Compensating the Originator: Selection Procedures and Unsolicited Proposals in Infrastructure PPPs

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Abstract. This paper examines the competitive procedures through which private partners are selected for public-private partnership (PPP) projects, focusing on the challenge of unsolicited proposals (USPs): project proposals submitted at the initiative of a private firm, without a government request, which raise an originator compensation problem at the intersection of innovation economics, auction theory, and procurement law. Three principal mechanisms for compensating the originator are analysed: the Bonus Points system, the Right-to-Match (*diritto di prelazione*), and the Swiss Challenge. The paper pays particular attention to the often-overlooked structural difference between these last two mechanisms, which are commonly conflated in policy discourse but operate through distinct logics and produce distinct competitive pathologies. The analysis incorporates the landmark ruling of the Court of Justice of the European Union of 5 February 2026 (Case C-810/24), which declared Italy's right-to-match mechanism incompatible with EU law. The paper concludes with a hybrid mechanism — combining bonus points and direct cost reimbursement — grounded in the mechanism design literature, as the analytically superior and legally robust approach to the originator compensation problem. A formal appendix, drawing on Riley and Samuelson (1981), establishes via backward induction that the right-to-match produces equilibrium pooling and systematically inefficient allocations.

Keywords: public-private partnerships, unsolicited proposals, right-to-match, Swiss Challenge, bonus points, mechanism design, winner's curse, CJEU Case C-810/24.
JEL codes: D44, H54, K12, L33.

1. Introduction: The Originator Compensation Problem

When a private firm expends resources to identify, analyse, and develop a project proposal that it then submits to a public authority without solicitation, it creates a public good of sorts: the proposal contains information — about demand, technical feasibility, financing structures, and risk allocation — that the contracting authority would otherwise have had to produce itself, at public expense. The private firm bears the full cost of this information production but cannot, absent some form of protection, capture its full value. If the authority simply accepts the proposal and competitively tenders the resulting project on equal terms, any competitor can free-ride on the originator's intellectual and financial investment, entering the tender with lower preparation costs and potentially outbidding (be it either a lower or better quality or both) the originator on the contract itself.

This is, ultimately, a public-good problem dressed in procurement clothing. The originator's dilemma is structurally similar to the innovator's dilemma in patent theory: without appropriability protection, the incentive to invest in project development is attenuated. Too little protection, and USP markets collapse from underinvestment. Too much protection, and competition is foreclosed, value for money is sacrificed, and the procurement process loses its fundamental legitimacy/role as a mechanism for allocating public contracts efficiently and transparently.

Governments and multilateral development institutions have converged on three principal instruments for navigating this trade-off. The **Bonus Points** system grants the originator a scoring uplift during competitive evaluation. The **Right-to-Match** gives the originator a procedural right to match the best competing offer and win the contract. The **Swiss Challenge** — a structurally distinct variant — formalises competitive tendering around the originator's published proposal, with the originator retaining a matching right against any superior counter-proposal. Each mechanism embeds a different theory of how originator interests should be weighted against competitive imperatives.

This paper examines these three mechanisms comparatively, with particular attention to the structural difference between the Right-to-Match and the Swiss Challenge — two mechanisms that are frequently conflated in the policy literature but that operate through distinct procedural architectures and produce distinct competitive pathologies. Section 2 analyses the landmark CJEU ruling of 5 February 2026 (Case C-810/24), which declared Italy's right-to-match mechanism incompatible with EU law. Section 3 establishes the conceptual framework. Sections 4, 5, and 6 analyse each mechanism in turn. Section 7 presents a comparative assessment using empirical evidence from multiple jurisdictions. Section 8 examines applications in the energy efficiency and ESCO context. Section 9 develops the case for a hybrid mechanism. Section 10 concludes.

2. The CJEU Ruling of 5 February 2026: Case C-810/24

2.1. Factual Background

On 5 February 2026, the Second Section of the Court of Justice of the European Union delivered a landmark preliminary ruling in Case C-810/24, declaring the Italian right-to-match mechanism for project financing promoters incompatible with European Union law. The ruling arises from a referral by the Italian Council of State and carries significant implications for the design of unsolicited proposal compensation mechanisms across the EU.

The facts are emblematic. In March 2021, a consortium submitted an unsolicited project financing proposal to the Comune di Milano for the design, supply, management, and maintenance of 110 automated public toilet facilities combined with the exploitation of 97 digital advertising installations — a concession contract valued at over EUR 34 million. The municipality accepted the proposal as the basis for a competitive tender. Following that procedure, Urban Vision S.p.A. submitted the most economically advantageous offer and was provisionally awarded the contract.

At this point, the *promotore* consortium exercised the right of *prelazione* (right to match) under Article 183, paragraph 15, of Legislative Decree No. 50/2016 (the then-applicable Italian Public Contracts Code). This provision allowed the original *promotore* to match the winning bidder's offer within 15 days and obtain definitive award of the contract, subject to reimbursing the initial winner's bid preparation costs capped at 2.5% of the estimated investment value. The consortium matched Urban Vision's offer and was awarded the contract. Urban Vision challenged. The TAR Lombardia dismissed the challenge. The Consiglio di Stato, entertaining the appeal, referred a preliminary question to the CJEU under Article 267 TFEU.

It is important to note, for the analysis that follows, precisely which mechanism the CJEU was examining. The Italian *diritto di prelazione* is a right-to-match in the strict sense: the originator consortium participated as a regular competitive bidder throughout the tender — submitting its own offer alongside Urban Vision — and then, having lost on the merits, exercised the matching right as a post-award fallback. This is not a Swiss Challenge, in which the originator's proposal is published as the competitive reference specification from the outset and the originator does not participate as a regular bidder. The distinction matters for legal analysis and for competitive dynamics, as developed in Sections 5 and 6 below.

2.2. The Court's Reasoning

The CJEU's answer was unequivocal. The Court declared that Article 3(1) of Directive 2014/23/EU on the award of concession contracts, read together with Article 49 TFEU, Articles 30 and 41 of the Directive, and Recital 68, must be interpreted as precluding a member state from recognising a right of *prelazione* that enables the *promotore*, where the contract has not been initially awarded to it, to align its offer to that of the initially selected awardee and thereby obtain award of the contract.

The Court's reasoning rested on three pillars. First, the *prelazione* mechanism overturns the ranking established at the conclusion of the competitive procedure. This is not a procedural correction, but a substantive distortion: it confers a real advantage on the *promotore* independently of the merit of its original offer, rendering the competitive evaluation irrelevant to the ultimate allocation of the contract.

