# The role of soft loans in the growth of innovative companies: focusing on emerging issues

# Marco Lacchini, Simone Manfredi, Fabio Nappo and Matteo Palmaccio\*

Department of Economics and Law, University of Cassino and Southern Lazio, Via S.Angelo (Loc. Folcara), Cassino 03043 (FR), Italy

Email: studio.lacchini@gmail.com Email: s.manfredi@unicas.it Email: f.nappo@unicas.it Email: m.palmaccio@unicas.it \*Corresponding author

**Abstract:** In this paper we analyse the role of soft loans in supporting the innovation processes by innovative companies operating in the province of Frosinone (central Italy). The analysis carried out in this paper is based on two dimensions: the first refers to companies' performances during the period 2010 to 2014; the second includes a questionnaire aimed at generating the company profile of each company participating in the investigation. The main findings of the research concern the preference of the companies for financial sources coming from investments funds and their scarce interest for the soft loans instruments, mainly due to the bureaucratic difficulties and the lack of an effective network between the public institutions of the area enrolled to support the innovation and the entrepreneurial development.

**Keywords:** soft loans; innovative companies; financial statement; financial performance; local development; local growth.

**Reference** to this paper should be made as follows: Lacchini, M., Manfredi, S., Nappo, F. and Palmaccio, M. (2017) 'The role of soft loans in the growth of innovative companies: focusing on emerging issues', *Int. J. Digital Culture and Electronic Tourism*, Vol. 2, No. 2, pp.139–154.

**Biographical notes:** Marco Lacchini is Full professor of Business Administration at the University of Cassino and Southern Lazio. He performs an intense scientific activity concerning finance, company evaluation, international accounting, management control and intangible assets. He also served within the major Italian companies as auditor and director.

Simone Manfredi is Assistant Professor of Business Administrations at the University of Cassino and Southern Lazio. He holds a PhD in Business Administration achieved at the University of Roma Tre. He performs an intense scientific activity concerning finance, company evaluation, international accounting, corporate insolvency law and intangible assets.

Fabio Nappo is Assistant Professor of Business Administrations at the University of Cassino and Southern Lazio, where he achieved a PhD in

Business Administration. His main research interests are: company evaluation, international accounting, intellectual property, intellectual capital and corporate governance.

Matteo Palmaccio is PhD student in Business Administration at the University of Cassino and Southern Lazio. His main research interests focus on corporate disclosure, intellectual capital, business evaluation and accounting history.

#### 1 Introduction

The objective of this paper is to analyse soft loans supporting the innovation processes of companies by including a territorial analysis developed within Italy.

Starting from the analysis of territorial development, the paper investigates into the relevant theories on financial development in order to discuss socio-economical phenomenon from a territorial point of view.

Through the use of logical methods and theoretical models, these theories investigate into the critical points of production levels, of development, the growth rates and distribution of profit, including the space dimension into the study of market operation.

In this direction the research approach is of a qualitative-quantitative nature, with the use of primary and secondary sources.

The empirical investigations carried out in this paper focus on a sample of companies working within a specific area of Central Italy (the province of Frosinone) and has been prepared by considering a dual dimension of the analysis: the first refers to company performance of the sample of companies used during the period 2010 to 2014; the other includes a questionnaire aimed at generating the company profile of each individual company participating in the investigation and subsequently aimed at investigating into the position of single individuals with regards to the topics of innovation, territorial development and soft loan instruments to support these processes.

Finally, through the elaboration of data taken from an empirical analysis carried out, a picture of the current economic context in which the companies operate has been created and providing, at the same time, some starting points for thought on the directions and strategic choices of management that, in the opinion of the author, may contribute towards the development of companies and therefore of the territory.

The theme of soft loans for the innovative companies appears of particular interest to the business sectors of culture, sports and entertainment in general (Trequattrini et al., 2016); in facts, these sectors are characterised by a high level of innovation (Cheok et al., 2009) and require the companies to adopt tools - including financial ones – able to protect and improve their competitive advantage (Borrás and Edquist, 2013). This implication justifies the potential interest of this study.

Considering the geographical area of interest of this study and the topic of the paper, the research question that guided the research is the following: which are the soft loan instruments used by innovative companies in the province of Frosinone?

#### 2 Literature review

In the current economic context in which companies characterised by well-known globalisation and internationalisation processes of economy operate, innovation represents the key to competitiveness of a region or of a territory, in a broad sense (Bonaglia and Goldestein, 2008).

