A Price Theory of Propaganda

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Politicians need support (votes in democracies, compliance and participation in autocracies) and must pay for it through patronage, public services, and policy concessions. I model this as monopsony: the politician faces an upward-sloping supply curve of political support. Propaganda is a complement that shifts supply down by making compliance less distasteful. The politician equates the marginal cost of propaganda to the wage savings on inframarginal supporters. I prove three results. First, monopolists use more propaganda than competitive politicians because markdowns are larger and there is no free-riding on regime-level messaging. Second, coercion and propaganda are complements: coercion makes supply more inelastic (raising markdowns) and enables forced consumption of propaganda that citizens would otherwise reject. Third, the model predicts scale effects: propaganda's returns rise with population, implying that mass-mobilization autocracies should propagandize heavily while elite autocracies rely on direct payments. Cross-country patterns are consistent with these predictions, though the scale effect is modest.

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1 Introduction

Consider a Soviet factory worker in 1975. Each month she attends Communist Party meetings, displays enthusiasm during official holidays, and refrains from criticizing the regime. In return, she receives job security, subsidized housing, and, crucially, the absence of a visit from the KGB. Now consider a swing voter in Ohio in 2020. Campaigns bombard her with advertisements, offering policy promises and partisan entertainment. Both systems purchase political support; both use persuasion to reduce what they must pay. Yet the Soviet system achieves far deeper compliance with far cruder messaging. Why?

The Soviet worker has nowhere else to go. The regime is the only buyer of her compliance; no opposition party bids for her support. The Ohio voter can switch sides, so both parties must compete for her. I argue that this difference in market structure, not differences in ideology or technology, explains why authoritarian regimes propagandize heavily while democracies rely on targeted persuasion. But this is not absolute. Britain's Ministry of Information during both World Wars is one example of how democracies invest in mass propaganda when the stakes are high enough.

Most models emphasize beliefs. Guriev and Treisman ([2019](), [2020]()) model "informational autocrats" who manipulate what citizens think. Edmond ([2013]()) treats propaganda as shifting beliefs to prevent coordination. I take a different view. Following Becker and Murphy ([1993]()), propaganda shifts the cost for the citizen of providing political support, not the content of beliefs. I formalize the problem as one of political market power. Citizens supply political support the way workers supply labor: reluctantly, in exchange for compensation, and more willingly when the task feels less burdensome. Propaganda makes compliance less distasteful, shifting the supply curve downward. The returns to this investment depend on market structure, not on the content of the message. The

payoff to this price-theoretic approach is simple comparative statics: propaganda is increasing in political rents, decreasing in its cost, and decreasing in political competition. These results emerge from market structure alone, without specifying how propaganda affects beliefs.

Three extensions follow from the baseline. First, political competition creates a free-rider problem: propaganda that benefits all politicians is a public good, so each under-invests relative to a monopolist. This explains why autocracies propagandize more than democracies even holding resources constant. Second, coercion and propaganda are complements. Coercion makes supply more inelastic, raising the returns to propaganda, and enables forced consumption of messaging that citizens would otherwise reject. Arendt (1951), writing about Hitler and Stalin, observed that "total terror... and total propaganda... are the two faces of the same phenomenon." The model formalizes one mechanism behind her observation. Third, propaganda exhibits scale effects: returns rise with population because the fixed cost of messaging is spread over more citizens. This explains why mass-mobilization autocracies propagandize heavily while elite autocracies rely on direct payments.

Section 2 reviews related literature. The basic market power model (Section 3) generates the markdown condition. Adding propaganda as a complement (Section 4) produces scale effects. Political competition creates free-rider problems (Section 5), and coercion enables forced consumption (Section 6). Section 7 tests the predictions against cross-country data.

2   Related Literature

Models of vote-buying treat support as a probabilistic choice response to transfers (Cox and McCubbins 1986; Lindbeck and Weibull 1987; Stokes et al. 2013). The debate is

whether parties should target swing voters or core supporters. I treat the problem differently: support is an input procured on an upward-sloping supply schedule. The politician exercises market power; she is not a lottery player. This generates markdown conditions and scale effects that targeting frameworks cannot produce. A parallel literature models political persuasion as Bayesian information design (Alonso and Camara 2016; Aköz and Arbatli 2016; Albrecht 2017). These models show how competing parties design campaigns to manipulate voter beliefs; the equilibrium strategies resemble those in vote-buying games. The key difference is mechanism: those models shift beliefs; mine shifts costs.

Several papers formalize media capture and its effects on accountability. Besley and Prat (2006) show how media capture undermines electoral discipline. Guriev and Treisman (2019, 2020) characterize "informational autocrats" who manipulate beliefs rather than using mass repression; Egorov, Guriev, and Sonin (2009) model when dictators allow media freedom; Egorov and Sonin (2024) survey the broader literature on non-democracy. Edmond (2013) models propaganda as belief manipulation affecting coordination; his key prediction is that propaganda targets coordination problems. Shadmehr and Bernhardt (2015) derive when rulers censor versus allow criticism. Lorentzen (2014) shows why autocrats sometimes allow criticism: to gather information. King, Pan, and Roberts (2013) show empirically that Chinese censorship targets collective action, not criticism per se. These models focus on what citizens believe; DellaVigna and Gentzkow (2010) survey the broader persuasion literature. I focus on what citizens are willing to do. Propaganda shifts the cost of providing support, not the content of beliefs.

Recent empirical work provides sharp tests of censorship effects. Chen and Yang (2019) conduct a field experiment providing Chinese students with uncensored internet access. Their central finding (that demand for uncensored information is low even when freely available) is consistent with the forced consumption result in Section VI. Under

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coercion, regimes can deploy propaganda that citizens would reject if given a choice. Carter and Carter (2023) develop a signaling theory where autocrats facing electoral constraints must produce "honest propaganda" that concedes failures to maintain credibility, while unconstrained autocrats deploy "absurd propaganda" that signals their hold on power rests on coercion, not persuasion. Their model predicts quality variation across regime types through a signaling mechanism; the quality result in Section 6.4 offers a complementary explanation through cost minimization under forced consumption. Testa (2018) shows how propaganda through education can induce autocracies to invest more in schooling. On the effects of propaganda, Adena et al. (2015) find that Nazi radio had negative effects before the regime seized control and positive effects after; Yanagizawa-Drott (2014) estimates that Rwandan radio propaganda caused 51,000 additional genocide perpetrators.