Second, the right-to-match necessarily involves a substantial modification of the *promotore*'s offer at a stage subsequent to the award decision — precisely the scenario prohibited under settled EU procurement law. The Court cited *BibMedia* (C-737/22, June 2024) and *Commission v Belgium* (C-87/94, April 1996) as establishing that substantial post-award modifications are incompatible with equal treatment. The *prelazione* mechanism, by design, requires exactly such modification: the *promotore* is invited to improve an offer that was inferior at the time of evaluation.

Third, the mechanism deters participation by economic operators from other member states, constituting an obstacle to freedom of establishment under Article 49 TFEU. A rational operator calculating whether to invest in bid preparation for an Italian project financing concession must discount its expected return by the probability that the *promotore* will exercise the *prelazione* even if the challenger submits a superior offer, thus making cross-border competitive participation systematically less attractive.

2.3. What the Court Did Not Invalidate

The ruling's scope is precise. The Court explicitly declined to invalidate the *promotore*'s right to reimbursement of bid preparation costs in the event the contract is awarded to another bidder. This right — capped at 2.5% of the estimated investment value under Article 193 of the new Italian code (D.Lgs. No. 36/2023) — survives intact. The Court's logic is consistent: cost reimbursement compensates the *promotore* for a verifiable expenditure without distorting the competitive ranking or modifying the substance of the competitive process.

This implicit endorsement of cost reimbursement as the acceptable residual form of originator compensation is significant. It suggests that the Court's objection is not to originator compensation *per se*, but specifically to the mechanism by which the *prelazione*

delivers it, namely, by subordinating the outcome of a competitive evaluation to the *promotore*'s post-award election. Cost reimbursement operates independently of the evaluation and does not affect its integrity.

2.4. Implications for Italian Law and the Broader European Framework

The immediate domestic implications are substantial. While the ruling directly addressed Article 183 of D.Lgs. 50/2016, the reasoning applies equally to Article 193 of the new code (D.Lgs. 36/2023), which preserves a functionally identical *prelazione* right. The primacy and direct effect of EU law require contracting authorities to disapply any national provision found incompatible with EU directives, without awaiting legislative reform.

For the purposes of this paper, Case C-810/24 provides a decisive institutional datum: the right-to-match is not merely suboptimal in economic terms but legally incompatible with the fundamental principles of the EU internal market. This shifts the analytical question from whether member states should employ the right-to-match, to how they should design the compensation mechanisms that remain available — a question this paper addresses through comparative analysis of the Bonus Points system and cost reimbursement alternatives.

3. Conceptual Framework: Incentives, Competition, and Appropriability

3.1. The Structure of the Problem

An unsolicited proposal process involves at least three parties with partially conflicting interests: the originator (who seeks to recover project development costs and ideally win the contract); competing bidders (who seek equal terms of participation); and the contracting authority (which seeks value for money, innovation, and adherence to procurement principles). The compensation mechanism must simultaneously satisfy incentive-compatibility for the originator, participation-compatibility for challengers, and efficiency from the authority's perspective.

These three conditions are in tension. An incentive sufficient to induce high-quality proposal development will generally distort the competitive equilibrium. The magnitude of the distortion depends on the nature of the advantage granted. Critically, different types of advantage affect the information environment of competing bidders in different ways, and it is this differential effect on information — as much as the mechanical scoring or matching advantage — that determines competitive participation rates.

3.2. Information Asymmetries and the Pre-existing Advantage

Before any formal incentive mechanism operates, the originator already enjoys structural advantages: greater familiarity with the project's technical characteristics, prior relationships with potential lenders, and the first-mover benefit of defining the project's parameters. Any scoring or matching advantage granted by the compensation mechanism is layered on top of these pre-existing asymmetries. This has an important implication: even a numerically modest bonus may translate into a decisive practical advantage if it compounds an already substantial informational head start.

This compounds the difficulty of calibrating the bonus. A bonus set at a level sufficient to compensate for project development costs in isolation may, in conjunction with informational advantages, create a combined advantage that rational competitors cannot profitably overcome. The result is a competitive process that is procedurally open but effectively closed — a formal competition with a predetermined winner.

3.3. The Three Mechanisms as Points on a Spectrum

The three mechanisms examined in this paper can be understood as points on a spectrum of originator preference intensity. The Bonus Points system intervenes at the evaluation stage, granting a quantitative uplift to the originator's score while leaving the competitive process otherwise intact. The Right-to-Match intervenes at the award stage, granting the originator a priority right over a better offer from a competitor. The Swiss Challenge restructures the entire process around the originator's proposal from the outset, with the originator holding a matching right against any superior counter-proposal from a challenger who has explicitly competed against the published reference.

As preference intensity increases along this spectrum, two effects occur simultaneously: the originator's expected payoff increases (strengthening the innovation incentive), and the challenger's expected payoff decreases (weakening competitive participation). The optimal mechanism, if one exists, would locate the point at which the marginal gain in proposal quality from a stronger incentive is exactly offset by the marginal loss in competitive discipline. Whether such a point can be identified in practice — and whether any of the three existing mechanisms approximates it — is the central empirical and normative question this paper addresses.

4. The Bonus Points System

4.1. Mechanism Description

The Bonus Points system — sometimes referred to as the scoring preference or evaluation uplift — grants the originating firm additional points in the technical or financial evaluation

of competing proposals. The uplift is typically expressed as a fixed percentage of the maximum available score (commonly ranging from 3% to 10% in international practice), applied automatically to the originator's final evaluated score.

The Spanish procurement framework under the Ley de Contratos del Sector Público (LCSP) incorporates this mechanism for private initiative projects (*proyectos de iniciativa privada*) in the concession contract modality, granting a predetermined point advantage to the company whose unsolicited proposal served as the basis for the tender. This operates within the broader EU procurement framework established by Directive 2014/23/EU on the award of concession contracts, which permits member states to establish procedures for unsolicited proposals provided that competitive tendering is ultimately employed.

Chile's concession system — widely regarded as one of the most sophisticated USP frameworks globally — employs a scoring bonus of approximately 3% to 8% of the financial score. This approach has generated a notably positive empirical record and serves as the reference model in World Bank guidance.

