

**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 justice***

Antonio CAPPIELLO, Senior Economist CNN cnn.acappiello@notariato.it

Claudio CECCARELLI, Director, Italian National Institute of Statistics ISTAT clceccar@istat.it

DRAFT Last updated 07.08.23

1. Introduction

The OECD PMR indicators (since 1998) assess the level of regulation on the key sectors of the economy also covering some professional services that are deemed to represent a significant intermediate input inside the productivity chain of the country system. Namely, OECD analyses the level of professional regulation of lawyers, accountants, notaries, civil engineers, architects and real estate agents according to ISIC¹ definitions (see specifications indicated in Tab. 1). The PMR score ranges from 0 (lowest regulatory level) to 6 (highest regulatory level). The objective of the PMR is to guarantee the regular functioning of the market through the mechanism of competition. The main idea is to avoid "barriers to entry" and ensure the correct functioning of the competition. Through the indicators of restrictiveness (PMR), higher scores are assigned to professional services with a higher level of regulation (which are supposed to result in lower quality services and higher costs). However, even if competition (under certain conditions) generally produces benefits, in the case of public goods it may not always guarantee well-functioning markets (e.g. market failure²) and the protection of consumers' health and safety.

* 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 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.

² Capiello, 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

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

<p>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).</p>
<p>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 certifying 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.</p>
<p>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</p>
<p>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.</p>
<p>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.</p>
<p>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).</p>

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

In the following paragraphs, we will analyze some characteristics of the notarial function underscoring the differences between “civil law notary” and “notary public” and the consistency of the PMR with the definitions (tab. 1) and nature of the notarial systems adopted by the different countries analyzed by OECD. Then will make some considerations on the PMR distributions of scores to understand if it reflects the empirical context (and how to read it considering the framework of the administration of the justice).

2. Notaries, PMR methodology, market failure and public goods

It should be considered that the notary services, if intended as *civil law notaries*, are included in the system of the administration of the justice (a service that does not follow the rules of a pure competition) because they are part of a process conferring legal certainty to some operations that deserve a particular guarantee by the State³

³ 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

(e.g. real estate transfers). The notarial service would therefore result highly regulated in all countries adopting notaries as part of their system of administration of the justice, as it can be empirically observed analyzing the OECD score within this cluster (PMR mean 4.49 and median 4.94; in a scale 0-6, where 6 is the maximum level of regulation).

Countries showing lower level of regulation in the PMR notarial sector (Sweden 0.67, USA 1.32 and Israel 3.67) are not using notaries with comparable functions to the ones of the civil law notaries and can be better classified, even with their own nuances, within the category of “notaries public”. In the following paragraphs, we will better analyze the definition and the nature of the notarial services in order to underscore the biased sample containing outliers belonging to a different distribution (i.e., “notaries public”). In fact, the scores of the outliers (i.e., Sweden and USA) affects significantly the “PMR average” which is used as a benchmark of some important assessment policies provided by OECD⁴.

3. OECD definitions, Notary functions and cluster biases

According to OECD (see tab. 1 § 1): *“The role and activities of notaries vary substantially in different legal traditions ... 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). Afterwards OECD claims that “in case 2 and 3 ..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 ..”

Beyond the OECD definitions excluding from the sample countries that adopt the notary profession as “civil servant” or as an “auxiliary service” of the lawyers, it is necessary to make a clear distinction between “civil law notary” and “notary public”.

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 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.*”

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

In order to have a comparison among homogenous units, we think that would be appropriate to compare separately “civil law notaries” (as recognised by the UINL⁵) and “notaries publics” operating mainly in common law jurisdictions and other mixed legal systems.

In fact, “civil law notaries” and “notaries public” have a completely different functions: only the civil law notaries are legal professionals delegated by the State to control the legal content of some delicate transactions (i.e., in most of the cases real property transfers) and are integral part of the administration of the justice. This justifies the higher legal requirements for civil law notaries. Therefore, it would be more consistent to take out, from the civil law notaries’ cluster (members of UINL), some countries adopting “notaries public” (i.e. USA, Sweden and Israel) because the nature of their notarial services is completely different. Notaries public, with different extent, usually operate as certifier of copies or signatures and they are not delegated by the State to provide the control of legality of important legal operations (such as the real estate transfers that in “notary public’s jurisdictions” are usually dealt by lawyers or by real estate agents).

