

**OECD PMR INDICATORS ON PROFESSIONAL SERVICES:
TOP PERFORMANCES OR OUTLIERS?
THE INHOMOGENEITY OF THE CIVIL LAW NOTARIES’
CLUSTER MAY BIAS THE ASSESSMENT ON THE
ADMINISTRATION OF THE JUSTICE¹**

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Abstract. The article passes in review the PMR indicators on notary regulation underscoring that the inhomogeneity of the cluster produces a large gap between minimum and maximum values. If we only consider “civil law notaries”, we can obtain more genuine picture of the reality. Since notaries exercise public functions within the administration of the justice (public good), they need a high level of regulation which is indeed empirically observed in the more homogeneous adjusted distribution (considering only notaries with comparable functions). In the case of notaries, in order to overcome market failure, higher regulation would be needed to ensure higher protection for the average consumer. The analysis of the legislative framework of Sweden, USA, Costa Rica and Israel clearly shows the inconsistency of the PMR notarial cluster as well incompatibilities with the OECD definitions of the notarial profession. Once sharpened the frontiers of the sample, excluding units belonging to a different distribution, notaries presents homogenous higher distribution of the PMR “regulatory score”. The inverse relation between regulation (PMR) and “cost” and the positive correlation between PMR score and quality (Cappiello 2022) in conjunction with the EXCAS study on the better performances of the civil law notaries countries compared to countries using different systems (World Bank indicators of the property transfers of the civil law notaries, are used to make a comparison among countries), it seems to confirm the paternalistic need of the adoption of a civil law notary system. The analysis of the homogenous cluster of civil law notaries completely reverses the benchmark thresholds of the OECD PMR indexes. Contrary to the OECD PMR general vision that “less regulated is better”, the top five PMR average score (countries with lowest notarial regulation) is in fact associated with high average costs, while the highest five PMR average score (countries with highest notarial regulation) is associated with low average costs for the consumer. Therefore, if a country presents a notarial PMR value above the OECD AVG (a level of notarial regulation above the OECD average), it would be empirically considered an advantage (because it produces lower cost, efficiency and higher quality) rather than a signal for deregulation as actually proposed by OECD.

¹ The views and opinions expressed are those of the authors and do not necessarily reflect the views or positions of the entities they represent.

1. Introduction

Since 1998, the OECD Product Market Regulation (PMR) indicators have measured the degree of regulation in key sectors of the economy, including selected professional services that constitute important intermediate inputs in national productivity systems. Among these professions are lawyers, accountants, architects, engineers, real estate agents, and notaries, classified according to ISIC² definitions (see Table 1). PMR scores range from 0 (lowest regulation) to 6 (highest regulation) and are intended to assess the extent to which regulation may hinder competition, under the assumption that lower regulatory intensity is generally associated with better market outcomes. While this assumption may hold for purely market-oriented services, it is more problematic when applied to professions exercising public functions³. This paper focuses on the notarial profession and argues that the PMR assessment is biased by the inhomogeneity of the notarial cluster. In particular, the inclusion of systems based on “notaries public” alongside civil law notaries leads to misleading benchmarks⁴ and policy implications.

We show that, once the sample is restricted to countries adopting civil law notaries with comparable functions, the distribution of PMR scores becomes homogeneous and the interpretation of regulation is substantially reversed.

2. Notaries, Market Failure, and Public Goods

Civil law notaries are integral components of the administration of justice. They are public officers entrusted with the *ex ante* control of legality in legally sensitive transactions, most notably real estate transfers. Their function is to ensure legal certainty⁵, protect weaker parties, and prevent negative externalities such as

² The International standard industrial classification of all economic activities, abbreviated as ISIC, is a standard United Nations Statistics Division (UNSD) classification of economic activities arranged so that entities can be classified according to the activity they carry out.

