

Do Market Rules Shape Quality of Life? A Capability-Based Test with Two Waves of OECD Product Market Regulation

Rodrigo Laera

rodrigolaera@gmail.com

Consejo Nacional de Investigaciones Científicas y Técnicas

Research Article

Keywords: Quality of life, Capability approach, Product market regulation, Gender inequality, Life evaluation, Null results

Posted Date: October 23rd, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-11460707/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Additional Declarations: No competing interests reported.

Abstract

The capability approach implies that institutions should be judged by what they enable people to do and be, and by whom. We apply this lens to product market regulation, treating it as a social conversion factor, and ask whether its two components, barriers to domestic and foreign entry and state involvement, relate differently to gender inequality and life evaluations. We combine the Organisation for Economic Co-operation and Development's economy-wide indicators for 2018 and 2023–24, which share one methodology, with United Nations Development Programme, World Happiness Report, and World Bank data for 54 economies, 50 of them observed in both waves. Cross-sectionally, less restrictive entry rules are weakly associated with lower gender inequality once human development is controlled ($b = -0.051$, $p = .109$), and the hypothesis that both components carry equal weight, as the aggregate indicator assumes, is not rejected ($p = .343$). Within countries, changes in entry barriers between 2018 and 2023 are unrelated to changes in gender inequality or in women's relative labor force participation. Reductions in entry barriers coincide with gains in national life evaluation (0.10 ladder points per standard deviation, $p = .018$), but the association halves and loses significance once initial life evaluation is controlled, consistent with convergence among middle-income economies. A conceptually appealing distinction between the composition and the level of regulation thus finds little empirical support. We discuss what this implies for capability-based evaluations of market institutions and for quality-of-life research on regulation.

1. Introduction

What makes institutions good for people's quality of life? Quality-of-life research has established that the quality of government is closely associated with how people evaluate their lives (Helliwell & Huang, 2008; Ott, 2010). Much less is known about how specific institutional domains relate to *who* is able to live well. Product market regulation is one such domain. It comprises the rules governing firm entry, administrative procedures, trade, and the involvement of the state in markets. These rules shape whether people, and women in particular, can turn a formal right to start a business or take up paid work into an actual opportunity. The capability approach, which conceives of quality of life as the real freedoms people have to achieve valued functionings (Nussbaum & Sen, 1993), offers a natural framework for this question.

The capability approach has a distributive implication. It looks beyond aggregate indicators such as GDP per capita or average human development to the capability sets available to individuals, especially those who face structural barriers in converting resources into functionings. A regulatory environment with heavy administrative and entry requirements is expected to concentrate compliance costs on those least able to bear them (Heinrich, 2016; Herd & Moynihan, 2018). Theory points to small entrepreneurs and women, and plausibly also to migrants and workers seeking to leave informal employment. The capability approach has been applied extensively to education, health, and political participation (Chiappero-Martinetti et al., 2020), but rarely to product market regulation (PMR). Research on PMR has

focused instead on productivity, resource allocation, and entrepreneurship (Andrews & Cingano, 2014; Bjørnskov & Foss, 2008; Égert, 2016).

This article tests a hypothesis that follows naturally from the capability approach: that the *composition* of regulation, and in particular the barriers individuals face when entering economic activity, matters for distribution-sensitive quality-of-life outcomes beyond the aggregate *level* of regulation. We make three contributions. First, we develop the argument that product market regulation acts as a social conversion factor and connect it to quality-of-life research on institutions and well-being. Second, we exploit the indicator structure of the OECD PMR database, which splits regulation into barriers to domestic and foreign entry and state involvement, and the fact that its 2018 and 2023–24 waves share one methodology. This allows a direct test of whether the two components carry equal weight and a within-country analysis of change. Third, we examine several quality-of-life outcomes: the Gender Inequality Index (GII), women’s relative labor force participation, national life evaluations, and the gender gap in life satisfaction.

The results are largely null. Neither the cross-section nor within-country change supports the claim that entry barriers matter for gender inequality more than state involvement does. The one association that survives most robustness checks, between reductions in entry barriers and gains in life evaluation, is substantially attenuated once convergence in life evaluations is taken into account. We report these results in full, with pre-specified tests and multiplicity adjustments, because a well-identified null finding on a theoretically motivated hypothesis is informative for both capability theory and regulatory policy, and because quality-of-life research benefits from knowing which plausible institutional channels do not show up in the data.

2. Theoretical Framework

2.1 The Capability Approach: A Distribution-Sensitive Framework

The capability approach emerged from dissatisfaction with utilitarian welfare metrics and resource-based theories of justice as grounds for evaluating individual advantage (Sen, 1980, 1999). Its central insight is that identical bundles of resources can yield very different opportunities depending on personal characteristics, social norms, and institutional arrangements. Robeyns (2005, 2017) systematizes this insight by distinguishing resources, conversion factors (personal, social, and environmental), and capabilities. Conversion factors govern how far resources become capabilities, the real opportunities from which people choose functionings. On this view, institutions should be judged not by their formal design alone but by their actual effects on people’s substantive freedom to pursue valued ways of living (Sen, 2009).¹

Any capability evaluation must also make explicit choices about which capabilities to assess and how to evaluate their distribution; the core of the approach leaves both open (Robeyns, 2017). We adopt a

distribution-sensitive evaluation. Aggregate outcomes can conceal large inequalities in genuine opportunities across individuals and social groups, a concern that has motivated multidimensional measures of heterogeneous deprivation (Alkire, 2002; Alkire & Foster, 2011). This article extends that distributive logic to product market regulation by asking whether its components relate differently to distribution-sensitive outcomes.

2.2 Nussbaum's Tenth Capability and the Gender Dimension

Within the capability approach, economic participation matters for agency and social standing, not only for income. On Nussbaum's list of central human capabilities, the tenth, *control over one's environment*, has a material component. That component includes being able to hold property and to seek employment on an equal basis with others, and, in work, being able to work as a human being who exercises practical reason (Nussbaum, 2000, 2011). The list does not mention founding enterprises or entering markets; reading these into the material component is our interpretation. Nussbaum's distinction between internal and combined capabilities shows why institutions matter here. A combined capability exists only when a person's own powers are matched by social, political, and economic conditions in which they can be used (Nussbaum, 2000, 2011). A person may therefore have the formal right to start a business or enter a profession and still have no realistic opportunity to do either.

From this perspective, regulation is one of the conditions that turn formal rights into combined capabilities. Administrative procedures, licensing requirements, and entry barriers affect not only efficiency but also how far individuals can exercise economic agency. Burdens that require informational, financial, or temporal resources make participation less accessible in practice, and they bear hardest on those with the fewest resources to absorb them (Herd & Moynihan, 2018). The argument becomes stronger if capabilities are understood in terms of agency. On Claassen's account, freedom consists in being able to navigate among social practices and life projects, and the regulatory framework helps determine whether economic practices are actually open to entry or open only in name (Claassen, 2017a, 2018).