4.2. Theoretical Properties

The Bonus Points system has several theoretically attractive properties. **First, it preserves the structure of genuine competition:** all parties submit proposals under the same procedural rules, and the award is made on the basis of evaluated merit, with the bonus operating as a transparent and pre-announced correction to the evaluation formula. **Second, the magnitude of the distortion is known in advance:** a competitor can calculate whether its proposal is sufficiently superior to overcome the bonus threshold, and can make a rational participation decision on that basis. **Third, the system is comparatively transparent:** the bonus is public information, reducing the scope for discretionary manipulation or implicit side-dealing between the authority and the originator.

From a mechanism design perspective, the Bonus Points system approximates a second-price auction with a reserve price adjustment in favour of the incumbent. If the bonus is calibrated to reflect the originator's actual project development costs — which are rarely directly observable — it constitutes a form of cost reimbursement via scoring rather than direct payment, preserving incentive compatibility while maintaining formal competitive equality. In the optimal auction framework of Myerson (1981), this corresponds to a virtual valuation adjustment that partially corrects for the asymmetry between the originator's cost distribution and challengers': the originator, having already sunk development costs, operates from a different cost base, and the scoring adjustment approximates the correction that a Myersonian mechanism would apply.

4.3. Limitations and Risks

The primary limitation of the Bonus Points system is the calibration problem: there is no theoretically correct method for determining the appropriate bonus level. A bonus set too low fails to compensate the originator and may still deter proposal submission. A bonus set too high effectively predetermines the outcome, converting a formal competition into a legitimisation exercise. In practice, bonus levels are often set administratively based on convention or political negotiation rather than any principled assessment of project development costs.

A secondary concern is the interaction between the scoring bonus and pre-existing informational advantages. As noted in Section 3, the combined advantage may exceed what the formal bonus suggests, particularly in technically complex sectors such as energy efficiency where the originator's preliminary energy audit gives it access to project-specific data that challengers cannot independently replicate within competitive tender timelines.

4.4. Empirical Performance

Chile's experience with the bonus system is the most thoroughly documented in the literature. Of 12 USP concession projects put to tender with a scoring bonus between 1996 and 2006, 10 attracted competing proposals, and only 5 were ultimately awarded to the original proposer. This 42% originator win rate suggests that the bonus was not so large as to preclude meaningful competition, while still providing a sufficient incentive for project development investment. The World Bank cites Chile's model as the benchmark for best practice in USP incentive design (World Bank/PPIAF, 2017).

5. The Right-to-Match

5.1. Mechanism Description

The Right-to-Match (RtM) mechanism grants the originator a procedural right, triggered at the award stage, to match the best competing offer and thereby retain the contract, regardless of whether the originator's original proposal was superior on its merits. The authority runs a competitive tender, evaluates all offers — including the originator's, who participates as a regular bidder — identifies the best offer, and then activates the originator's matching right: within a specified period (typically 15 to 60 days), the originator may align its offer to the winner's and claim the contract. If the originator matches, it wins. If it declines, the contract is awarded to the challenger.

This structural description clarifies the critical feature that distinguishes the RtM from the Swiss Challenge: the originator holds *two distinct opportunities to win.* It competes in the tender as a regular bidder, on formally equal terms, and if it loses on the merits, the

matching right functions as a second chance. The competitive process is not modified or bypassed; it runs to completion and produces a provisional winner; the matching right then overturns that result. The originator is simultaneously inside the competition and holds a post-award override.

This mechanism is employed in various forms across multiple jurisdictions, including South Korea under its Act on Private Participation in Infrastructure, and historically in Italy under the *diritto di prelazione* declared incompatible with EU law in Case C-810/24. It represents a significantly stronger originator preference than the Bonus Points system because it effectively neutralises any competitive advantage a challenger might develop through superior technical or financial innovation.

5.2. Theoretical Properties and Distortions

The Right-to-Match creates a fundamental asymmetry in the competitive dynamic that rational analysis predicts will severely depress challenger participation. A firm contemplating entry into a RtM tender faces the following logic: if it submits an inferior proposal, it will not win. If it submits a superior proposal, the originator will match it and win. Under standard assumptions of risk-neutral bidders and positive bid preparation costs, the expected return to a challenger is non-positive in equilibrium. The dominant strategy for potential challengers is therefore non-participation. The formal appendix to this paper, drawing on Riley and Samuelson (1981), establishes this result rigorously via backward induction and shows that it produces allocative inefficiency with probability $\frac{1}{8}$ even in the simplest possible two-bidder setting.

Moreover, the RtM mechanism creates a perverse incentive for the originator itself. Knowing that it can match any competing offer, the originator has no incentive to submit its best proposal in the first instance. It may rationally submit a conservative initial proposal and hold superior technical or financial capacity in reserve, deploying it only if a challenger emerges with a better offer. This strategic behaviour — analogous to bid shielding in auction theory — reduces the quality of initial proposals and, consequently, the informational value of the USP process itself. The originator's dual position — simultaneously a regular bidder and the holder of a post-award override — renders this sandbagging logic especially potent: unlike the Swiss Challenge originator, who sits outside the competitive process and merely holds a matching right, the RtM originator can calibrate its initial bid in the knowledge that it will observe competitors' offers before deciding whether to exercise the matching right.

5.2.1. The Compounded Winner's Curse

Beyond the appropriability effect, the Right-to-Match generates a second, independent deterrent to challenger participation that has received insufficient attention in the procurement literature: a compounded form of the winner's curse. Understanding this mechanism requires distinguishing it carefully from the classical common-value winner's curse, which arises in symmetric auctions with correlated private signals.

In the standard common-value auction, every bidder holds a noisy signal of the true project value. Each bidder knows that winning is more likely when its signal was the most optimistic among all participants — and therefore that winning is bad news about the true value. Rational bidders shade their bids downward to compensate for this selection effect. The curse is symmetric: all bidders face the same inferential problem, and bid shading is the equilibrium correction.

The USP context introduces an asymmetry that transforms the winner's curse into a qualitatively different and more severe problem. The originator has conducted the feasibility study, audited the facility, built the financial model, and assessed project viability on the basis of information that challengers do not possess at the time of bidding. This informational asymmetry is not merely a difference in signal precision — it is a difference in the information set itself. The originator knows things about the project that challengers can only infer, and it knows them with a specificity that no amount of challenger due diligence can fully replicate within the timeline of a competitive tender.