The treatment of propaganda as a complement in stable preferences follows Becker and Murphy (1993) on advertising. Advertising need not "change tastes" to affect behavior. The political market power framework inverts Stigler (1971) and Peltzman (1976). Instead of politicians selling regulation, I model politicians buying support. The coercion-propaganda complementarity provides an economic foundation for Arendt (1951), who emphasizes that totalitarian regimes uniquely combine terror and ideology. Wintrobe (1998) models the repression-loyalty tradeoff as a principal-agent problem; I treat citizens as suppliers rather than agents. The free-rider result connects to Olson (1965). Regime propaganda is a public good that monopolists provide but competitors undersupply.

The contribution is to embed persuasion into a procurement problem with buyer power. This generates results that require the combination to see. The public-good nature of regime propaganda, the complementarity between coercion and ideology, and the scale effect linking propaganda to regime size all emerge from treating the politician as having market power.

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3 The Market for Political Support

I model political support the way labor economists model labor. Citizens supply support reluctantly, in exchange for compensation, and more readily when the task feels less burdensome. This generates an upward-sloping supply curve. Even the most coercive dictatorship must procure compliance; someone must staff the bureaucracy, operate the secret police, and produce goods. Democracies require votes; autocracies require cadres. The difference is not in the need for support, but in the market structure through which it is procured.

The literature models support as emerging from either beliefs or coercion. Guriev and Treisman (2019) and Gehlbach and Sonin (2014) study how regimes manipulate information to shape citizen beliefs. Wintrobe (1998) models the tradeoff between repression and loyalty. The supply-curve approach generates different predictions: propaganda is increasing in political rents, decreasing in its cost, and exhibits scale economies in population.

3.1 The Citizen's Problem

Consider a representative citizen with preferences over three objects: consumption c, political support s, and propaganda a. Support is a broad category: voting, canvassing, attending rallies, displaying party symbols, defending the regime in conversation, refraining from criticism, or simply complying with directives rather than resisting. The citizen has a utility function

$$U = U(c, s, a). \tag{1}$$

Contrary to common language, people do not "give" their support. If they did, support would not be a valuable political asset but free. Because support is valuable, people sell it for policies, patronage, or simply the absence of punishment.

Assumption 1 (Support is Costly).

$$\frac{\partial U}{\partial s} < 0, \qquad \frac{\partial^2 U}{\partial s^2} < 0. \tag{2}$$

The marginal disutility of support is positive and increasing.

Voting once every four years costs little; canvassing every weekend costs much more. Publicly endorsing a politician you mildly dislike is easy; endorsing one you despise requires active self-deception. The first units of support are relatively painless, but deeper commitment becomes increasingly burdensome.

Propaganda may be a good or a bad. Campaign ads, patriotic films, and national celebrations may be genuinely enjoyable, or they may be tedious, insulting, and obviously false. The same message delights some citizens and repels others.

Assumption 2 (Propaganda May Be Good or Bad).

$$\frac{\partial U}{\partial a} \gtreqless 0. \tag{3}$$

Citizens may enjoy propaganda (patriotic entertainment, national spectacles) or dislike it (tedious, intrusive messaging).

This distinction does real work. Democratic advertising must be tolerable because citizens can change the channel. Totalitarian propaganda faces no such constraint. For now, I remain agnostic about the sign of $\partial U / \partial a$.

The key assumption is complementarity between propaganda and support:

Assumption 3 (Propaganda Reduces the Marginal Cost of Support).

$$\frac{\partial^2 U}{\partial s \, \partial a} > 0. \tag{4}$$

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Propaganda makes support less distasteful. The citizen who consumes propaganda finds the next unit of support less burdensome.

This cross-partial derivative is the foundation of the entire analysis. In the language of Becker and Murphy (1993), propaganda "gives favorable notice" to the regime, raising the relative marginal utility of support. In consumer theory, goods that favorably affect demand for other goods are treated as complements, not as shifting utility functions. There is no reason to claim that propaganda "changes tastes" just because it affects willingness to provide support. The same logic applies to advertisements that make people want Coca-Cola or political speeches that make people want to vote.

3.2 The Supply of Support

The citizen receives payment w_s per unit of support. This "payment" may take many forms: direct transfers, favorable policies, access to state-controlled goods, or simply the absence of punishment. The citizen also has exogenous income m. The budget constraint is $c = m + w_s s$.

Propaganda is offered at quantity A by the politician. The citizen can consume up to this amount: $a \leq A$. For now, assume propaganda is a good ($\partial U / \partial a > 0$) so the constraint binds and $a = A$. Section VI considers what happens when propaganda is a bad and the politician forces citizens to consume it.

Given these assumptions, the citizen's problem is straightforward.

$$\max_s \ U(m + w_s s, s, A). \tag{5}$$

The citizen chooses how much support to provide, taking as given the wage w_s and the

level of propaganda A. The first-order condition is

$$\frac{\partial U}{\partial c} \cdot w_s + \frac{\partial U}{\partial s} = 0. \tag{6}$$

The citizen equates the marginal utility from additional income (the wage times marginal utility of consumption) to the marginal disutility of support. This defines the supply of support as a function of the wage and propaganda: $s = S(w_s, A)$.

Inverting this supply function yields the inverse supply curve:

$$w_s = w_s^*(s, A), \tag{7}$$

which tells us the minimum payment required to induce support level s given propaganda level A. This inverse supply curve is the key object for analyzing the politician's problem.