4. Notaries in USA, Sweden and Israel

In this paragraph, we analyse the characteristics of “notaries public” operating in USA, Sweden and Israel in order to better understand the differences with the civil law notary system. 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

⁵ International Union of Civil Law Notaries

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.

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 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

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>

¹¹ Förordning (1982:327) om notarius publicus SFS 2019:194 Tillsättning och verksamhetsområde 6 §

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 Association3) 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*”.

the Anglo-Saxon “notary public”¹⁴ (Israeli notaries are not considered civil law notaries by the UINL), the 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.

5. Notaries in Costa Rica and OECD definition

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.

סעיף 7 לחוק הנוטריונים 1 (לאמת חתימה על מסמך); 2 (לאשר שהחתום על מסמך, בשם זולתו, היה מוסמך לכך); 3 (לאשר נכונותו של העתק מסמך); 4 (לאשר נכונותו של תרגום מסמך); 5 (לקבל ולאשר תצהיר והצהרה אחרת); 6 (לאשר שאדם פלוני חי); 7 (לאשר נכונותה של רשימת מצאי); 8 (לערוך העדה של מסמך סחיר); 9 (לערוך מסמך או לעשות בו פעולה אחרת כשהעריכה או עשיית הפעולה בידי נוטריון דרושה או מותרת על פי דין, לרבות דין של מדינת חוץ, או על פי מסמך אחר); 10 (להשתמש בסמכות של נוטריון ציבורי על פי דין (לאמת הסכם ממון בין בני זוג, שנכרת לפני הנישואין. פעולות שרק נוטריון רשאי לבצע אחר); 11 (לאמת הסכם ממון בין בני זוג, שנכרת לפני הנישואין. פעולות שרק נוטריון רשאי לבצע אחר); <https://main.knesset.gov.il/>) English translation: Section 7 of the Notaries Law 1976-10 (1) 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 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..*”

6. PMR notary average score and sample homogeneity

The last PMR indicator concerns the analysis notarial sector in 28 OECD countries and presents a distribution of scores (indicated in the right frames of fig. 1) where Sweden, USA and Costa Rica emerge as anomalous values.

Using the approach of exploratory data analysis, we can assess the features and characteristics of the data with an “open mind” before applying the synthesis indicators.

In order to assess if the anomalous values can be considered “outliers”, we could apply the Tukey's fences method¹⁷ based on the interquartile range. An outlier to be any observation outside the following range:

$$\left\{ \begin{array}{ll} Q_1 - k(Q_3 - Q_1) & \text{lower fence} \\ Q_3 + k(Q_3 - Q_1) & \text{upper fence} \end{array} \right.$$

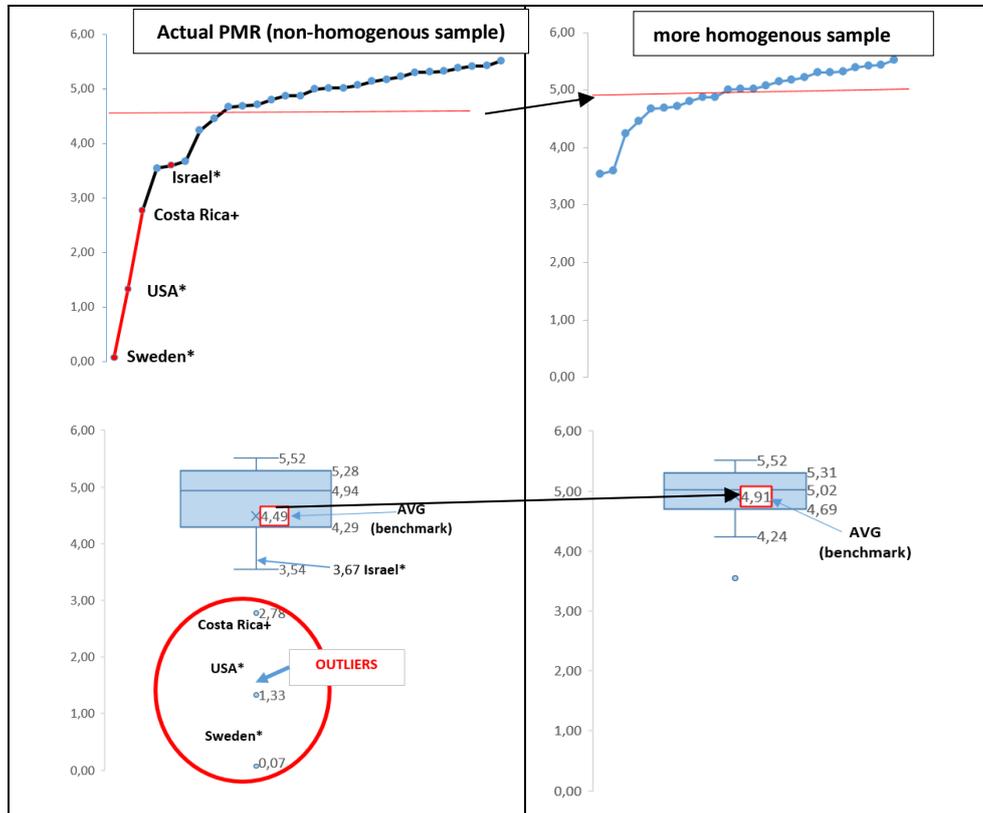
Where Q_1 and Q_3 are the lower and upper quartiles.