These effects are unlikely to be evenly distributed. Robeyns (2003) argues that a capability assessment of gender inequality must select its dimensions explicitly; her list includes paid work and other projects, domestic work and non-market care, and time-autonomy. When care responsibilities absorb the time and resources needed to comply with regulation, converting a formal right of market entry into paid work or an enterprise costs women more. Kabeer's (1999) account of empowerment as the ability to make strategic life choices through resources, agency, and achievements locates the mechanism: regulatory burdens raise the resource threshold at which agency can be exercised. Agarwal (1997) links women's bargaining power within the household to their position in markets, community, and state. Nussbaum's (2000) insistence on assessing each person's capabilities, not those of the household, is the reason we use a gender-disaggregated outcome.²

2.3 Regulation as a Social Conversion Factor

We hypothesize that the capability consequences of regulation depend on its composition, not only on its aggregate level. Conventional measures of regulatory restrictiveness implicitly assume that a given level of regulation has broadly similar effects whatever its internal composition. From a capability perspective this assumption is problematic, because individuals do not encounter regulation as an undifferentiated aggregate. They face specific rules, procedures, and administrative requirements, each of which shapes their opportunities differently.³

Some regulatory costs are absorbed broadly across the economy, whereas others fall disproportionately on actors with fewer resources and less capacity to comply. Business registration, licensing, and other dealings with public authorities demand time, information, money, and bureaucratic expertise. On theoretical grounds, these conversion costs can be expected to be higher for resource-constrained entrepreneurs and for women balancing unpaid care responsibilities, the group examined empirically below (Klapper & Parker, 2011). By the same logic they may be higher for migrants and for workers moving into formal economic activity, although the present data do not allow these groups to be examined.

The claim that regulation can act as a negative conversion factor is not a claim that regulation as such reduces capabilities. Much regulation exists precisely to secure capabilities: licensing of childcare providers and health professionals, occupational safety rules, and consumer protection standards protect bodily health, bodily integrity, and the ability to transact without fraud. Capability theorists have therefore argued that markets should be regulated to the extent needed to secure basic capabilities (Claassen, 2017b). The relevant distinction is between protective content and *conversion friction*: procedural requirements whose costs in time, information, and money exceed what their protective purpose needs, and entry restrictions that mainly shield incumbents. The occupational licensing literature describes this tension: licensing may raise service quality, but it also restricts entry and raises prices and wages in licensed occupations (Kleiner, 2000; Kleiner & Krueger, 2013). The OECD Recommendation on Regulatory Policy and Governance draws the same line in policy terms, asking governments to keep the protection that regulation delivers while reducing its administrative and compliance costs (OECD, 2012). The PMR indicators used below record procedural and entry requirements rather than protective standards, so a less restrictive score does not imply less protection. They are not designed, however, to separate protective from purely restrictive content within a given requirement, so this distinction remains conceptual here.

The aggregate PMR indicator averages two high-level components: *barriers to domestic and foreign entry* and *distortions induced by state involvement* (OECD, 2023; Vitale et al., 2020). Our conversion-factor argument applies most directly to the entry component, because its rules act where individuals try to start or formalize economic activity. That is where differences in resources, information, and time most directly become differences in conversion costs. State involvement (public ownership, involvement in business operations, and regulatory impact evaluation) acts mainly on the conduct of incumbent and state-owned firms. We therefore expect, but do not assume, that state involvement is less closely associated with gender inequality. It could matter through female-intensive public and state-owned

employment, or through conduct regulation in service sectors where women's enterprises are concentrated. Rather than excluding state involvement, we estimate both components together and test whether they carry equal weight, which is the restriction implicit in the aggregate indicator.

2.4 Empirical Evidence on Regulation and Gendered Economic Participation

The claim that regulation works as a gendered conversion factor builds on two empirical literatures that have rarely been brought together. The first documents the costs of entry regulation that applies to everyone. Djankov et al. (2002) collected the procedures, time, and official costs of starting a business in 85 countries and found that heavier entry regulation goes with more corruption and larger unofficial economies, not with better public or private goods. Using European firm-level data, Klapper et al. (2006) showed that costly entry regulation reduces new firm creation, especially in industries that would naturally have high entry. Neither study separates its results by gender, but both identify the margins (formal entry, firm size, informality) where gender gaps appear.

The second literature measures gender-differentiated legal barriers directly. Drawing on five decades of *Women, Business and the Law* data, Hyland et al. (2020) show that more equal laws are associated with higher female labor force participation and a smaller gender wage gap. With firm-level data, Islam et al. (2019) find that unequal laws are associated with lower female participation in the private-sector workforce and a lower likelihood that women own or manage firms. Reviewing the evidence on gender and new firm creation, Klapper and Parker (2011) conclude that the entrepreneurship gap does *not* stem mainly from explicitly discriminatory rules; part of it reflects business-environment features that weigh more heavily on women's decisions to run formal businesses, notably financing constraints and weaker collateral. In OECD panel data, Égert and Gal (2017) report that stricter sectoral product market regulation is associated with lower employment rates among prime-age women, although they caution that their estimates for this group are larger than those in the literature.

Research on administrative burden supplies a micro-foundation for why gender-neutral rules can have gendered effects. Moynihan et al. (2015) and Herd and Moynihan (2018) decompose burdens into learning, psychological, and compliance costs, and Heinrich (2016) shows that such burdens fall hardest on those with the fewest resources. The present article asks whether formally gender-neutral product market regulation, which legal indices of gender discrimination do not capture, is associated with gender-differentiated outcomes.

2.5 Capabilities, Institutions, and Quality of Life

The capability approach entered quality-of-life research as an answer to a measurement question: in what space should a person's life going well be assessed? Nussbaum and Sen (1993) argued that neither income nor reported utility is sufficient, and that quality of life is better assessed by the functionings people achieve and the capabilities they have to achieve them. This framing makes

institutions part of what is evaluated, because they shape the conversion of resources into valued functionings.

A substantial literature links institutional quality to subjective well-being. Helliwell and Huang (2008) found that good government, including regulatory quality, is strongly associated with national life satisfaction, especially in poorer countries. Ott (2010) reported that technical governance quality correlates more strongly with happiness than democratic quality and that the quality of government matters more than its size, which suggests that the composition of state action is relevant for well-being. Bjørnskov et al. (2010) showed that economic-judicial institutions dominate political institutions in explaining life satisfaction in broad samples. Graafland (2020) found that economic freedom, which includes regulatory components, is positively related to most dimensions of the OECD Better Life Index. Studies in this journal link confidence in national institutions to higher life satisfaction (Macchia & Plagnol, 2019; Li et al., 2025).

This literature rarely asks *for whom* institutions improve quality of life. Higher national gender equality is associated with higher life satisfaction (Audette et al., 2019), yet gender gaps in subjective well-being are complex (Blanchflower & Bryson, 2024; Stevenson & Wolfers, 2009). Dluhosch (2021) found that exposure to globalization affects women's and men's well-being differently and attributed the gap mainly to national policies, institutions, and norms. We combine these strands: capabilities as the evaluative space, the expectation that *which* rules a state imposes matters for quality of life, and the expectation that the same institutions can affect women and men differently. We treat gender inequality as an objective, distributional quality-of-life outcome and complement it with subjective life evaluations (Section 4.2).

