conseil d'analyse économique

Focus
No. 111
may 2025

The Marginal Value of Public Funds Applied to the Sourdun Boarding School of Excellence

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This Focus presents a tool for evaluating public policies known as the Marginal Value of Public Funds (MVPF). This tool measures the social benefits generated per net euro invested in a given policy. It is thus a useful metric to inform public choices: by enabling the comparison of different policies according to the value they create for society, the MVPF provides a rigorous framework for prioritizing resource allocation. As an illustration, the analysis focuses on the case of the Sourdun boarding school of excellence, a program aimed at offering better schooling conditions to youth from disadvantaged backgrounds.

Context

School education is the largest item of public expenditure, with an overall education budget of €180 billion, including €120 billion for school education. In 2021, France dedicated 5.4% of its GDP to education spending (all levels combined), a share slightly above the OECD average (4.9%). The average spending per student reached €9,352, compared to an OECD average of €8,838.[1] France spends more than the OECD average on secondary school students but significantly less on primary school students. However, as the latest PISA survey shows, despite high spending, strong social determinism in academic achievement persists in France compared to other countries: students' skills are more closely linked to their social background.

Informing the Ministry of Education's budget decisions is crucial given its scale and the importance of its missions, particularly improving educational attainment and reducing inequalities. To contribute to a more efficient allocation of resources, this Focus presents an evaluation and comparison tool for education policies, designed to guide public choices based on measurable impact. This tool, called the Marginal Value of Public Funds (MVPF), measures the social return of a net euro invested by the public sector.[2] Applied to education policies, it accounts for a wide range of parameters (costs, benefits to recipients, fiscal returns) to allow for meaningful policy comparisons. To illustrate its use, this Focus proposes a detailed evaluation of one program: the Sourdun boarding school of excellence. This program has the advantage of being well-documented, allowing for a robust application of the method.

The MVPF Method

The MVPF: a ratio of social benefits to total net cost of a policy

The Marginal Value of Public Funds (MVPF) measures the social benefits per net euro spent on a given policy. It serves as a standardized metric and can be used for any type of expenditure (public or private). The MVPF is calculated as the ratio of the benefits a policy provides to all its beneficiaries (direct or indirect) to its net cost to the state.

$$\text{MVPF} = \frac{\text{social benefits}}{\text{net cost to the state}}$$

- The numerator captures the social value of a policy, i.e., the benefits to its direct and indirect beneficiaries:
  - Direct benefits: monetary transfers, human capital gains, improved working conditions for teachers, etc.
  - Indirect benefits: increased overall productivity, reduced crime, enhanced civic engagement, etc.
- The denominator measures the actual budgetary cost of the policy, i.e., public spending net of any tax revenues or budget savings it generates in the short or long term (e.g., through increased taxable income or reduced future social expenditures).

The MVPF is designed to measure the long-term efficiency of policies. This temporal perspective is crucial, as returns on public investment can take years to materialize. Therefore, the MVPF denominator incorporates all expected fiscal effects, including those delayed over time. This contrasts with traditional cost-benefit analysis, which treats long-term savings to the state as program benefits rather than cost reductions. For example, if an education policy raises students' future wages, it also increases tax revenue over time and thus reduces the net cost to public finances. These savings are included in the MVPF denominator. Similarly, if a policy improves health and thereby reduces public healthcare costs, these savings should also be deducted from the MVPF denominator.

[1] According to the OECD international indicator, which includes activities related to teaching, ancillary services such as transportation, meals, and school accommodation, as well as research and development in higher education.

[2] The MVPF is a theoretical construct that has been used in public economics for many years. Its systematic use in recent years owes much to the empirical revolution that made it possible to causally identify the parameters entering both the numerator and the denominator of the index, as well as to the work of Nathan Hendren, who helped popularize it. For more methodological details, see Hendren et al. (2022) and the website PolicyImpacts.org.