³ Cappiello, A. OECD PMR indicators for professional services. Civil law notaries as ‘public good’: efficiency and legal protection need higher regulation, *RIEDS - Rivista Italiana di Economia, Demografia e Statistica - The Italian Journal of Economic, Demographic and Statistical Studies*, 2022, vol. 76, issue 3, 179-190

⁴ European Commission and OECD (2022). Assessment of the links between the European National Recovery and Resilience Plan and OECD PMR indicators.

⁵ Directive (EU) 2018/958 of the European Parliament and of the Council, of 28 June 2018, relating to a test of proportionality before the adoption of a new regulation of the professions, excludes the notary profession from its scope of application, in the light of the consideration that the requirements for entry and exercise of the same are proportional and justified by the public function that characterizes it. Indeed, Article 2 of the directive in question limits its scope of application only to professional activities falling within the scope of directive 2005/36/EC. The latter, in the text amended by Directive 2013/55/EU (see art. 1, point 2.b) of the European Parliament, in turn

litigation, fraud, and enforcement failures. As such, notarial services cannot be analysed as ordinary market services governed by pure competition. From an economic perspective, notarial activity addresses classic forms of market failure, including information asymmetry and contractual incompleteness. This explains why civil law notaries are subject to a high and relatively uniform level of regulation across countries adopting this institutional model. Empirically, OECD PMR data show that civil law notaries exhibit high regulatory scores (mean around 4.5 on a 0–6 scale), reflecting their public mandate rather than inefficiency or rent-seeking behaviour.

Table 1 – OECD definitions of the professions analysed by the PME indicator.

Lawyers (included in ISIC 4.0 6910 class) are professionals that usually provide: 1) legal representation of one party's interest against another party before courts and other judicial bodies; 2) advice and representation in civil cases; 3) advice and representation in criminal cases; 4) advice and representation in connection with labour disputes, and general counselling and advising, preparation of legal documents (including deeds, wills and trusts).
Notaries (included in ISIC 4.0 6910 class) are professionals that usually confer authenticity on legal deeds, contracts, oaths and other legal documents. The following options may apply: 1) an independent professional who charges fees to its clients (like in several European and Latin American countries); 2) a public employee, who offers its services in a public office and is paid as public employees. Those who receive his/her services may be asked to pay a fee, but this fee would accrue to the public office and not directly to the employee (like in some Nordic countries); 3) a lawyer who also offer notarial services, usually Administering oaths and certificating legal documents, after obtaining an additional qualification (like in the UK). In case 2 and 3 the OECD would consider that notary is not an independent profession for the purpose of PMR analysis.
Accountants (included in ISIC 4.0 6920 class) are professionals that can prepare financial accounts for firms, handle payrolls, reconcile firms' books at year end, and prepare tax returns for firms and individuals
Architects (included in ISIC 7110 class) are professionals that usually plan, design, and supervise the construction, restauration and refurbishment of buildings. They can also perform urban planning and landscape architecture.
Civil engineers (included in ISIC 7110 class) are professionals that usually plan, design, and supervise the construction, refurbishment and maintenance of buildings, as well as roads, bridges, dams, and the like.
Real estate agents (included in ISIC 4.0 6820 class) are professionals that usually arrange the selling, letting and/or management of real estate properties (e.g. houses, flats, building, shops).

Source: OECD 2023, *Definitions and instructions for the PMR questionnaire*.

3. OECD Definitions and Cluster Inhomogeneity

According to OECD definitions, notaries may operate under three different institutional arrangements: (i) independent professionals exercising a public function and charging regulated fees; (ii) public employees providing notarial services within public offices; and (iii) lawyers who perform limited notarial acts as an ancillary activity. For PMR purposes, only the first category should be considered an

excludes the profession of notary from its scope of application: article 2 of the “*Directive 2005/36/EC is amended as follows: ... this Directive shall not apply to notaries who are appointed by an official act of government.*”