$$k > 0$$

$k = 1.5$ indicates an "outlier" while $k = 3$ indicates data that is "far out of the distribution"

¹⁷ Tukey, John W (1977). Exploratory Data Analysis. Addison-Wesley.

Fig. 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

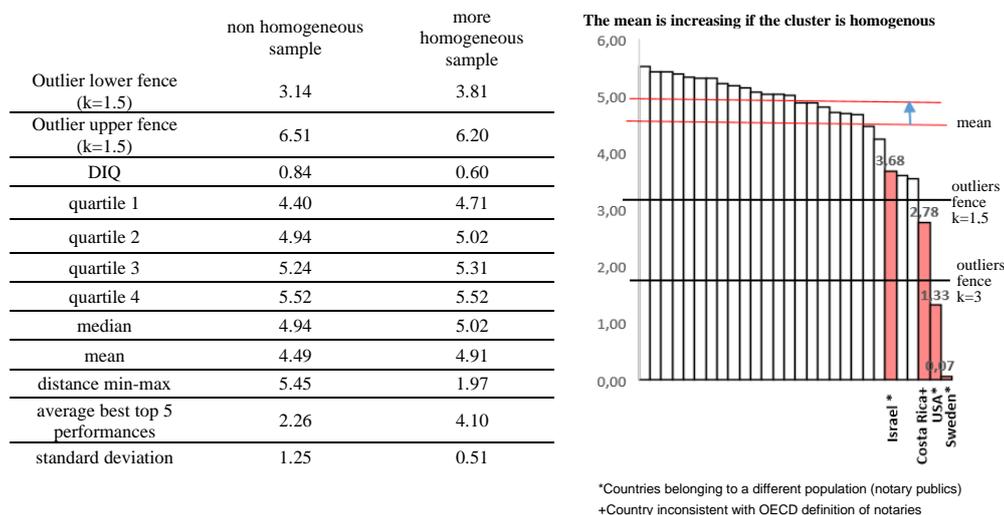
USA, Sweden and Costa Rica (falling under the lower fence 3.14 are clearly outliers of this distribution). Anyway, before considering methodologies relating to the treatment of outliers and the recomputation of average values, it is necessary a step back and to consider the homogeneity of the units contained in the distribution. Since Sweden, USA and Israel adopt a system of “notary public” (therefore belonging to a different statistical population), we could exclude them from the sample as well as Costa Rica that does not meet the OECD definition about the notarial profession. The homogenous cluster will produce higher PMR average score for the notarial sector and the reduction of the gap between minimum and maximum score (the gap will reduce from 5.5 to 1.9)

7. How to read the PMR regulatory score of civil law notaries

The OECD defines as benchmark of good performance the average PMR scores of the analysed sector. In order to push for reforms, comparisons are also made with the “best performance” (country with lower level of regulation) or the average of the 5 best performing OECD countries¹⁸.

