In this paper we would to analyze the mechanism of public grants on economic growth. In particular this topic has been the subject of scientific interest by economists and, recently, also by business economics scholars. The studies of the economists focused on the motivations of the intervention itself; the business economic studies, on the other hand, have analyzed the impact both on the behavior of entrepreneurs and on the firms themselves by public grants. The studies examined so far highlight two basic conceptual dimensions, different, but also complementary to each other: on the one hand the economic-oriented to investigate the motivations and effectiveness of the public intervention; the second, business-oriented, focused on the firm’s behavior following public grant. Based on these arguments, our research question arises: could the effectiveness of public intervention for funding development and business innovation be influenced by the differences in the various socio-political and institutional contexts in which they are applied? The aim of paper is analyze the motivations of public grants policies and their influence on the behavior of firms. In this way we want to identify a
solutions scheme able to recover efficiency and effectiveness of public actions to support development. It is therefore possible to identify some corrective mechanisms on public intervention policies. In particular with reference to the behaviors induced by the grants policies, the idea is to re-design the grants policies in consideration of the different forms of pre and post contractual opportunism. With reference, instead, to the motivations underlying the public grants policies, it is necessary to examine the relationship between the State (Principal) and the beneficiary firms (Agent) in relation to the respective dimensions of the contractual force.

1. INTRODUCTION

The study on the impact of national or extra national structural funds (for example, European funds) on economic growth is the subject of attention by scholars who have provided inconclusive results (Mohl & Hagen, 2009). In this way a study on public intervention policies to support territorial cohesion and entrepreneurial development, or more generally on public intervention policies for development and innovation, it needs to start from the logic that guided the planning from the extraordinary intervention for southern Italy.

The aim of paper is analyze the motivations of public grants policies and their influence on the behavior of firms. In this way we want to identify a solutions scheme able to recover efficiency and effectiveness of public actions to support development. Based on these arguments, our research question arises: could the effectiveness of public intervention for funding development and business innovation be influenced by the differences in the various socio-political and institutional contexts in which they are applied?

Through a literature review on economic and corporate thinking (Section 2), the authors develop some propositions (Section 3) on possible solutions to the governance of public grants for business development and innovation. In conclusion, the paper proposes a research agenda (Section 4) for a renewal of public grants to support the economy as a strategic leverage for the development of private investments.

2. THEORETICAL BACKGROUND AND LITERATURE REVIEW

For many years the study of public grant intervention to support the economic development and business innovation has been the subject of scientific interest by economists and, recently, also by business economic scholars. In particular the studies of the economists focused on the motivations of the intervention itself; the business economic studies, on the other hand, have studied the impact both on the behavior of entrepreneurs and on the firms themselves by public grants.1

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1 Cfr. AAVV, 2018, Rapporto SVIMEZ 2018 L’economia e la società del Mezzogiorno.
2.1. The economic perspective

Accetturo and De Blasio (2019) have highlighted the role of the economist through the analysis of market imperfection. The economists identify the correct policies to ensure the missing public assets. In this perspective, already in 1961, Giannessi affirmed that the State should cover the specific “costs” to promote a more balanced development between depressed and non-depressed areas.

In the 60’s a strong debate developed about the public grants in the economy; the scholars proposed, therefore, to isolate the “quid” that’s not a matter of the businesses (improper charges), but is related to the territorial deficits and therefore of the State. In particular, the lack of social and economic infrastructures, in the idea of Giannessi, had to be rebalanced by the State and not by the firms. Instead, the firms had to safeguard their business balance without burdening their balance sheets. In literature, therefore, it was stated that the charges represent the renunciation of firms to better alternatives.

For this reason, these choices have been defined as improper, as they are expressed in additional costs, or in lost revenues, which do not distinguish the business logic of private companies.

The so-called “quid” theorized by Giannessi was deepened by Pasquale Saraceno, who was the first economist who posed the problem of southern Italy between the focal points of programs and government action. In this regard, Saraceno argued: “(...) an economically late zone will never be able to start a development process, without the grants necessary to match the reasons for the advantage enjoyed by the more developed areas” (Saraceno, 1963); so that it is necessary to undertake special measures since, if they were not “(...) adopted to increase the productivity of the weakest sections of the integrated economy, the development of these areas will not be facilitated, indeed it will probably be hindered by the comparison with the <stronger economy>” (Saraceno, 1961).

In particular, the Saraceno’s studies contributed to the formation of an entrepreneurial culture in the South of Italy, the lack of which had hindered the spontaneous businesses start-ups. In the Centre-North of Italy, on the other hand, environmental conditions were more positive to the development of a lower entrepreneurship (Varaldo, 1995; Mariti, 1988).

