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EVALUATING THE ENTREPRENEURSHIP POLICY AND PROGRAMMES

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Public policy to promote entrepreneurship can be of a two-fold nature. It can focus on lowering barriers or on providing direct support to entrepreneurs. Particularly in the latter case, there is a strong need for identifying the effects of policy outcomes. The paper explains the role of evaluation in the public policy cycle, reviews the methodological approaches to evaluation of SME and entrepreneurship policies and programmes in developed countries as well as discusses the challenges in entrepreneurship policy evaluation stemming from the move from narrowly defined outputs to more holistic evaluation frameworks. To this end, qualitative data analysis is performed to recognise practices of OECD countries in this field, identify good practices and enrich the ongoing debate about how to assess SME and entrepreneurship policies and programmes in a more comprehensive and holistic way drawing on the core concepts of systems thinking.

Keywords: evaluation, public intervention, SME and Entrepreneurship policy, additionality, evidence-based policy

1. INTRODUCTION

Public policy to promote entrepreneurship can be of a two-fold nature. It can focus on lowering barriers or on providing direct support to entrepreneurs. Particularly in the latter case, there is a strong need for identifying the effects of policy outcomes. Impact evaluation is regarded as a key policy tool to provide decision makers with information about the effects of implemented public interventions. It aims principally to assess the extent to which the policy (programme, project), actually, solves the identified problem, but it should not end there and answer ques-
tions concerning the general costs and benefits of the policy, what are the direct and indirect effects, intended as well as unintended consequences of public actions. On this basis, it is decided whether the policy (programme, project) should be continued, modified or discontinued. It is also the initial stage of a new policy cycle as lessons learned in the past influences the agenda setting and choices to be made in the future. However, the traditional approaches to impact evaluation appear to be insufficient to explain real world complexities and usefulness of evaluation as a learning tool is limited, as they favour more linear perspective. Therefore, a shift of attention from narrowly defined outputs towards more holistic evaluation frameworks is widely advocated. Particularly, in the field of entrepreneurship, which is high on public policy agenda worldwide and, on the other hand, is by far a complex and multifaceted phenomenon. The scale and the effectiveness of expenditure spent is disguised because there is a wide range of public actions to support entrepreneurship undertaken by various government and non-government agencies as well as regional and local organisations.

In the Global Entrepreneurship Monitoring (GEM) in 2015 government policy and programmes addressed at new and developing enterprises in Poland received a moderately low rating\(^1\). Thus, there still exist areas for further improvement in the field of entrepreneurship and SME policy\(^2\). Evaluation of small business policies and programmes, till recently, lagged behind their growth and proliferation (Wren & Storey, 2002).

The aim of the paper is to discuss the challenges in entrepreneurship policy evaluation. To this end, qualitative data analysis is performed to recognise practices of the OECD countries in this field. Apart from identifying the state of art in contemporary impact evaluation of entrepreneurship policy, considerations are made regarding how systems thinking ideas can contribute to impact evaluation.

The article consists of four parts. The first explains the role of evaluation in the public policy cycle; the second reviews the methodological approaches to evaluation of SME and entrepreneurship policies and programmes in the OECD countries; the third presents good practices in this field and the fourth suggests directions for future research by drawing on the core concepts of systems thinking to enable more holistic and dynamic approach to evaluation of the entrepreneurship policy and programmes.

\(^{1}\) The average assessment of the overall approach of authorities, i.e. the extent to which public policies support entrepreneurship was 4.6 points, fiscal and administrative burdens related to running a business activity – 3.4 points and the presence and quality of programmes directly assisting small and medium sized enterprises at all levels of government – 4.6 points. Average scores from Likert scales of 9 points, where 1 – highly insufficient and 9-highly sufficient.