Innovation attracts new investments and opens the doors to development, at the same time increasing productivity of work: therefore, it is necessary to create suitable conditions for companies to innovate (Maarten et al., 2010; Lombardi et al., 2016).

Speaking of development does not only mean interpreting the data that emerges from some indicators, but it also implies paying attention to a whole range of processes that aim at improving the quality of life and the wellness of citizens.

In this regard, the main objective of the picture that has accompanied political decisions on a community level in the last decade was to guide Europe towards becoming the most competitive and dynamic economy in the world, based on knowledge and capable of creating a sustainable economic growth with more jobs and better working conditions, without however neglecting the need to achieve greater social cohesion (RIIR, 2011).

In reality, the idea developed throughout the last few years indicated that it was not only factors of a tangible nature that affected the level of local development, but most of all those of an intangible nature (Flynn, 2008), partially attributable to the social capital of a community (Trigilia, 1999).

Furthermore, the need to prepare economic-financial resources in order to "help" local development (Ciapetti, 2010) also emerged: with the subsequent development of political formulas capable of stabilising tangible and intangible elements (Granelli et al., 2008; Thomas, 2008), perhaps through economic-financial cooperation between public and private individuals.

Therefore, in light of the elements represented above, a brief analysis of the literature on the topic of innovation and local development will be provided below, then passing onto a representation of the method characterising research and, finally, the data deriving from the investigations will be presented and commented.

The topic of the economy of local development (Isard, 1951) has, throughout the years, played a very important part, so much so that it has taken on the role of independent science. As known, regional economy or spatial economy represent a branch of economic science aimed at studying and interpreting some social-economic phenomenon in their territorial dimension.

In fact, the attention to this dimension originates from recent economic studies: the interest of scholars has always focused on aspects connected with the quantity of resources to be destined to different purposes, rather than asking themselves where the activities and resources were localised or should be localised (Isard, 1954).

The regional economy attempts to investigate into the economic logics underlying the choice of localisation of production activities, in an attempt in the meantime, to provide answers in order to determine the level of growth of some areas compared with others (Rolfo and Calabrese, 2003).

By creating an initial classification of the theories of regional economy, a distinction can be made between the theory of localisation and the theory of growth and of regional development.

The first deals with the economic mechanisms underlying the distribution of activities in space while the second refers to the spatial aspects of economic growth and the territorial distribution of profit.

These theories highlight several analysis approaches of the phenomenon in question, two traditional theories attributable to the physical-metric space and abstract uniform space and a much more recent theory identified as a diversified relational space, representing the bridge between the two types of approach of the economic regional doctrine, finalised in enhancing some aspects connected with intrinsic relationalities present on the territory.

According to the scholar François Perooux, in fact, development is considered as: «a selective and cumulative process that does not occur everywhere and simultaneously, but it emerges in some points of the space with variable intensity» (Perroux, 1967). This kind of vision presumes the existence of stable and long-term local input-output relations; in this view, the space is conceived as diversified and "relational" (Biehl, 1991; Boudeville, 1977; Gillespie and Williams, 1988; Holland, 1977; Paelink, 1970; Vickerman, 1991).

It was only at the beginning of the Seventies that conceptual progress was made in the interpretation of space as territory. In this vision, therefore, a system of localised technological externalities appeared, that is to say, a range of tangible as well as intangible factors (Granelli et al., 2008; Thomas, 2008) that, considering the geographical proximity and reduction in transaction costs, may have an effect on the productivity and innovation of companies. The territory, defined in this way, represents a system of economic and social relations that represent relational capital or social capital of a specific geographical space (Camagni, 2002).

In this perspective, the "tangible" profiles connected with the concept of space are abandoned in order to enhance some of the intangible aspects. Therefore, the role of economic-social relations that are created within a given territory are emphasised and an attempt is made to investigate into the decisive points of the factors of an endogenous nature that allow the economic system to reach high development rates throughout time.

Therefore, we can state that, if in the theory of relational diversified development, the strategic element for development and competitiveness of the territory lies in social capital, or in the range of relations that the territorial system can establish and implement (Putnam, 2004), in the same way for companies, the level of development, innovation and competitiveness may exceed the critical dimensional threshold, operating on the lever of cooperation and collaboration between public and private individuals.

