Artificial Intelligence Procurement and Vendor Dependency: Managing Lock-In Risk Among Small Businesses in Emerging European Markets

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Abstract
Purpose: This paper examines how small businesses in emerging European markets procure artificial intelligence (AI) and what vendor dependency risks follow from those decisions. AI adoption remains low, at 8.4% of enterprises in Poland and 5.2% in Romania against an EU average of 20.0% in 2025, so procurement choices made now will shape dependency for years.
Design / approach: An integrative review combines transaction cost economics, resource dependence theory, switching-cost theory and Kraljic's procurement portfolio model with research on cloud lock-in, Eurostat statistics and EU law. The analysis builds on Сидорук's (2023) distinction between creating, ordering and subscribing to AI.
Findings : Purchased AI gives rise to eight forms of vendor dependency. Each implementation route carries a distinct dependency profile. The EU Data Act reduces infrastructure and data lock-in, but model continuity, output drift and knowledge dependency remain matters of contract and management.
Practical implications : An AI dependency risk matrix, contract safeguards for each quadrant and a six-point procurement checklist help owner-managers match procurement strategy to the role an AI service plays in the business.
Originality / value: The paper links firm-level AI implementation routes to AI-specific lock-in risks and evaluates current EU regulation from the perspective of small buyers in emerging European markets.

Keywords : artificial intelligence; procurement; vendor lock-in; switching costs; small businesses; Central and Eastern Europe; Data Act.

1. Introduction

For most small businesses, adopting artificial intelligence now means buying it. Generative assistants, AI features inside accounting and customer-relationship software, and model access through application programming interfaces (APIs) are sold on subscription, typically by a handful of global providers. This model has made AI accessible to firms that could never build it. It also creates a new form of dependency: the capability a firm relies on is owned, priced, updated and potentially withdrawn by someone else.

The issue is especially relevant in emerging European markets. In 2025, enterprise AI adoption stood at 8.4% in Poland and 5.2% in Romania, against an EU average of 20.0% [3]. Paid cloud computing, the infrastructure on which most purchased AI runs, was used by 24.9% of Romanian and 17.8% of Bulgarian enterprises, compared with 52.7% across the EU [2]. In Moldova, adoption is concentrated in the IT sector, where 78% of technology park residents had integrated AI at least partially in 2026 [9]. These markets are at an early point on the adoption curve, when procurement choices are made for the first time and dependency patterns are still forming.

Сидорук [16] framed the AI decision facing SMEs in Poland, Romania and Moldova as a choice between creating AI internally, ordering it from external developers, or subscribing to ready-made services under resource and regulatory constraints. That framing highlights a

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procurement decision whose consequences extend beyond cost and speed. Each route creates a distinct dependency profile, and for resource-constrained firms the subscription route, while often the only realistic option, carries the greatest exposure to vendor decisions.

This paper asks three questions. How do small businesses in emerging European markets make AI procurement decisions? What forms of vendor dependency arise from those decisions? And how can firms and policymakers manage dependency risk without giving up the benefits of purchased AI? The paper contributes a typology of AI-specific dependency risks, a risk matrix with matching contract safeguards, and an assessment of how far current EU regulation protects small buyers.

2. Conceptual Foundations

2.1 Transaction costs and asset specificity

Transaction cost economics explains when firms make rather than buy, and how they govern purchases [17]. The key variable is asset specificity: the more a relationship requires investments that lose value outside it, the greater the risk of hold-up by the other party. AI purchases become more specific over time as firms adapt processes, train staff on a particular tool, and accumulate prompts, configurations and data inside a vendor's environment.

2.2 Resource dependence

Resource dependence theory holds that organisations become vulnerable when they rely on external parties for critical resources that are scarce or concentrated [12]. Dependence increases with the importance of the resource and with the lack of alternative suppliers. Small businesses buying AI from a concentrated market can meet both conditions while having almost no bargaining power.

2.3 Switching costs and lock-in

Switching costs, whether technical, contractual, financial or learning-related, create lock-in that allows suppliers to raise prices or reduce quality without losing customers [6]. Research on cloud computing documents how proprietary interfaces, data formats and contract terms make migration costly for business users [11]. AI adds further sources of lock-in: model-specific prompt engineering, fine-tuning on vendor platforms, and outputs that change when a vendor updates its model.

2.4 Procurement portfolio thinking

Kraljic's portfolio model classifies purchases by profit impact and supply risk, recommending different strategies for routine, leverage, bottleneck and strategic items [7]. Applied to AI, the model shifts attention from the price of a tool to its role in the business and the difficulty of replacing it. A writing assistant and a system that handles customer orders may cost the same, but they belong in very different quadrants.