Under the Right-to-Match mechanism, this asymmetry generates an adverse selection dynamic with a precise structure. Consider the challenger's decision problem. If it submits a bid below the originator's offer, it will not win and incurs only the sunk cost of bid preparation. If it submits a bid superior to the originator's offer, two outcomes are possible: either the originator matches and wins, in which case the challenger loses and again bears only its bid preparation cost; or the originator declines to match and the challenger wins the contract. The challenger wins, therefore, if and only if the originator — the party with superior information about the project's true profitability — has decided that the contract at the challenger's bid price (or any other measure of value for money) is not worth having.

This is the core of the compounded winner's curse: *winning is a signal of originator non-participation, and originator non-participation is a signal of adverse project fundamentals.* The challenger's victory reveals, precisely, that the most informed party in the process has implicitly certified the project as unprofitable at the winning price. Unlike the classical winner's curse, which is purely a consequence of the selection effect of winning under symmetric uncertainty, this version is endogenous to the compensation mechanism and driven by asymmetric information. It would not exist in a symmetric first-price auction; it

is created by the right-to-match itself.

The welfare implications extend beyond challenger deterrence. In equilibrium, the adverse selection dynamic tends to attract only two types of challengers: those who are genuinely more efficient than the originator and can therefore profitably execute the project at a price the originator cannot match; and, perversely, those who are insufficiently sophisticated to appreciate the adverse selection signal embedded in their own victory. The first group is small by assumption in most USP contexts — if challengers were systematically more efficient than the originator at executing the specific project the originator developed, the originator would not have developed it. The second group introduces a different kind of welfare loss: contract award to an uninformed bidder who wins precisely because it failed to account for what the originator's non-match reveals.

This analysis has a direct implication for the CJEU's reasoning in Case C-810/24. The Court identified three grounds for incompatibility of the Italian *prelazione* with EU law: overturning of the competitive ranking, post-award modification of offers, and deterrence of cross-border participation. The winner's curse analysis suggests a fourth ground that the Court did not articulate but that is implicit in its equal treatment reasoning: the mechanism systematically corrupts the informational content of the competitive process. A tender in which winning is an adverse signal — in which the most rational response to being selected as the best offer is to question whether the project is deliverable at that price — is not a genuine competition for value for money. It is a selection mechanism for either superior efficiency or informational naïveté, neither of which is the objective of public procurement law.

The compounded winner's curse also interacts with the originator's strategic sandbagging incentive noted above. If the originator submits a deliberately conservative initial offer — holding capacity in reserve to match a superior challenger bid — it increases the probability that challengers encounter the winner's curse in its most severe form: they must not only compete against a strategic incumbent but do so knowing that the incumbent's reserve capacity makes the signalling value of non-matching ambiguous. The originator might decline to match because the project is genuinely unprofitable at the challenger's price, or because it has strategically exhausted its matching capacity. The challenger cannot distinguish these cases, which further suppresses participation. The strategic sandbagging incentive and the winner's curse therefore compound each other in a self-reinforcing deterrence dynamic that is absent from the Bonus Points mechanism.

5.3. Distinction from the Swiss Challenge

Though frequently conflated in non-specialist literature and policy discourse, the Right-to-Match and the Swiss Challenge are structurally distinct. The distinction runs deeper

than a procedural detail: it determines the information environment in which challengers compete and the nature of the distortion introduced into the allocation.

Under the RtM as implemented in Italian project financing, the competitive procedure superficially resembles a standard tender: all parties, including the originator, submit bids in a formally symmetrical process. The originator's matching right is not exercised during the competition; it is held in reserve and activated only if the originator loses on the merits. This dual position — inside the competition as a regular bidder, and holding a post-award override as a fallback — gives the originator a structural advantage that does not appear in its bid but shapes its competitive strategy in ways invisible to challengers.

Under the Swiss Challenge, by contrast, the originator does not participate as a regular competitive bidder. Its proposal is published as the reference specification for the competition; challengers are invited to submit counter-proposals that improve upon the published reference; and the originator then decides whether to match the best counter-proposal received. The competitive process is structured around the originator's proposal from the outset, and all participants know from the beginning that the originator holds a matching right and that the originator is not simultaneously submitting a competing offer.

The RtM is therefore more distortive than the Swiss Challenge in one dimension: it runs the full machinery of a competitive tender, selects a winner, and then overturns the selection through the matching right. The Swiss Challenge, by contrast, never pretends that the competitive process alone will determine the outcome. Challengers in a Swiss Challenge know they are competing against a published reference and that the originator will have a last look; the deterrence is explicit and ex ante. Under the RtM, the deterrence is implicit and revealed only ex post, when the provisional winner discovers that its superior offer can be appropriated.

This greater distortion of the RtM explains why the CJEU's reasoning in C-810/24 — though addressed specifically to the Italian *diritto di prelazione* — is grounded in principles that apply with at least equal force to the Swiss Challenge in an EU context. The formal difference in procedural architecture does not insulate the Swiss Challenge from the same treaty objections: a Swiss Challenge implemented in an EU member state would be vulnerable to the equal treatment and freedom of establishment arguments that the Court found decisive in C-810/24.

6. The Swiss Challenge

6.1. Historical Origin and International Spread

Despite its name, the Swiss Challenge has no established historical connection to Switzerland. The term appears to have emerged in South Asian procurement discourse — partic-

ularly in India and the Philippines — in the 1990s and 2000s to describe a specific formal procedure for competitive tendering of unsolicited proposals. It has since been adopted across a remarkably diverse range of jurisdictions, including the Philippines (under the BOT Law R.A. 7718), South Korea, Colombia, Brazil (under the *Manifestação de Interesse Privado* framework), Indonesia, Taiwan, Bangladesh, and several Indian states.

The Philippines' BOT Law provides one of the most institutionally developed Swiss Challenge frameworks. Under its implementing rules, when an agency accepts an unsolicited proposal as worthy of competitive tendering, it publishes an invitation for counter-proposals. If no counter-proposal is received within 60 working days, the contract is awarded directly to the originator. If a superior counter-proposal is submitted, the originator has 30 days to match it. If the originator matches, it wins. If it does not, the contract is awarded to the challenger, and the originator receives compensation for bid preparation costs.

6.2. The Swiss Challenge as a Structured Auction

From an auction theory perspective, the Swiss Challenge can be understood as an asymmetric auction with a privileged incumbent and an endogenous reserve price. The originator's published proposal sets the floor against which challengers compete; challengers must beat it to generate a matching decision; and the originator retains a right of last resort against the best counter-proposal received. The reserve price is endogenous because it is set by the very party that also holds the matching right — a feature that has no analogue in standard auction design, where the reserve is set by the seller independently of the bidders.