3. Research Design

3.1 Measuring the Composition of Product Market Regulation

We use the OECD economy-wide PMR indicators for 2023–24 and 2018 (OECD, 2024a), which continue a series compiled since 1998 (Conway & Nicoletti, 2006; Koske et al., 2015; Wölfl et al., 2009). The economy-wide PMR indicator is the simple average of two high-level indicators, *distortions induced by state involvement* (SI) and *barriers to domestic and foreign entry* (BDFE). Each high-level indicator is the simple average of three medium-level indicators, so each medium-level indicator carries a weight of 1/6 (OECD, 2023; Vitale et al., 2020). All indicators range from 0 to 6, with lower values denoting more competition-friendly regulation. BDFE comprises *administrative and regulatory burden* (ARB), which covers administrative requirements for new firms and the communication and simplification of rules, including licenses and permits; *barriers in service and network sectors* (BSN); and *barriers to trade and investment* (BTI), which covers barriers to foreign direct investment, trade facilitation, and tariffs. SI comprises public ownership, involvement in business operations, and regulatory impact evaluation. The

OECD has recalculated the 2018 values under the methodology introduced in 2023, so the two waves are directly comparable.

We express the entry component on a capability-oriented scale, the Regulatory Capability Index (RCI), in which higher values indicate entry rules more conducive to the exercise of capabilities:

$$RCI_i = \frac{(6 - ARB_i) + (6 - BSN_i) + (6 - BTI_i)}{3} = 6 - BDFE_i \quad (1)$$

The RCI uses only the three non-overlapping components of the entry block and is therefore fully replicable from OECD data. The aggregate indicator can be written exactly as

$$PMR_i = 1/2 (6 - RCI_i) + 1/2 SI_i \quad (2)$$

Both identities hold in our data up to rounding (maximum absolute deviation below 10^{-6}). Eq. 2 shows that comparing the RCI with aggregate PMR amounts to asking whether state involvement belongs in a distribution-sensitive assessment of regulation with the same weight as entry barriers. We test this question directly.

3.2 Hypotheses

H1 (Non-redundancy; descriptive). Aggregate PMR does not determine its composition: there are country pairs whose PMR scores differ by at most 0.10 points but whose RCI scores differ by at least half the sample interquartile range. H1 is a precondition for the remaining hypotheses, not evidence for them.

H2 (Entry component versus state involvement). Conditional on human development, the entry component is more strongly associated with gender inequality than state involvement. Because the RCI is inverted, the restriction implied by aggregate PMR is $b_{RCI} = -b_{SI}$, which we test with an HC3 Wald test in $GII \sim RCI + SI + HDI$. As an auxiliary test, we assess whether the SI coefficient is negligible with a two one-sided equivalence test, using as bound a change of 0.1 standard deviations of GII per standard deviation of SI (Lakens, 2017).

H3 (Differential incidence within the entry component). Conditional on SI and human development, the components that bear most directly on individual entry (ARB and BSN) are more strongly associated with gender inequality than BTI . We test equality of the three coefficients and the one-sided contrast $\frac{1}{2}(b_{ARB} + b_{BSN}) - b_{BTI}$.

H4 (Within-country change). Between 2018 and 2023, economies that reduced entry barriers (a rising RCI) experienced larger reductions in gender inequality, larger gains in women's relative labor force participation, and larger gains in life evaluation than economies that did not, holding changes in state involvement, income, and legal gender equality constant.

H2 and the three outcomes of H4 form the primary family of tests, to which we apply the Holm correction. Throughout, the fact that one coefficient is statistically significant and another is not is not treated as evidence of a difference (Gelman & Stern, 2006).

3.3 Model Specifications

The main cross-sectional specifications are

$$GII_i = \alpha + \beta_1 RCI_i + \beta_2 SI_i + \beta_3 HDI_i + \epsilon_i \quad (3)$$

$$GII_i = \alpha + \beta_1 ARB_i + \beta_2 BSN_i + \beta_3 BTI_i + \beta_4 SI_i + \beta_5 HDI_i + \epsilon_i \quad (4)$$

For comparison we also report $GII \sim PMR + HDI$, which is Eq. 3 under the restriction $\beta_1 = -\beta_2$, and $GII \sim RCI + HDI$. The within-country analysis estimates first differences between 2018 and 2023:

$$\Delta Y_i = \alpha + \beta_1 \Delta RCI_i + \beta_2 \Delta SI_i + \beta_3 \Delta \ln GDP_{pc_i} + \beta_4 \Delta WBL_i + \epsilon_i \quad (5)$$

where Y is GII , the female-to-male labor force participation ratio, or life evaluation, and WBL is the World Bank's index of legal gender equality. First differencing removes all time-invariant country characteristics, such as legal origin, culture, and geography. Because economies with low initial values may improve faster, we also add the initial level of each outcome.

All models are estimated by ordinary least squares with HC3 heteroscedasticity-consistent standard errors (Long & Ervin, 2000), with p values and confidence intervals from the t distribution. Wald tests are complemented by wild-bootstrap p values with Rademacher weights imposed under the null (Davidson & Flachaire, 2008). Non-nested comparisons of the RCI and PMR models use Davidson–MacKinnon J tests (Davidson & MacKinnon, 1981), the Vuong (1989) test, and pairs-bootstrap confidence intervals for differences in standardized coefficients and explained variance.

Controlling for the Human Development Index (HDI) is conservative but potentially problematic: if less restrictive regulation raises incomes, schooling, or health, HDI lies partly on the path from regulation to gender inequality, and HDI and GII share an education dimension. HDI is therefore a candidate “bad control” (Angrist & Pischke, 2009). We re-estimate the key models with log GDP per capita in place of HDI and without any development control. Further robustness checks address influential observations (Cook's distance, leave-one-out estimates, a Huber M-estimator), omitted common causes (European Union membership, region fixed effects, legal gender equality), heterogeneity (OECD members only), timing (the 2018 wave as a lagged regressor), sensitivity to the weights of the entry index (a specification curve over all weight vectors on a 0.1 grid of the unit simplex, crossed with four control sets; Simonsohn et al., 2020), and unobserved selection (Oster, 2019). Replication data and code are available (see Data Availability).

4. Data and Measurement

4.1 Sources and Sample

The 2023–24 wave covers 55 economies: 45 compiled by the OECD, 9 by the OECD and the World Bank Group, and 1 by the OECD and the Asian Development Bank. Regulations refer to 1 January 2023 for 38 economies, 1 January 2024 for 13, and 1 January 2025 for 4 (OECD, 2024a). We merged these data with the HDI and GII for 2023 (UNDP, 2025a, 2025b) using ISO 3166-1 alpha-3 codes. One economy is excluded because UNDP does not publish its indicators, leaving an analytical sample of $N = 54$ (38 OECD members, 27 European Union members). The 2018 wave is available for 50 of them; Armenia, Kenya, Morocco, and Thailand were not covered in 2018. Supplementary Table S1 lists every economy with its data source and reference year.

4.2 Outcomes and Controls

The primary outcome is the GII (UNDP, 2025b), which combines reproductive health, empowerment, and labor-market participation; higher values indicate greater inequality. Because two of its five indicators (maternal mortality and adolescent births) are distant from any plausible regulatory channel, we also use its labor-market component, the female-to-male labor force participation ratio (UNDP, 2025b). These participation figures are modeled estimates from the International Labour Organization.

Two subjective outcomes connect regulation directly with quality of life. National life evaluation is the country mean of the Cantril ladder (0–10) from the Gallup World Poll, averaged over 2022–2024 and, for the panel, over 2017–2019 (Helliwell et al., 2025). The gender gap in life satisfaction (women minus men, 0–10 scale) comes from the OECD Well-being Database underlying *How's Life?* (OECD, 2024b), averaged over 2021–2024. It is available for 35 economies, mostly in Europe. Because women and men may use response scales differently (Montgomery, 2022), we interpret this gap as a relative indicator.