## 3 Methodological approach

The sample included in the analysis consists of 41 companies operating in the Province of Frosinone. Using the Ateco 2007 six-digit classification it was possible to clearly identify the companies operating in specific sectors considered as strategic for the territory, being: extraction of minerals, automotive, paper production and tourism. The selection of the companies has been made considering the ATECO classification issued by the Italian Statistical Institute (see Table 1).

The analysis carried out has been articulated on two levels:

- the first level refers to each single company, analysed through the use of the technique of financial statement analysis by ratios;
- the second level is characterised by an explorative investigation finalised at highlighting the main critical points found by the companies selected in approaching the soft loan instruments.

 Table 1
 Economic sectors of the sample

C 1	M G , /G , /G ; C G ,
Code	Macro Sector/Sector/Specific Sector
В	MINING AND QUARRING
08	Other activities of mining and quarrying
08.11.00	Extraction of ornamental and building stones
С	MANUFACTURING
17	Production of paper and other paper products
17.12.00	Paper and paperboard
29	Production of motor vehicles, trailers and semi-trailers
29.10.00	Motor vehicles
29.20.00	Bodies for motor vehicles
29.31.00	Electric and electronic equipment for motor vehicles
29.32.01	Seats for motor vehicles
29.32.09	Other parts for motor vehicles
I	HOTELS AND RESTAURANTS
55	Hotels
55.10.00	Hotels
55.20.51	Holiday houses
55.30.00	Camping areas

Source: Ateco ISTAT (2007)

With the first level of analysis the main indicators of the financial statement have been defined, such as: ROI, ROS and ROE. This study is considered necessary in order to provide a picture of the current financial situation experienced by companies operating in the fields previously indicated above.

It is also true to say that this kind of information is not able to provide an exhaustive answer to the question regarding the level of trust of economic operators with regards to the soft loan instruments, but it may contribute towards extending information on performance achieved by the sector, therefore on the average profitability of capital invested in the company, on profitability of personal capital and on profitability from sales.

The sampling has been carried out by taking into consideration the citizens of the cities considered in the survey as of December 2013 (source: Istat, 2013); moreover, the population of the sample – made of 41 elements – is the result of the attribution of the weight of each city in terms of population to the companies operating in the sectors listed in Table 1. Table 2 exposes the determination of the sample.

 Table 2
 Sample

Municipality	Companies	Sample <sup>1</sup>
Acquafondata	0	0
Aquino	2	1
Atina	10	3
Ausonia	3	1
Belmonte Castello	0	0
Casalattico	0	0
Casalvieri	2	1
Cassino	35	11
Castelnuovo Parano	2	1
Castrocielo	3	1
Cervaro	4	1
Colfelice	0	0
Coreno Ausonio	34	11
Esperia	3	1
Gallinaro	0	0
Picinisco	2	1
Piedimonte San Germano	6	2
Pignataro Interamna	4	1
Pontecorvo	1	0
Roccasecca	2	1
San Giovanni Incarico	0	0
San Vittore nel Lazio	1	0
Sant'Ambrogio sul Garigliano	0	0
Sant'Andrea sul Garigliano	1	0
Sant'Apollinare	0	0
Sant'Elia Fiumerpido	5	2
Settefrati	1	0
Terelle	0	0
Vallerotonda	1	0
Villa Santa Lucia	6	2
TOTAL	128	41

Note: <sup>1</sup>The sampling has been made in proportion to the population of the municipalities.

Following the sampling, an analysis of financial and income statements has been carried out in order to identify the average indicators of each sector. As shown in Table 3, the indicators have highlighted negative results for some sectors with regards to their average performances or values that should be kept under control.

 Table 3
 Ratios of the sectors

		2010			2011			2012			2013	
	ROE	ROI	ROS	ROE	ROI	ROS	ROE	ROI	ROS	ROE	ROI	ROS
Other activities of mining and quarrying	12%	2%	7%	16%	12%	18%	%6	4%	%9	%L	15%	16%
Production of paper and other paper products	23%	29%	21%	25%	24%	23%	34%	27%	23%	35%	30%	28%
Production of motor vehicles, trailers and semi-trailers	-49%	1%	1%	21%	1%	1%	15%	-1%	47%	-20%	1%	1%
Hotels	3%	%8	12%	-10%	2%	37%	%6	1%	34%	%6	4%	76%

#### 146 M. Lacchini et al.

Through the second level of analysis, an explorative investigation has been focused on investigating into the main problems of the economic operators with regards to the topic of innovation, development and means of finance suitable to sustain such processes within the companies.