\(^{2}\) Generally, the conclusions drawn in this paper relate to both SME and entrepreneurship policy, for the distinction between these two policies – see: Lundström & Stevenson (2005).
Impact evaluation is a systematic assessment of the changes (positive and negative) produced (directly or indirectly) by a public intervention such as a programme, project or a policy. In the literature, two important aspects of the evaluation process are highlighted. First, it is the analytical and systemic character of evaluation studies, the application of scientific approach and rigour in methodology (Ferry & Olejniczak, 2008; Langbein & Felbinger, 2006; Patton, 2004). Secondly, it is its utilitarian character (Bienias et al., 2012). The aim of evaluation is to provide reliable information which can be used in the decision-making process. Therefore, evaluation is at the very heart of evidence-based policy making. Moreover, the important feature of evaluation is that ‘conclusions made in evaluations encompass both an empirical aspect (that something is the case) and a normative aspect (judgment about the value of something). It is the value feature that distinguishes evaluation from other types of inquiry, such as basic science research...’ (Fournier, 2005, p.140).

The core concept of impact evaluation is the additionality, which can be characterised as the net changes which are brought about over and above what would take place anyway without public intervention (a program, project or policy). In other words, an impact of intervention is additional if it would not have occurred in the absence of the intervention. There are different forms of additionality (OECD, 2010 p. 2), namely: (a) input additionality – describes the extent to which intervention supplements or substitutes for inputs provided by other means – the market or entrepreneur’s own resources; for instance - whether public funding supplements or substitutes private R&D investment, (the latter case is called the crowding-out effect of public subsidies and is regarded as a case of government failure); (b) output additionality identifies the proportion of outputs (e.g. a number of patents, profits, employment) that would not have been created without public intervention, and (c) behavioural additionality – refers to the difference in behaviour of a target population owing to public intervention, for instance, weather subsidised firms strive for more cooperation while pursuing RDI activity or develop competencies and expertise. This form of additionality is the least examined due to the practical difficulties, however, plays a critical role in understanding the wider and more sustained impact of public interventions.

The focus on additionality implies one of the problems which impact evaluation must face – the problem of attribution, i.e. the ability to attribute observed outcomes to the specific public intervention under evaluation. Therefore, it needs to account for the counterfactual – what would have occurred without the intervention. A positive change, for instance in the performance of the beneficiary of public support can be the result of other factors, such as general macroeconomic conditions. In this respect, the use of experiments and quasi-experiments appear to be the appropriate evaluation methods to deal with the problem of attribution, however, at
the same time they are debated and critiqued for epistemological, methodological, practical and ethical reasons (Befani et al., 2015, p. 2).

3. CATEGORISATION OF METHODS USED IN EVALUATION OF SME AND ENTREPRENEURSHIP POLICIES AND PROGRAMMES IN THE OECD COUNTRIES

The methods used to assess programmes aimed at supporting SME/Entrepreneurship vary considerably. Storey (2000) introduced the ‘Six steps to heaven’ framework, which has been incorporated into the OECD Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes (2008), in order to categorise them according to the sophistication in the assessment procedure. In this approach - Step I represents the least sophisticated procedure and Step VI – the most sophisticated, which at the same time provides the best measurement of the additionality, (the core concept of impact evaluation, as mentioned above). However, not all of the listed methods can be regarded as an evaluation endeavour in a strict sense. According to the OECD Framework first three steps are regarded as monitoring (I-III), and subsequent three (IV-VI) as evaluation. The distinction between monitoring and evaluation is based on the fact that monitoring relies exclusively upon the opinions of the beneficiaries, (recipients of the policy) and evaluation attempts to contrast these views with objective data to construct the counterfactual scenario.

It can be argued, however, that the difference between monitoring and evaluation lies more in their roles in managing the policy instruments than in methods they rely on. Monitoring is a continuous process carried out during the duration of the intervention, (and some time after its completion). It generates quantitative data on the implementation of the intervention, however, generally not on its effects, (unlike evaluation, it does not take into account the outcomes and longer term impact of the intervention). Its aim is to track the progress of a public action and take remedial measures in the case of a deviation from the operational objectives. Thus, monitoring improves the performance of a public project, programme etc., and, by providing relevant factual data, facilitates subsequent evaluation, which is performed to learn lessons applicable to other public actions (European Commission, 2015; Olejniczak, 2007; Olejniczak and Ferry, 2008). The beneficiaries’ opinions are very important from the point of view of the evaluation objectives. The need for assessing the value of an intervention as perceived by the policy recipients and give voice to their priorities and concerns is widely expressed by practitioners and scholars alike (Salmen, 2002; Groves, 2015). On the other hand, beneficiaries opinions are only ‘a one piece in a larger puzzle’.
### Table 1. Six Steps to Heaven: Methods for assessing the impact of SME policy and their limitations