Standard auction theory predicts that this structure will produce systematically inefficient outcomes. In a symmetric first-price auction, the winner is — in expectation — the bidder with the highest valuation, and revenue equivalence holds across standard formats. The Swiss Challenge breaks both conditions: the originator's matching right means that a challenger with a higher valuation than the originator may invest in proposal development, submit a superior bid, and still lose the contract. In equilibrium, this drives challengers out of the market, and the effective auction collapses to a bilateral negotiation between the authority and the originator — the very outcome that the competitive process was designed to prevent.

6.3. Transparency, Governance, and Corruption Risks

Beyond its competitive effects, the Swiss Challenge raises significant governance concerns. The process necessarily involves privileged disclosure of the originator's technical proposal to the authority prior to competitive tendering. Even with confidentiality safeguards, this creates opportunities for information leakage — deliberate or inadvertent — that can give the originator intelligence about the authority's evaluation criteria, competing firms' likely

approaches, and the specific parameters that will determine the outcome.

More fundamentally, the Swiss Challenge depends critically on the authority's good faith in managing the process. An authority that is colluding with the originator — or that is simply captured by it through superior informational resources — can manipulate the process at multiple stages: setting the evaluation criteria to favour the originator's strengths, managing the timeline to disadvantage challengers, or interpreting the matching right in ways that extend its scope beyond its formal definition. These risks are particularly acute in developing-country contexts where institutional capacity and independence are limited.

The World Bank's empirical review documents these concerns across multiple jurisdictions. In the Philippines, all USP projects put through the Swiss Challenge process through 2006 were ultimately awarded to the original proposer, raising systemic concerns about whether the competitive procedure was functioning as intended or serving as a legitimisation mechanism for predetermined outcomes. Similar patterns have been documented in Taiwan, where 28 of 29 Swiss Challenge projects were awarded to the originator, and in several Indian state-level implementations.

6.4. Hybrid Models Within the Swiss Challenge Framework

Recognising the failings of pure Swiss Challenge approaches, several jurisdictions have begun developing hybrid models that attempt to combine the originator-incentivising features of the Swiss Challenge with stronger competitive discipline. Argentina has experimented with a hybrid that grants a scoring bonus in the first competitive round and reserves the matching right only as a secondary mechanism if the bonus is insufficient to attract competition. Indonesia's PPP regulations similarly allow a developer's fee payment to the originator if a challenger wins, which partially compensates the originator without entirely extinguishing the challenger's incentive.

These hybrid models represent an implicit acknowledgment that neither pure form — the Swiss Challenge nor the no-incentive competitive tender — is satisfactory across all contexts, and that the optimal approach may be context-dependent in ways that resist universal prescription.

7. Comparative Assessment

7.1. Competitive Participation Rates: The Decisive Criterion

The empirical record across jurisdictions points to competitive participation rate as the most discriminating criterion for evaluating compensation mechanisms. A mechanism that nominally preserves competition but de facto deters challengers fails not only on

efficiency grounds — because the competitive discipline needed to reveal value for money is absent — but also on legitimacy grounds, because the resulting process provides a veneer of competition without its substance.

The evidence is striking in its consistency. The World Bank's review of experiences documents that jurisdictions employing the Right-to-Match or Swiss Challenge consistently attract few or no competing proposals. The Philippines' record of zero successful challenges across all Swiss Challenge projects through 2006 is the most dramatic example, but Taiwan's 1-in-29 success rate is equally telling. By contrast, Chile's bonus system — the most carefully calibrated example of the scoring preference approach — achieved a 10-in-12 rate of competitive participation (World Bank/PPIAF, 2017).

This empirical regularity is not coincidental. It reflects the theoretical prediction that matching rights, by making challengers' competitive effort appropriable by the originator, suppress the incentive to compete at the margin where it matters most: for a bidder who has developed a genuinely superior proposal and would, in a symmetric competition, expect to win.

7.2. The World Bank's Institutional Position

The World Bank's Policy Guidelines for Managing Unsolicited Proposals (2017) take a clear institutional position: competitive tendering should be the default approach, USPs should be managed as exceptions rather than the rule, and when originator compensation is provided, the Bonus Points approach is preferred over any form of matching right. The Swiss Challenge is explicitly characterised as "highly discouraged," with the Right-to-Match subject to similar scepticism. The Guidelines recommend that even the bonus be set conservatively, and that cost reimbursement — paying the originator directly for verifiable development costs if a challenger wins — be considered as an alternative or complement to scoring preferences.

This institutional position reflects both the Bank's theoretical priors and the accumulated empirical evidence from its review of global experience. It is worth noting, however, that the Bank's guidance is addressed primarily to developing-country governments with relatively immature PPP markets and limited institutional capacity — contexts in which the risks of process capture and corruption are heightened. The optimal calibration of incentive mechanisms may differ systematically in more institutionally developed environments.

8. Application to Energy Efficiency and ESCO Contracts

The theoretical and empirical considerations developed above acquire specific practical dimensions when applied to energy efficiency projects and Energy Service Company

(ESCO) contracts. Several features of this sector make the originator compensation problem particularly acute.

8.1. The Energy Audit as Project Development Investment

ESCO project development requires a preliminary energy audit of the target facility — typically a public building or portfolio of buildings — as the precondition for any credible proposal. This audit constitutes the principal project development cost and simultaneously generates the key proprietary information on which the ESCO's technical proposal and guaranteed savings commitment will be based. The audit is therefore both the originator's main investment and the primary source of its informational advantage.

This creates a structural amplification of the pre-existing information asymmetry problem identified in Section 3. A competitor seeking to enter a Swiss Challenge or Right-to-Match tender for an ESCO contract faces not merely the generic disadvantage of having developed no project concept, but the specific disadvantage of lacking access to the facility-specific energy consumption data that the originator generated through its audit. Even if the authority publishes the originator's audit as part of the tender documentation — as best practice would require — competitors receive this information later, in condensed form, and without the tacit knowledge that comes from conducting the audit itself.

This suggests that in the ESCO context, the effective competitive advantage of the originator is systematically higher than in standard infrastructure PPPs, implying that even the Bonus Points approach may need to be calibrated more conservatively to preserve genuine competition — or alternatively, that the authority should invest in conducting a baseline energy audit itself, prior to any private proposal process, to level the informational playing field.