However, despite the fact that there has been an initial direct contact with companies from the sample, only 14.63% of them subsequently took part in the investigation.

The questionnaire was prepared with the following questions:

- 1 What is your role within the company?
- 2 In which town is your company based?
- 3 What is your company governance?
- 4 In which field does your company operate?
- 5 How many employees did you have at the end of 2013?
- 6 Do you have production branches abroad?
- 7 Do you have sales offices abroad?
- 8 In which geographical areas are your export activities mainly focused?
- 9 How do you plan to implement your growth ambitions?
- 10 With regards to your growth ambitions, do you believe that your company should increase its capitalisation?
- 11 Which financial instruments may be the most useful for your strategies of growth?
- 12 If, in the case of opening of share capital of your company, you were asked which role you would like to cover, which would you choose?
- 13 Have you used soft loan instruments in the last few years?
- 14 Did you make use of structural funds during the period 2007/2013?
- 15 Which structural funds have you used?
- 16 Have you used the self-entrepreneurial measure as indicated in the Leg. Decree n.185/2000?
- 17 Have you ever used State assistance (2007–2013)?
- 18 Which categories of help have you used (art. 87 EC treaty par. 3)?
- 19 Which of the following reasons make a company "not" use soft loan instruments?
- 20 Which of the following instruments do you consider suitable to favour the innovation of your company and the territory?
- 21 Do you believe that, for purposes related to development and innovation of the territory, signing agreements and/or partnerships with authorities or research institutes is the right thing to do?
- 22 Have you signed agreements with authorities and research institutes?

- 23 Would you advise other entrepreneurs to sign agreements with authorities or research institutes?
- 24 Why would you not advise other entrepreneurs to sign agreements with authorities or research institutes?

Even if the research is affected by a moderate level of participation by the companies of the sample, the answers given by the companies interviewed are provided in Table 4.

# 4 Findings and discussion

For a long time the topic of innovation has aroused particular interest by scholars of various branches. We can hypothesise that this attraction is strictly connected with the need to find models that can describe and, therefore, favour research into the very best organisational and governance solutions, not only with reference to a well-defined territorial space but most of all to support the companies, the ones that called upon first of all to defend competitiveness of a territory (Abell, 1980; Burgelman and Maidique, 1988; Cooper and Schendel, 1976; Hayes and Wheelwright, 1984; Friar and Horwitch, 1985; Rosembloom, 1986).

According to several authors, innovation represents a phenomenon that can modify the company-environment relationship on the basis of much more convenient conditions and methods of an internal and external nature (Corticelli, 1990) to the company.

In reality, innovation represents the essential attribute of the entrepreneurial formula, in the absence of which it is difficult to adapt to the environmental dynamic or attempt to modify it: at the same time, this represents the style of a company that guides development and from which it constantly reaps benefits (Rosenberg, 1991).

Recent studies (RIIR, 2011) reveal that despite the fact that the innovative activities of small and medium Italian enterprises are important in the idea phase, on a relatively small number of companies succeed in gaining access to the subsequent phases of the innovative cycle as they are blocked by the huge investments necessary for implementation of the production/innovative process.

In light of this it seems clear that there are at least two useful solutions to overcome this barrier:

- 1 access to soft loan instruments;
- 2 collaboration between companies or research authorities.

From the analyses carried out, it is clear that the first solution presented has not been favourably accepted by the companies in consideration of the bureaucratic limits, poor level of assistance by the promoting authorities as well as the methods of credit emission.

The fact confirmed also by the non-use of self-employment measures and support for the economic development of the past decades.

Another worrying element is certainly the lack of knowledge or in some cases distrust of the sample to institutions in the region are promoting initiatives aimed at the development of the territory and innovation.

Finally, are the valuable tips and suggestions collected through the investigation, namely, the provision of measures through structural funds, and tax credits.