<table>
<thead>
<tr>
<th>Step</th>
<th>Methodology</th>
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<tr>
<td>I</td>
<td>Take up of schemes</td>
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<td>II</td>
<td>Recipients opinions</td>
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<td>III</td>
<td>Recipients’ view of the difference made by the assistance</td>
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<td>IV</td>
<td>Comparison of the performance of ‘assisted’ with ‘typical’ firms</td>
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Table 1 continue

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<th>Step</th>
<th>Description</th>
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<tr>
<td>Step V</td>
<td>Comparison with ‘match’ firms</td>
<td>A specific ‘control group’ is identified to compare with assisted enterprises; the matching is usually based on such factors as: age, sector, ownership and geography. However, entrepreneurs who decide to apply for aid are usually those who have an idea, a project, who are not lacking interest or creativity, what may well be the case in the reference to non-beneficiaries.</td>
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<tr>
<td>Step VI</td>
<td>Taking account of selection bias</td>
<td>Not only observable characteristics of enterprises are taken into account but also unobservable, which influence both: the outcome (the performance of assisted enterprises) and reasons explaining eligibility or attribution of aid.</td>
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Source: Own elaboration based on OECD (2008), Criscuolo et. al. (2016), Lambrecht and Pirnay (2005).

Using the ‘Six steps to heaven’ framework, Greene (2009) investigated the correlation between the applied evaluation method and the evaluation results. To this end, he compared the results of different assessment methods (step I–VI) using data from the UK business support programme run by the Prince’s Trust for the period 1993–2003. He found out that different evaluation methods led to different conclusions. The higher position the method occupied on the six steps ladder, the more robust and convincing were the results. Moreover, the less sophisticated methods led to more positive assessment of the programme under evaluation in comparison with those more sophisticated.

4. GOOD PRACTICES IN EVALUATING ENTREPRENEURSHIP POLICIES AND PROGRAMMES

The last method (Step VI) which takes into account selection bias, appears to be the most appropriate to evaluate entrepreneurship and SME policies and programmes as it gives more assurance to the policy makers about true effects of the policy outcomes. However, the choice of methods should depend on the scale and complexity of a specific public intervention, as well as evaluation cost, the context of the measure and the available data. Thus, the same level of sophistication should not be used in all entrepreneurship and SME policies and programmes.

The problem of the selection bias arises when participants in a specific programme (intervention) are systematically different from non-participants (even before they enter the programme). In estimating the additionality of a public intervention beneficiaries are compared to non-beneficiaries in order to infer the effect
of the program, however, selection bias can affect the legitimacy of these evaluations. There are two main types of selection bias: self-selection and committee-selection (agency selection). The former occurs when enterprises voluntarily decide whether to apply for aid or not. In the case of aid schemes for innovative projects, entrepreneurs who are more growth-oriented are more likely to be beneficiaries of such programmes as well as owing to their motivation and dynamism they are also more likely to perform better even without public assistance in comparison to those who lack ambition and creativity. These factors, however, are difficult to capture by observable characteristics. The committee selection, in turn, occurs in the case of aid schemes where only a portion of applicants are successful. It is argued that public authorities may follow a ‘picking-the winner’ strategy, what means that the undertakings which are, for instance, already more engaged in RDI activity are also more likely to receive state aid for RDI (Aerts & Czarnitzki, 2006, p.12). Similarly, as in the former type of selection bias, entrepreneurs selected for aid would also be expected to outperform the other entrepreneurs even in the case of no public intervention. The opposite may also be true, depending on the policy priorities, support may be granted to deprived areas and entities, who while compared to the rest of the population are more likely to underperform. These structural differences may bias a sound comparison between the research population and the control group.