How the MVPF works

The MVPF can take both positive and negative values, with no upper or lower bound. An MVPF of 4.5 (as in the case of the Sourdun boarding school) means that recipients received €4.50 in benefits for every euro the policy cost the state in the long term. A high MVPF indicates a favourable "return on investment" for society: the policy generates social value exceeding its cost. Conversely, a low MVPF indicates limited social return relative to the resources mobilized. This does not necessarily mean the policy is ineffective or undesirable, but that its marginal social return is low relative to its cost.

By design, the MVPF can take a wide range of values, with important interpretative thresholds:

- **MVPF < 0**: The policy reduces recipient welfare while imposing a public cost—a costly and harmful intervention.
- **0 < MVPF < 1**: The policy yields positive social benefits but below its net cost to the state. Such policies may still be justified on redistributive or equity grounds. We return to this key point on the redistributive effects of public policies and their role in comparing MVPFs.
- **MVPF > 1**: The policy's social benefits exceed its net cost to public finances. It is therefore a good use of public funds as a social investment.
- **MVPF = ∞**: When a policy fully pays for itself (i.e., its net cost is zero or negative, for example due to tax returns), its MVPF is considered infinite. Even with modest social effects, such policies improve collective welfare without burdening public finances—a Pareto improvement benefiting some without harming others.

How the MVPF informs public decision-making

The MVPF is a useful because it allows policymakers to compare the social value of spending across policies. It offers a standardized measure of value created per invested euro, whether within a domain (e.g., education) or across domains (health, taxation, etc.).[3]

By construction, the MVPF integrates all behavioural responses affecting the long-term net cost of policies, as well as all social benefits to direct and indirect beneficiaries.

Its main advantage lies in offering an intuitive and conceptually coherent metric compared to other cost-benefit tools (see the appendix for a comparison of the MVPF to other methods). It helps assess the relative impact of public spending across programs and guide decisions on a more objective basis. As a comparison tool, the MVPF also strengthens transparency by providing a clear, comparable, and accessible indicator for informing citizens and supporting budget communication.

However, the MVPF is not a substitute for democratic deliberation on policy choices. A higher MVPF for policy A than for policy B does not automatically mean A should be preferred. The policies may pursue different goals or target different populations. The MVPF is a decision aid, not a sole criterion. It complements broader political reflections on public action objectives.

In summary, the MVPF offers three main contributions to public policy decision-making:

1. **Identifying self-financing policies**. In a long-term public investment logic, such policies should not face classic budget trade-offs—they are, by design, socially profitable.

2. **Ranking policies** by their return per net euro spent for their recipients.

3. **Clarifying trade-offs across policies**, especially redistributive ones. Consider policies A and B with different goals and beneficiaries. If A's MVPF is twice B's, that does not mean A should be prioritized. One might still favour B if its social objective is deemed twice as important, or if the social value of a euro transferred to B's beneficiaries is twice that for A's. Thus, the MVPF does not replace democratic deliberation; rather, it clarifies its terms by making visible the implicit social value of redistribution in each policy.

[3] Fougère D. and Heim A. (2019) : "L'évaluation socioéconomique de l'investissement social. Comment mettre en œuvre des analyses coût-bénéfice pour les politiques d'emploi, de santé et d'éducation", France Stratégie, Les documents de travail, n° 2019-06, November.

The MVPF is especially suited to education policies. First, it captures long-term effects—a key feature of education. Second, education often includes policies with infinite MVPFs (i.e., self-financing). Identifying such policies is vital to guiding long-term public investment. In times of fiscal consolidation, cutting high-MVPF education policies would worsen deficits over the medium term. Finally, the MVPF allows standardized comparison across policies with varied objectives (learning outcomes, dropout prevention, inequality reduction) and target groups. It thus provides a common evaluation framework in a field where redistributive impacts are central but often hard to quantify.

Practical limitations and challenges

Despite its strengths, using the MVPF presents practical challenges that must be carefully managed.

Causal effect estimation

The MVPF requires empirical studies to measure all policy effects, especially beneficiaries' behavioral responses. These are essential to estimate fiscal externalities and the policy's net social cost. Evaluations must meet the highest scientific standards to be used in MVPF calculations. To build a robust library of MVPF estimates for France, we rely exclusively on the best available impact studies.