independent profession. Beyond this formal classification, a substantive distinction must be drawn between civil law notaries and notaries public. Civil law notaries, recognized by the International Union of Notaries (UINL), are delegated by the State to perform legality controls with full evidentiary and enforceable effects. By contrast, notaries public—typical of common law systems—mainly certify signatures or copies and do not provide legal advice or control the substance of transactions. The inclusion of countries such as the United States, Sweden, and Israel in the PMR notarial cluster introduces units belonging to a different institutional population. In these countries, notarial functions are either minimal, ancillary to the legal profession, or purely administrative. Their inclusion artificially lowers the PMR average and inflates the dispersion of scores. In the USA the “notary public” is not providing legal advice or supervising crucial processes connected with the property transfers (activity normally carried out by lawyers). For instance, in New York (USA), anyone having a high school degree can become a notary public after paying 15\$ and passing a multiple-choice test of the duration of 1 hour concerning a booklet on notary public licence law⁶. As concerns Texas (NY and Texas are the representative States considered by the PMR to calculate the USA average⁷), on the portal of the Secretary of the State contains a “warning” specifying (in English and Spanish) that a “notary public” is not a “notario” (civil law notary) and “he is not authorised to practice law” neither to “give legal advice or prepare legal documents”⁸. Moreover, to become notary in Texas you do not need to pass any examinations⁹, you are only required to pay \$95.95 to get an authorisation to practice¹⁰. In Sweden, according to the law on Notary Public (SFS-nummer 1982:327 Förordning om notarius publicus¹¹), the activity of the notary seems related mainly to the certification in limited fields (certification of signatures, witness about

⁶ See information on the official website of state of New York (<https://dos.ny.gov/notary-public>)

⁷ See USA in the PMR table scores (OECD 2018)

⁸ Notice from the Secretary of the State of Texas (<https://www.sos.state.tx.us/statdoc/notary-public.shtml>) Notario Público? Not in Texas! 1) A notary public is not a *notario*; 2) A notary public is not authorized to practice law. 3) A notary public may not give legal advice or prepare legal documents; 4) A notary public may not charge a fee for preparation of immigration documents or represent someone in immigration matters. Please report any notaries public disobeying these rules to the Office of the Secretary of State.

⁹ FAQ American Association of Notaries (<https://www.texasnotary.com/notary-faqs/notary-course-and-testing#category-title>) “Do I need to take an exam or a notary course?: Notaries are not required to take a course or pass a test to become a Texas notary. However, for the notary's protection, training is highly recommended.

¹⁰ In the portal of Texas notaries is also specified that, to become a notary in Texas, you only need to pay \$95.95 and “you must: 1) Be 18 years of age or older; 2) Be a legal resident of the State of Texas; 3) Have no criminal convictions or felonies.” Source: <https://www.texasnotary.com/how-to-become-a-texas-notary>

sealing and closing of storage rooms, lottery certification and confirmation of certain powers of representation). The Swedish notary may also certify translations “to the extent that his language skills permit”. The typical services offered by the Swedish notaries¹² seem to have the *notary public*'s characteristics (mainly authentication of signatures and linguistic skills). The Swedish law does not foresee any notarial legality control for the purposes of the real estate transfer or other crucial activities usually delegated by the State to civil law notaries. The official website of the Stockholm municipality provides the following indications of the main services of *Notarius publicus*: 1) verifying signatures, copies, translations, and other data concerning the content in various documents; 2) witnessing when storage rooms are opened or closed, or when seals are put in place or are broken; 3) supervising lottery draws; 4) confirming that someone is qualified to do certain things, or that someone has the competence or capacity to represent someone else. As concerns Israel, in order to become a notary it is necessary, among other requirements, to be a member of the Israel Bar Association and have 10 years of work experience as a lawyer (see criteria 2 and 3 of Notary Licensing Department).¹³ Leaving apart the assessment concerning the notarial functions which, except some legal competences on the matrimonial agreements, seems anyway closer to those of the Anglo-Saxon “notary public”¹⁴ (Israeli notaries are not considered civil law notaries by the UINL), the

¹² Our most common services are...: 1) Legalisation of a signature on a document; 2) Legalisation of two signatures on a document Attestation/Affidavit/Spanish and French Power of Attorney (one signature); 3) Legalisation of the name and authorisation of an authorised signatory on a document; 4) Legalisation of the names and authorisation of two authorised signatories on a document; 5) Legalisation of a photocopy (on presentation of the original) 6) Apostille.