Table 4Answers

	Question	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
-	What is your role within the company?	Manager	Owner	Member of the Board of Directors	Company Manager	Owner	Company Manager
2	In which town is your company based?	Picinisco	Cassino	Castrocielo	Esperia	Cassino	Villa Santa Lucia
3	What is your company governance?	Family (100%)	Diversified shareholders (100%)	Mainly family (>50%)	Family (100%)	No answer	Family (100%)
4	In which field does your company operate?	Accommodation and food services	Accommodation and food services	No answer	Extraction of minerals from quarries and mines	Accommodation and food services	Production of vehicles, trailers and semi-trailers
5	How many employees did you have at the end of 2013?	Less than 10	Between 10 and 49	Between 50 and 249	Less than 10	Less than 10	Between 10 and 49
9	Do you have production branches abroad?	No	No	No	No	No	No
7	Do you have sales offices abroad?	No	No	No	No	No	No
∞	In which geographical areas are your export activities mainly focused?	50% Europe, 50% between America and Asia	No answer	70–90% Europe, 30–10% between USA and Asia	50% Europe, 50% between USA and Asia	Only Europe	No answer
6	How do you plan to implement your growth ambitions?	Investments to increase the average level of quality of the products	Investments to increase the average level of quality of the products	Investments to increase the average level of quality of the products	Opening of new markets abroad	Acquisitions/mergers with other companies	Internal investments to recover efficiency
10	With regards to your growth ambitions, do you believe that your company should increase its capitalisation?	No	Yes	Yes	Yes	Yes	Yes
Ξ	Which financial instruments may be the most useful for		External capital from new partners	External capital from investment	External capital from investment	External capital from investment funds	External capital from investment

 Table 4
 Answers (continued)

	Question	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
12	If, in the case of opening of share capital of your company, you were asked which role you would like to cover, which would you choose?	Manager and majority shareholder	Manager and majority shareholder	Manager and majority shareholder	Only manager	Manager and majority No answer shareholder	No answer
13	Have you used soft loan instruments in the last few years?	No	No	No	No	No	Yes
14	Did you make use of structural funds during the period 2007/2013?	Yes	No	Yes	Yes	No	No answer
15	Which structural funds have you used?	Territorial and European cooperation funds		Regional competition funds and employment	Sviluppo LAZIO		
16	Have you used the self- entrepreneurial measure as indicated in the Leg. Decree n.185/2000?	No	No	No	No answer	No	No
17	Have you ever used State assistance (2007 - 2013) ?	No	No	No	Yes	No	Yes
18	Which categories of help have you used (art. 87 EC treaty par. 3)?				Support for SMEs		Support for SMEs
19	Which of the following reasons make a company "hot" use soft loan instruments?	Too much red tape	Too much red tape	Methods of supply of the credit	Methods of supply Too much red tape of the credit	Poor level of assistance by the individuals involved	No answer
20	Which of the following instruments do you consider suitable to favour the	Funds for structural investments	Funds for structural investments	Funds for structural	Tax credit	Funds for structural investments	Tax credit

 Table 4
 Answers (continued)

Company 6	Yes	I believe it is important to sign agreements with authorities or research institutes, but at the moment I have not signed any agreements	Yes	
Company 5	No		Yes	
Company 4	Yes	No answer	Yes	
Company 3	Yes	University of Cassino and Southern Lazio	Yes	
Company 2	No		No answer	
Company 1	No		No	Too much red tape in the activation of agreements
Question	Do you believe that, for purposes related to development and innovation of the territory, signing agreements and/or partnerships with authorities or research institutes is the right thing to do?-	Have you signed agreements with authorities and research institutes?	Would you advise other entrepreneurs to sign agreements with authorities or research institutes?	Why would you not advise other entrepreneurs to sign agreements with authorities or research institutes?
	21	22	23	24

The second solution, however, appears to be much more appreciated, so much so as to be recommended to other entrepreneurs. However, 50% of the participants of the investigation have not succeeded in signing other agreements.

From the problems illustrated above, involving most of all small and medium sized Italian enterprises, we can see a trend in the last few years towards an environmental context that favours collaboration.

In fact, considering the current phase of economic trends that involves the main industrialised countries (Bank of Italy, 2012), the complexity of the innovative dynamic and acceleration in the obsolescence process of technologies, companies appear to be "forced" to develop cooperation relations, providing competence, knowledge and different resources and allowing, at the same time, sharing of the risks and costs connected with exploitation of the technological opportunities (Malerba, 2000).

## 5 Concluding remark

The study analysed the theme of soft finance instruments and their impact on the territory of the province of Frosinone.

The analysis was developed on a dual perspective, aimed to investigating first of all, the firm's economic situation by their financial statement and then by qualitative approach with a preparation of a questionnaire. In this perspective, we've proceeded to identify the sectors considered strategic, and later, to make homogeneous the analysis was carried out a sample stratification in relation to the number of companies in the area.