Even though the number and quality of French evaluations have improved, they remain scarce in some policy areas. In some cases, the policy of interest may not even exist in France.

In such cases, it is possible to rely on evaluation results from other countries and contexts and, where available, to use estimates drawn from international meta-analyses that compile all evaluation findings for a given policy. These sources can inform the calculations, but the results must be interpreted with caution: institutional contexts, implementation methods, and target populations may differ, leading to potentially non-transferable effects. To address these uncertainties, one solution is to compute confidence intervals around the key parameters. These intervals provide a plausible range for the expected effects, while accounting for the variability inherent in the available data. By extension, it is also possible to calculate confidence intervals for the MVPF itself, which yields a more robust and nuanced evaluation of the policy by incorporating potential margins of error. These confidence intervals can be derived based on discount rates, the standard deviations of the causal effect parameter, or the range of cost estimates used.

Valuing all social benefits

Calculating the MVPF numerator requires monetizing all policy benefits, which can be complex. For monetary transfers, valuation is straightforward: one euro equals one euro. But education policies rarely involve pure transfers, making the exercise more challenging. Many of their effects, however, can be monetized. For instance, improved academic performance can be translated into expected future wage gains, approximating the value of increased human capital.

This valuation nonetheless presents practical difficulties:

- Monetizing certain effects is challenging, especially when they concern non-market dimensions (well-being, motivation, school climate, etc.)
- Accounting for all beneficiaries: an education policy may benefit not only students but also teachers (for instance, in the case of class size reductions)
- Considering externalities and indirect effects, such as impacts on health, crime, or broader macroeconomic effects,[4] which are rarely quantified due to lack of available data. Omitting these benefits may lead to an underestimation of the overall effectiveness of education policies.

The calculation of benefits may either underestimate or overestimate total social benefits, depending on the elements included. It may be an underestimate if certain effects are omitted, such as positive externalities (e.g., benefits to teachers from smaller class sizes) or indirect impacts (e.g., better health, reduced crime). It may be an overestimate if the monetary benefits are based on overly optimistic assumptions or if the effects attributed to the policy are overstated due to insufficient data. These imprecisions highlight the challenges involved in fully and accurately translating benefits into monetary terms. This is why, in our approach, we choose to adopt conservative assumptions to avoid overestimating the

[4] Guadalupe M. and Ng B. (2022): "Soft Skills et productivité en France", *Focus du CAE*, no. 92, September.

MVPF. This principle of caution helps strengthen the robustness of the calculated indices by favouring minimal estimates that remain credible even in the presence of uncertainties.

Sensitivity of long-term effects to key parameters

Many effects associated with public policies, particularly in the field of education, only materialize in the long term and are not directly observable at the time of evaluation. These effects must therefore be assessed through intermediate variables that are observable in a shorter time frame and for which the long-term impacts on key outcomes, such as earnings, are known. For example, the wage returns of an education policy are often estimated in two steps: first, its impact on academic performance or the probability of obtaining a diploma is evaluated, and then these effects are translated into future wage gains.

Moreover, uncertainties persist around certain key parameters, such as the wage returns to academic skills, which encourages the use of conservative assumptions to avoid overestimating the value of the MVPF. The MVPF is calculated under the assumption that other public policies remain unchanged; it therefore depends heavily on the specific characteristics of the economic and fiscal context. For instance, the MVPF evaluating an education policy that improves students' future earnings will depend on the fiscal externalities associated with these wage increases, which in turn depend on income tax rates. If these rates change, the MVPF will be affected, highlighting its contextual and dynamic nature.

In this sense, the MVPF is a dynamic object. This characteristic is not, in itself, a limitation on its use in public decision-making, provided that this dynamic evaluation tool is regularly updated. This sensitivity implies that the MVPF library must be kept up to date to best reflect the current state of knowledge, institutional changes, and economic contexts. Such updating is essential for the MVPF to remain a reliable tool for informing public decisions.