Criscuolo et al. (2016) have evaluated discretionary grants to enterprises in disadvantaged areas in the UK in the years 1986-2004 using instrumental variable approach. The aid scheme was called: ‘Regional Selective Assistance’ (RSA) and was the main business support scheme in the UK to support manufacturing jobs. The aid constituted regional state aid, which is governed by pan-European state aid rules and is granted on the basis of ‘regional aid maps’, which indicate the geographical areas where entrepreneurs can receive state aid and at which intensities. In their estimations, Criscuolo et al. exploited changes in the area-specific eligibility criteria, as the list of regions covered by the programme changed over time (it was for external reasons – average EU’s GDP per capita dropped). As a consequence, some areas ceased to be eligible for assistance. These rule changes was used to construct instrumental variables for program participation, as this has an effect on the programme participation but not on enterprise’s local market conditions. As a result, they reported a significant positive effect of the programme in terms of manufacturing employment and the number of plants, however, this positive treatment effects was confined solely to small enterprises.

Lelarge, Sraer and Thesmar (2010) evaluated a French loan guarantee programme: ‘Sofaris’ aiming at facilitating SMEs and young enterprises’ access to external finance. The programme provided insurance to lenders against borrower’s risk of default through guarantee. Similarly as Criscuolo et al (2016), the factual context of the programme provided a source of identification of the policy impacts. Lelarge, Sraer and Thesmar exploited an exogenous regulatory shift which led to new eligibility of several industries. To assess the effect of the programme on vari-
ous indicators, like debt, employment, capital growth, financial expenses and probability of bankruptcy, they compared the newly eligible enterprises to the previously eligible enterprises. Although, enterprises in these groups are likely to differ, they were expected to be affected by similar macroeconomic shocks, thus their differences should not change over time, except for the policy effects, (difference-in-difference type of estimation was provided). The authors implemented a Heckman type two-step model, where the first step consists of formulating a selection model – a model of the probability to be an aid beneficiary, with an exclusion variable (a variable that explains selection of the beneficiary but not the outcome); thereafter, a control variable, which captures unobserved differences between the beneficiaries and non-beneficiaries due to selection, is added in the second step – the substantive equation. Their findings suggest that the French loan guarantee programme had impact on the development of the newly created enterprises, (they raised systematically more external finance, paid lower interest expenses and enjoyed higher growth rates). However, this does not mean that the programme was found fully efficient as loan guarantees caused simultaneously enterprises to become more likely to go bankrupt. Thus, the general conclusion was that ‘the overall efficiency of the program (…) boils down to the trade-off between increased growth and increased risk’.

Howell (2015) examined the effects of R&D subsidies for high-tech enterprises using a regression discontinuity design based on the dataset of ranked applications to the Small Business Innovation Research (SBIR) grant programme at the US Department of Energy. This method estimates a local average treatment effect around the cut-off in a rating variable, in this case the applicant’s rank. She found that aid granted enhanced the probability of receiving further funding and of patenting. However, the impact was stronger in the case of more constrained enterprises. The same method applied Martini and Bondonio (2012) who investigated the impact of investment grants available in Italy under the ‘Law 488/92’ – a large scale programme targeting industrial enterprises. The grants were assigned through open competitions. As in the previous case, the impact of aid was assessed by comparing outcomes of enterprises which received aid (were just successful) and those which applied for aid and fulfilled all of the criteria but due to smaller budget of an aid scheme did not receive aid (their applications were closely rejected). The difference–in-difference method was applied; control group was selected among rejected applicants by matching using stratification and reweighting approach. Beneficiaries were matched with non-beneficiaries in identical sector, size and geographic area. They, in turn, showed that large non-repayable grants, particularly when awarded to large enterprises, are ineffective to stimulate additional private investment and to improve the performance of the subsidized enterprises.
5. MORE HOLISTIC APPROACH TOWARDS EVALUATION OF ENTREPRENEURSHIP AND SME POLICY