To fix ideas, consider a specific functional form. Suppose the citizen's utility takes the separable form

$$U = c - \frac{s^{1+1/\eta}}{1+1/\eta} \cdot \frac{1}{h(A)}, \tag{8}$$

where $\eta > 0$ governs the elasticity of support supply and $h(A)$ is an increasing function capturing propaganda's effect. The first-order condition yields $w_s = s^{1/\eta}/h(A)$, so the inverse supply curve is

$$w_s^*(s, A) = \frac{s^{1/\eta}}{h(A)}. \tag{9}$$

This form has three properties: (i) the elasticity of supply is constant at η; (ii) propaganda shifts the curve down multiplicatively; and (iii) complementarity holds automatically since $\partial^2 U/\partial s \partial A > 0$ when $h'(A) > 0$. The general results below do not require this specific form, but it aids calibration and intuition.

Lemma 1 (Properties of Inverse Supply). *Under Assumptions 1–3:*

(i) $\dfrac{\partial w_s^*}{\partial s} > 0$: *the inverse supply curve slopes upward.*

(ii) $\dfrac{\partial w_s^*}{\partial A} < 0$: *propaganda shifts the inverse supply curve down.*

The second property is the heart of the theory. Propaganda shifts the entire supply curve downward. At any given level of support, the citizen requires less compensation because propaganda has made that support less distasteful. This is precisely the complementarity assumption at work: higher A reduces the marginal disutility of s, so the citizen's reservation wage falls.

3.3 The Politician as Monopsonist

The politician values political support because it generates rents from office. The standard approach models politicians as maximizing votes or policy outcomes. I take a simpler view: support is valuable because it generates rents.

What are these rents? They include the direct perquisites of power (salary, corruption opportunities, ego gratification), the ability to implement preferred policies, and job security.

Let $v > 0$ denote the constant marginal value of support to the politician. This reflects all the rents from office, measured in the same units as the wage paid to citizens. The politician chooses how much support to purchase, taking the inverse supply curve as given.

The politician has market power. There is one buyer (the state) and many sellers (the citizens). In a dictatorship, this is obvious. The regime is the only entity purchasing political support. But even in a democracy, the incumbent politician has market power over citizens who already lean toward her party.

The politician's payoff is

$$\Pi = v \cdot s - w_s^*(s, A) \cdot s - w_A \cdot A, \tag{10}$$

where w_A is the marginal cost of producing propaganda. The first term is the value of support; the second is the cost of purchasing that support; the third is the cost of propaganda.

The first-order condition with respect to s is

$$v = w_s^* + \frac{\partial w_s^*}{\partial s} \cdot s. \tag{11}$$

The left side is the marginal value of an additional unit of support. The right side is the marginal cost, which has two components: the wage paid to the marginal supporter, plus the increase in wages paid to all inframarginal supporters (since attracting one more supporter requires raising the wage for everyone).

This second term is the market power distortion. A competitive buyer takes the wage as given and ignores the effect of their purchases on price. A politician with market power internalizes this effect and restricts purchases to keep the wage down.

To express this result in familiar terms, define the elasticity of supply:

$$\varepsilon_s \equiv \frac{\partial S}{\partial w_s} \cdot \frac{w_s}{S} = \left(\frac{\partial w_s^*}{\partial s} \cdot \frac{s}{w_s^*} \right)^{-1}. \tag{12}$$

This measures how responsive citizens are to changes in compensation. When ε_s is large, a small increase in the wage attracts many new supporters. When ε_s is small, citizens are insensitive to compensation, perhaps because they have no outside options.

Proposition 1 (Political Market Power). *At an interior optimum, the politician's choice of sup-*

port satisfies

$$v = w_s^* \left(1 + \frac{1}{\varepsilon_s} \right). \tag{13}$$

Equivalently, the markdown on the price of support is

$$\frac{v - w_s^*}{v} = \frac{1}{1 + \varepsilon_s}. \tag{14}$$

Proof. From the first-order condition, $v = w_s^* + (\partial w_s^* / \partial s) \cdot s$. Using $(\partial w_s^* / \partial s) \cdot s = w_s^* / \varepsilon_s$, this yields $v = w_s^* (1 + 1/\varepsilon_s)$. Rearranging gives the markdown formula. The second-order condition requires $2(\partial w_s^* / \partial s) + s(\partial^2 w_s^* / \partial s^2) > 0$, which holds when the supply curve is not too concave. ∎

This is the standard result for a buyer with market power. Just as a monopolist marks up price above marginal cost by an amount inversely proportional to the elasticity of demand, a buyer with market power marks down payment below marginal value by an amount inversely proportional to the elasticity of supply.

Political rents are the politician's "profit" from the support transaction:

$$\text{Political Rents} = (v - w_s^*) \cdot s. \tag{15}$$

The market power framework explains why these rents are large in autocracies and small in democracies. The reason is not that autocrats are greedier, but that they face more inelastic supply curves.

4   Propaganda and the Supply of Support

Propaganda is valuable because it shifts the supply curve downward. The logic is the same as workplace amenities: happier workers accept lower wages. The politician invests

in propaganda not to brainwash citizens but to reduce the cost of purchasing support.

4.1 The Returns to Propaganda

The first-order condition for propaganda makes the logic precise:

$$-\frac{\partial w_s^*}{\partial A} \cdot s = w_A. \tag{16}$$

The right side is the marginal cost of producing propaganda. The left side is the marginal benefit: propaganda shifts the supply curve down (recall Lemma 1), reducing the wage bill on inframarginal units of support. The politician equates these two margins.

Notice the key feature: the benefit scales with s, the total amount of support being purchased. If you are buying a lot of support, even a small downward shift in the supply curve saves substantial money. If you are buying little support, the savings are modest.

4.2 Diminishing Returns

Propaganda faces diminishing returns. The first round of messaging may be highly effective, but by the hundredth repetition, citizens are tired of hearing the same slogans. I formalize this as follows.

Assumption 4 (Diminishing Returns to Propaganda)**.**

$$\frac{\partial^2 w_s^*}{\partial A^2} > 0. \tag{17}$$

The marginal effectiveness of propaganda in reducing the supply price diminishes as propaganda increases.

This assumption is intuitive. The first patriotic film may inspire genuine emotion; the tenth feels stale; the hundredth is background noise. The first party meeting may

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build solidarity; subsequent meetings are just obligations to endure. Propaganda, like advertising, exhibits decreasing returns.

With this assumption in hand, I can characterize the determinants of equilibrium propaganda.