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 Fig. 2)

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



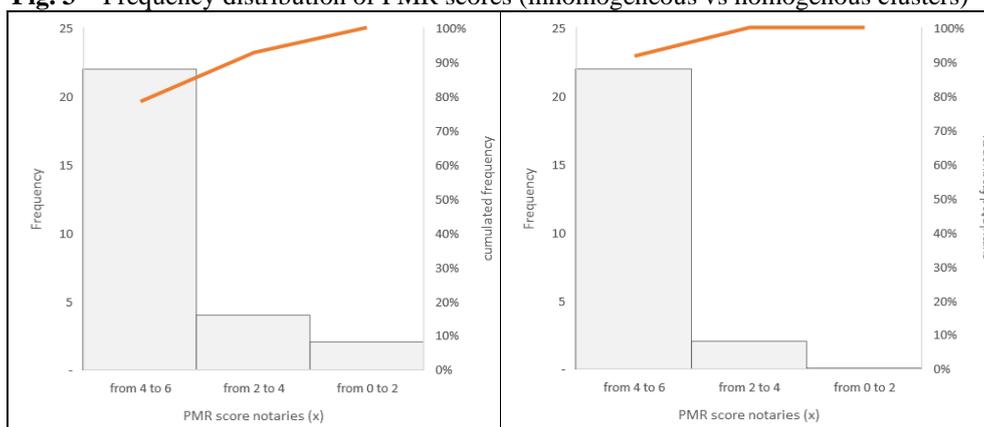
Source: elaboration on OECD countries - PMR indicator 2018

As we could see from the previous figures and analysis, in this case, a more appropriate index to measure the distribution would be the median rather than the arithmetic mean. Both median and mean are different kind of average that should be chosen according to the specific context that they aim to synthesize. In fact, if we consider the vector x with the entries of the PMR OECD country scores of the notarial sector, the mean considers all values of the distribution while the median

¹⁸ See tables “professional services” of the last edition (2018) OECD PMR: average of top 5 best performing OECD countries.

refers to the most central values. In the notarial cluster, the histogram of frequency distribution (fig. 3) clearly shows some outliers, in particular the ones with a value of 0.07 and 1.3 (see details in fig. 1 and 2), and therefore the median would be more appropriate than the mean in order to synthesize the distribution.

Fig. 3 – Frequency distribution of PMR scores (inhomogeneous vs homogenous clusters)



Considering the median instead of the mean, in our case, can make a big difference. In our vector x , the mean (4,49) is lower than its median (4.94) and, 0.45 points (difference between mean and median values) makes a big difference when the majority of the countries (78.5% of them) produce scores between 4.24 and 5.51 (because the median discards the value from 0 to 4 in the vector x , while the arithmetic mean considers it¹⁹). If we use the median value as assessment benchmark, 4.94 would be a clearer indication that the countries adopting notaries have to use higher level of regulation in order to comply with their State mandate as officers for the administration of the justice.

8. Further deepening on the inverse relation between notarial costs and regulations

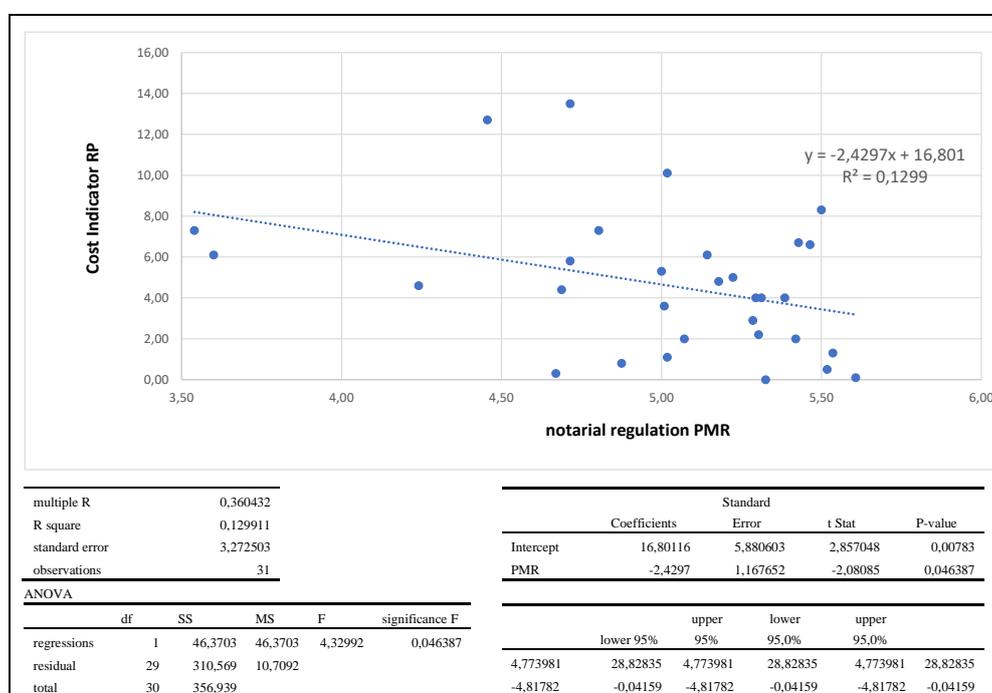
As observed in a previous paper on PMR OECD²⁰, the comparison between the level of the notarial regulation (as expressed by the PMR) with the Registering Property Indicators of World Bank, shows that: “low level of regulation” does not seem to be more correlated with better quality and lower costs, while a “higher level