Drawing on current research and evaluation practices, emerging challenges faced by evaluators of entrepreneurship and SME policy and areas which deserve further attention may be highlighted. Cowie (2012) indicates the following two challenges for the field of SME policy evaluation: (1) the increased need to evaluate the more subjective aims and outcomes of SME policy, and (2) developing real-time evaluation models, which is an imperative for policy makers to respond in due time to economic changes that affect entrepreneurs. In connection with his first claim, it can be argued that the methods massively used to evaluate entrepreneurship and SME policy focus rather on narrowly defined outputs and lack more holistic approach. In that respect evaluation practice is not attuned to the developments in entrepreneurship and SME policy, which consists, among others, in the move away from the interventionist industrial policy, (often sectoral in nature), to more comprehensive policy which concentrates on general entrepreneurship environment (Cowie 2012). Currently, evaluation studies which aim to identify broader impacts of a specific public intervention, use proxies for the intended policy aims, for instance, as a proxy measure for more entrepreneurial society—new VAT registration, as a proxy measure for innovation—research and development spending. These, however, do not offer the whole picture of the phenomenon under evaluation. For instance, innovation is a lot more than R&D. There is a large body of literature regarding the relationship between R&D and innovation which may lead to the conclusion that although these two variables are interrelated, the relationship between them is not as strong as might have been expected (e.g. Harris & Moffat, 2011), as the innovation process tends to involve continuous feedback loops between different stages, the interplay between sources of science, and the demand forces of the market place (Grupp 2000, Kubera, 2016).

In an increasingly complex business environment, the assumption that casual factors work independently as single causes and that causality is always a linear process is hard to justify. For this reason, systemic approaches in impact evaluations are being increasingly debated. As Reynolds (2015, p.71) put it: ‘A shift in

3 Toulemonde (1995) distinguished four types of causality: (1) linear, (2) circular – refers to mutual interactions of causes and consequences, where A not only causes B but B influences also A; it is likely that the circular system having a multiplier effect will slowly deviate like a spinning top, where small initial changes result in large unpredictable impacts (3) reflexive – also has an element of feedback in it, as A causes B, which, in turn, causes A, but in this case A and B interact together in a such a way that their system is self-organising, and (4) irreversible causality – which stems from the fact that every self-organising system needs a permanent renewal in order to keep stable, (a permanent adaptation process), thus, irreversible causality highlights the lowering level of determinism.
attention amongst evaluators is generally acknowledged; from exploring questions regarding the linear net effect of an intervention (project, programme or policy) towards questions regarding whether an intervention made a difference to the situation, what the difference was, how the difference was made, and what differences might have been made elsewhere. It represents a shift from being systematic towards being more systemic’.

Drawing on the three core concepts of systems thinking in impact evaluation, such a shift means: (1) understanding interrelationships, (2) engaging in multiple perspectives, and (3) reflecting on boundary judgements. To improve any component of entrepreneurship environment, other components often have to be addressed first. Focusing entirely on the intervention logic in impact evaluation, i.e. what the intervention intended to accomplish, whether the desired goals were achieved or not, and whether this can be attributed to the intervention or not, poses the risk of overlooking evidence that points to unintended, indirect and secondary impacts which can be associated with the intervention. These are largely the effects of the context interacting with the intervention (Gracia & Zazueta 2015). Major limitations in current evaluation studies in reference to interrelationship dimension are: no proper reflection on dynamics (interrelationships are viewed as being rather static), no proper attention to non-linear relationships, e.g. feedback loops, and no proper attention to context sensitivity, as the same interrelationships in different settings may produce different results4.

The second dimension of systems thinking – perspectives, stems from the fact that interrelationships are not neutral concepts, the relative importance of particular interrelationships generally depends on the different perspectives through which various stakeholders observe the system. In principle, each person’s observation may be accurate – but only within the limits of their own perspective. Importantly, our perspectives influence our behaviours, which in turn affect how a situation develops. Thus, unintended and unexpected patterns within a situation are often a consequence of unwillingness to identify and understand the range of relevant perspectives that stakeholders bring to an intervention. A single-perspective approach taken in impact evaluations is unfortunately common (Williams, 2015).