Proposition 2 (Determinants of Propaganda). *Under Assumption 4, equilibrium propaganda A^* is:*

  (i)   *Increasing in the marginal value of support v.*

  (ii) *Decreasing in the cost of propaganda w_A.*

  (iii) *Increasing in total support s (scale effect).*

Proof. From the FOC (16): $-(\partial w_s^*/\partial A) \cdot s = w_A$. Under Assumption 4, the LHS is decreasing in A. (i) Higher v raises s^* (Proposition 1), increasing LHS, so A^* must rise to restore equality. (ii) Higher w_A requires lower LHS, so A^* falls. (iii) Higher s directly increases LHS, so A^* rises. ∎

Part (i) says that politicians with more at stake (higher rents from office) invest more in propaganda. This helps explain why authoritarian regimes, which face no term limits and can extract enormous rents, propagandize so heavily.

Part (ii) is straightforward. Cheaper propaganda means more of it. The invention of radio, television, and the internet all reduced w_A dramatically. The model predicts that each of these technologies should be associated with increased propaganda, which is broadly consistent with historical experience.

Part (iii) is the scale effect. Propaganda is more valuable when there is more support to be purchased, because the wage savings apply to all inframarginal units. The cross-country evidence for this prediction is modest (Section VII), but the logic distinguishes mass-mobilization autocracies from elite autocracies. The former need support from millions; the latter need support only from a small coalition.

4.3 Propaganda and the Markdown

Equation (16) shows that the marginal benefit of propaganda scales with equilibrium support s^*. Since higher markdowns increase s^*, the returns to propaganda rise indirectly with the markdown $(v - w_s^*)$. This connection links propaganda to the degree of political competition.

Under monopoly, the markdown is large (Proposition 1). Each additional unit of support is highly profitable, so the extensive margin benefit of propaganda is substantial. The politician invests heavily in propaganda.

Under competition, the markdown shrinks. Politicians compete away the rents, driving w_s^* toward v. The extensive margin benefit falls toward zero. Propaganda becomes less valuable.

This generates a key prediction: *propaganda is used less, but is more effective per unit, under competition*. Competitive politicians stop earlier on the marginal benefit curve, where each unit of propaganda has high marginal effect. They use propaganda sparingly because the returns (captured through the markdown) are modest. Monopolist politicians use propaganda until the marginal return is quite low, pushing deep into the diminishing-returns region. They can afford to because they capture all the benefits through their large markdown.

Consider an analogy to advertising. A perfectly competitive firm does not advertise its individual products because the benefits are competed away. A monopolist advertises heavily because it captures all the induced demand. The same logic applies to political propaganda: monopolist regimes propagandize heavily; competitive democracies do not.

Casual observation supports this prediction. Authoritarian regimes invest enormous resources in propaganda: state television, mandatory political education, pervasive symbolism, carefully managed public spectacles. Competitive democracies have campaign advertising, but the volume and intensity are far lower. The model explains why. Democrats

are not more honest; the returns to propaganda are smaller when political rents are competed away.

5 Political Competition and Propaganda

The model so far has treated the politician as a monopolist. Democracies feature competition among parties; even autocracies sometimes have competing factions. How does competition affect propaganda?

The answer has two parts. First, competition reduces the politician's markdown, which reduces the returns to propaganda. Second, when propaganda benefits all politicians (as "regime propaganda" does), competition creates a free-rider problem. Both effects push in the same direction: competition reduces propaganda.

5.1 Competition Through Elasticity

Suppose n identical politicians compete for citizen support in Cournot fashion. Standard oligopoly analysis yields the symmetric equilibrium condition $v = w_s(1 + 1/(n \cdot \varepsilon_s))$.

Proposition 3 (Competition Reduces Markdowns). *As the number of competing politicians n increases:*

(i) *Each politician's effective elasticity becomes $n \cdot \varepsilon_s$.*

(ii) *The markdown shrinks:* $\dfrac{v - w_s}{v} = \dfrac{1}{n \cdot \varepsilon_s + 1}$.

(iii) *As $n \to \infty$, the markdown vanishes and $w_s \to v$.*

Proof. From the symmetric FOC, $v = w_s(1 + 1/(n \cdot \varepsilon_s))$. Rearranging: $(v - w_s)/v = 1/(n \cdot \varepsilon_s + 1)$. As $n \to \infty$, the RHS goes to zero. ∎

Competition drives up the "wage" paid to citizens; political rents are dissipated. In a competitive democracy, parties must offer generous policies. In a monopoly autocracy, the dictator pays citizens the bare minimum.

5.2 Propaganda Under Competition

Competition changes the propaganda calculus. The analysis depends on whether propaganda is a "private good" that benefits only the producing politician, or a "public good" that benefits all politicians.

Some propaganda benefits only the politician who produces it. Campaign advertisements for a specific candidate, personalized appeals for support, and attacks on rival politicians all fit this category. Each politician i produces A_i, which reduces the wage she must pay for her own support but does not affect rivals.

The first-order condition for politician i's propaganda is

$$-\frac{\partial w_{s,i}}{\partial A_i} \cdot s_i = w_A, \tag{18}$$

where $w_{s,i}$ is the effective wage politician i pays. This mirrors the monopoly condition (16): each politician equates the marginal cost of propaganda to the wage savings on her inframarginal units s_i. Competition matters because $s_i = s/n$ is smaller than the monopolist's s. Since each politician purchases less support, the scale effect from Proposition 2 implies lower returns to propaganda. Each politician propagandizes less than a monopolist would.

This is the first channel through which competition reduces propaganda: smaller scale means smaller returns to shifting supply.

Other propaganda benefits the entire political system. Messaging about the legitimacy of the state, the importance of civic participation, or the dangers of foreign enemies

benefits all incumbents, regardless of party. This is "regime propaganda" rather than "candidate propaganda."

Let $A = \sum_j A_j$ be total propaganda. Each politician's propaganda contributes to the aggregate, and the aggregate shifts the supply curve for all politicians. Politician i's first-order condition for propaganda becomes

$$-\frac{\partial w_s}{\partial A} \cdot s_i = w_A. \tag{19}$$

The politician equates the marginal cost of propaganda to the wage savings on *her own* support. She ignores the benefits to other politicians.