¹³ Israeli Ministry of Justice (Regulation of Professions Division, Notary licensing department) “*To apply you must meet all the following criteria: 1) Be an Israeli citizen or have Israeli permanent residence status; 2) Be a member of the Israel Bar Association; 3) Have 10 years work experience as a lawyer; 4) Participate in a notary training course; 5) Have a criminal record check. The notary licensing committee will check if there are criminal investigations or proceedings against you; 6) Have a disciplinary complaints-history check*”.

¹⁴ של נכונותו לאשר (3); לכך מוסמך היה, זולתו בשם, מסמך על שהחתום לאשר (2); מסמך על חתימה לאמת (1) הנוטריונים לחוק 7 סעיף 7 של נכונותה לאשר (7); חי פלוני שאדם לאשר (6); אחרת והצהרה תצהיר ולאשר לקבל (5); מסמך תרגום של נכונותו לאשר (4); מסמך העתק נוטריון בידי הפעולה עשיית או כשהעריכה אחרת פעולה בו לעשות או מסמך לערוך (9); סחיר מסמך של העדה לערוך (8); מצאי רשימת של אחר דין פי על ציבורי נוטריון של בסמכות להשתמש (10); אחר מסמך פי על או, חוץ מדינת של דין לרבות, דין פי על מותרת או דרושה (<https://main.knesset.gov.il/>) לבצע רשאי נוטריון שרק פעולות. הנישואין לפני שנכרת, זוג בני בין ממון הסכם לאמת (11) English translation: Section 7 of the Notaries Law 1976-10 to verify a signature on a document; (2) to confirm that the signatory of a document, on behalf of another, was authorized to do so; (3) confirm the correctness of a copy of a document; (4) to confirm the correctness of a document translation; (5) accept and approve an affidavit and other statement; (6) to confirm that a certain person is alive; (7) to confirm the correctness of an inventory list; (8) to make the witness of a negotiable document; (9) Edit a document or perform another action on it when editing or performing the action by a notary is required or permitted by law, including the law of a foreign country, or by another document; (10) use the authority of a notary public according to another law; (11) To verify a financial

exercise of the notarial function is accessory to that of lawyer and therefore the Israeli notaries, according to OECD definitions (par. 1), should not be included in the PMR notarial cluster. A different consideration would deserve Costa Rican notaries. In this case, the observation does not concern their functions (they provide services typical of civil law notaries) but the inconsistency with the OECD definition (see par. 1). In fact, even if Costa Rican notaries perform typical activities of civil law notaries and are part of the Latin Notaries International Union, they are required (in order to exercise as a notary) to be lawyers with at least two years of incorporation in the National Bar Association¹⁵. Therefore, we are within the case of “lawyers exercising the notarial profession” and this would be inconsistent with the OECD definitions. Even in this case, according to the OECD definitions, the PMR notarial cluster should not include the score of Costa Rica because within the case of “lawyers who also offer notarial services”¹⁶.

4. Outliers and Sample Adjustment

An exploratory data analysis of PMR scores confirms the presence of significant outliers in the notarial distribution. Countries such as the United States and Sweden display extremely low PMR scores that are not comparable with those of civil law notaries.