¹⁹ In fact, while the arithmetic mean considers all the values in a vector, the median value only considers a subset of values. This is because the median discards all vector elements except for the most central value.

²⁰ CAPPIELLO, A. (2022), *OECD PMR indicators for professional services. Civil law notaries as ‘public good’: efficiency and legal protection need higher regulation*, Rivista Italiana di Economia, Demografia e Statistica, Volume LXXVII n. 3

of regulation” is more often associated with better performances in terms of quality, costs, and speediness of the procedures. Taking into consideration the more homogeneous cluster²¹ discussed in the previous paragraphs, we could be more precise in the analysis of the correlation (Cappiello 2021-22) between PMR (levels of notarial regulations) and cost of the Real Estate Transfer paid by the consumer (see fig. 4, fig. 5, tab. 1 and tab. 2).

Fig. 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

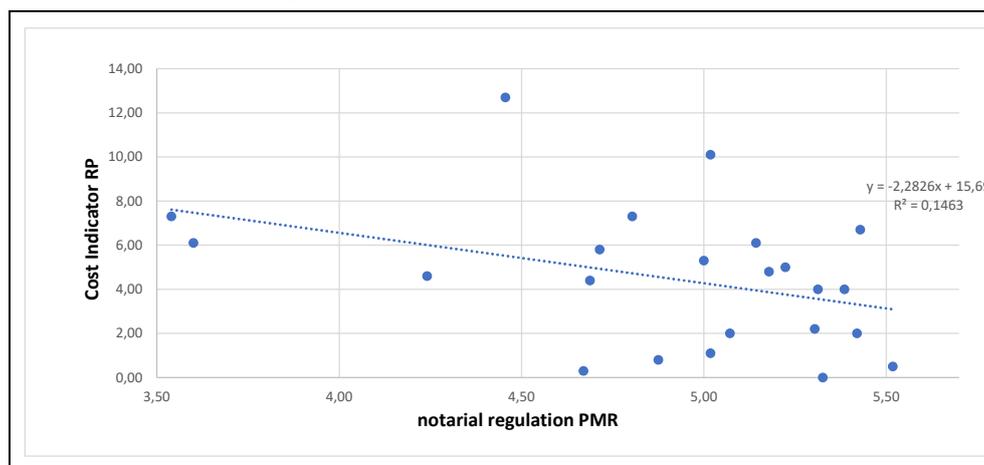
²¹ The regressions do not include the 3 countries adopting “notaries public” i.e. USA, SE, IL (because “notaries public” have different functions and are not normally involved in the RE transfers), Costa Rica (because of the inconsistencies with OECD definitions) and 2 civil law notary countries (KR and KZ) not usually adopting notaries in the Real Estate transfers. It includes, all the countries (analysed by PMR) adopting civil law notaries who are involved, according to the analysis of World Bank (doing business report 2018-2019), in the real estate transfers.