The Sourdun Boarding School of Excellence

To illustrate the use of this evaluation method, we present in detail the case of the Sourdun boarding school of excellence, located in Seine-et-Marne, which has been the subject of a rigorous evaluation. Inaugurated in 2009, this boarding school aims to provide a favorable environment for academic success and personal development for middle and high school students from disadvantaged backgrounds. In addition to classes, students receive pedagogical support and participate in sports and cultural activities. The school targets motivated students who wish to improve their academic performance or who face social, economic, or family difficulties. The weekly schedule is organized around regular classes, specific academic support including review sessions and tutoring, as well as extra-curricular sports and cultural activities. More than 300 boarding schools of excellence have now been officially recognized in France, although their operation is not always comparable to that of Sourdun, which represents a particularly structured and intensive model.

To better understand how to calculate the effects of this policy, let us adopt the perspective of a student entering the Sourdun boarding school of excellence. Like most of their peers, they are under the age of sixteen and are therefore simply continuing their education at this boarding school rather than at a regular secondary school. During the years spent at the institution, they are housed and fed, and benefit from individualized pedagogical support and improved learning and study conditions. In the long run, they hope to make more academic progress than in an ordinary school, obtain better exam results, and have a greater chance of earning a baccalauréat and pursuing higher education. Once in the workforce, they can thus hope to earn a higher salary. The beneficial effects of their time at Sourdun are twofold: they correspond to the sum of the short-term benefits of full boarding and the long-term benefit of higher earnings.

From the State's point of view, this policy involves additional costs compared to regular schooling: accommodation, meals, enhanced supervision, and extra teaching hours. However, these expenditures may be partially offset by future tax revenues generated by the students' professional success (in the form of higher salaries). The net cost of the policy corresponds to the difference between the gross cost to the State and the additional revenues it induces. At first glance, the Sourdun boarding school appears to be a costly policy. But as we shall see, a policy can show an MVPF greater than 1 if the benefits to society are sufficiently large.

General approach

The MVPF is a ratio that compares the social benefits generated by a public intervention to its net cost to the public sector (and thus indirectly to society). This net cost is obtained by subtracting from the intervention's gross cost the additional tax revenues generated by the economic effects induced by the expenditure. The MVPF is thus computed in three steps. First, the effects of the policy under study are monetized—for example, future wage gains, better employment conditions, or health improvements. These effects are discounted to obtain an estimate of the total benefit per individual. Finally, we account for the fact that improvements in beneficiaries' situations indirectly benefit the state through the induced tax revenues. This fiscal externality is included in the calculation to determine the net cost of the policy.

The general formula for the MVPF incorporates these three elements as follows:

$$MVPF = \Delta B / (\Delta C - \Delta E) \qquad (1)$$

Where:

- ΔB represents the social benefit received by the beneficiaries of the public policy
- ΔC represents the cost of the policy to the State, that is, the total public expenditures required for its implementation
- ΔE represents the additional tax revenues generated by the effects of the policy, particularly through increased income among beneficiaries. This fiscal externality allows the calculation of the net cost of the public intervention by adjusting ΔC.

Social Benefits (ΔB)

An education policy aims, directly or indirectly, to improve students' academic skills. There is a causal link between an individual's academic trajectory and the salary they will earn once they enter the workforce (Card, 1999). The better a student performs on exams or the higher the level of education they attain, the more likely they are to earn a higher salary as an adult.[5] The effect of an education policy on earnings therefore constitutes the first component of the social benefit ΔB, in the sense that an individual would be willing to support a policy that increases their future earning prospects. In addition to this is the consideration of retirement contribution surpluses: since these contributions represent deferred income, they are regarded as a social gain for the beneficiaries and are included in the calculation of ΔB.