Many scholars showed the inefficacy of public grants policies in Italy and in the South. In other contexts, however, the results have appeared more encouraging (Kline & Moretti, 2014). For instance, the program of the Tennessee Valley Authority (TVA) was the most important program for local development in the United States. Research has shown industrial growth even after the end of granting programs. Other research shows positive effects of public policies in well-managed regions with an high educated workforce too; in other regions, where the
education level is lower and less effective quality of administration, the performance are very low.  

2.2. The business perspective

On these issues, the thought of a young Golinelli (1970) reflected on the validity of the public financial intervention useful for creating, over time, a new southern Italian entrepreneurs class. Further on, Golinelli affirmed the contrary declaring a "profound disappointment for the inability of public intervention to solve the problems of southern Italy" (1991, p. 62). Also Pasquale Saraceno later expressed his strong disappointment for “a process still far from being completed, despite the fact that 120 years have already passed since the political union”.

Golinelli, like Saraceno, recognized the limits of public policy, based on the transfer of financial resources through subsidized financing scheme; they both anticipated the failure of the South politics (Golinelli, 1980, pp. 135-138). The Saraceno and Golinelli studies improved the debate in micro-economic perspective; they argued the impact that policy grants have on the behavior of businesses and entrepreneurs.

In this perspective, the literature studied the direct or indirect impact that intervention policies may have on entrepreneurial behavior; already in 1974, in particular, Anne Krueger argued that government grants to support the economy could generate undesirable effects on the behavior of individuals and businesses; they would encourage the development of phenomena of low social cohesion and entrepreneurial risk-averse, determining³, in fact, a deterioration of the territorial social capital.⁴

Those findings were confirmed by a recent study carried out through a series of indicators related to confidence in others and the enlargement of cooperation. The results showed that facilitating transfers in support of less-developed European regions have had a negative effect on confidence and fairness among individuals.

In a paper being published, Crescenzi et al., argue that the effect of these grants has no impact on performance indicators, such as

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⁴ A significant function in the production of goods and services is also performed by the level of trust in the social system, the propensity for cooperation and collective action, and civil commitment. The literature defines these elements with the expression "social capital". Putnam defines social capital as "the set of trust, norms and networks that improve the efficiency of society" Cfr. Putnam R. (1993), Making democracy work: Civic tradition in modern Italy, Princeton University Press, Princeton. Fukuyama lo individua ne “l’insieme di norme e regole non codificate e condivise che permettono ai membri di un gruppo di cooperare l’uno con l’altro” Cfr. Fukuyama F., 1999, the great disruption, Simon and Schuster, New York. Nella sintesi dell’OCSE il capitale sociale è l’insieme di “reti associate a norme, valori e intese condivise che facilitano la cooperazione all’interno o tra i gruppi” (OECD, 2001).
investments, added value and employment. The results show that, on average, the program did not bring any benefits to the firms as recipient of state supports.

2.3. Agency perspective

The public grants, in some cases, have negative consequences on the entrepreneurs’ behavior. Part of the literature argues that “... a high level of public grant in the territory decrease the level of private investments with negative impacts on economic growth; local entrepreneurs could choose to take advantage of public grants without, however, innovate in order to survive the competitive pressures...”\(^5\) In this perspective, the public grants reduce the formation of the territorial social capital, affecting the labor productivity and the propensity to entrepreneurship, as well as investments in research and development.

In the literature there are many papers on the relationship between information asymmetry and opportunistic behavior. It refers to the rent-seeking when an organization tries to generates revenues by the acquisition of an economic gain through the economic exploitation of the environment, rather than the conclusion of economic transactions and the production of added value.

The phenomenon of rent-seeking was studied for the first time in monopolies by Tullock (1967).\(^6\) The behavior of rent-seeking is distinguished from profit-seeking in which the entrepreneurs aim to gain value through mutual benefit transactions.

Accetturo et al. (2014)\(^7\), in assessing how the public grants favors the rent-seeking phenomena arise, have shown that financial transfers have had a negative effect on the provision of confidence and fairness between individuals.

However, literature doesn’t always agree. Some authors argue about the usefulness and necessity of public grants for smart, inclusive and sustainable growth. This is the direction of Europe 2020 Strategy, which aims to bring all countries of Europe to a higher level of average spending in terms of Research and Development.

Arrow (1962) argues that businesses left alone to invest in the innovation market are not always able to achieve their goals, especially for financial deficiencies (Lucas, 1988; Romer 1990, Barro 1991). The high absorption of financial resources for the design and development of innovation can be solved, either through create balance sheet reserves for the purpose default (which is possible only in excellent firms), or trough the provision of public funds.