At a symmetric equilibrium, $s_i = s/n$:

$$-\frac{\partial w_s}{\partial A} \cdot \frac{s}{n} = w_A. \tag{20}$$

Theorem 1 (Competitive Atrophy of Propaganda). *Under Assumption 4, if propaganda is a public good among politicians, equilibrium propaganda per politician is strictly decreasing in n. As $n \to \infty$, individual propaganda $A_i^* \to 0$.*

Proof. From (20), politician i's FOC is $-(\partial w_s / \partial A) \cdot (s/n) = w_A$. The LHS equals the marginal benefit (wage savings on own support $s_i = s/n$); the RHS is marginal cost. Under Assumption 4, $|\partial w_s / \partial A|$ is decreasing in A. As n increases, the factor s/n shrinks, reducing the LHS. To restore equality, A_i^* must fall so that $|\partial w_s / \partial A|$ rises. As $n \to \infty$, $(s/n) \to 0$, so $A_i^* \to 0$ (assuming $|\partial w_s / \partial A|$ remains bounded as $A \to 0$). ∎

The intuition is the classic public goods problem. Propaganda that makes citizens more willing to support "the government" benefits all politicians. But each politician bears the full cost and captures only $1/n$ of the benefits. In the limit, nobody pays, and regime propaganda disappears.

6 Coercion and Forced Consumption

Propaganda is the "carrot" that makes support less distasteful. But political systems also use "sticks." Regimes punish dissent, restrict movement, surveil citizens, and imprison opponents. How does coercion fit into this framework?

I model coercion as operating through two distinct channels. First, coercion restricts citizens' outside options, making the alternative to support less attractive. This shifts the supply curve downward, just as propaganda does. Second, coercion enables *forced consumption* of propaganda: the politician can deploy propaganda that citizens dislike, as long as it effectively reduces the marginal cost of support.

The second channel is particularly important. It explains why totalitarian propaganda can be tedious, repetitive, and transparently false, while democratic advertising must be entertaining. Totalitarian regimes can force citizens to consume propaganda; democracies cannot.

6.1 Non-Propaganda Coercion: Restricting Outside Options

Without coercion, the citizen can always withhold support entirely. She can refuse to attend rallies, decline to inform on neighbors, and privately criticize the regime. Setting $s = 0$ yields utility

$$\bar{U}_0 \equiv U(m, 0, a). \tag{21}$$

This is the citizen's *outside option*, the utility from non-compliance. The participation constraint for any support level $s > 0$ is

$$U(w_s \cdot s + m, s, a) \geq \bar{U}_0. \tag{22}$$

The citizen provides support only if it makes her at least as well off as non-compliance.

Now introduce coercion. Let $P \geq 0$ denote the penalty for non-compliance. This penalty captures imprisonment, loss of employment, social ostracism, violence against family members, or any other punishment the state can inflict. If the citizen provides support $s < \underline{s}$ (some minimum threshold set by the regime), she suffers utility loss P. The citizen's problem becomes

$$\max_{s} \ U(w_s \cdot s + m, s, a) - P \cdot \mathbf{1}[s < \underline{s}], \tag{23}$$

where $\mathbf{1}[\cdot]$ is an indicator function.

If P is sufficiently large, the citizen always provides $s \geq \underline{s}$. The effective outside option becomes $\bar{U}_0 - P$, which is worse than before. Non-compliance is no longer costless.

Lemma 2 (Coercion Shifts Supply Down). *An increase in the penalty P reduces the inverse supply curve $w_s^*(s, A)$ for all $s \geq \underline{s}$.*

Proof. The participation constraint (22) becomes $U(w_s \cdot s + m, s, a) \geq \bar{U}_0 - P$. Increasing P relaxes this constraint, so the minimum w_s required to induce any s falls. ∎

The politician can lower the cost of support either by making support more attractive (propaganda) or by making non-support more painful (coercion). Both shift the supply curve down.

Coercion also makes supply inelastic. With a binding minimum $\underline{s}$, the supply curve has a kink: below $\underline{s}$, supply is perfectly inelastic.

Lemma 3 (Coercion Reduces Elasticity). *An increase in the minimum support requirement $\underline{s}$ reduces the elasticity of supply ε_s in the neighborhood of $\underline{s}$.*

Proof. At $s = \underline{s}$, the citizen must provide at least $\underline{s}$ regardless of price. The supply curve is perfectly inelastic from below, creating a kink. Local elasticity falls. ∎

This elasticity effect amplifies the market power distortion. When coercion makes supply more inelastic, the politician's markdown increases.

The politician's problem with coercion is

$$\max_{s,A,P,\underline{s}} \ v \cdot s - w_s^*(s, A, P) \cdot s - w_A \cdot A - w_P \cdot P, \tag{24}$$

where w_P is the cost of enforcement (the expense of maintaining secret police, surveillance networks, informant systems, and punishment infrastructure).

Proposition 4 (Optimal Coercion). *The politician uses positive coercion ($P^* > 0$) if and only if the marginal enforcement cost w_P is sufficiently low. Higher coercion leads to:*

(i) *Lower wages w_s^*.*

(ii) *Larger markdowns $(v - w_s^*)/v$.*

(iii) *Greater political rents.*

Proof. The FOC for coercion is $-(\partial w_s^* / \partial P) \cdot s = w_P$. Since $\partial w_s^* / \partial P < 0$ by Lemma 2, the LHS is positive. Interior $P^* > 0$ requires w_P low enough that the marginal benefit exceeds cost at $P = 0$. Parts (i)–(iii) follow from Lemma 2 and Proposition 1. ∎

The proposition shows that coercion is essentially a substitute for wages. Both induce support: wages make support attractive; coercion makes non-support costly. The choice between them depends on their relative costs.

6.2 Forced Consumption of Propaganda

Coercion affects propaganda through a second channel: forced consumption. So far I have assumed that citizens voluntarily consume propaganda: $a \leq A$ with the constraint binding only if propaganda is a "good" ($\partial U / \partial a \geq 0$). But what if propaganda is a "bad"?