Controls are the HDI (UNDP, 2025a), log GDP per capita in purchasing power parity terms (World Bank, 2025), the *Women, Business and the Law* index of legal gender equality (World Bank, 2024b),⁴ European Union membership, and region (Europe, the Americas and Oceania, Asia, and Africa).

4.3 Descriptive Statistics

Table 1 reports descriptive statistics. Entry barriers and state involvement are strongly correlated ($r(\text{RCI}, \text{SI}) = -.835$), and both correlate strongly with GII before controls. Between 2018 and 2023, 47 of the 50 economies reduced their entry barriers (mean $\Delta\text{RCI} = 0.20$, $SD = 0.19$) and most reduced state involvement (mean $\Delta\text{SI} = -0.21$, $SD = 0.24$). GII fell on average by 0.028 points. Changes in the two components are negatively correlated ($r = -.547$), so reforms tended to move both in the liberalizing direction. The full correlation matrix is reported in Supplementary Table S2.

Table 1
Descriptive statistics

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max	<i>r</i> with GII
PMR (0–6)	54	1.56	0.54	0.81	2.92	.77
RCI (= 6 – BDFE)	54	4.48	0.51	2.94	5.23	–.77
SI (0–6)	54	1.60	0.62	0.82	3.36	.71
ARB (0–6)	54	1.93	0.71	0.76	3.46	.44
BSN (0–6)	54	1.81	0.55	0.83	3.32	.64
BTI (0–6)	54	0.82	0.68	0.17	3.04	.75
HDI	54	0.883	0.076	0.628	0.972	–.91
Log GDP per capita	54	10.58	0.62	8.65	11.78	–.86
WBL index (0–100)	54	92.0	7.8	70.6	100.0	–.63
GI	54	0.144	0.134	0.003	0.526	–
Female/male LFPR ratio	54	0.80	0.11	0.28	0.98	–.56
Life evaluation, 2022–24	54	6.43	0.70	4.51	7.74	–.67
Life satisfaction gap (F – M)	35	–0.02	0.09	–0.18	0.19	–.25
ΔRCI, 2018–2023	50	0.20	0.19	–0.03	0.87	–
ΔSI, 2018–2023	50	–0.21	0.24	–1.10	0.10	–
ΔLife evaluation	50	0.05	0.32	–0.62	0.80	–
<p>Note. PMR, BDFE, SI, ARB, BSN, and BTI: higher = more restrictive; RCI: higher = less restrictive entry rules. GI, HDI, and LFPR refer to 2023. Sources: OECD (2024a, 2024b); UNDP (2025a, 2025b); Helliwell et al. (2025); World Bank (2024b, 2025).</p>						

5. Results

5.1 The Composition of Regulation (H1)

H1 receives only partial support. PMR leaves 9.9% of the variance of the RCI unexplained. Thirty country pairs have PMR scores within 0.10 points of each other and RCI scores differing by at least half the interquartile range (0.29 points), for example Greece and Australia or Portugal and Iceland. By construction, these pairs offset a difference in entry barriers with an opposite difference in state involvement. In 16 of the 30 pairs, the country with the higher RCI also has the lower HDI-adjusted GI, close to the half expected by chance.

5.2 Entry Barriers versus State Involvement (H2)

Table 2 reports the cross-sectional models. Entered alone with HDI, the RCI is associated with lower GII (Model 2: $b = -0.045$, $p = .043$). Once state involvement is included (Model 3), the RCI coefficient is slightly larger but less precise ($b = -0.051$, 95% CI $[-0.115, 0.012]$, $p = .109$), and SI is close to zero ($b = -0.008$, $p = .827$). The test of equal magnitudes, which is the restriction implied by aggregate PMR, does not reject ($F(1, 50) = 0.92$, $p = .343$; wild-bootstrap $p = .371$). The equivalence test cannot establish that the SI coefficient is negligible ($p = .346$), so the data are uninformative about the relative weight of the two components rather than evidence that they are equal.

The non-nested comparisons point the same way. Neither the RCI model nor the PMR model is rejected against the other (J tests: $p = .827$ and $p = .343$), the Vuong test does not discriminate between them ($z = 0.76$, $p = .448$), and the bootstrap difference in standardized coefficients is 0.02 (95% CI $[-0.09, 0.14]$). A move from the 25th to the 75th percentile of the RCI (0.58 points) corresponds to a 0.030-point lower GII (95% CI $[-0.067, 0.007]$), 22% of the cross-country standard deviation. For aggregate human development, the RCI and SI are both associated with HDI in the expected directions (Model 5), and their magnitudes cannot be distinguished either ($p = .516$). H2 is not supported.

Table 2
OLS regressions of gender inequality and human development on PMR components ($N = 54$)

PMR	(1) GII	(2) GII	(3) GII	(4) GII	(5) HDI
	0.035 (0.029)				
RCI		-0.045* (0.022)	-0.051 (0.032)		0.075* (0.031)
SI			-0.008 (0.035)	-0.005 (0.037)	-0.040 (0.024)
ARB				0.020 (0.017)	
BSN				-0.002 (0.021)	
BTI				0.026 (0.025)	
HDI	-1.402*** (0.200)	-1.363*** (0.178)	-1.378*** (0.199)	-1.389*** (0.247)	
Constant	1.327*** (0.217)	1.551*** (0.098)	1.604*** (0.247)	1.322*** (0.252)	0.613** (0.175)
R^2	.835	.840	.840	.843	.622
Equality test, p			.343	.623	.516

Note. Unstandardized coefficients with HC3 standard errors in parentheses; p values from the t distribution. Equality tests: $b_{RCI} = -b_{SI}$ in Models 3 and 5; $b_{ARB} = b_{BSN} = b_{BTI}$ in Model 4. Model 1 is Model 3 under the restriction $b_{RCI} = -b_{SI}$. * $p < .05$. ** $p < .01$. *** $p < .001$.

5.3 Differential Incidence within the Entry Component (H3)

Within the entry component, the three coefficients are small and cannot be distinguished (Model 4: $F(2, 48) = 0.48, p = .623$; wild-bootstrap $p = .591$). The directional contrast $\frac{1}{2}(b_{ARB} + b_{BSN}) - b_{BTI}$ equals -0.017 (95% CI $[-0.080, 0.047]$), with a sign opposite to the one predicted. Collinearity is moderate (all variance inflation factors below 3.7), so the null result does not simply reflect an inability to separate the components. H3 is not supported.

5.4 Within-Country Change, 2018–2023 (H4)

Table 3 reports the first-difference models. Changes in entry barriers are unrelated to changes in gender inequality ($b = -0.027$, 95% CI $[-0.076, 0.022]$, $p = .272$) and to changes in the female-to-male participation ratio ($b = 0.016$, $p = .483$), and adding the initial outcome level does not change this. The exception is life evaluation. Economies that reduced entry barriers more also saw larger gains in life evaluation ($b = 0.54$, 95% CI $[0.10, 0.98]$, $p = .018$), about 0.10 ladder points per standard deviation of ΔRCI , or a third of the standard deviation of Δ Life evaluation.