The studies on financial Slack\textsuperscript{8}, (Renzi, 2012; Noria & Gulati, 2017; Orlando et al., 2016), are related to these phenomena.

The intensity of public grants is linked to the concept of Technology Readiness Level (TRL), or level of Technological Maturity; this method allows us to evaluate the degree of maturity of a technology on the market. When the TRL is low, it means that the technology is far from the market and, therefore, the need for public grants is higher. For businesses, in cases where the TRL is low, in fact, it is difficult and dangerous to start innovation activities.

These considerations are also confirmed in the recent paper presented by Angelo Castaldo at Public Administration Forum\textsuperscript{9}; the Author supports the reasons for the intervention in support of Research and Development to raise the competitive capacity of firms.

The risk and uncertainty of research projects limits the level of investment that is difficult to assess given the high information asymmetry (Akerlof, 1970) present in the relations between the actors responsible for granting and controlling the loan and their end users. Therefore it isn’t always possible to value the effectiveness and efficiency of the facilitation intervention, since there is a high degree of opportunism that could degenerate into phenomena of rent-seeking.

Opportunism is facilitated, on the one hand, by the difficulties of control; on the other, from the high information asymmetry inherent in the evaluation processes.

3. THEORETICAL SPECULATIONS AND PROPOSITIONS

The studies examined so far highlight two basic conceptual dimensions, different, but also complementary to each other (Table 1): on the one hand the economic-oriented to investigate the motivations and effectiveness of the public intervention; the second, business-oriented, focused on the firm’s behavior following public grant.

In the first dimension, the literature, which justifies the need for public grant due to the market's inability to make up the structural deficits of the context and of businesses (financial deficiencies connected to the nature of the interventions themselves), highlights its failed results. Many studies, in fact, report the presence of high socio-institutional gaps, particularly in Italy in the depressed areas of the country.

On the other hand, in relation to the corporate dimension, literature counteracts the logic of public grant, as it is responsible for generating opportunistic phenomena in firms and entrepreneurs. Opportunism, in

\textsuperscript{8} In management studies, the organizational slack identifies redundant resources with respect to the normal course of business. The surplus of resources assumes a positive value in terms, above all, of potential flexibility of the corporate structure with respect to the dynamism of the environmental context and to the innovative business processes. At the same time, the formation of slack resources implies two main negative effects: lower short-term economic efficiency; greater volatility in expected performance. A. Renzi, 2012.

\textsuperscript{9} Castaldo A., Misure di sostegno alla RS&I: Le ragioni dell’intervento pubblico e metodologie di valutazione, Intervento Forum PA 24 Maggio 2018.
particular, cause the development of actions to competition and the innovative growth of firms, as well as the reduction of confidence levels among the players involved. The formation of social capital, in fact, is linked to the trust degree between the stakeholders of the territory.

Table 1. Taxonomy of the logic behind public grants

<table>
<thead>
<tr>
<th>Economic approach</th>
<th>Exogenous vision to the firms (Market failure)</th>
<th>Endogenous vision to the firms (Financial default and opportunism)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public grants for economic development, in contexts of low institutional quality, can lower the degree of trustness between territory’s actors; this aspect lowers the behavior oriented towards cooperation and collective action.</td>
<td>Public grants for research and innovation support is motivated by the risk of business financial failure, but exposes the public administration to the risk of rent-seeking; this issue could be reduced though ex ante and ex post control processes reengineering.</td>
<td></td>
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</table>

In literature, the conclusions on the ineffectiveness of public policies in support of development and innovation are inconclusive. While, in fact, in Italy and in other similar contexts such as Germany, public development policies appear to be inefficient, in the United Kingdom and in America such policies report positive results.

In Italy as in Germany, for instance, the presence of a bank-based culture, based on the logic of the Civil Law (the property is a community), could affect the effectiveness of policies supporting growth and development given the persistence of an entrepreneurial culture, that is evidently not risk and market-oriented. In this perspective, more favorable conditions would be created for the diffusion of opportunistic behavior from the firms, thus inducing the arising of rent-seeking phenomena.

On the contrary, in other countries as America and the United

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10 In Germany one of the most well-known interventions is the Zonenrandgebiet, which envisaged a mix of tax exemptions and direct incentives for business investments. “The results show that this policy has led to a shift in economic activities from untreated to treated areas, with almost no overall effect. See von Ehrlich M., Seidel T., The persistent effects of place-based policy: evidence from the “West-German Zonenrandgebiet, in the American Economic Journal: Economic Policy, 10, n. 4, 2018, pp. 344-374.