Without coercion, if $\partial U / \partial a < 0$, the citizen ignores as much propaganda as possible. She changes the channel, throws away the mailer, or tunes out the speech. The politician cannot reach her with unwanted messaging.

Coercion changes this. The same enforcement capacity that punishes non-compliance with support requirements can compel propaganda consumption. *Forced consumption* allows the politician to impose $a = A$ regardless of citizen preferences. Mandatory attendance at rallies, political meetings, and study sessions means citizens cannot stay home. Required display of portraits, symbols, and slogans forces citizens to signal compliance visibly. State media monopolies place televisions and loudspeakers in every home and public square, leaving nothing else to watch or hear. Penalties for non-consumption (missing the May Day parade, failing to applaud at the right moments, not knowing the current party line) complete the picture.

Under forced consumption, the citizen's problem becomes

$$\max_{s} \ U(w_s \cdot s + m, \, s, \, A), \tag{25}$$

where $a = A$ is imposed exogenously. The citizen still chooses how much support to provide, but she cannot choose whether to consume propaganda.

Proposition 5 (Forced Consumption Enables Distasteful Propaganda). *(i) Without forced consumption, the politician's optimal propaganda satisfies $\partial U / \partial a \geq 0$. Propaganda must be weakly enjoyable.*

(ii) With forced consumption, the politician can deploy propaganda with $\partial U / \partial a < 0$, as long as $\partial^2 U / \partial s \, \partial a > 0$. Propaganda can be distasteful if it effectively reduces the marginal cost of support.

Proof. (i) Without forced consumption, the citizen sets a to maximize utility given (w_s, s). If $\partial U / \partial a < 0$, the citizen sets $a = 0$, and propaganda has no effect. For propaganda to

matter, the citizen must voluntarily consume it, which requires $\partial U / \partial a \geq 0$.

(ii) With forced consumption, $a = A$ is imposed. The citizen's supply of support depends on A through the cross-partial $\partial^2 U / \partial s\, \partial a > 0$. Even if $\partial U / \partial a < 0$, the propaganda shifts the supply curve down (Lemma 1), benefiting the politician. ∎

Democratic campaign advertising must satisfy $\partial U / \partial a \geq 0$: citizens can change the channel. Totalitarian propaganda has no such constraint. The content can be tedious, repetitive, or transparently false. What matters is not whether citizens enjoy the propaganda but whether it shifts their willingness to provide support through the cross-partial $\partial^2 U / \partial s\, \partial a > 0$.

6.3 Why Coercion and Propaganda Are Complements

Both coercion and propaganda shift the supply curve down. They might seem like substitutes: why bother with propaganda if you can just coerce? But coercion and propaganda are complements because coercion expands *what kind* of propaganda can work.

The key constraint is voluntary consumption. Without coercion, citizens choose how much propaganda to consume. If propaganda is distasteful ($\partial U / \partial a < 0$), citizens avoid it: they change the channel, skip the rally, ignore the pamphlet. For propaganda to shift the supply curve, it must be consumed. This means democratic propaganda must be at least tolerable.

Define the feasible propaganda set. For propaganda to shift the supply curve, it must satisfy $\partial^2 U / \partial s\, \partial a > 0$ (complementarity with support). Without forced consumption, it must also be voluntarily consumed:

$$\mathcal{A}_0 = \{A : \partial U / \partial a \geq 0 \text{ and } \partial^2 U / \partial s\, \partial a > 0\} \quad \text{(works without coercion)} \qquad (26)$$

With forced consumption (enabled by sufficient coercion), only the supply-shifting con-

dition matters:

$$\mathcal{A}_1 = \{A : \partial^2 U / \partial s\, \partial a > 0\} \quad \text{(works with coercion)} \tag{27}$$

The second set is strictly larger: $\mathcal{A}_0 \subset \mathcal{A}_1$. Coercion relaxes the tolerability constraint. Mandatory political education, compulsory rallies, and repetitive slogans are tedious ($\partial U / \partial a < 0$) but still shift the supply curve ($\partial^2 U / \partial s\, \partial a > 0$).

Proposition 6 (Complementarity). *Coercion weakly increases the set of propaganda instruments that can shift the support supply curve downward. If the most effective propaganda is distasteful ($\partial U / \partial a < 0$), coercion strictly expands the feasible set.*

Proof. From Proposition 5, forced consumption requires coercion above some threshold $\bar{P}$. For $P < \bar{P}$, the politician is constrained to $\mathcal{A}_0$. For $P \geq \bar{P}$, the feasible set expands to $\mathcal{A}_1 \supset \mathcal{A}_0$. Since $\mathcal{A}_1 \setminus \mathcal{A}_0$ is nonempty (distasteful but effective propaganda exists), the expansion is strict. ∎

This is complementarity in the feasibility sense: coercion doesn't just raise the level of propaganda; it changes what propaganda is possible. Regimes move from "must be tolerable" to "can be effective even if hated." The Soviet Union could deploy tedious Marxist-Leninist education because citizens had no choice but to attend. A democratic politician cannot: voters would tune out.

The empirical implication is that high-coercion regimes should run tighter information environments. Where coercion is high, states can deploy propaganda that would fail without forced consumption: coercive regimes use propaganda instruments that non-coercive regimes cannot.

The feasibility result can also be summarized with a direct assumption on the supply function. If we assume propaganda is more effective at reducing the supply price when

coercion is higher:

$$\frac{\partial^2 w_s^*}{\partial A\, \partial P} < 0, \tag{28}$$

then standard comparative statics imply $dA^*/dP > 0$ and $dP^*/dA > 0$. This cross-partial captures multiple channels: forced consumption, censorship of alternatives, preference falsification (Kuran 1995), and cognitive dissonance. The assumption packages these mechanisms into a single condition on the reduced-form supply function.