8.2. Bankability and the Project Finance Dimension

ESCO contracts are project finance structures: the ESCO's debt service is secured against the guaranteed savings stream rather than against corporate assets. This means that the winning bidder must not only have the technical capability to deliver the retrofit, but must be able to demonstrate to lenders that its savings guarantee is bankable collateral. The originator, having developed the project concept and presumably having had preliminary discussions with potential lenders, enjoys a bankability advantage in addition to its technical informational advantage.

This has implications for the evaluation criteria used in competitive tenders. A scoring system that weights technical merit heavily may inadvertently compound the originator's advantage if technical merit is proxied by familiarity with project-specific parameters. A scoring system that weights financial structure and bankability may similarly favour

the originator's more mature financing relationships. Designing evaluation criteria that genuinely test competitive capability independently of project-specific familiarity is a non-trivial challenge in ESCO procurement.

8.3. Implications for Spanish and Italian Practice Post C-810/24

Spain's LCSP framework, which permits the bonus points approach for private initiative projects in the concession modality, is in formal alignment with World Bank guidance when applied to energy efficiency projects. The IDAE (*Instituto para la Diversificación y Ahorro de la Energía*) has recommended competitive dialogue as the preferred procedure for ESCO selection in complex public building portfolios, precisely because the specification co-evolves with market learning in ways that neither the originator nor the authority can fully anticipate in advance. Competitive dialogue and the private initiative procedure are not mutually exclusive: a private initiative can trigger the need for competitive dialogue, with the bonus points operating within the dialogue framework as the originator's compensation.

For Italian practice, the post-C-810/24 landscape requires a transition toward the hybrid mechanism described in Section 9: cost reimbursement at verifiable rates (the 2.5% cap explicitly preserved by the Court provides a legislative reference point) combined with a conservatively calibrated scoring bonus within the competitive evaluation. In the ESCO context specifically, the authority's investment in a baseline energy audit of its portfolio — made available to all tenderers — would reduce the informational asymmetry that currently justifies a higher bonus, permitting recalibration toward a lower scoring premium and greater competitive participation.

9. Toward a Hybrid Mechanism: Bonus Points and Cost Reimbursement

9.1. The Two-Margin Problem

The mechanism design literature offers a useful diagnostic lens for understanding why neither the Bonus Points system nor cost reimbursement alone constitutes a fully satisfactory solution to the originator compensation problem, and why a hybrid of the two may dominate either pure instrument. The originator's decision problem involves two analytically distinct margins, each responding to a different instrument.

The first is the *ex-ante participation margin*: the originator's decision, prior to any contact with the contracting authority, whether to invest resources in identifying and developing an unsolicited project proposal. This investment is costly, uncertain, and largely irreversible (that is, sunk). The decision whether to make it depends on the expected return to winning the subsequent contract, discounted by the probability of winning and adjusted for the risk

of total loss if a competitor ultimately prevails. This margin is sensitive to the magnitude of any expected competitive advantage — that is, to bonus points — but it is also sensitive to downside risk: a firm facing total loss of development expenditure if a challenger wins may require a larger expected advantage to justify the initial investment than a firm whose development costs are partially insured.

The second is the *ex-post competitive margin*: the originator's incentive, having submitted a proposal and entered the competitive tender, to put forward its best possible offer rather than hold capacity in reserve. This margin is shaped by the competitive format and the magnitude of any scoring advantage. It is also where the tension between originator incentive and challenger deterrence is most acute: a large bonus preserves the originator's ex post incentive but simultaneously reduces challengers' expected return from participating.

These two margins call for different instruments. Bonus points are primarily a solution to the ex post competitive margin: they increase the probability that the originator wins the contract conditional on a given level of offer quality. Cost reimbursement is primarily a solution to the ex ante participation margin: it provides a floor that partially insures the originator against total development cost loss, reducing the risk premium required to justify the initial investment. The critical insight is that addressing each margin with its purpose-specific instrument allows both to be calibrated at lower intensities than would be required if either were used alone to do both jobs simultaneously.

9.2. Theoretical Foundations

This decomposition maps onto a rich strand of procurement mechanism design literature. Arozamena and Cantillon (2004), examining investment incentives in asymmetric procurement auctions, demonstrate that firms in competitive tender environments systematically underinvest in pre-auction cost reduction because they anticipate fiercer head-on competition: the marginal return to investment is diluted by the competitive pressure it induces. Their result implies that a scoring advantage for the investing firm — calibrated to partially compensate for this competitive dilution — can restore first-best investment incentives while preserving competitive participation by other firms. Crucially, the first-price sealed-bid format compounds this underinvestment problem relative to the second-price benchmark, a finding with direct implications for the evaluation format used in USP competitive tenders.

The auction theory literature on endogenous entry, originating with McAfee and McMillan (1987) and developed by Levin and Smith (1994), establishes a complementary result: when participation involves positive sunk costs, the free-entry equilibrium in symmetric auctions generates inefficiently low participation because potential entrants do not internalise the social value of additional competitive pressure. A participation subsidy — or equivalently

a cost reimbursement scheme — can correct this externality by reducing the effective entry cost and inducing the socially optimal participation level. Applied to the USP context, cost reimbursement for the non-winning originator lowers the effective cost of USP submission, inducing socially beneficial proposal generation at the margin.

The most directly relevant theoretical architecture for the present argument appears in the analysis of innovation procurement by Che and Cabral (2021), who examine prizes versus contracts as incentives for innovation in a setting that captures the essential structure of the USP problem: a private party exerts unverifiable effort to generate an innovation, and a social planner must then procure its implementation efficiently. When research effort is unverifiable and implementation costs are private information, a fundamental trade-off arises between incentivising effort and selecting the most efficient implementer. The key finding is that the optimal mechanism employs two instruments simultaneously: a follow-on contract preference (analogous to bonus points at the implementation stage) and a cash prize (analogous to cost reimbursement). These instruments are not substitutes but complements in the optimal mechanism — a two-instrument architecture that is precisely the structure of the hybrid mechanism proposed in this paper.

9.3. The Myersonian Perspective: Virtual Valuation Adjustments

From the perspective of Myerson's (1981) optimal auction theory, the originator's situation can be framed as an asymmetric bidder problem. The originator enters the competitive tender with a distribution over private costs that is systematically different from challengers: it has incurred known sunk development costs, possesses superior information about project parameters, and may have more refined financing relationships. In Myerson's framework, the optimal mechanism for a buyer facing asymmetric bidders involves awarding virtual score adjustments that account for these asymmetries — effectively implementing a scoring rule that corrects for the informational rent structure rather than treating all bidders symmetrically.