11 The Regional Selective Assistance (RSA) of the United Kingdom provides grants to firms locate in depressed areas; the RSA, like the 488, finances investments with the aim of increasing employment and investments. The performances are positive. Employment growth of 43% was recorded; the impact on the investments of smaller companies is also significant. Cfr. Deveraux M., Griffith R., Simpson H., 2007, Firms location decision, regional grants and agglomeration externalities, in Journal of Public Economics, 91, n. 3-4, 2007, pp. 413-435; Chiara Criscuolo C., Martin R., Overman H., Van Reenen J., 2019, Some Causal Effects of an Industrial Policy, in American Economic Review, 109, n. 1, 2019, pp. 48-85.
Kingdom, where the Common Law prevails (ownership is a commodity); the typically liberal approach is the market-based approach inspired by the market for corporate control in which the efficiency of the market is able to redress the imbalances induced by the erroneous behavior of the players involved.\(^\text{12}\)

In planning of public development policies, the cultural, political and juridical differences of each territory should therefore be considered.

Taking into consideration our research question it was considered useful to recover, on the one hand, the literature on corporate governance (with reference to the behavioral mechanisms of the subjects appointed to the governance and control of the firms); and on the other hand on the studies that have introduced new paradigms for an effective and efficient management of the public business (for example the New Public Management (NPM).

It is therefore possible to identify some corrective mechanisms on public intervention policies.

In particular with reference to the behaviors induced by the grants policies, the idea is to re-design the grants policies in consideration of the different forms of pre and post contractual opportunism:

1. **Control mechanisms related to post-contractual opportunism.** Post-contractual opportunism, or moral hazard, is a form of opportunism that induces the players to pursue their own interests at the expense of the other party. Part of the literature (Esposito De Falco, 1998; Eisehnaardt, 1989) argues that post contractual opportunism can be counteracted with control over results. Basically, using a control over results is effective when: the principal shows certain neutrality to the risk, or even if it is adverse; in situations of major conflict of purpose between the principal and the agent; in cases of measurable results and short-term agency relations. Furthermore, control over results gives importance to the following strategic variables: information systems and information acquisition costs; risk related to environmental uncertainty; high level of incentives. These forms of opportunism are prevalent in the bank-based contexts in which the market imperfections (the market is more latent), and the risk aversion of the agent (the entrepreneur is less risk-oriented), requires control over the results. Therefore, intelligent information systems are needed that can build firms reliability grids in the use of public funds based on performance results. With regard to grants nature, the idea is to reduce, except in special circumstances, the subsidized grant, in favor of automatic grants such as the tax credit and the Patent box, which are both among the most significant measures introduced by the State to encourage research and development activities and the consequent competitive advantage of firms.

What is shown here leads us to define the first proposition:

**P1:** In bank-based systems public grants policies for economic development and innovation can improve situations of post-contractual opportunism, which must be counteracted with control mechanisms.

\(^{12}\) S. Esposito De Falco, 2014.
based on results through the establishment of information system for control comparative of business performance.

2. Control mechanisms linked to pre-contractual opportunism: pre-contractual opportunism manifests itself in ex ante situations where the loan is disbursed and can generate risk of adverse selection. The most appropriate control is on behavior. The control strategies on the behavior of the agent must necessarily correlate with the construction of ex ante constraints that the principal can impose on the discretion of the agent. Therefore the behavior-based control strategy must be linked to precise rules and procedures. Pre-contractual opportunism manifests itself more easily in market-based contexts.

In these cases, public grants policies should adopt transparent disclosure and compliance mechanisms, capable of reducing information asymmetries and opportunistic attitudes arising from the evident fragmentation taking place in the complex system of public funds assigned to research. Recent evidence, in fact, suggest the use of adequate codes and mechanisms able of realigning the relationships between principals (institutional subjects that provide benefits) and agents (firms that use the grants), introducing best practices and corporate governance systems aimed at guaranteeing appropriate systems to rebalance the relationships in play. The establishment of a self-regulatory code which, through the virtue of the comply or explain mechanism, allows the company to self-regulate could reduce opportunism, reversing the control over the individual beneficiary, who would be forced to declare the reasons for different behavior by the rules imposed. The adoption of indirect control mechanisms such as the Audit Certificate (through an independent Auditor) is also conceivable. The nature of the incentives should be indistinctly, both in the form of the cash contribution to the expenditure, and through forms of tax reduction. Based on the considerations expressed, it is proposed:

\[ P_2: \text{In market based systems, where coordination and control is entrusted to the market, public grants policies for economic development and innovation can arise the pre-contractual opportunism situations; they should be counteracted with the self-regulatory codes.} \]