2.5 AI implementation routes

Сидорук [16] distinguishes three implementation routes for SMEs: *creating* AI internally, *ordering* custom solutions from developers, and *subscribing* to AI-as-a-service. Read through a procurement lens, the routes form a spectrum from internal control to external dependency. Creating minimises vendor dependency but demands scarce skills and capital. Ordering shifts dependency to a developer, with ownership of code, models and data set by contract. Subscribing offers the lowest entry cost and the least control.

3. Market Context in Emerging Europe

Purchased AI runs on cloud infrastructure, so cloud uptake indicates both readiness and exposure. Figure 1 shows the gap between emerging and leading European markets.

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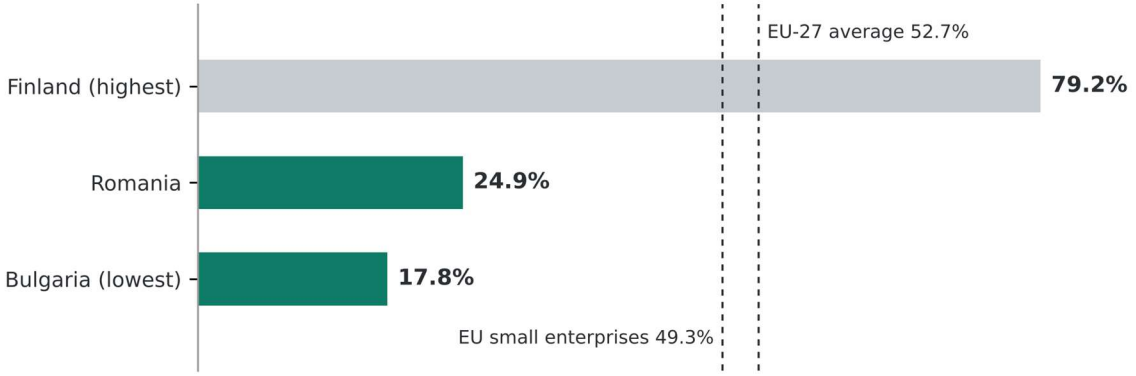


Figure 1 Enterprises buying paid cloud computing services, 2025 (% of enterprises with 10+ employees)
Source: Eurostat [5]; Bulgarian News Agency [2].

Across the EU, 49.3% of small enterprises bought cloud services in 2025, compared with 84.7% of large enterprises [5]. Low cloud uptake in Romania and Bulgaria means that many small businesses there will meet AI and cloud dependency at the same time, often through a single bundled purchase. AI adoption follows the same pattern of size and geography: 17.0% of small EU enterprises used AI in 2025, against 55.0% of large enterprises [4], and the OECD notes that SME adoption remains low relative to larger firms [10].

Two features of these markets raise dependency risk. First, limited expertise weakens firms' ability to evaluate vendors and contracts: among EU enterprises that considered AI but did not use it, 70.3% cited a lack of relevant expertise in 2025 [1]. Second, local vendor ecosystems are smaller, so there are fewer alternatives to global providers, particularly for services that handle Polish, Romanian or Bulgarian well.

4. The Regulatory Environment

EU regulation addresses part of the dependency problem. The **Data Act** [14] gives customers of data processing services, including cloud and many software-as-a-service offerings, a right to switch providers. Since 12 September 2025, customers can start a switch on notice of up to two months, after which the switch should be completed within 30 days. Switching charges have been limited to cost since January 2024 and will be prohibited from 12 January 2027 [8]. The rules apply without exemptions for small providers, although heavily customised services are excluded [8].

The **AI Act** [15] allocates obligations between providers and deployers of AI systems, so the procurement route determines a firm's regulatory role. A small business that subscribes to an AI service is usually a deployer, while one that creates a system becomes its provider. Purchasing therefore transfers much of the compliance burden to vendors, but it also leaves the buyer reliant on the vendor's compliance and documentation. The **GDPR** [13] applies whenever personal data enter AI services, making the location of processing and the terms of data use central procurement questions.

The Data Act makes the infrastructure portable. It does not make the model, the prompts or the skills portable.

The protection these laws offer is real but incomplete. The Data Act targets infrastructure and data portability. It does not guarantee that a firm's prompts, workflows, fine-tuned behaviour or staff skills will transfer to another AI model, nor that outputs stay consistent when a vendor updates or retires a model. These AI-specific forms of dependency remain matters of contract design and management practice.