6.4 Propaganda Quality

The feasibility expansion has a sharp implication for propaganda *quality*. Let $q \in [0, \bar{q}]$ denote the quality of propaganda: its entertainment value, production quality, and plausibility. Assume the marginal utility of propaganda depends on quality:

$$\frac{\partial U}{\partial a} = g(q), \quad g'(q) > 0, \quad g(0) < 0 < g(\bar{q}). \tag{29}$$

Low-quality propaganda is distasteful ($g(0) < 0$); high-quality propaganda is enjoyable ($g(\bar{q}) > 0$). Define $\underline{q}$ as the minimum quality satisfying $g(\underline{q}) = 0$: propaganda of quality $\underline{q}$ is just barely tolerable.

Assume the complementarity condition holds regardless of quality: $\partial^2 U / \partial s\, \partial a > 0$ for all q. Even tedious propaganda shifts the supply curve. Finally, assume quality is costly: $w_A = w_A(A, q)$ with $\partial w_A / \partial q > 0$.

Proposition 7 (Propaganda Quality). *Let q_D^* denote optimal quality without forced consumption and q_A^* denote optimal quality with forced consumption. Then $q_A^* < q_D^*$.*

Proof. Without forced consumption, citizens choose $a = A$ only if $\partial U / \partial a \geq 0$, requiring $q \geq \underline{q}$. The politician optimizes subject to this constraint. With forced consumption, this constraint vanishes: the politician can set any $q \geq 0$. Since $\partial w_A / \partial q > 0$, the politician

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reduces quality until another constraint binds. Because the constraint set is larger under forced consumption, $q_A^* \leq \underline{q} \leq q_D^*$. ∎

The model predicts that propaganda quality is negatively correlated with coercion. High-coercion regimes can deploy tedious, repetitive, obviously false propaganda because citizens cannot opt out. Low-coercion regimes must invest in entertainment value and plausibility to ensure voluntary consumption.

This explains a puzzle: totalitarian propaganda is famously low-quality. North Korean broadcasts are tedious and transparently false. Soviet mandatory political meetings were notoriously boring. Yet American Super Bowl advertisements are slickly produced, and political campaigns invest heavily in entertainment value. The standard explanation invokes irrationality or incompetence. The model offers an economic explanation: totalitarian regimes *can afford* low-quality propaganda because forced consumption removes the tolerability constraint. Democracies must produce higher-quality propaganda because citizens can change the channel. Carter and Carter (2023) obtain a similar prediction through signaling: "absurd propaganda" signals coercive capacity. The mechanisms are complementary.

7 Predictions and Evidence

The model generates four main predictions. First, autocracies should use more propaganda than democracies because monopolists capture higher returns. Second, coercion and propaganda should move together because they are complements. Third, larger autocracies should propagandize more heavily because of scale effects. Fourth, propaganda *quality* should be negatively correlated with coercion: high-coercion regimes can deploy low-quality propaganda because forced consumption removes the tolerability constraint.

Cross-country data support these predictions, though the correlations do not identify

the mechanism. Correlations cannot distinguish the model's mechanism from alternatives. But if the basic patterns ran counter to the predictions, that would be informative. The data come from QoG, V-Dem, and Reporters Without Borders, covering 103 countries from 1976–2024.

Coercion is measured by the Political Terror Scale (PTS), which codes state repression on a 1–5 scale. Propaganda control is measured by the RSF Press Freedom Index (higher values indicate more freedom, less state control) and V-Dem's academic freedom index.

Table 1 shows the basic pattern. Closed autocracies have the lowest press freedom (RSF = 40) and highest coercion (PTS = 3.8); liberal democracies have the highest press freedom (RSF = 78) and lowest coercion (PTS = 1.7). This is consistent with the first prediction.

Table 1: Propaganda Control and Coercion by Regime Type (2023)

Regime Type	RSF Press Freedom		Political Terror Scale	
	Mean	n	Mean	n
Closed Autocracy	39.7	39	3.79	25
Electoral Autocracy	52.3	43	2.92	17
Electoral Democracy	62.2	45	2.41	19
Liberal Democracy	78.3	40	1.66	17

Note: RSF: higher = more press freedom (less propaganda control).
If RSF 2023 is missing, we use 2022 RSF for that country.
PTS: higher = more state repression. Source: QoG Standard Dataset, PTS 2025.

The second prediction is that coercion and propaganda move together. Figure 1 shows the cross-sectional relationship: the correlation between press freedom and coercion is $r = -0.75$ ($p < 0.001$). Countries with high coercion also have low press freedom; countries with low coercion have high press freedom. Figure 2 shows a monotonic gradient by democracy quintile using panel data from 1976–2024.

These cross-sectional correlations cannot distinguish complementarity from common causes. Perhaps some third factor drives both. Within-country changes provide a modest check. The correlation between changes in coercion and changes in academic freedom is
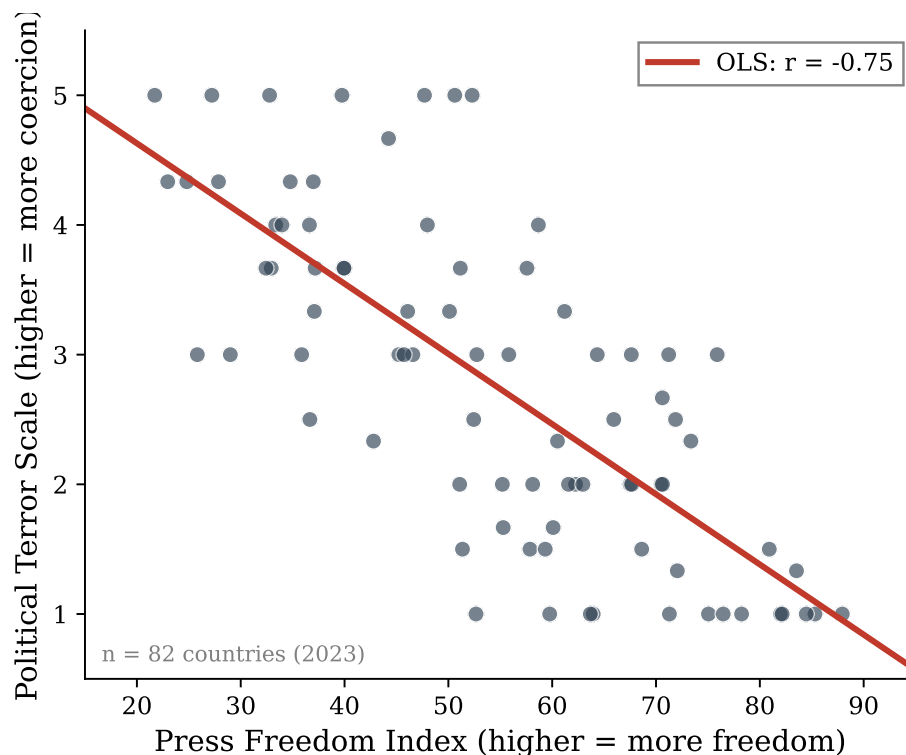
Figure 1: Press freedom and coercion across countries (2023). Each point is a country. The x-axis is the RSF Press Freedom Index (higher = more freedom). The y-axis is the Political Terror Scale (higher = more state repression). Correlation: $r = -0.75$, $n = 82$.