Three parameters are used to quantify this effect:

- β measures the increase in earnings induced by the policy, expressed as a percentage of the average counterfactual salary of the beneficiaries—that is, what they would have earned in the absence of the policy.
- w_e represents the total labour income that beneficiaries would have earned over their working life in the counterfactual scenario in which they were not exposed to the policy. These earnings are discounted to the age of exposure to the policy, denoted e. To perform this calculation, we rely on data from the Annual Declarations of Social Data (DADS) and the Labor Force Survey available through the Secure Data Access Center (CASD), taking into account the probability of being employed at each age.
- the average marginal tax rate τ includes all social contributions (employer and employee contributions excluding pensions, CSG and CRDS) and income tax, expressed as a proportion of the super-gross salary (gross salary + employer contributions). Retirement contributions are excluded because they represent deferred income that will be returned to the beneficiaries upon retirement; they are therefore not net revenue for the State.[6] To compute this tax rate:

  – According to the most recent OECD data,[7] the average marginal tax rate (for a single person without children) is 58.17% of the super-gross salary.

  – The OECD also indicates that the average employer social contribution rate (total employer contributions) applied to the gross salary is 36.3%.[8] Therefore, the relationship between the super-gross and gross salary is:

[5] Fajeau M., Grenet J. and Laveissière E. (2025): "L'effet des compétences scolaires sur les salaires futurs", *Focus du CAE* no. 112, May.

[6] Legros F. (1996): "Neutralité actuarielle et propriétés redistributives des systèmes de retraite", *Économie et statistique*, no. 291-292, pp. 173-183.

[7] OCDE (2024): Taxing Wages 2024

[8] This rate is calculated by applying the average employer contribution rate expressed as a proportion of the super-gross salary (26.6% – see OECD, 2024, Table 1.2 p. 24) to the average super-gross salary (€83,034 according to Table 1.2 p. 24), and dividing the result by the average gross salary (€60,992 according to Table 1.3 p. 27).

– The OECD also indicates that the average employer social contribution rate (total employer contributions) applied to the gross salary is 36.3%. Therefore, the relationship between the super-gross and gross salary is: super-gross salary = (1 + 36.3%) × gross salary.

Finally, subtracting the share of retirement contributions (18.9%) from the overall marginal tax rate (58.17%) gives an average marginal tax rate net of retirement contributions of 39.27% of the super-gross salary.

By combining these parameters, the social benefit ΔB is calculated as follows:

$$\Delta B = \beta \cdot (1 - \tau) \cdot w_e \qquad (2)$$

However, the calculation of the social benefit must be adjusted to account for any in-kind benefits provided by the policies being evaluated. In the case of the Sourdun boarding school of excellence, beyond the policy's effect on future earnings, the full boarding service (PC) received by students must also be considered. Since accommodation and meals are covered by the boarding school and not by the student's family, they represent an additional benefit. The formula for the social benefit therefore becomes:

$$\Delta B^{\text{Sourdun}} = \beta \cdot [(1 - \tau) \cdot w_e] + PC \qquad (3)$$

Cost of Deployment (ΔC)

In the case of education policies, the estimation of the deployment cost ΔC relies on data available in reports from the relevant administrative bodies, notably those from the Ministry of National Education, its statistical service (DEPP), and Parliament (particularly through budget bills).

Since the majority of students at the Sourdun boarding school are under the age of sixteen and subject to compulsory schooling, the additional cost to the State does not lie in the schooling itself, but in the extra expenditures compared to standard schooling: accommodation, meals, enhanced supervision, etc. Moreover, the evaluation of the program shows that it leads, on average, to an additional year of higher education (Behaghel, de Chaisemartin et Gurgand, 2024). This extra year of education also represents a cost to the State. The formula for the gross cost of the policy is therefore written as:

ΔC = cost of one year at Sourdun – cost of one year in a regular secondary school + cost of one additional year in higher education (4)

Fiscal Externality (ΔE)

Since future income is subject to taxation, any increase in earnings generates additional tax revenues for the State. A first component of this fiscal externality ΔE corresponds to the mandatory levies collected by the State as a result of the salary increase induced by the education policy. However, we exclude retirement contributions from this calculation, as they represent deferred income that will be returned to beneficiaries upon retirement and therefore do not constitute actual revenue for public finances.

