affiliation

Table II. Regression between "Maven" and independent variables

$R^2 = 376$, R^2 adjusted = 0.358	B	*t*	Significance
Constant	0.000	15.410	12.507
Need-for-affiliation	0.025	2.274	0.283

Table III. Regression between "Connector" and independent variables

$R^2 = 0.527$, R^2 adjusted = 0.514	B	*t*	Significance
Constant	16.317	12.437	0.000
New trends	1.088	3.561	0.001
Take risks	1.526	4.525	0.000
Need-for-affiliation	1.460	5.403	0.000

levels, have the ability to persuade and have a more positive business attitude: they are ready to take loans (Table VII).

Most of the entrepreneurs are ready to cooperate with the open incubator and to contribute to generating common business interests, but mavens and connectors have few of the required personal characteristics and business attitudes. Only the salesmen have the relevant personal characteristics, but they lack the necessary business attitude.

Highly motivated entrepreneurs, at the need-for-power motivational level, have the relevant personal characteristics and business attitude. They could serve as growth generators and a portion of them could become mavens, connectors and salesmen.

Limitations of the research

The present research has the following limitations:

- The results are relevant primarily to the selected region and area of specialization.
- Rural development could be based on other specializations as well, such as furniture, food processing or home businesses.

Table IV. Regression between "Salesmen" and independent variables

$R^2 = 0.527$ R^2 adjusted = 0.514	B	t	Significance
Constant	−0.877	−0.818	0.415
Family focus	0.567	3.108	0.002
Ready to take risks	0.628	4.552	0.000
Connector	0.096	3.346	0.001

Table V. Regression of "need for achievement" on independent variables

$R^2 = 0.217$, R^2 adjusted = 0.196	B	t	Significance
Constant	1.617	0.461	
New trends	0.214	0.075	0.251
Bring people together	0.287	0.095	0.264
Invest in training	0.224	0.081	0.230

Table VI. Regression between "need for affiliation" motivation level and independent variables

$R^2 = 0.217$, R^2 adjusted = 0.196	B	t	Significance
Constant	−1.196	2.028	0.045
New trends	0.369	3.845	0.000
Bring people together	0.493	3.955	0.000
Invest in training	0.395	3.748	0.000

Table VII. Regression between "need-for-power" motivation level and independent variables

$R^2 = 0.335$, R^2 adjusted.= 0.310	B	t	Significance
Constant	−1.824	2.931	0.004
New trends	0.305	3.077	0.003
Bring people together	0.274	2.055	0.042
Persuade	0.349	2.489	0.014
Ready to take loans	0.272	2.913	0.004

- The size of the sample is smaller in the tourism sector than in the agriculture sector, which could affect results.
- Entrepreneurship in tourism and agriculture includes a wide scope of specializations, whereas our sample covered only a portion of it.
- The list of parameters used to determine personal profiles and business attitudes could be extended and deepened to ensure a better evaluation of entrepreneurs' capabilities.

Conclusions

Viral economic development could occur if a few mavens, connectors and salesmen present in a given sector or region have the required positive personal characteristics and business attitudes and if most of the entrepreneurs are ready to cooperate with a neutral organization, such as the open incubator, in joining efforts with each other to generate new, common business interests.

The willingness to cooperate with a neutral organization and generate common economic interests is present, but to achieve viral development, the following actions are required:

- Persuade and support entrepreneurs at the highest level of motivation to become part of the few (mavens, connectors and salesmen). Provide incentives for engaging in joint business activities with other businesses and support networking between entrepreneurs and local and international sources of knowledge in technology, markets and finance.
- Improve the business attitude of mavens, connectors and salesmen by providing relevant training and business opportunities through the open incubator.
- Design a work program for the open incubator in cooperation with entrepreneurs at the need-for-power motivational level (mavens, connectors and salesmen). To implement the work plan, use the capabilities of connectors to transfer information and of the salesmen to persuade.

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