$r = -0.09$ ($p < 0.001$). The sign is correct but the magnitude is small. At democratization events, both coercion and propaganda control decline, consistent with the model.

The third prediction is scale effects. Among autocracies, larger countries should propagandize more. Restricting to autocracies, the correlation between log population and press freedom is $r = -0.07$ ($p = 0.002$): larger autocracies have modestly lower press freedom, consistent with more propaganda control. The magnitude is small, perhaps reflecting that propaganda is partly a public good, broadcast once to all citizens.

The fourth prediction concerns propaganda quality. High-coercion regimes should deploy lower-quality propaganda because forced consumption removes the need for tolerability. This prediction is harder to test quantitatively but consistent with case-study evidence. North Korean broadcasts, Soviet political meetings, and Maoist study sessions
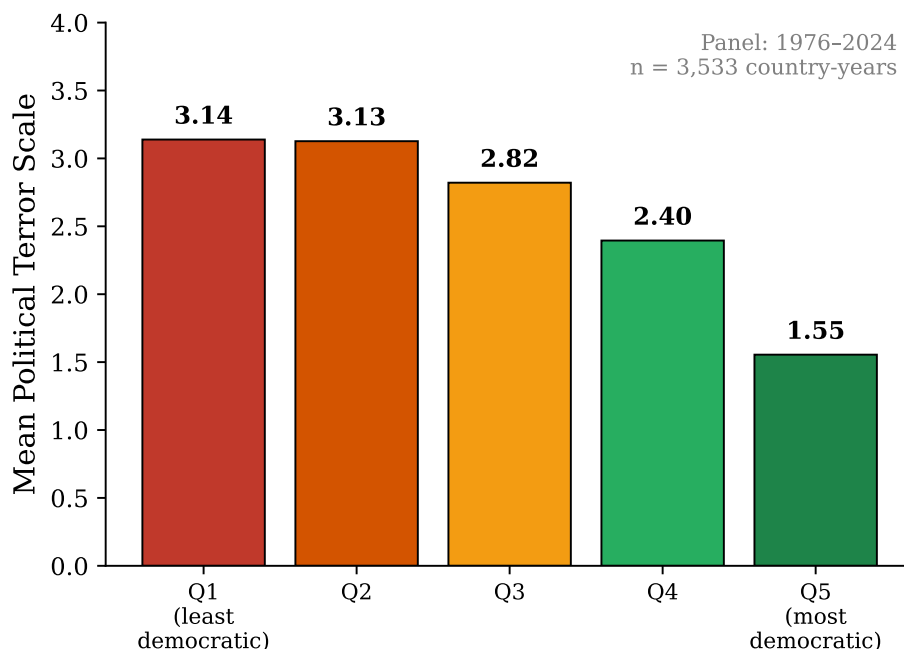
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Figure 2: Mean coercion by democracy quintile (panel, 1976–2024). Countries grouped by V-Dem polyarchy score. The y-axis is the Political Terror Scale (higher = more state repression). $n = 3{,}533$ country-years.

were famously tedious. American political advertising, by contrast, must compete for attention and invests heavily in production value. The model explains this contrast: totalitarian regimes can afford low-quality propaganda because citizens cannot change the channel.

These patterns are consistent with the model but do not identify its mechanism. I measure propaganda *control* rather than *output*, and the correlations could reflect common causes.

The model generates additional predictions that future work could examine. Consolidation should increase propaganda, since it reduces effective competition. Technology shocks should have asymmetric effects across regime types. Media liberalization should crowd out state propaganda by raising its effective cost.

8 Conclusion

Propaganda is the politician's tool for shifting the supply curve of political support. This single idea explains why autocracies propagandize heavily and why coercion and propaganda move together.

The market power framework explains why political rents are large in autocracies and small in democracies. Autocrats face inelastic supply curves and exploit their market power. The complementarity between propaganda and support explains why propaganda is used: it makes support less costly to purchase.

The competition results explain why democracies propagandize less than autocracies. Competition reduces markdowns, which reduces the returns to propaganda. And when propaganda is a public good among politicians ("regime propaganda"), competition creates a free-rider problem that further reduces provision.

The coercion results explain why totalitarian regimes combine terror and ideology. Coercion and propaganda are complements, each making the other more effective. Coercion also enables forced consumption of propaganda that citizens would otherwise reject. This is why totalitarian propaganda can be tedious and transparently false in ways that democratic advertising cannot be.

By treating propaganda as a complement in stable preferences, I avoid the need for special theories of "manipulation," "brainwashing," or "preference change." The effects of propaganda emerge from the same logic that governs advertising, product quality, and complementary goods. Nothing in the model requires that citizens be irrational or that their preferences be unstable. Propaganda works not by changing who people are, but by changing the constraints they face.

This unification allows standard welfare analysis to apply. Whether propaganda is excessive depends on the same variables that determine whether advertising is excessive

(the direct utility effects, the degree of competition, and the induced changes in other markets). The answer is not obvious in either case.

The model also generates sharp empirical predictions. Autocracies should propagandize more than democracies. Consolidation should increase propaganda. Coercion and propaganda should move together. Technology shocks should have asymmetric effects across regime types. These predictions are testable and broadly consistent with historical and cross-country evidence.

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