It is also possible that certain education policies produce other indirect fiscal benefits, for example through their effects on health, crime, or civic engagement. These effects can lead to savings in public spending. Nevertheless, to ensure the robustness of our approach, we adopt a conservative assumption: only effects that are directly observable and well-identified in the empirical literature are included in the calculation of the MVPF. This methodological prudence preserves a strong causal relationship between the policy and the measured effects but mechanically leads to an underestimation of the policy's total benefits. The fiscal externality is calculated symmetrically to the social benefits:

$$\Delta E = \beta[\tau \cdot w_e] \qquad (5)$$

By combining equations (3), (4), and (5), we thus obtain the following formula for estimating the MVPF associated with the Sourdun boarding school of excellence:

$$\text{MVPF} = \frac{\beta\,[(1 - \tau) \cdot w_e] + PC}{\text{Coût} - \beta\,[\tau \cdot w_e]} \qquad (6)$$

Application of the MVPF to the Sourdun Boarding School

We assess the effect of the Sourdun boarding school of excellence on academic skills through its impact on obtaining a higher education degree and on the future earnings of its beneficiaries. These effects are quantified using parameters whose definitions and estimation methods are detailed below.

Social Benefits

The social benefit appears in the numerator of our MVPF. It accounts for the policy's effect on discounted earnings throughout the beneficiaries' working lives. It is estimated based on a combination of empirical parameters, detailed below.

The parameter β measures the increase in earnings induced by the policy, expressed as a proportion of the beneficiaries' counterfactual earnings. This effect is estimated from the work of Behaghel, de Chaisemartin, and Gurgand, who conducted a randomized evaluation (Behaghel, de Chaisemartin et Gurgand, 2024). The study focuses on two cohorts of students eligible for the boarding school in 2009 and 2010, assigned by lottery among motivated applicants from disadvantaged households. The sample includes 244 students in the treatment group and 137 in the control group, tracked for up to 12 years after entering high school.

By comparing students in the treatment and control groups, the authors show that admission to Sourdun reduces school dropout by 14.2 percentage points, increases the probability of obtaining a higher education degree by 15.9 points, and leads to a predicted wage gain of +10.6%. This wage gain, which the authors estimate based on the observed return to education, corresponds to the parameter β in equation (2).

The τ rate represents the average marginal tax rate on the super-gross wage. It includes employer and employee social contributions (excluding retirement contributions) and income tax. In our calculation, τ is set at 39.27%.

We estimate the counterfactual earnings that Sourdun beneficiaries would have earned throughout their working lives using administrative data: DADS (Annual Declaration of Social Data) for wage income and the Labor Force Survey for employment rates by age. We assume that income flows follow those of an average individual in the absence of the policy. These earnings are then discounted to age 15, corresponding to the beginning of 10th grade, when students start benefiting from the Sourdun program. Working life is assumed to begin at age 23 (accounting for the additional year of higher education induced by the policy) and end at age 64. The present value at age 15 is calculated using the following formula:

$$w_{15} = \sum_{a=24}^{64} \frac{\mathrm{e(a)} \cdot \mathrm{w}(a)}{(1+r)^{a-15}} \qquad (7)$$

Where:

- $\mathrm{p(a)}$ denotes the probability of being employed at each age a, estimated from the Labor Force Survey. This reflects the fact that career paths are not continuous
- $\mathrm{w(a)}$ is the annual super-gross wage by age, with data taken from the DADS
- r is the discount rate, set at 3%, consistent with the MVPF calculations by Chetty et al. (2011) and Hendren and Sprung-Keyser (2020).

Under these assumptions, the discounted value of future earnings at age 15 is estimated at w_{15} = €534,402.

The private benefit from full boarding (PC): in addition to future wage gains, students at the boarding school benefit from in-kind services (housing, meals, and supervision). According to Behaghel, Charpentier, de Chaisemartin and Gurgand (2013), one year at the Sourdun boarding school costs the public authority €21,646, split into €12,167 for personnel expenses (teachers, supervisors, etc.) and €9,479 for other expenses, notably related to full boarding (food, housing). Since we can only evaluate an MVPF for a minimum of two consecutive years of schooling at this institution, the private benefit for students amounts to €18,958, i.e., the equivalent of two years of full boarding (€9,479 × 2).