Costa Rica, although adopting a Latin-type notarial system, also raises consistency issues with OECD definitions because the notarial function is legally reserved to lawyers. Applying standard statistical tools, such as Tukey’s fences based on the interquartile range, these countries fall clearly outside the lower bounds of the civil law notarial distribution. Once these units are excluded, the remaining sample exhibits a much narrower dispersion, with a reduced gap between minimum and maximum values and a substantially higher average score. This adjustment has

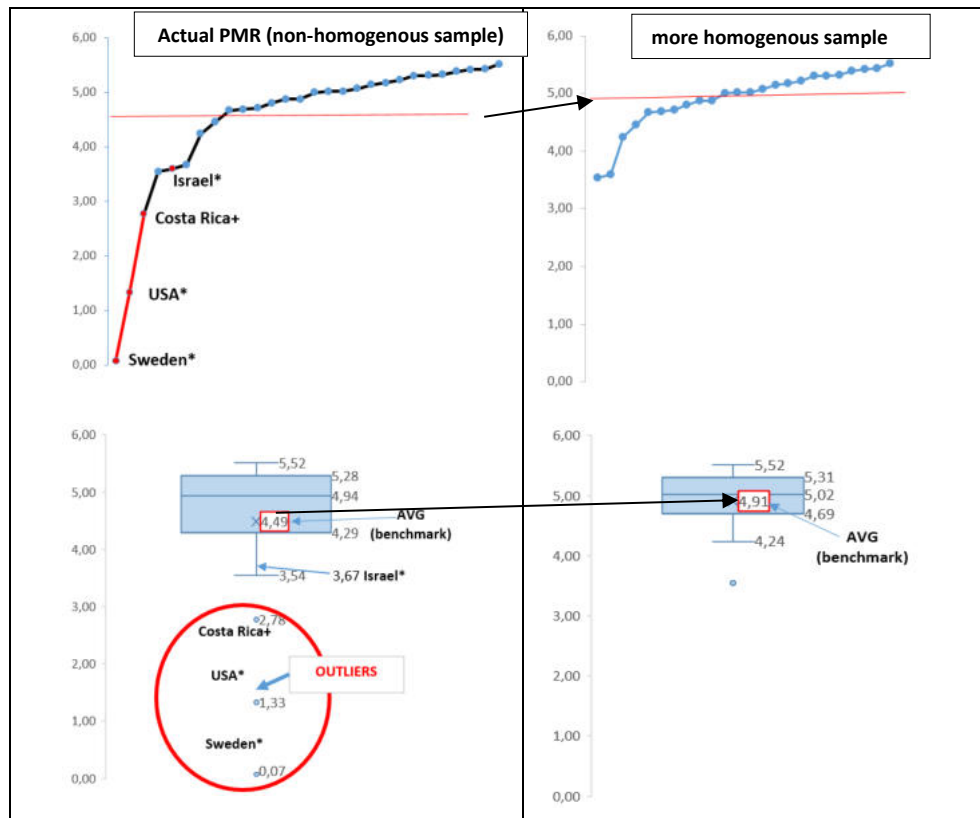
agreement between spouses, made before the marriage. Actions that only a notary may perform. (<https://main.knesset.gov.il/>)

¹⁵ Among the requirements to be a notary public in Costa Rica: “They must have a law degree and must be incorporated into the Costa Rica Bar Association for at least two years” (Codigo notarial: CAPÍTULO II, Requisitos e impedimentos para ejercer el notariado público. Artículo 3.- Requisitos. Para ser notario público y ejercer como tal, deben reunirse los siguientes requisitos: *..omissis..*: c) Ser licenciado en Derecho, con el postgrado en Derecho Notarial y Registral, graduado de una universidad reconocida por las autoridades educativas competentes; además, haber estado incorporado al Colegio de Abogados de Costa Rica al menos durante dos años y, con la misma antelación, haber solicitado la habilitación para ejercer el cargo.

¹⁶ As indicated at pag. 3 point 2 of the instructions for PMR “*in case a lawyer who also offer notarial services..*” OECD claims that “*..notary is not an independent profession for the purpose of this questionnaire. All answers for the previous update would be marked as sector does not exist..*”

important implications for interpretation. In the homogeneous sample, the PMR mean increases from about 4.5 to nearly 5, and the standard deviation is more than halved. This indicates that high regulation is a structural and consistent feature of civil law notarial systems rather than an anomaly.