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

OECD and non OECD countries				OECD countries		
cluster	index	CO Cost RP	PMR notaries (level of regulation)	index	CO Cost RP	PMR notaries
Cluster 1 C1 countries where CO < 3	MEDIAN C1	1,10	5,30	MEDIAN C1	0,95	5,19
	AVERAGE C1	1,20	5,24	AVERAGE C1	1,11	5,15
	ST.D C1	0,92	0,28	ST.D C1	0,80	0,27
Cluster 2 C2 countries where 3 ≤ CO < 6,5	MEDIAN C2	4,70	5,08	MEDIAN C2	4,90	5,07
	AVERAGE C2	4,81	4,90	AVERAGE C2	5,01	4,85
	SD C2	0,83	0,50	SD C2	0,76	0,53
Cluster 3 C3 countries where CO ≥ 6,5	MEDIAN C3	7,80	4,91	MEDIAN C3	7,30	4,80
	AVERAGE C3	9,06	4,87	AVERAGE C3	8,82	4,65
	ST.D C3	2,56	0,62	ST.D C3	2,27	0,64

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

Fig. 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

If we divide in 3 subclusters (according to the Cost indicator) each of the two PMR score distributions (i.e. “distribution including OECD and non-OECD countries” and “distribution including only OECD countries”, see Tab.1) we can better notice, in each subcluster, an inverse correlation between AVG level of regulations PMR and AVG cost supported by the consumer for the real estate transfer. Therefore, we can make more reflexions about the “OECD PMR average” used as benchmark underscoring the need of reforms for countries having PMR value

above it and about the “PMR average of the lowest 5 scores” (which is considered as an inspiring “top best performances” for other countries). The analysis of the homogenous cluster of civil law notaries completely reverses the OECD PMR reasoning. The “PMR average of the top five best performing OECD countries” (countries with lowest notarial regulation) is now 4.10 and associated with an average cost of 6.20 (high cost), while the “average of the highest 5 scores” (5.42) is associated with an average cost of 2.64 (low cost). Inside this new context, being above the PMR average (4.91) would be considered an advantage (because it produces lower cost, efficiency and higher quality) rather than a signal for deregulation (see Tab 2).

Tab.2 - Inverse relation between Notarial PMR and RE consumer costs (OECD countries)

Indexes of the OECD PMR in the more homogeneous sample <i>(Empirical evidence: PMR correlation with RE consumer costs) *</i>	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) <i>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</i>
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 “*OECD PMR indicators for professional services. Civil law notaries as ‘public good: efficiency and legal protection need higher regulation*”, Rivista Italiana di Economia, Demografia e Statistica, Volume LXXVII n. 3. 2022)

9. Conclusions and final considerations

This article passes in review the PMR indicators on notary regulation. We can observe that the inhomogeneity of the cluster implies a large gap between minimum and maximum values. In fact, if we only consider “civil law notaries” we can come back to a more realistic distribution of the PMR scores. The civil law notaries are public officers who are integral part of the system of the administration of the justice and, since they can be considered a “public good”²², they need a high level of regulation which is empirically observed in adjusted cluster which considers 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 most vulnerable parties overcoming the information asymmetries²³. The analysis of the legislative framework of Sweden, USA, Costa Rica and Israel clearly shows the inconsistency of the PMR notarial cluster (Sweden, USA and Israel adopt “notaries public”) as well incompatibilities with the OECD definitions of the notarial profession (because of the precondition of a lawyer’s licence in Israel and Costa Rica)²⁴. Once sharpened the frontiers of the sample through an attentive exploration of the data (presence of significant outliers because of the inhomogeneity of the cluster), it becomes evident that the notarial profession, intended as civil law notaries, has a very homogenous distribution of higher “regulatory score” (even though it may persist some minor differences that depend on the particular features of their national legal framework). The higher level of regulation seems forcibly needed to carry out the notarial function according to the national features of the administration of the justice. The inverse relation between regulation and “cost” and the positive correlation between PMR score and quality²⁵ in conjunction with the EXCAS study²⁶ on the better performances of the civil law notaries countries compared to countries using different systems (World Bank indicators of the property transfers, core activities of the civil law notaries, are used to make a comparison among countries) seems to endorse the paternalistic need of the adoption

²² Market failure and public goods [see Stiglitz J., Rosengard J. (2015), *Economics of the Public Sector*. Norton. pp. 75-80). Kapstein E. (1999), *Distributive Justice as an International Public Good* in *Global Public Goods: International Cooperation in the 21st Century*, Inge Kaul (ed.) et al.]