Policy Deployment Cost (ΔC)

ΔC, the deployment cost of the policy for the State, is estimated at €34,168 per beneficiary. This amount breaks down as follows: one year at Sourdun costs €21,646, compared to €10,687 in a regular secondary school;[9] the annual additional cost is therefore €10,959, or €21,318 for two years of schooling at Sourdun. Added to this is the cost of one additional year in higher education, estimated at €12,250.[10]

Fiscal Externality (ΔE)

ΔE, the fiscal externality, as previously described, represents the additional tax revenues that the State collects as a result of the beneficiaries' increased earnings. It is calculated using the same parameters as those used in the social benefits numerator: the wage gain (as a percentage) induced by the policy for beneficiaries (β), the discounted future earnings (we), all multiplied by the average marginal tax rate on the super-gross salary (τ).

Results

Based on all the parameters detailed above, for two consecutive years of schooling at the Sourdun boarding school, we obtain an MVPF of 4.5. In other words, each net euro invested by the public authorities in financing the Sourdun boarding school yields an additional €4.50 in benefits for the students enrolled in this institution, compared to schooling in a traditional secondary school.

This result reflects the following elements:

- A social benefit ΔB aggregating both the wage gain and the private in-kind benefits from covered housing and meal expenses, estimated at ΔB = €53,359
- A policy deployment cost of €34,168, or ΔC = 10,959 × 2 + 12,250, representing the additional cost to the State of two years at Sourdun, including one additional year of higher education
- A fiscal externality of ΔE = €22,245, reflecting the fact that higher future earnings generate higher tax revenues.

This result is primarily driven by the program's effect on obtaining a higher education degree, which translates into higher future earnings. The parameter β, which measures the wage gain induced by the policy, plays a central role in this outcome. Holding all other parameters constant, the MVPF for the Sourdun boarding school remains above 1 as long as the wage gain exceeds 2.8%.

Conclusion

The MVPF provides a standardized measure for comparing the effectiveness of public policies. It is particularly well suited to education policies, whose effects unfold over the long term, as it allows the inclusion of deferred benefits from public investment and connects immediate budgetary costs to future social gains—thereby supporting more informed decision-making.

The example of the Sourdun boarding school of excellence illustrates the potential of this tool: although this policy appears costly in the short term, the MVPF shows that it is, in fact, highly profitable. The gains for beneficiaries—particularly through access to higher education degrees and increased earnings—far exceed the net cost to public finances.

Nevertheless, this approach involves methodological limitations. The calculation of the index relies on a set of assumptions (regarding the discount rate, returns to education, time horizon, etc.) and faces uncertainty about certain long-term effects, particularly in estimating future wage trajectories.

Therefore, the MVPF should be used as a decision-support tool, supplemented by other considerations (such as feasibility and political acceptability), and its parameters should be regularly updated as new data and evaluations become available.

[9] Behaghel et al. 2013, Table 14

[10] DEPP (2024), Table 2 p. 375.

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Appendix

Appendix: Comparison with Other Evaluation Tools

Building on Hendren & Sprung-Keyser (2022), we outline the relationship between the MVPF and other metrics commonly used to evaluate public policies.

MVPF vs. Cost-Benefit Ratio (BCR)

The calculation of the cost-benefit ratio (or Benefit-Cost Ratio, BCR) is a widely used method for evaluating public policies, notably by James Heckman et al. in "The Rate of Return to the Highscope Perry Preschool Program" (2010). This indicator is defined by the following relationship::

$$BCR = \frac{\Delta B + \Delta E(1+\phi)}{\Delta C(1+\phi)}$$

where:

- ΔB, ΔE et ΔC respectively denote the social benefits of the policy, the fiscal externality generated by its implementation, and the mechanical cost of its deployment.
- ϕ represents the cost of the deadweight loss due to taxation. This deadweight loss reflects the reduction in social welfare caused by the economic distortions resulting from tax collection. Thus, $1 + \phi$ captures both the amount raised through taxation and the additional loss of surplus (ϕ) caused by its adverse effects on the economy.