This association is robust to several checks: adding EU membership ($p = .015$) or region fixed effects ($p = .033$), excluding the three observations with high Cook's distance ($p = .007$), a Huber M-estimator ($p = .040$), a permutation test ($p = .017$), and a wild bootstrap ($p = .028$). It remains significant in 48 of the 50 leave-one-out samples. It does not survive two other checks. First, it depends on the non-European economies: among OECD members the coefficient is similar but imprecise ($b = 0.44$, $p = .341$), and among European economies it reverses sign ($b = -0.16$, $p = .707$). Second, life evaluations converged strongly over the period: economies starting lower improved more ($b = -0.29$ per ladder point, $p < .001$). Controlling for initial life evaluation halves the coefficient and removes its significance ($b = 0.27$, $p = .163$; Fig. 1). The decline in aggregate PMR shows the same pattern (from $b = -0.66$, $p = .001$, to $b = -0.24$, $p = .159$), so the association is not specific to the entry component. After the Holm correction across the four primary tests, the adjusted p value for the life-evaluation association is .071, and the remaining primary tests have adjusted p values of .817. H4 is not supported for gender inequality or labor force participation and receives only fragile support for life evaluation.

Table 3
First-difference regressions, 2018–2023 ($N = 50$)

ΔRCI	ΔGII	ΔGII	$\Delta LFPR$ ratio	$\Delta LFPR$ ratio	$\Delta Life$ eval.	$\Delta Life$ eval.
	-0.027 (0.024)	-0.031 (0.025)	0.016 (0.023)	0.003 (0.027)	0.538* (0.219)	0.267 (0.188)
ΔSI	-0.004 (0.014)	-0.001 (0.016)	0.021 (0.015)	0.016 (0.021)	-0.191 (0.179)	-0.021 (0.149)
Initial level of outcome		0.021 (0.023)		-0.064 (0.033)		-0.249*** (0.044)
Controls ($\Delta \log$ GDP pc, ΔWBL)	Yes	Yes	Yes	Yes	Yes	Yes
R^2	.058	.069	.099	.164	.260	.511
Equality test, p	.390	.400	.268	.662	.328	.409
<p>Note. HC3 standard errors in parentheses; p values from the t distribution. Equality test: $b_{\Delta RCI} = -b_{\Delta SI}$. Life evaluation: 2022–24 minus 2017–19 averages. * $p < .05$. ** $p < .01$. *** $p < .001$.</p>						

5.5 Further Quality-of-Life Outcomes and Robustness

The remaining cross-sectional quality-of-life outcomes, controlling for log GDP per capita and legal gender equality, do not support the composition hypothesis either (Table 4). Neither component is associated with national life evaluation (RCI: $p = .682$; SI: $p = .105$) or with the gender gap in life satisfaction ($N = 35$; RCI: $p = .997$; SI: $p = .441$). For the female-to-male participation ratio, both components have negative coefficients (RCI: $b = -0.119$, $p = .056$; SI: $b = -0.138$, $p = .029$). The SI sign is consistent with less state involvement going with more equal participation, but the RCI sign is opposite to the hypothesized one. Legal gender equality, by contrast, is associated with a higher participation ratio ($p = .024$).

Table 4
Robustness of the RCI and SI coefficients and further quality-of-life outcomes

Outcome and specification	<i>b</i> RCI (SE)	<i>b</i> SI (SE)	Equality <i>p</i>	<i>N</i>
GII				
Baseline (Table 2, Model 3)	−0.051 (0.032)	−0.008 (0.035)	.343	54
No development control	−0.154** (0.054)	0.048 (0.053)	.317	54
Log GDP per capita instead of HDI	−0.066 (0.035)	0.021 (0.037)	.520	54
Log GDP per capita + WBL	−0.065 (0.037)	0.020 (0.037)	.518	54
HDI + EU membership	−0.046 (0.038)	−0.008 (0.035)	.416	54
HDI + region fixed effects	−0.036 (0.028)	−0.007 (0.031)	.431	54
OECD members only	−0.011 (0.032)	0.024 (0.030)	.827	38
Excluding high Cook's distance	−0.035 (0.024)	0.023 (0.022)	.780	50
Huber M-estimator	−0.035 (0.026)	0.004 (0.020)	—	54
PMR 2018 wave (lagged)	−0.034 (0.039)	0.002 (0.049)	.706	50
Other outcomes (log GDP pc + WBL)				
Female/male LFPR ratio	−0.119 (0.061)	−0.138* (0.061)	.031	54
Life evaluation, 2022–24	−0.115 (0.279)	−0.360 (0.218)	.311	54
Life satisfaction gap (F – M)	0.000 (0.103)	−0.055 (0.070)	.727	35
<i>Note.</i> HC3 standard errors in parentheses. For GII and the life satisfaction gap, a negative coefficient indicates less inequality; for the LFPR ratio and life evaluation, a positive coefficient indicates better outcomes. * $p < .05$. ** $p < .01$.				

The GII results are fragile in the same way. Without any development control, the RCI is strongly associated with GII ($b = -0.154$, $p = .007$), but every specification that controls for development, income, region, or EU membership yields a smaller and nonsignificant coefficient. Leave-one-out estimates range from -0.064 to -0.033 and are significant in only 1 of 54 samples. In the specification curve, 98% of the 264 standardized estimates are negative, but only 2.7% reach $p < .05$ (median $\beta = -0.12$; Supplementary Figure S1). The Oster (2019) δ for the RCI is 0.53, so unobserved selection half as strong as selection on observables would be enough to explain the remaining association. The relationship between entry barriers and gender inequality is thus consistent in sign but too weak, once development is accounted for, to be distinguished from zero or from the association of state involvement.

6. Discussion

6.1 What the Null Results Mean

The capability approach gives good reasons to expect that the composition of regulation matters for who can convert formal rights into real opportunities. Our data provide little support for that expectation at the level of national indicators. Three readings of this result are possible, and they have different implications.

The first is that the hypothesis is wrong at the cross-national scale. In the economies observed, which are mostly high-income, the gendered conversion costs of business entry may be small relative to other determinants of gender inequality, such as care policies, labor-market institutions, and norms. This reading is consistent with Klapper and Parker's (2011) conclusion that business-environment features explain only part of the gender gap in entrepreneurship, and with our finding that legal gender equality, not PMR, is associated with women's relative participation.

The second reading is that the hypothesis may be right but the measures are too coarse. The PMR indicators record de jure requirements for a representative firm, not the conversion costs that particular groups face, and the GII aggregates outcomes, two of which are unrelated to markets. Life evaluations and the gender gap in life satisfaction are closer to quality of life but are also driven by many other factors. Micro-level data on business formation by gender, matched to regulatory change, would be the appropriate test.

The third reading concerns power. With 54 economies, strongly correlated components ($r = -.835$), and modest within-country variation in regulation over five years, the data cannot rule out moderate associations. The confidence intervals in Tables 2 and 3 include effects that would matter substantively. Our results should therefore be read as an absence of evidence for the composition hypothesis, not as evidence of its absence.

6.2 Regulation and Life Evaluation

The association between reductions in entry barriers and gains in life evaluation illustrates why within-country designs need to account for convergence. The economies that liberalized most, such as Argentina, Indonesia, Brazil, and Greece, also started with more restrictive regulation, and life evaluations in lower-scoring economies rose faster over the period. Initial life evaluation did not predict the extent of reform ($b = 0.001$, $p = .986$), but economies with more restrictive initial regulation reformed more ($p = .013$). Both patterns are consistent with a broader catch-up process in middle-income economies that moves regulation and well-being together without one causing the other. The same association appears for aggregate PMR, so it does not support a specific role for entry barriers. Quality-of-life research that relates institutional reforms to subjective well-being should routinely test whether such associations survive conditioning on initial levels.