The construction of the questionnaire provided 24 questions to answer, and constrained by the construction of a platform were invited companies to participate in the survey.

Participation was disappointing, as only 15% of companies participating in the survey. The low participation is certainly a survey limit.

In conclusion we can say that the innovative activities of companies, originally developed inside the same companies that are now opening up, perhaps through the stipulation of technological collaboration agreements, aimed at taking advantage of the potential of resources and knowledge generated by other companies and institutions (Malerba, 2000).

In this regard, some scholars have sustained that the collaboration between Universities and research centres represent the most suitable instrument to increase competitiveness of the industrial system of a country (Rosenberg and Nelson, 1994) and, in particular, of the SME's that, even though they are small, are much more capable of acquire new knowledge deriving from R&D laboratories of the universities (Viale and Etzkowitz, 2008), with savings in terms of time and money (Acs et al., 1991).

Finally, we believe that the road that should be followed in order to favour the innovation and territorial development process should not only have policy makers as its representatives, but also research authorities and category associations.

In conclusion, is it possible to say that financial tools, in particular the external capital coming from the investments funds are considered most suitable for the growth strategies, the use of financial instruments with reference to the soft loans has not been taken into account for almost the totality of the sample, often, for bureaucratic difficulties, maybe because between the public institutions of the area whose mission is

represented by the support for innovation and development activities and local entrepreneurs, they fail to create the system.

In the opinion of the writer, in fact, the solution involves the political world, the academic world as well as the local economic situation in exactly the same way.

One of the possible solutions to the topic of this paper lies in the streamlining of bureaucratic procedures by political institutions and greater collaboration between Universities and category associations.

It has been sustained with authority that, with the same level of physical capital and human capital, social capital seen as a range of relations between individuals, social networks and norms of reciprocity and reliability deriving from them (Putnam, 2004), produce value.

Therefore, the key to success of a territorial system currently depends most of all on the presence and implementation of some intangible resources such as culture, competence and innovative skills, favoured by individual and joint learning processes that are capable of increasing local social capital.

The major limitation of the research carried out concern the low exploratory participation in the survey, perhaps due to the lack of trust in the institutions and even more towards the public funding instrument. This lack of confidence is also reflected by the fact that, in many cases, there is no connection between the companies and the institutions also concerning the involvement of the world of research.

#### Acknowledgements

While the article is the result of a joint effort by the authors, the individual contributions are as follows: Marco Lacchini wrote "Introduction", Fabio Nappo wrote "Literature Review", Matteo Palmaccio wrote "Methodological approach", Simone Manfredi wrote "Findings and Discussion" and "Concluding remark". The authors would like to thank the reviewers for their precious suggestions in improving the paper.

## References

Abell, D.F. (1980) *Defining the Business: The Starting Point of Strategic Planning*, Prentice-Hall, Englewood Cliffs, NJ, pp.3–26.

Acs, Z.J. and Audretsch, D.B. (1991) 'R&D, firm size and innovative activity', *Innovation and Technological Change: An International Comparison*, Vol. 98, No. 2, pp.451–456.

Arentsen, M.J., van Rossum, W. and Steenge, A.E. (2010) Governance of Innovation, Edward Elgar Publishing.

Banca d'Italia, Eurosistema, *Economie regionali, l'economia del Lazio*, n. 14 June 2012, Divisione editorie e stampa della Banca d'Italia, Roma, 2012.

Biehl, D. (1991) 'Il ruolo delle infrastrutture nello sviluppo regionale', in Boscacci, F. and Gorla, G. (Eds): *Economie locali in ambiente competitivo*, Franco Angeli, Milano.

Bonaglia, F. and Goldestein, A. (2008) Globalizzazione e sviluppo, il Mulino, Bologna.

Borrás, S. and Edquist, C. (2013) 'The choice of innovation policy instruments', *Technological Forecasting and Social Change*, Vol. 80, No. 8, pp.1513–1522.

Boudeville, J.R. (1977) Lo spazio ei poli di sviluppo, Franco Angeli.