With reference, instead, to the motivations underlying the public grants policies, it is necessary to examine the relationship between the State (Principal) and the beneficiary firms (Agent) in relation to the respective dimensions of the contractual force:

3. System with high contractual strength by the Principal: in cases where the power of the Principal is stronger than that of the Agent, an unbalanced relationship is in place: the agent will try to play on information asymmetry, to reduce strength and the power of the Principal. This situation, the coordination is market-based, instead of hierarchy. Public policies in support of economic development must be based on less hierarchical and more flexible forms of coordination, so as to rebalance both the excessive hierarchical power of the State and the absence of the market. An excess of hierarchical procedures could compromise, in fact, the relationship already per se weighed down by the
excessive power of the Principal. From this point of view the interventions based on negotiation procedures in which the firms (Agents) can agree with the State (Principal) the intervention directives and actions appear justified. From what has been said, it follows that:

**P3**: In bank based systems, since the power of the Principal is stronger than the Agent, the motivations underlying the public intervention will have to be supported by coordination mechanisms based on the market and on consultation center-periphery.

4. **System with balanced power between Principal and Agent**: in market-based contexts the relationship between the Principal and the Agent is more balanced. In such situations, in fact, where the Agent’s behavior is freer, the market reduces the power of the Principal. In these contexts forms of coordination typical of the hierarchy must monitor the motivations underlying the public grants.

It is therefore necessary to plan administrative and centralized corrective actions, also useful for calming the market and preventing the excess of liberalism from leading to the creation of speculative bubbles. This brings us to the last proposition:

**P4**: In market based systems the relationship between Principal and Agent is more balanced; therefore the motivations must be supported by coordination on the hierarchy. The hierarchy, in fact, can allow greater rebalancing and curb the uncontrolled development of the market itself.

### Table 2. Motivations and control of opportunism in public grants

<table>
<thead>
<tr>
<th>Mechanisms for coordinating the motivations behind the interventions and forms of regulation of opportunism</th>
<th>Prevailing opportunism: Pre-contractual</th>
<th>Prevailing coordination mechanisms based on the Market (P &gt; A)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Based</strong></td>
<td>Control of behavior through the establishment of self-regulatory codes and audit systems based on the Audit Certificate. The system also includes a database to guide the valuator in the pre-contractual phase. Qualitative and quantitative ratings on the reliability of firms must be provided.</td>
<td></td>
</tr>
<tr>
<td><strong>Bank Based</strong></td>
<td>Control of results through the establishment of historical performance grids and the design of intelligent dynamic indicators. The new indicator system must be dynamic and flexible.</td>
<td></td>
</tr>
</tbody>
</table>

4. **CONCLUSION**

It is therefore necessary to change the logic of public intervention in operation: the contexts of reference, the characteristics of the players involved the dynamics in place in the State-Market-Business relations.

The ideas proposed here consider, both the founding motivations of
public contributions and the consequences induced on the behavior of firms by public support policies. All of these factors are placed at the base of our propositions.

With this work we argue that a redesign of public intervention must not identify specific mechanisms to control opportunism, but rather change the motivational logic underlying public interventions, more functional to the context. It is therefore possible to identify a possible, non-exhaustive, agenda of the actions to be taken. Our objective is to contribute to the development of a new model of governance of public grants in support of economic development and innovation:

1. *Creation of a national Authority for the introduction of a system of self-control of public funds for R&D*: in the management of public funds for research and innovation, the identification of certain rules could reduce opportunism, overturning the control system on the individual beneficiary, who would be forced to declare the reasons for behavior different from the rules taxes.

2. *Creation of a rating agency*. The objective is to create a rating system with specific quantitative and qualitative standards to assess: the reliability, timeliness, seriousness of businesses in the use and management of public grants for development and innovation. To date, there is not a system capable of controlling and memorizing the research and development activities proposed by businesses for the acquisition of subsidized funds.

3. *New performance metrics in the absence of a market*. The perspective must be that of the business economist who must search for the data and adopt an adequate "research design" to evaluate the project’s performance.

4. *New methods of application and the operating mechanisms of subsidiarity*. The objective is to design public grants to support the economy according to the impact on the territory and its players. The objective is to design a public grants value chain so as to identify the various activities, such as generator components on the one hand, and value destructors on the other.

5. *Design of relationships between control systems, organizational effectiveness, and management innovation*. We need a reform in the formal and bureaucratic control systems that trigger defensive routines and revive the known vicious circles of bureaucracy; the idea is to program virtuous practices and innovative methods to question the “ritual game of control”. The idea is to use best practices to avoid the emergence of tunneling practices.

REFERENCES