6.3 Implications for Capability-Based Evaluation of Institutions

Critics argue that the capability approach gives a persuasive account of the ends of justice but little guidance on the institutions needed to achieve them (Dean, 2009; Pogge, 2002). A natural response is to identify concrete institutional channels, such as market-access rules, through which substantive freedoms are widened or narrowed, and to test them. This article shows that such tests are possible and that their results can disappoint. That is itself useful. It suggests that the normative case for attending to conversion friction in regulation, which remains strong on conceptual grounds (Claassen, 2018; Sen, 1999), should not rest on cross-national associations with aggregate outcomes. It would be better grounded in evidence on how specific procedures affect specific groups, as in the administrative burden literature (Herd & Moynihan, 2018; Moynihan et al., 2015).

The results also caution against policy claims that deregulating market entry will narrow gender gaps. Such claims appear in policy frameworks: the OECD Recommendation on Gender Equality in Education, Employment and Entrepreneurship calls on adherents to reduce “barriers to women entrepreneurship, administrative burdens on firms and excessive regulatory restrictions” (OECD, 2013, Section I.F.1). Our findings do not contradict that recommendation, which rests on other evidence, but they show that national PMR indicators do not provide evidence for it. Tools that measure implementation and gendered outcomes directly, such as the World Bank’s Business Ready assessments (World Bank, 2024a) and the *Missing Entrepreneurs* series (OECD & European Commission, 2023), are better placed to test it.

7. Limitations

First, the analysis relies on national indicators. PMR records de jure rules, not their implementation, and outcomes such as the GII and life evaluations aggregate many influences. Second, the sample is small and dominated by high-income OECD members, which limits power and external validity for the lower-income contexts where the proposed mechanism may matter most. Third, the panel covers only five years, a period that includes the COVID-19 pandemic and its effects on both regulation and well-being. Fourth, first differencing removes time-invariant confounders, but not time-varying ones such as EU accession processes or macroeconomic shocks. Fifth, the gender gap in life satisfaction is available for only 35 economies and comes from national sources that are not fully harmonized. Finally, the PMR indicators are not designed to separate protective from purely restrictive content within a requirement (Section 2.3), so the conversion-friction concept cannot be measured directly.

8. Conclusion

This article tested whether the composition of product market regulation, as distinct from its level, is associated with distribution-sensitive quality-of-life outcomes. Using two waves of OECD indicators that share one methodology, we find no evidence that barriers to market entry matter more than state involvement for gender inequality, either across countries or within countries over time. Reductions in entry barriers coincide with gains in life evaluation, but this association is largely explained by convergence and is not specific to entry barriers. The capability approach remains a compelling

framework for evaluating market institutions; our results suggest that its claims about regulation are best tested with data closer to the people whose conversion costs it is concerned with.

Several avenues for future research follow. Matching regulatory reforms to micro-level data on business formation, self-employment, and labor-market transitions by gender would test the conversion-friction hypothesis where it operates. Longer PMR panels would provide more within-country variation. Outcomes closer to the mechanism, such as gender gaps in early-stage entrepreneurship and business ownership, could be added as coverage allows. Finally, extending the analysis to lower-income economies, where informal employment is widespread (International Labour Office, 2018), would test the mechanism where theory expects it to bind most tightly.

Declarations

Competing interests.

The authors have no competing interests to declare.

Author Contribution

R. L. wrote the entire manuscript.

Data Availability

<https://doi.org/10.5281/zenodo.23546748>

References

1. Agarwal, B. (1997). Bargaining and gender relations: Within and beyond the household. *Feminist Economics*, 3(1), 1–51. <https://doi.org/10.1080/135457097338799>
2. Alkire, S. (2002). *Valuing freedoms: Sen's capability approach and poverty reduction*. Oxford University Press.
3. Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics*, 95(7–8), 476–487. <https://doi.org/10.1016/j.jpubeco.2010.11.006>
4. Andrews, D., & Cingano, F. (2014). Public policy and resource allocation: Evidence from firms in OECD countries. *Economic Policy*, 29(78), 253–296. <https://doi.org/10.1111/1468-0327.12028>
5. Angrist, J. D., & Pischke, J. S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton University Press. <https://doi.org/10.1515/9781400829828>
6. Audette, A. P., Lam, S., O'Connor, H., & Radcliff, B. (2019). E)Quality of life: A cross-national analysis of the effect of gender equality on life satisfaction. *Journal of Happiness Studies*, 20(7), 2173–2188. <https://doi.org/10.1007/s10902-018-0042-8>

7. Bjørnskov, C., Dreher, A., & Fischer, J. A. V. (2010). Formal institutions and subjective well-being: Revisiting the cross-country evidence. *European Journal of Political Economy*, 26(4), 419–430. <https://doi.org/10.1016/j.ejpoleco.2010.03.001>
8. Bjørnskov, C., & Foss, N. J. (2008). Economic freedom and entrepreneurial activity: Some cross-country evidence. *Public Choice*, 134(3–4), 307–328. <https://doi.org/10.1007/s11127-007-9229-y>
9. Blanchflower, D. G., & Bryson, A. (2024). The gender well-being gap. *Social Indicators Research*, 173(3), 1–45. <https://doi.org/10.1007/s11205-024-03334-7>
10. Chiappero-Martinetti, E., Osmani, S., & Qizilbash, M. (Eds.). (2020). *The Cambridge handbook of the capability approach*. Cambridge University Press. <https://doi.org/10.1017/9781316335741>
11. Claassen, R. (2017a). An agency-based capability theory of justice. *European Journal of Philosophy*, 25(4), 1279–1304. <https://doi.org/10.1111/ejop.12195>
12. Claassen, R. (2017b). A capability framework for financial market regulation. In L. Herzog (Ed.), *Just financial markets? Finance in a just society* (pp. 56–77). Oxford University Press. <https://doi.org/10.1093/oso/9780198755661.003.0003>
13. Claassen, R. (2018). *Capabilities in a just society: A theory of navigational agency*. Cambridge University Press. <https://doi.org/10.1017/9781108561853>
14. Conway, P., & Nicoletti, G. (2006). *Product market regulation in the non-manufacturing sectors of OECD countries: Measurement and highlights* (OECD Economics Department Working Papers No. 530). OECD Publishing. <https://doi.org/10.1787/362886816127>
15. Davidson, R., & Flachaire, E. (2008). The wild bootstrap, tamed at last. *Journal of Econometrics*, 146(1), 162–169. <https://doi.org/10.1016/j.jeconom.2008.08.003>
16. Davidson, R., & MacKinnon, J. G. (1981). Several tests for model specification in the presence of alternative hypotheses. *Econometrica*, 49(3), 781–793. <https://doi.org/10.2307/1911522>
17. Dean, H. (2009). Critiquing capabilities: The distractions of a beguiling concept. *Critical Social Policy*, 29(2), 261–273. <https://doi.org/10.1177/0261018308101629>
18. Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). The regulation of entry. *The Quarterly Journal of Economics*, 117(1), 1–37. <https://doi.org/10.1162/003355302753399436>
19. Dluhosch, B. (2021). The gender gap in globalization and well-being. *Applied Research in Quality of Life*, 16(1), 351–378. <https://doi.org/10.1007/s11482-019-09769-2>
20. Égert, B. (2016). Regulation, institutions, and productivity: New macroeconomic evidence from OECD countries. *American Economic Review*, 106(5), 109–113. <https://doi.org/10.1257/aer.p20161026>
21. Égert, B., & Gal, P. (2017). The quantification of structural reforms in OECD countries: A new framework. *OECD Journal: Economic Studies*, 2016(1), 91–108. https://doi.org/10.1787/eco_studies-2016-5jg1lqspxtvk
22. Gelman, A., & Stern, H. (2006). The difference between significant and not significant is not itself statistically significant. *The American Statistician*, 60(4), 328–331.