The bonus points system is a crude approximation of this Myersonian adjustment: it corrects for the asymmetry between originator and challengers via a blanket scoring uplift, without explicitly modelling the precise distribution of cost asymmetries. The calibration problem identified in Section 4 — the difficulty of setting the bonus at the right level — is, in this framing, the problem of estimating the Myersonian virtual valuation correction without the information needed to compute it precisely.

Cost reimbursement operates on a different dimension of the mechanism: it is not a virtual valuation adjustment but a participation subsidy that shifts the originator's effective reserve in the auction. By guaranteeing partial recovery of development costs regardless of the competitive outcome, it changes the originator's outside option and therefore

its reservation bid. Combined with a modest scoring adjustment, the mechanism can implement a closer approximation to the Myerson optimum: the scoring adjustment corrects for the ex-post cost asymmetry, while the reimbursement guarantee corrects for the ex ante investment distortion. The instruments are genuinely complementary because they operate on different dimensions of the welfare problem.

9.4. Why the Hybrid Dominates Either Pure Instrument

The argument for the hybrid's superiority can be stated as a Pareto-dominance claim under reasonable assumptions. Suppose the contracting authority's objective is to maximise a welfare function that trades off project development incentives against competitive participation, subject to the constraint that the originator's expected return is sufficient to induce proposal submission. Under standard assumptions — risk-averse originator, positive and partially verifiable development costs, positive challenger participation costs — the following holds.

A pure bonus points system of magnitude b^* that just satisfies the originator's participation constraint will, in general, over-deliver on ex-post competitive advantage relative to what is needed to attract challenger participation. Because the bonus must simultaneously compensate for development cost risk and provide a competitive edge, it will be set at a level that deters some challengers who would have participated under a smaller bonus. A pure cost reimbursement scheme at rate r^* that just insures development costs will, conversely, under-deliver on ex-post incentive: it provides no competitive advantage and therefore requires a riskier originator — one with high variance in project value assessments — to find the USP process worthwhile.

The hybrid mechanism — a bonus $b < b^*$ combined with reimbursement $r < r^*$ — can satisfy the originator's participation constraint at lower values of each instrument than either can achieve alone, because the two instruments address different components of the constraint. The reduction in b relative to b^* preserves more challenger participation. The addition of r, even at levels below full cost coverage, partially decouples the originator's ex-ante investment decision from the variance of competitive outcomes, reducing the risk premium embedded in the required bonus. The net effect is a feasible mechanism that achieves the same originator participation, greater challenger participation, and lower expected rents to the originator than either pure instrument — a Pareto improvement across all three welfare dimensions simultaneously.

9.5. Calibration and Verifiability Advantages

A practical advantage of the hybrid mechanism that the theoretical argument tends to understate is its superior calibration properties. The pure bonus system requires the

contracting authority to estimate a single number that must simultaneously compensate for development costs, risk, and competitive asymmetry. These three components are not independently observable, making principled calibration very difficult in practice — a fact reflected in the administrative convention or political negotiation that typically determines bonus levels internationally.

The hybrid mechanism separates the calibration problem into two components with different observability properties. Cost reimbursement can, in principle, be calibrated against verifiable expenditure: the originator can be required to document project development costs — feasibility studies, energy audits, financial modelling, legal fees — and the reimbursement rate set as a defined fraction of documented costs, capped at a maximum. Italy's 2.5% cap under Article 193 of D.Lgs. 36/2023 — explicitly preserved by the CJEU in Case C-810/24 — provides a worked example, though the cap's level itself requires calibration against actual development cost patterns across project types.

The bonus component, relieved of the need to compensate for total cost loss risk (which cost reimbursement now handles), can be set at a lower and more precisely calibrated level targeted specifically at the competitive asymmetry correction. In energy efficiency ESCO contracts, this asymmetry arises primarily from the originator's informational advantage from its preliminary energy audit. If the authority independently commissions a baseline audit — or requires the originator to disclose its audit data as a condition of proposal acceptance — the informational asymmetry is partially reduced, and the required scoring bonus declines accordingly. The hybrid thus interacts constructively with transparency requirements in ways that the pure bonus system does not.

9.6. Legal Compatibility in the Post-C-810/24 Landscape

The CJEU's ruling in Case C-810/24 does not directly address the Bonus Points system — which, unlike the right-to-match, has not been subject to EU judicial review in the concession context. However, the Court's reasoning provides implicit guidance on the conditions under which a scoring preference would be compatible with Directive 2014/23/EU and the Treaty principles of equal treatment and non-discrimination.

The Court's objection to the *prelazione* rested on three specific features: it overturned the competitive ranking ex post; it involved a post-award substantial modification of offers; and it operated as a blanket preference independent of competitive merit. A scoring bonus, applied uniformly and transparently within the evaluation formula, avoids all three defects: it operates within the evaluation process not after it, it does not modify the content of any offer, and it is pre-announced to all participants on equal procedural terms. Its effect on the competitive ranking is proportionate and predictable, not unlimited and unilateral.

Cost reimbursement is even more clearly compatible: the Court in C-810/24 explicitly

preserved it. A hybrid mechanism combining these two instruments is therefore, on current EU law, the most legally robust form of originator compensation available — it uses precisely the two instruments that the Court's reasoning either endorses or leaves intact, and avoids the instrument the Court has declared incompatible.

9.7. Open Design Questions

Several design questions in the hybrid mechanism deserve further analytical and empirical attention. First, the interaction between the bonus level and the reimbursement rate is not arbitrary: a higher reimbursement rate reduces the required bonus for a given level of originator participation, but it also subtly changes challengers' strategic calculus — if challengers know the originator receives cost reimbursement upon a challenger win, this modestly improves challengers' expected payoff and reduces the deterrent effect at the margin. This interaction has not been formally modelled in the USP literature and represents a genuine research gap.

Second, the optimal sequencing of the two instruments requires attention. Should cost reimbursement be conditional on the originator having submitted its best initial offer — to prevent strategic sandbagging — or unconditional? If conditional, what is the verification mechanism? These are incomplete contracting problems of the kind Tirole (1999) identifies as endemic to public procurement: the authority cannot fully specify ex ante what constitutes best-effort submission, creating space for opportunistic behaviour by the originator.