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5. Methodology

The study uses an integrative review of four bodies of evidence: theory on transaction costs, resource dependence, switching costs and procurement portfolios [6, 7, 12, 17]; research on cloud lock-in [11]; official statistics on cloud and AI adoption [4, 5]; and legal texts and professional analyses of the Data Act, the AI Act and the GDPR [8, 13, 14, 15]. Regional evidence on SME AI implementation, with Сидорук [16] as the anchor study, grounds the analysis in conditions in Poland, Romania, Bulgaria and Moldova. Evidence was coded by dependency source, procurement route and mitigation to produce the typology, matrix and propositions that follow. The framework is conceptual and intended for empirical testing.

6. A Typology of AI Vendor Dependency Risks

Eight forms of dependency emerge from the analysis. They differ in source, visibility and the extent to which regulation addresses them. Table 1 sets them out, and the final column shows where EU law already offers some protection.

Table 1 AI vendor dependency risks for small businesses

Risk	Description	Typical trigger	Main mitigation	Covered by EU law?
Technical lock-in	Reliance on proprietary APIs, formats or integrations	Vendor changes interface or ends support	Abstraction layer; open standards	Partly (Data Act)
Data lock-in	Business data, history or embeddings held in vendor systems	Migration or exit	Export rights; regular backups	Largely (Data Act, GDPR)
Commercial	Exposure to price rises, bundling or plan changes	Renewal or usage growth	Price caps; alternatives	Switching charges only
Model continuity	Reliance on a specific model version	Deprecation or forced upgrade	Version notice; regression tests	No
Output drift	Changes in quality or behaviour after updates	Silent model updates	Monitoring; acceptance criteria	No
Compliance spill-over	Vendor's legal failures affecting the buyer	Breach; unlawful processing	Due diligence; processing agreements	Partly (GDPR, AI Act)
Knowledge dependency	Skills tied to one vendor's tools	Need to switch tools	Transferable training; documentation	No
Jurisdictional	Exposure to non-EU law, access limits or withdrawal	Legal or policy change abroad	EU-hosted options; contingency plans	Partly (GDPR transfers)

Source: Author's elaboration based on Farrell and Klemperer [6], Opara-Martins et al. [11] and the regulatory analysis in Section 4.

The procurement route shapes which of these risks dominate. Table 2 relates the three routes identified by Сидорук [16] to their dependency profile; filled circles indicate a higher level.

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Table 2 Procurement route and dependency profile

Route	Entry cost	Control	Dependency	Dominant risks	AI Act role
Subscribe	●○○	●○○	●●●	Commercial, model continuity, output drift, jurisdictional	Usually deployer
Order	●●○	●●○	●●○	Developer dependency; ownership of code, models and data	Shared, by contract
Create	●●●	●●●	●○○	Key-staff knowledge; reliance on underlying platforms	Provider

Source: Author's elaboration based on Сидорук [16] and Regulation (EU) 2024/1689 [15].

7. Managing Dependency: A Risk Matrix

Adapting Kraljic's logic [7], dependency risk can be judged along two dimensions: how critical the AI service is to the business, and how costly it would be to switch. Figure 2 presents the resulting matrix.