Figure 1 – Notarial PMR score: actual PMR vs more homogeneous sample (OECD countries)



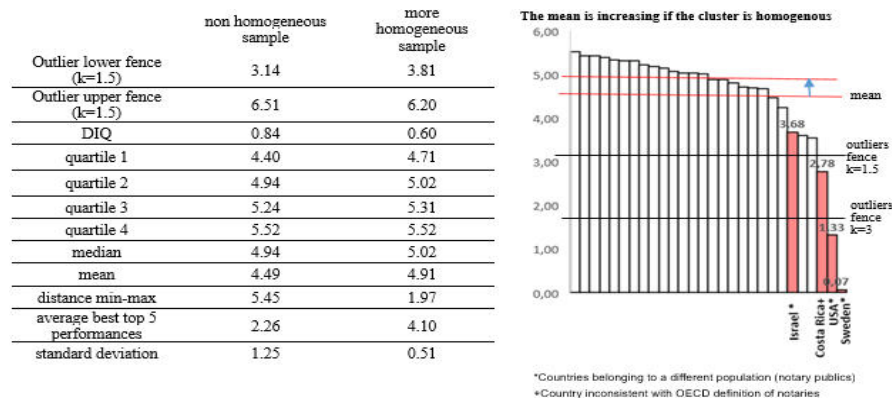
Source: elaboration on OECD countries - *OECD PMR indicator 2018* Notes: (*) units belonging to “public notaries’ distribution” (Israel is belonging to a different distribution also by OECD definition) (+) unit belonging to a different distribution by OECD definition

5. Mean versus Median in PMR Interpretation

The OECD commonly uses the arithmetic mean PMR score as a benchmark to identify sectors or countries that are “over-regulated” and therefore candidates for reform. However, in the presence of outliers, the mean becomes a misleading

indicator. It is evident that the adjustment of the sample (eliminating outliers and units coming from a different distribution) will make the results closer to the empirical context. In fact, after the adjustment, the top 5 best performing average will increase from 2.2 to 4.1 (almost the double) and the gap between the maximum and minimum value will reduce from 5.4 to 1.9 (see table in Figure 2).

Figure 2 – Distribution values: inhomogeneous vs homogenous clusters (OECD countries)



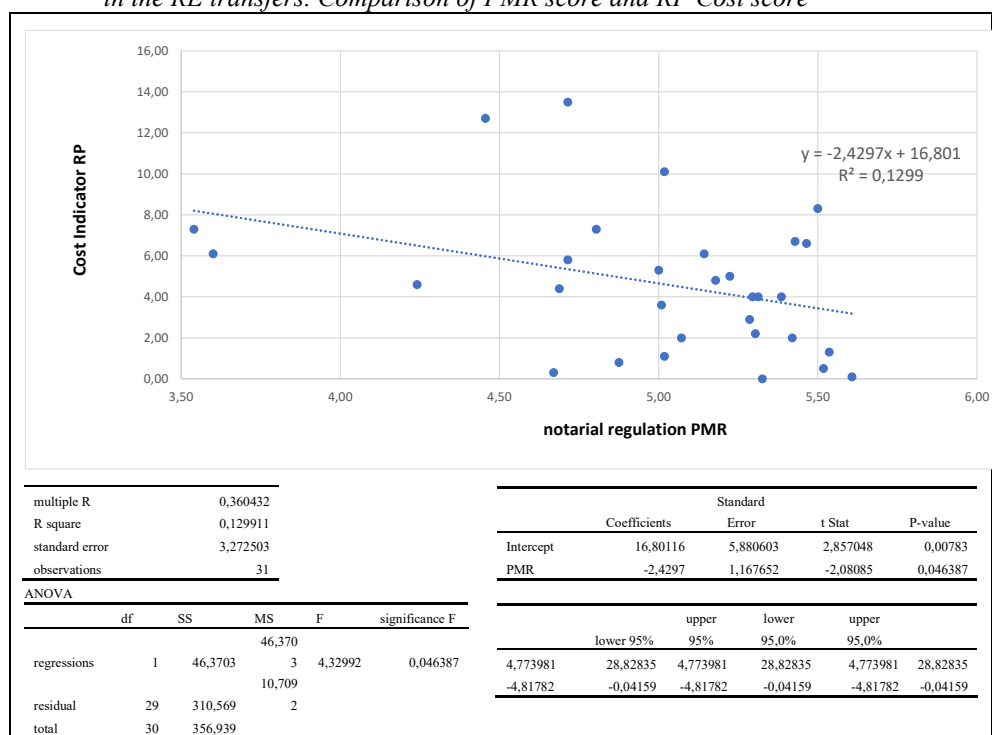
Source: elaboration on OECD countries - PMR indicator 2018