The first major distinction between the cost-benefit ratio and the MVPF lies in how they treat fiscal gains. In the BCR, these gains are included in the numerator as part of the policy's benefits. In contrast, the MVPF places them in the denominator, subtracting them from the gross cost to calculate the net cost to public finances. In other words, all savings generated for the State are treated as a reduction in the cost of the measure. This methodological difference allows the MVPF to identify so-called Pareto-improving situations, where a policy generates a net gain for society without making anyone worse off.

The second difference between these two indicators lies in their treatment of tax distortions. BCR calculations are generally required to incorporate the loss of surplus associated with funding the policy via a proportional tax—that is, the "deadweight loss" induced by taxation. However, estimating this loss often relies on arbitrary assumptions, which limits the standardization of policy evaluation using the BCR. In contrast, MVPFs can integrate these considerations more flexibly, notably through weighted versions that combine spending and revenue policies in a socially optimal manner.

MVPF vs. Net Social Benefit (NSB)

Garcia and Heckman (2022) question the use of the MVPF as a method for evaluating public policies, particularly because of how its denominator is defined and calculated. They advocate for the broader adoption of an alternative indicator, Net Social Benefit (NSB), to assess the effectiveness of public policies. The formal definition of this indicator is as follows:

$$NSB = \Delta B - (1+\phi) \times (\Delta C - \Delta E)$$

Where:

- ΔB, ΔC and ΔE respectively denote, as in the MVPF definition, the benefits received by the policy's beneficiaries, the mechanical cost of its implementation by the government, and the fiscal externality—approximated by the beneficiaries' behavioral response—which is subtracted from the mechanical cost ΔC
- ϕ represents the deadweight loss from taxation. This deadweight loss reflects the reduction in social welfare caused by the economic distortions induced by taxation. Thus, $1 + \phi$ encompasses both the amount raised through taxation and the additional surplus loss (ϕ) caused by its negative effects on the economy.

Such an indicator measures the difference between total social benefits and total social costs, whereas the MVPF rather evaluates the marginal value of public spending in terms of social welfare — "the bang for the buck". In response, Hendren & Sprung-Keyser (2022) emphasize the relevance of constructing an indicator in the form of a ratio, rather than a simple difference, which would assess a public policy solely by its absolute welfare gain. Indeed, by design, a ratio is insensitive to the scale at which a policy is deployed. The MVPF allows comparisons between programs that differ in the number of people they reach, whereas relying solely on the NSB would mechanically favour policies that, although only marginally effective, are deployed on a large scale. However, the fact that the effects of policies may vary with their scale of implementation could also be viewed as a limitation.

Another critique of the MVPF is that it evaluates public policies without incorporating compliance with the government's budget constraint. To address this, one can consider the argument—developed in the literature—that public policies can be compared via their MVPFs by weighing a spending policy against a revenue policy. A spending policy is budget-neutral and socially beneficial in this framework if:

$$\eta_i \, \mathrm{MVPF}^{\,\text{spending}} > \eta_j \, \mathrm{MVPF}^{\,\text{revenue}}$$

where η_i and η_j are the average social marginal utilities of the spending policy's beneficiaries and the taxpayers affected by the revenue policy, respectively. Thus, public policy evaluation using the MVPF treats expenditures and revenues distinctly, but allows for their combination in designing budget-neutral and socially advantageous policies.

By integrating the average social marginal utility of both the beneficiaries and the taxpayers, the MVPF, unlike the NSB, takes into account the redistributive effects of public policies. Therefore, while a strictly negative NSB would automatically preclude a policy's implementation, that same policy might still be adopted if it proved more socially beneficial than alternative options and if its financing were adjusted in accordance with the relevant marginal utilities. For instance, the MVPF of Policy A could be lower than that of Policy B, yet A might be more socially desirable if the social marginal utility of its beneficiaries is higher than that of B's.

ISSN 2971-3560 (print)
ISSN 2999-2524 (web)

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