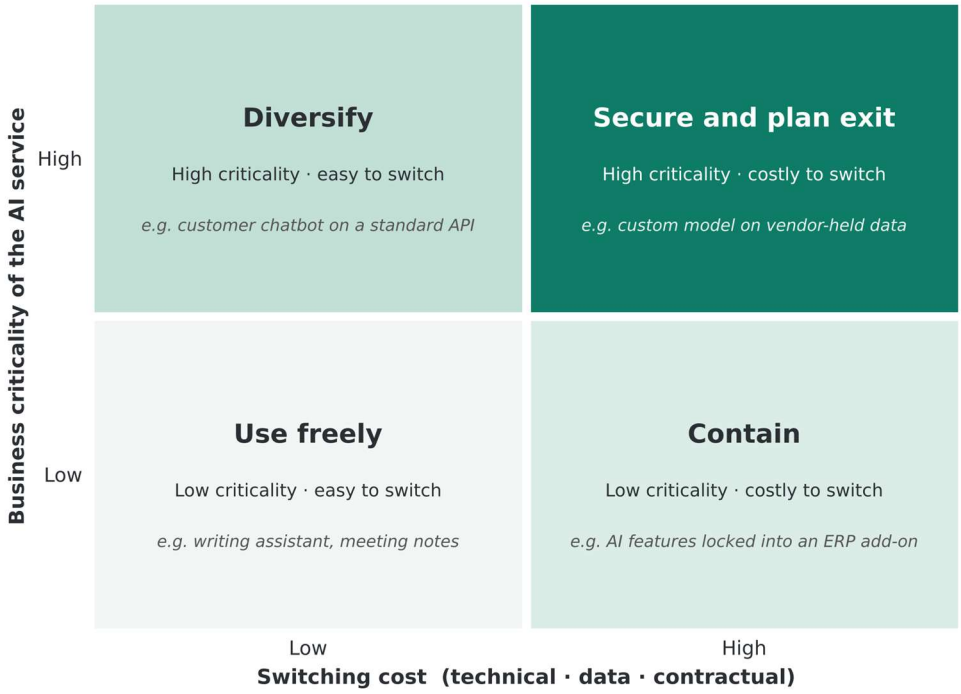


Figure 2 AI dependency risk matrix for small businesses
Source: Author's framework, adapted from Kraljic [7].

7.1 Strategies by quadrant

— **Use freely.** Low-criticality tools that are easy to replace need little governance beyond basic data rules.

— **Contain.** Low-criticality services that are costly to leave, often AI features bundled into wider software, should be kept out of core processes.

— **Diversify.** Critical services that are easy to switch should be designed so

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that a second provider can be substituted quickly.
— **Secure and plan exit.** Critical, hard-to-replace services need strong contracts, data ownership, version guarantees and a documented exit plan.

7.2 Contract safeguards

Strategies translate into specific contract terms. Table 3 sets out the safeguards that small buyers should seek in each quadrant, and how often the arrangement should be reviewed.

Table 3 Contract safeguards and review frequency by quadrant

Quadrant	Typical services	Safeguards to seek	Review
Use freely	Writing assistants, transcription, image tools	Confirm that customer data are not used for training; basic data rules for staff	Annually
Contain	AI add-ons inside ERP, CRM or accounting suites	Data export rights; cap on renewal price; limit integration scope	At renewal
Diversify	Chatbots or document tools on standard APIs	Standard interfaces; a tested second provider; portable prompts and data	Twice a year
Secure and plan exit	Custom or fine-tuned models on firm data	Model version notice; ownership or escrow of code and models; service levels; exit assistance; Data Act switching terms; data processing agreement	Quarterly

Source: Author's elaboration based on the Data Act [14], Latham & Watkins [8] and Opara-Martins et al. [11].

7.3 Propositions

P1 Small businesses that procure AI by subscription accumulate switching costs over time through process adaptation, data enrichment and staff learning, even when initial contracts are short.

P2 Limited procurement expertise increases the likelihood that small businesses place critical AI services in the high-criticality, high-switching-cost quadrant without contractual safeguards.

P3 The Data Act reduces infrastructure and data lock-in for small buyers but has little effect on model continuity, output drift and knowledge dependency.

P4 Firms that separate their data and business logic from specific AI models face lower dependency risk at equal levels of AI use.

P5 In markets with few local AI vendors, collective procurement mechanisms reduce dependency risk for small businesses by strengthening bargaining power and access to alternatives.

8. Implications

8.1 A procurement checklist for owner-managers

1. Classify each AI service by business criticality and switching cost before purchase.
2. Confirm that business data, prompts and configurations can be exported in usable formats.
3. Seek notice of model changes or retirements, and test key outputs after updates.

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4. Check where data are processed and whether the vendor uses customer data for training.
5. Avoid building critical processes around features that exist in only one vendor's product.
6. Keep a short exit plan for every critical AI service, naming an alternative provider.

8.2 Implications for policymakers and advisers

Public support for SME digitalisation should treat procurement capability as part of AI readiness. Model contract clauses for AI services, guidance on using Data Act switching rights, and advisory support for vendor assessment would help small buyers use protections that already exist. Encouraging open standards, interoperable tools and a wider choice of EU-based providers would reduce the market concentration that drives dependency. Collective purchasing through business associations could give small firms bargaining power they lack individually.

9 | Conclusion

For small businesses in emerging European markets, buying AI is usually the only realistic path to adoption, and a sensible one. But the procurement decision is also a decision about dependency. This paper has shown that AI introduces forms of lock-in beyond those familiar from cloud computing, that the implementation routes identified by Сидорук [16] carry distinct dependency profiles, and that EU regulation, while helpful, leaves the most AI-specific risks to contracts and management. The dependency risk matrix and its contract safeguards offer a practical way to match procurement strategy to the role an AI service plays in the business.

The study is conceptual and relies on secondary evidence. Future research should measure switching costs in AI services empirically, survey how small businesses in Poland, Romania, Bulgaria and Moldova negotiate AI contracts, and assess the effect of the Data Act's switching rules once the ban on switching charges takes effect in 2027.

Declarations

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