²³ Cappiello, A. (2022). *OECD PMR indicators for professional services. Civil law notaries as public good: efficiency and legal protection need higher regulation*. RIEDS, *The Italian Journal of Economic, Demographic and Statistical Studies*, vol. 76(3), pages 179-190, July-Sept.

²⁴ The precondition of a lawyer’s license, even considering the actual PMR scheme and data, would also affect the notarial scores of these countries because it would impact on education and examination requirements as well as “conduct regulations” (as defined by PMR OECD methodology).

²⁵ *Supra* note 20

²⁶ Cappiello, A. (2020), *Doing Business Report and Real Estate Transfers: Far Better with Legal Controls and Notarial Guarantee*. Working Papers 20/079, EXCAS

of a civil law notary system. The empirical analysis on 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 “PMR average of the top five scores” (countries with lowest notarial regulation) is in fact associated with high average costs, while the “average of the 5 highest scores” (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 (see Tab 2).

References and further readings

- CECCARELLI C., ROSATI S. (2006) *Statistical Data Editing: Improving Quality*, Statistical Data Editing Impact - United Nations Publications
- CECCARELLI C., GIORGI G. M., GUANDALINI A. (2011). *Varianza dello stimatore calibrato in presenza di informazioni ausiliarie campionarie*, RIEDS
- CECCARELLI C, GIORGI G. M., GUANDALINI A. (2012) *Estimator with Sampling Constraints and Their Effects* . Working Paper, University of Rome La Sapienza
- CAPPIELLO, A. (2022), *OECD PMR indicators for professional services. Civil law notaries as 'public good': efficiency and legal protection need higher regulation*, Rivista Italiana di Economia, Demografia e Statistica, Volume LXXVII n. 3.
- CAPPIELLO, A. (2021), *OECD PMR indicators for professional services: are civil law notaries different?* Selected paper for the OECD workshop on regulatory barriers to competition in professional services, 18-19 November, Paris. Published on https://www.oecd.org/economy/reform/Cappiello_OECD_PMR_for_professional_services.pdf
- CAPPIELLO, A. (2020), *Doing Business Report and Real Estate Transfers: Far Better with Legal Controls and Notarial Guarantee*. Working Papers 20/079, EXCAS.
- CAPPIELLO A. (2014), *World Bank Doing Business Project and the Statistical Methods based on Ranks: the Paradox of the Time Indicator*, Rivista Italiana di Economia, Demografia e Statistica, Volume LXVIII n. 1.
- CAPPIELLO, A. (2010). *Legal Origins and Socio-economic Consequences: Can Legal Origins Really Explain the Main Differences in Economic and Juridical Performances?* Nordic Journal of International Law, Volume 79, Number 4.
- CAPPIELLO, A. (2008), *Estimating non-observed economy*, Journal of Economic and Social Measurement, IOS press, vol. 33 n.1, New York.
- KAPSTEIN E. (1999), *Distributive Justice as an International Public Good* in Global Public Goods: International Cooperation in the 21st Century, Inge Kaul (ed.) et al.
- OECD (2018), *Product Market Regulation Indicators*. Paris.
- RIDDELL M. - CAPPIELLO, A. (2008), *Does the rest of the world need the "Civil law notary model"?* Studi e Materiali Suppl. n. 1, 2008, IPSOA - Proceedings of the Conference "Public Administration and Information Technology"
- WORLD BANK (2018-2020), *Doing Business Report*. Washington D.C
- STIGLITZ J., ROSENGARD J. (2015), *Economics of the Public Sector*. Norton.
- TUKEY, J. W. (1977), *Exploratory Data Analysis*. Addison-Wesley

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 (Sweden, USA and Israel adopt “notaries public”) as well incompatibilities with the OECD definitions of the notarial profession (because of the precondition of a lawyer’s licence in Israel and Costa Rica). Once sharpened the frontiers of the sample, excluding units belonging to a different distribution, notaries (intended as civil law 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 (see Tab 2).

Antonio CAPPIELLO, Senior Economist CNN cnn.acappiello@notariato.it

Claudio CECCARELLI, Director, Italian National Institute of Statistics ISTAT clceccar@istat.it