Third, the appropriate cap on cost reimbursement requires empirical grounding in actual project development cost data across sectors and project types. In energy efficiency ESCO contracts, where preliminary audit costs are the dominant development expense and can represent a substantial fraction of total project value for smaller building portfolios, the appropriate cap may differ substantially from large infrastructure concessions where engineering feasibility studies dominate. These are ultimately empirical questions that the current literature has not systematically addressed.

These open questions are not arguments against the hybrid mechanism but rather a research agenda. The theoretical case for its superiority is well-founded in mechanism design, the empirical case is supported by comparative evidence on competitive participation rates, and the legal case has been materially strengthened by Case C-810/24. The remaining work is principally institutional design: translating the theoretical architecture into procurement regulations that contracting authorities can implement reliably and that withstand the scrutiny of both economic analysis and judicial review.

10. Conclusion: Toward a More Precise Theory of Originator Compensation

The analysis presented in this paper suggests several conclusions, some convergent with existing World Bank guidance and others more challenging to received wisdom.

First, the empirical evidence against the Swiss Challenge and the Right-to-Match is sufficiently robust that their use is difficult to justify on efficiency grounds in contexts where institutional alternatives exist. The theoretical prediction that matching rights deter competitive participation is confirmed across multiple jurisdictions and sectors, and the governance risks associated with these mechanisms are not merely theoretical concerns. The CJEU ruling in Case C-810/24 has now added legal incompatibility with EU law to the economic case against the right-to-match, materially clarifying the available design space for member states.

Second, the Bonus Points system is clearly superior to matching rights along the dimensions that matter most — competitive participation, transparency, and resistance to capture — but it does not resolve the fundamental calibration problem. The bonus that adequately compensates the originator's development investment will vary by project type, sector, institutional context, and market structure in ways that resist universal prescription. The World Bank's recommendation of a conservatively set bonus is sensible as a default but cannot substitute for context-specific analysis.

Third, the distinction between the Right-to-Match and the Swiss Challenge — commonly elided in policy discussions — matters both economically and legally. The RtM is more distortive because the originator's dual position inside the competition and outside it generates a sandbagging logic and a compounded winner's curse that are structurally absent in the Swiss Challenge. Yet both mechanisms share the matching right's fundamental pathology — making challengers' competitive effort appropriable — and both are vulnerable to the equal treatment and freedom of establishment arguments the CJEU found decisive in C-810/24. The formal difference in procedural architecture provides no legal insulation to the Swiss Challenge in an EU context.

Fourth, the least-discussed alternative — direct cost reimbursement to the originator if a challenger wins, without any scoring preference — deserves more systematic consideration than it has received in policy discussions. This approach decouples the incentive to invest in project development from the distortion of the competitive evaluation, addressing the two objectives separately. Its main limitation is the difficulty of verifying and pricing project development costs, which creates its own governance risks. The hybrid mechanism proposed in this paper addresses this by combining a modest reimbursement with a correspondingly reduced bonus, allowing the calibration problem to be decomposed into

two more tractable components.

Fifth, and most fundamentally, the originator compensation problem may be a second-best response to a first-best failure. If contracting authorities had adequate technical capacity to identify, develop, and specify infrastructure projects — including energy efficiency retrofits — they would not need to rely on private initiative to generate project pipelines. The USP mechanism, and the compensation problem it creates, is ultimately a symptom of public sector capacity constraints. Addressing those constraints directly, through investment in internal project development capabilities or in expert advisory services, may be a more efficient long-run solution than any combination of scoring bonuses and matching rights. In the meantime, the hybrid mechanism advocated in this paper represents the most defensible available second-best.

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A. The Right-to-Match as a Matching Auction: A Formal Model

The following model, drawn from Riley and Samuelson (1981), formalises the intuition developed in Section 5 and establishes via backward induction that the right-to-match mechanism generates equilibrium pooling and allocative inefficiency.

Setup

Two buyers have private valuations $v_1, v_2 \overset{\text{iid}}{\sim} \text{Uniform}[0,1]$. The seller sets reserve price $v^* = \frac{1}{2}$. The mechanism proceeds in two stages:

1. Buyer 1 (the originator) may quote a price $b_1 \geq v^*$, or make no bid.
2. If Buyer 1 has bid b_1, Buyer 2 (the challenger) may *match* by paying b_1 and obtaining the good, or decline, in which case Buyer 1 obtains the good at price b_1. If Buyer 1 made no bid, Buyer 2 may obtain the good at v^*.

Solution by Backward Induction

Stage 2. Buyer 2 matches if and only if $v_2 \geq b_1$. The probability that Buyer 2 does *not* match — and hence that Buyer 1 obtains the good — is therefore $\Pr(v_2 < b_1) = b_1$.

Stage 1. Anticipating Stage 2, Buyer 1 chooses $b_1 \geq v^*$ to maximise

$$\Pi_1(b_1) = (v_1 - b_1) \cdot b_1.$$

The unconstrained maximum is at $b_1^* = v_1/2$. Since $v_1/2 < \frac{1}{2}$ for all $v_1 < 1$, the constraint $b_1 \geq v^* = \frac{1}{2}$ is binding, and Π_1 is strictly decreasing in b_1 for all $b_1 > v_1/2$. Every type $v_1 > \frac{1}{2}$ therefore bids exactly at the reserve:

$$b_1(v_1) = \tfrac{1}{2} \quad \text{for all } v_1 > \tfrac{1}{2}.$$

Equilibrium and Inefficiency

Every originator type above the reserve price submits the same bid regardless of valuation: the bidding function is completely flat — a pooling equilibrium. The matching right eliminates any incentive for Buyer 1 to signal its valuation through its bid.

An allocation is *efficient* if the good goes to the buyer with the higher valuation. Inefficiency arises whenever $v_1 > v_2 \geq \frac{1}{2}$: Buyer 1 bids $\frac{1}{2}$, Buyer 2 matches (since $v_2 \geq \frac{1}{2}$), and the good goes to Buyer 2 despite $v_1 > v_2$. The probability of this event is:

$$\Pr\big(v_1 > v_2 \geq \tfrac{1}{2}\big) \;=\; \int_{1/2}^{1} \int_{1/2}^{v_1} dv_2\, dv_1 \;=\; \frac{1}{8}.$$

The mechanism therefore misallocates the good with probability $\frac{1}{8}$, a result that is entirely a consequence of the pooling equilibrium induced by the matching right. No standard symmetric auction format (first-price, second-price, English) produces allocative inefficiency of this kind under independent private values.