In the notarial case, the median provides a more appropriate measure of central tendency. The median PMR score is systematically higher than the mean, reflecting the fact that the majority of civil law notarial systems cluster around high regulatory values. Using the median as a benchmark would lead to a more accurate interpretation of regulatory needs in the administration of justice and would avoid policy recommendations driven by non-comparable cases.

6. Regulation and Costs: Empirical Evidence

Contrary to the standard PMR narrative, empirical evidence shows an inverse relationship between the level of notarial regulation and the cost of real estate transfers borne by consumers (Figure 4 and 5). Using World Bank Registering Property indicators and PMR data for countries adopting civil law notaries, higher PMR scores are associated with lower transaction costs, shorter completion times, and higher quality outcomes.

Figure 4 – Countries (also including non-OECD countries) adopting civil law notaries in the RE transfers. Comparison of PMR score and RP Cost score



Source: World Bank and PMR indicator 2018

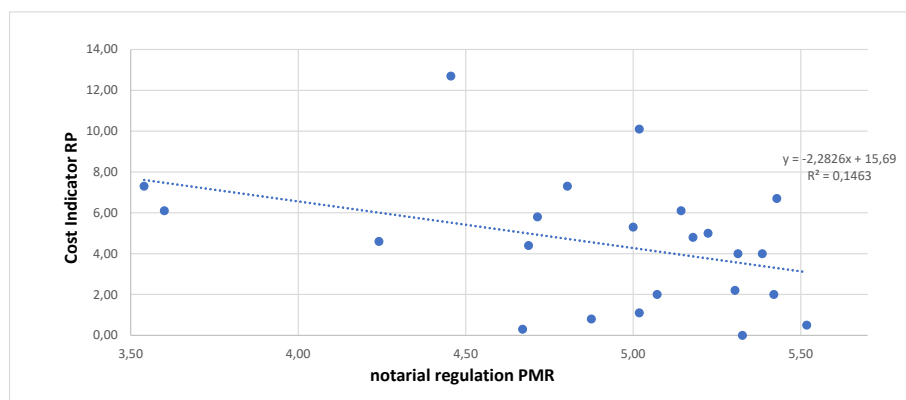
Table 1 – Countries* (analysed by PMR and adopting notaries in RE transactions) divided into clusters according to the RP Cost indicator of the DB report

cluster	OECD and non OECD countries		
		Cost RP	(level of regulation)
Cluster 1 C1 countries where CO < 3	MEDIAN C1	1,10	5,30
	AVERAGE C1	1,20	5,24
	ST.D C1	0,92	0,28
Cluster 2 C2 countries where 3 ≤ CO < 6,5	MEDIAN C2	4,70	5,08
	AVERAGE C2	4,81	4,90
	SD C2	0,83	0,50
Cluster 3 C3 countries where CO ≥ 6,5	MEDIAN C3	7,80	4,91
	AVERAGE C3	9,06	4,87
	ST.D C3	2,56	0,62

index	OECD countries		PMR notaries
MEDIAN C1	0,95	5,19	
	1,11	5,15	
	0,80	0,27	
MEDIAN C2	4,90	5,07	
	5,01	4,85	
	0,76	0,53	
MEDIAN C3	7,30	4,80	
	8,82	4,65	
	2,27	0,64	

Source: World Bank and PMR indicator 2018 * including non OECD countries (analysed by OECD PMR).