- Burgelman, R.A., Maidique, M.A. and Wheelwright, S.C. (1996) Strategic Management of Technology and Innovation, Vol. 2, Irwin, Chicago.
- Camagni, R. (2002) 'Competitività territoriale, milieux locali e apprendimento collettivo: una contro-riflessione critica', in Camagni, R. and Capello, R. (Eds): *Apprendimento collettivo e competitività territoriale*, pp.29–56.
- Cheok, A.D., Haller, M., Fernando, O.N.N. and Wijesena, J.P. (2009) 'Mixed reality entertainment and art', *The International Journal of Virtual Reality*, Vol. 8, No. 2, pp.83–90.
- Ciapetti, L. (2010) Lo sviluppo locale, Il Mulino, Bologna.
- Cooper, A.C. and Schendel, D. (1976) 'Strategic responses to technological threats', Business Horizons, Vol. 19, No. 1, pp.61–69.
- Corticelli, R. (1991) L'innovazione in economia aziendale, Pacini.
- Flynn, B. (2008) 'Intangible matter and the body', *International Journal of Digital Culture and Electronic Tourism*, Vol. 1, Nos. 2/3, pp.126–138.
- Friar, J. and Horwitch, M. (1985) 'The emergence of technology strategy: a new dimension of strategic management', *Technology in Society*, Vol. 7, Nos. 2/3, pp.143–178.
- Gillespie, A. and Williams, H. (1988) 'Telecommunications and the reconstruction of regional comparative advantage', *Environment and Planning A*, Vol. 20, No. 10, pp.1311–1321.
- Granelli, A., Pone, R. and Marcotulli, B. (2008) 'The economic value of "immateriality"', *International Journal of Digital Culture and Electronic Tourism*, Vol. 1, Nos. 2/3, pp.192–208.
- Hayes, R. and Wheelwright, S. (1984) Regaining Our Competitive Edge, John Wiley, New York.
- Holland, S. (1977) Le regioni e lo sviluppo economico europeo, Laterza, Bari.
- Isard, W. (1951) 'Interregional and regional input-output analysis: a model of a space-economy', The Review of Economics and Statistics, pp.318–328.
- Isard, W. (1954) 'Location theory and trade theory: short-run analysis', *The Quarterly Journal of Economics*, pp.305–320.
- Lombardi, R., Trequattrini, R. and Russo, G. (2016) 'Innovative start-ups and equity crowdfunding', *International Journal of Risk Assessment and Management*, Vol. 19, Nos. 1/2, pp.68–83.
- Malerba, F. (Ed.) (2000) Economia dell'innovazione, Carocci.
- Paelink, J. (1970) 'La teoria dello sviluppo regionale polarizzato', in Testi, A. (Ed.): Sviluppo e pianificazione regionale, Torino, Einaudi.
- Perroux, F. (1967) 'Note sur la ville considérée comme pôle de développement et comme foyer du progrès', *Revue Tiers Monde*, pp.1147–1158.
- Putnam, R.D. (2004) Capitale sociale e individualismo: crisi e rinascita della cultura civica in America, il Mulino.
- RIIR (2011) Rapporto Innovazione nell'Italia delle Regioni 2010, Edizioni Forum PA.
- Rolfo, S. and Calabrese, G. (2003) 'Traditional SMEs and innovation: the role of the industrial policy in Italy', *Entrepreneurship & Regional Development*, Vol. 15, No. 3, pp.253–271.
- Rosenberg, N. (1991) 'Scienza e tecnologia nel XX secolo', *Innovazione, imprese, sviluppo economico*, pp.223–258.
- Rosenberg, N. and Nelson, R.R. (1994) 'American universities and technical advance in industry', *Research Policy*, Vol. 23, No. 3, pp.323–348.
- Rosenbloom, R.S. (Ed.) (1986) Research on Technological Innovation, Management and Policy: A Research Annual, Vol. 3, Jai Press.
- Thomas, M. (2008) 'Digitality and immaterial culture: What did Viking women think?' *International Journal of Digital Culture and Electronic Tourism*, Vol. 1, Nos. 2/3, pp.177–191.

## 154 M. Lacchini et al.

- Trequattrini, R., Del Giudice, M., Cuozzo, B. and Palmaccio, M. (2016) 'Does sport innovation create value? The case of professional football clubs', *Technology, Innovation and Education*, Vol. 2, No. 1, pp.1–15.
- Trigilia, C. (1999) 'Capitale sociale e sviluppo locale', *Stato e mercato*, Vol. 19, No. 3, pp.419–440.
- Viale, R. and Etzkowitz, H. (Eds) (2010) *The Capitalization of Knowledge: A Triple Helix of University-Industry-Government*, Edward Elgar Publishing.
- Vickerman, R.W. (Ed.) (1991) Infrastructure and Regional Development, Vol. 1, Pion Limited.