<https://doi.org/10.1198/000313006X152649>

23. Graafland, J. (2020). When does economic freedom promote well being? On the moderating role of long-term orientation. *Social Indicators Research*, 149(1), 127–153. <https://doi.org/10.1007/s11205-019-02230-9>
24. Heinrich, C. J. (2016). The bite of administrative burden: A theoretical and empirical investigation. *Journal of Public Administration Research and Theory*, 26(3), 403–420. <https://doi.org/10.1093/jopart/muv034>
25. Helliwell, J. F., & Huang, H. (2008). How's your government? International evidence linking good government and well-being. *British Journal of Political Science*, 38(4), 595–619. <https://doi.org/10.1017/S0007123408000306>
26. Helliwell, J. F., Layard, R., Sachs, J. D., De Neve, J. E., Aknin, L. B., & Wang, S. (Eds.). (2025). *World happiness report 2025*. Wellbeing Research Centre, University of Oxford.
27. Herd, P., & Moynihan, D. P. (2018). *Administrative burden: Policymaking by other means*. Russell Sage Foundation.
28. Hyland, M., Djankov, S., & Goldberg, P. K. (2020). Gendered laws and women in the workforce. *American Economic Review: Insights*, 2(4), 475–490. <https://doi.org/10.1257/aeri.20190542>
29. International Labour Office. (2018). *Women and men in the informal economy: A statistical picture* (3rd ed.). International Labour Organization.
30. Islam, A., Muzi, S., & Amin, M. (2019). Unequal laws and the disempowerment of women in the labour market: Evidence from firm-level data. *The Journal of Development Studies*, 55(5), 822–844. <https://doi.org/10.1080/00220388.2018.1487055>
31. Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. *Development and Change*, 30(3), 435–464. <https://doi.org/10.1111/1467-7660.00125>
32. Klapper, L., Laeven, L., & Rajan, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*, 82(3), 591–629. <https://doi.org/10.1016/j.jfineco.2005.09.006>
33. Klapper, L. F., & Parker, S. C. (2011). Gender and the business environment for new firm creation. *The World Bank Research Observer*, 26(2), 237–257. <https://doi.org/10.1093/wbro/lkp032>
34. Kleiner, M. M. (2000). Occupational licensing. *Journal of Economic Perspectives*, 14(4), 189–202. <https://doi.org/10.1257/jep.14.4.189>
35. Kleiner, M. M., & Krueger, A. B. (2013). Analyzing the extent and influence of occupational licensing on the labor market. *Journal of Labor Economics*, 31(S1), S173–S202. <https://doi.org/10.1086/669060>
36. Koske, I., Wanner, I., Bitetti, R., & Barbiero, O. (2015). *The 2013 update of the OECD's database on product market regulation: Policy insights for OECD and non-OECD countries* (OECD Economics Department Working Papers No. 1200). OECD Publishing. <https://doi.org/10.1787/5js3f5d3n2vl-en>

37. Lakens, D. (2017). Equivalence tests: A practical primer for t tests, correlations, and meta-analyses. *Social Psychological and Personality Science*, 8(4), 355–362. <https://doi.org/10.1177/1948550617697177>
38. Li, L. M. W., Lou, X., & Bond, M. H. (2025). Confidence in societal institutions extends citizens' radius of trust, leading to even greater life satisfaction in societies with stronger rule of law. *Applied Research in Quality of Life*, 20(2), 809–831. <https://doi.org/10.1007/s11482-025-10438-w>
39. Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician*, 54(3), 217–224. <https://doi.org/10.2307/2685594>
40. Macchia, L., & Plagnol, A. C. (2019). Life satisfaction and confidence in national institutions: Evidence from South America. *Applied Research in Quality of Life*, 14(3), 721–736. <https://doi.org/10.1007/s11482-018-9606-3>
41. Montgomery, M. (2022). Reversing the gender gap in happiness. *Journal of Economic Behavior & Organization*, 196, 65–78. <https://doi.org/10.1016/j.jebo.2022.01.006>
42. Moynihan, D., Herd, P., & Harvey, H. (2015). Administrative burden: Learning, psychological, and compliance costs in citizen-state interactions. *Journal of Public Administration Research and Theory*, 25(1), 43–69. <https://doi.org/10.1093/jopart/muu009>
43. Nussbaum, M. C. (2000). *Women and human development: The capabilities approach*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511841286>
44. Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*. Belknap Press of Harvard University. <https://doi.org/10.4159/harvard.9780674061200>
45. Nussbaum, M. C., & Sen, A. (Eds.). (1993). *The quality of life*. Clarendon.
46. OECD. (2012). *Recommendation of the Council on Regulatory Policy and Governance*. OECD Publishing. OECD/LEGAL/0390.
47. OECD. (2013). *Recommendation of the Council on Gender Equality in Education, Employment and Entrepreneurship*. OECD Publishing. OECD/LEGAL/0398.
48. OECD (2023). *Product market regulation indicators: A detailed explanation of the methodology used to build the OECD PMR indicators*. <https://oecd.org/content/dam/oecd/en/topics/policy-sub-issues/product-market-regulation/Methodology%20to%20build%20the%202018-23%20PMR%20indicators.pdf>
49. OECD (2024a). *PMR economy-wide indicators 2023–24 and 2018* [Data set]. <https://www.oecd.org/en/topics/sub-issues/product-market-regulation.html>
50. OECD. (2024b). *How's Life? 2024: Well-being and resilience in times of crisis*. OECD Publishing. <https://doi.org/10.1787/90ba854a-en>
51. OECD & European Commission. (2023). *The missing entrepreneurs 2023: Policies for inclusive entrepreneurship and self-employment*. OECD Publishing. <https://doi.org/10.1787/230efc78-en>
52. Oster, E. (2019). Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics*, 37(2), 187–204. <https://doi.org/10.1080/07350015.2016.1227711>