Figure 5 – OECD Countries adopting civil law notaries in the RE transfers. Comparison of PMR score and RP Cost score.



Source: World Bank and PMR indicator 2018.

Table 2 – Inverse relation between Notarial PMR and RE consumer costs (OECD countries).

Indexes of the OECD PMR in the more homogeneous sample (Empirical evidence: PMR correlation with RE consumer costs) *	Consumer cost	PMR notarial regulation (min 0; max 6)	OECD PMR actual benchmark
AVG lowest 5 PMR scores (less regulated countries)	6.20 ↑	4.10 ↓	2.26 (AVG PMR top 5 best performances) According to the actual OECD PMR scheme, low level of regulation is supposed to have (without empirical evidence) benefits in terms of cost and quality of the notarial services
AVG highest 5 PMR score (more regulated countries)	2.64 ↓	5.42 ↑	5.42 (worst performances, see above comments about the top 5 best performances)
lowest PMR score (less regulated country)	7.30 ↑	3.54 ↓	0.07 (best performance, see above comments about the top 5 best performances)
highest score (more regulated country)	0.50 ↓	5.52 ↑	5.52 (worst performance, see above comments about the top 5 best performances)
Average PMR score According to the empirical analysis, if a country is above this OECD AVG, it produces better performances in terms of lower costs and better quality for the consumers)	4.41	4.91	4.49 (threshold for reforms) According to the actual OECD PMR scheme, if a country has a score above the OECD AVG, it is considered too regulated and is encouraged to deregulate

*Further analysis show negative trend of PMR correlation also with time and procedures to complete a Real estate transfer and a positive correlation with the “quality of the real estate transfers” (see Cappiello, 2022).

Regression analyses confirm a statistically significant negative correlation between PMR scores and consumer costs. When countries are grouped according to cost clusters, those with higher levels of regulation systematically display lower average costs. Conversely, countries with lower regulatory scores tend to exhibit higher transaction costs. This evidence completely reverses the OECD benchmark logic.

The evidence illustrated in table 2 completely reverses the OECD benchmark logic. In the homogeneous civil law notarial cluster, the average of the five least regulated countries corresponds to high consumer costs, while the average of the five most regulated countries corresponds to low costs. Being above the PMR average thus appears to be an advantage rather than a signal of inefficiency.

7. Policy Implications

The misinterpretation of PMR scores in the notarial sector stems from a failure to distinguish between regulation that restricts competition for private gain and regulation that enables the provision of public goods. Civil law notaries operate as institutional safeguards, internalising transaction risks and reducing downstream social costs. Using competition-based indicators without accounting for functional differences leads to distorted reform agendas. In the case of notaries, deregulation inspired by PMR benchmarks could undermine legal certainty, increase litigation, and ultimately raise total transaction costs.

8. Conclusions

This paper has shown that the OECD PMR assessment of notarial regulation is biased by the inhomogeneity of the underlying cluster. The inclusion of notaries public and systems inconsistent with OECD definitions produces misleading averages and benchmarks. Once the analysis is restricted to civil law notaries with comparable functions, PMR scores display a homogeneous distribution characterised by high regulatory levels. Empirical evidence demonstrates an inverse relationship between regulation and consumer costs in real estate transactions, as well as a positive association between regulation and quality. These findings challenge the assumption that “less regulation is always better” and suggest that, in the presence of market failure and public goods, higher regulation may enhance efficiency and consumer welfare. For civil law notaries, regulation should therefore be interpreted as an institutional necessity rather than a distortion. Evaluation frameworks should be refined to reflect the specific role of professions operating

within the administration of justice, avoiding inappropriate comparisons and misguided policy recommendations.

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