The third dimension of systems thinking are boundaries. Due to the fact that an evaluation study cannot encompass everything, to make situation manageable it is imperative to set boundaries, to decide who is ‘in’ and who is ‘out’. It is not about the scale of a study, the units to be analysed but what is seen to be relevant and what is not, what is valued and what is not valued, which is a critical point for each evaluation. Whoever defines the dominant perspective controls the system’s boundary. What can be seen beneficial from the point of view of national automobile industry, (an increase in cars production), can be seen as detrimental for the EU common market (a competitive disadvantage). Thus, setting boundaries is, as

4 However, there are forms of theory-based evaluations which highlight the importance of understanding an intervention’s context, e.g. realist evaluation.
Ulrich (2002, p.41) highlights, ‘partial, (...) in the double sense of being selective with respect to relevant facts and norms and of benefiting some parties more than others. This is what boundary critique is all about; it aims at disclosing this inevitable partiality’. What is recommended is to set boundaries cautiously and contemplate the implications for all the parties concern, what entails asking such questions as: ‘what new facts become relevant if we expand the boundaries of the reference system or modify our value judgments? How do our valuations look if we consider new facts that refer to a modified reference system? In what way may our reference system fail to do justice to the perspective of different stakeholder groups?’ (Ulrich 2003, p.334). Reflection on boundary choices is essential to ensure that impact evaluations reflect broader social perspectives and not specific client perspective. What is hardly done in current impact evaluations in the face of enormous accountability pressure and a strong evaluation commissioner dependency.

5. CONCLUSIONS

There is a growing demand for identifying the effects of public policies, including SME and entrepreneurship policies, which ‘consume’ significant amounts of taxpayer money. Till recently, governments were rather reluctant to ensure that these policies are rigorously evaluated. Prior the year 2000 studies which take into account sample selection bias were hardly to be found, (e.g. David et al. (2000) surveyed the body of evaluation studies conducted to ascertain additionality of R&D subsidies accumulated over the period of 35 years before 2000). Since the programme beneficiaries are, as a rule, not randomly selected for support, comparison between beneficiaries and non-beneficiaries of a specific public intervention is biased. Current evaluation endeavours are more sensitive to this problem. There is a variety of methods proposed to build a counterfactual scenario and identify net effects of public actions, i.e. what would have happed without public intervention (e.g. OECD Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes (2008); EU Common methodology for State aid evaluation (2014). Not all of them entail the highest level of sophistication, since the institutional and factual context of a programme can provide also the source of identification of the policy impacts. However, it can be argued that the methods used to evaluate entrepreneurship and SME policy are suitable rather for single public actions, focus on narrowly defined outputs and lack more holistic approach. In that respect evaluation practice is not attuned to the developments in entrepreneurship and SME policy, i.e. the move away from the interventionist industrial policy, to more comprehensive policy which concentrates on general entrepreneurship environment. Systems thinking ideas appear to be promising to address the deficits of contemporary evaluation practice, such as: no proper reflection on interrelation-
ships’ dynamics, no proper attention paid to non-linear relationships and context sensitivity, a dominant single-perspective approach, as well as no contemplation of the system’s boundaries, i.e. what is seen to be relevant and what is not, what is valued and what is not valued, what is a critical point for each evaluation. As Ulrich (2003, p.325) points out: ‘Reflective practice depends more on a framework of critical argumentation and discourse than on a framework of methodology choice.’

LITERATURE


Działania państwa na rzecz wspierania przedsiębiorczości mogą być dwojakiego rodzaju. Mogą koncentrować się na znoszeniu barier prowadzenia działalności gospodarczej lub na dostarczaniu bezpośredniego wsparcia dla przedsiębiorców. Szczególnie w tym drugim przypadku, identyfikacja efektów prowadzonej polityki jest sprawą kluczową. Artykuł wyjaśnia rolę ewaluacji w cyklu polityk publicznych, dokonuje przeglądu stosowanych podejść metodologicznych do ewaluacji polityki i programów przedsiębiorczości w krajach rozwiniętych, a także omawia wyzwania stojące przed ich ewaluacją wynikające z przeniesienia punktu ciężkości z wąsko zdefiniowanych produktów (outputs) w kierunku oceny bardziej całościowej. W artykule zastosowano analizę jakościową do rozpoznania praktyki państw OECD w zakresie ewaluacji programów wsparcia przedsiębiorczości, identyfikacji dobrych praktyk i przybliżenia problemu oceny polityki przedsiębiorczości odwołując się do konceptji systemowych.

Słowa kluczowe: ewaluacja, interwencja publiczna, polityka przedsiębiorczości, zasada dodatkowości, polityka oparta na dowodach