53. Ott, J. C. (2010). Good governance and happiness in nations: Technical quality precedes democracy and quality beats size. *Journal of Happiness Studies*, 11(3), 353–368.
<https://doi.org/10.1007/s10902-009-9144-7>
54. Pogge, T. W. (2002). Can the capability approach be justified? *Philosophical Topics*, 30(2), 167–228.
55. Robeyns, I. (2003). Sen's capability approach and gender inequality: Selecting relevant capabilities. *Feminist Economics*, 9(2–3), 61–92. <https://doi.org/10.1080/1354570022000078024>
56. Robeyns, I. (2005). The capability approach: A theoretical survey. *Journal of Human Development*, 6(1), 93–117. <https://doi.org/10.1080/146498805200034266>
57. Robeyns, I. (2016). Capabilitarianism. *Journal of Human Development and Capabilities*, 17(3), 397–414. <https://doi.org/10.1080/19452829.2016.1145631>
58. Robeyns, I. (2017). Wellbeing, freedom and social justice: The capability approach re-examined. *Open Book Publishers*. <https://doi.org/10.11647/OBP.0130>
59. Sen, A. (1980). Equality of what? In S. M. McMurrin (Ed.), *The Tanner lectures on human values* (Vol. 1, pp. 197–220). University of Utah; Cambridge University Press.
60. Sen, A. (1999). *Development as freedom*. Oxford University Press.
61. Sen, A. (2004). Capabilities, lists, and public reason: Continuing the conversation. *Feminist Economics*, 10(3), 77–80. <https://doi.org/10.1080/1354570042000315163>
62. Sen, A. (2009). *The idea of justice*. Belknap Press of Harvard University.
63. Simonsohn, U., Simmons, J. P., & Nelson, L. D. (2020). Specification curve analysis. *Nature Human Behaviour*, 4(11), 1208–1214. <https://doi.org/10.1038/s41562-020-0912-z>
64. Stevenson, B., & Wolfers, J. (2009). The paradox of declining female happiness. *American Economic Journal: Economic Policy*, 1(2), 190–225. <https://doi.org/10.1257/pol.1.2.190>
65. UNDP (2025a). *Human development report 2025. Statistical annex: Human Development Index* [Data set]. <https://hdr.undp.org/data-center/documentation-and-downloads>
66. UNDP (2025b). *Human development report 2025. Statistical annex: Gender Inequality Index* [Data set]. <https://hdr.undp.org/data-center/documentation-and-downloads>
67. Vitale, C., Bitetti, R., Danitz, E., Moiso, C., & Wanner, I. (2020). *The 2018 edition of the OECD PMR indicators and database: Methodological improvements and policy insights* (OECD Economics Department Working Papers No. 1604). OECD Publishing. <https://doi.org/10.1787/2cfb622f-en>
68. Vuong, Q. H. (1989). Likelihood ratio tests for model selection and non-nested hypotheses. *Econometrica*, 57(2), 307–333.
69. Wölfl, A., Wanner, I., Koźluk, T., & Nicoletti, G. (2009). *Ten years of product market reform in OECD countries: Insights from a revised PMR indicator* (OECD Economics Department Working Papers No. 695). OECD Publishing. <https://doi.org/10.1787/224255001640>
70. World Bank. (2024a). Business ready 2024. *World Bank*. <https://doi.org/10.1596/978-1-4648-2021-2>
71. World Bank. (2024b). Women, business and the law 2024. *World Bank*. <https://doi.org/10.1596/978-1-4648-2063-2>

72. World Bank (2025). *World development indicators: GDP per capita, PPP (constant 2021 international \$)* [Data set]. <https://data360.worldbank.org>

Footnotes

1. Robeyns (2016) uses “capabilitarianism” for the family of normative theories that use functionings and capabilities as (part of) their evaluative space, and distinguishes the capability approach as an open evaluative framework from the more specific theories built on it (see also Sen, 2004, on lists of capabilities). We use the approach as a framework for evaluating regulatory institutions and do not derive a canonical list of capabilities that regulation must secure.
2. The *Women, Business and the Law* (WBL) index scores de jure gender-differentiated legal barriers on a 0–100 scale, where higher scores indicate greater legal equality; we use the WBL 1.0 index for report years 2019 and 2024, which record laws in force in late 2018 and late 2023 (World Bank, 2024b). In our sample it correlates with GII at $r = -.63$ (95% CI $[-.77, -.44]$), as expected. The two measures remain conceptually distinct: WBL records formal rules, whereas the GII records realized gaps.
3. Moynihan et al. (2015) define administrative burden along three dimensions: learning costs, psychological costs, and compliance costs. Heinrich (2016) shows empirically that these costs are not evenly distributed: individuals with fewer educational, financial, and social resources bear higher burdens per interaction. We hypothesize an analogous gradient for business regulation.
4. The *Women, Business and the Law* (WBL) index scores de jure gender-differentiated legal barriers on a 0–100 scale, where higher scores indicate greater legal equality; we use the WBL 1.0 index for report years 2019 and 2024, which record laws in force in late 2018 and late 2023 (World Bank, 2024b). In our sample it correlates with GII at $r = -.63$ (95% CI $[-.77, -.44]$), as expected. The two measures remain conceptually distinct: WBL records formal rules, whereas the GII records realized gaps.

Figures

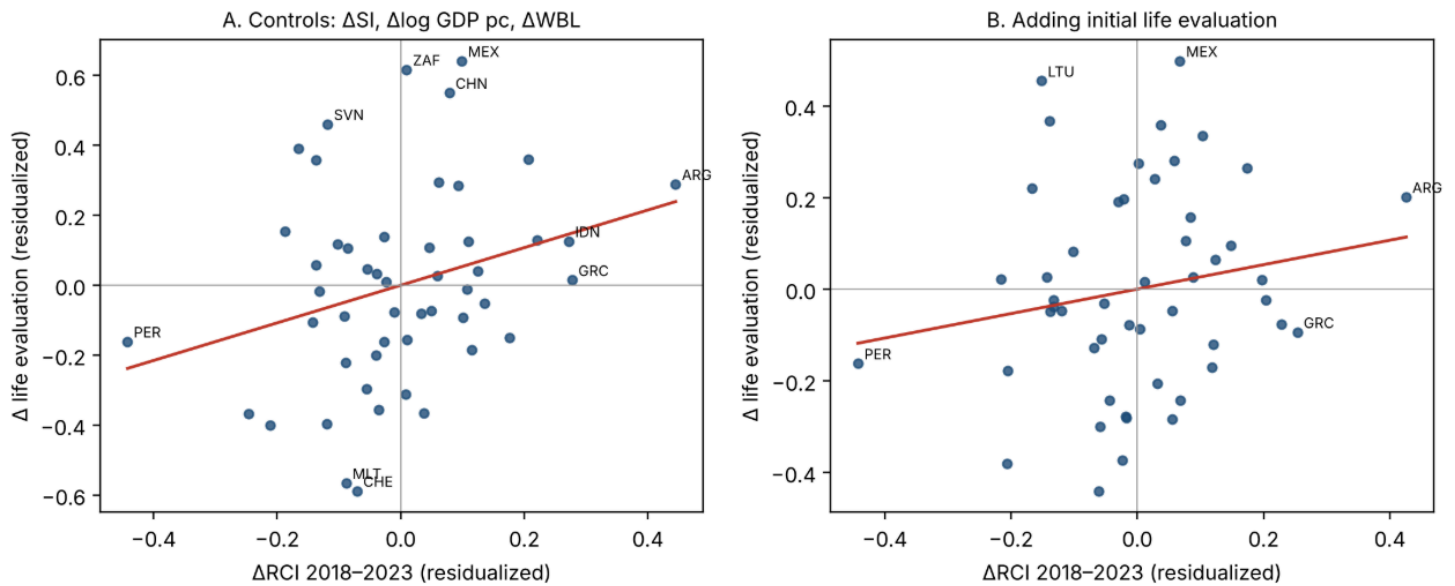


Figure 1

Change in entry barriers and change in life evaluation, 2018–2023. Added-variable plots from the first-difference model (Panel A) and after adding initial life evaluation (Panel B). Each point is an economy; N= 50.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [MaterialSup..docx](#)