Interjurisdictional Competition and Coordination: Evidence from Kansas City*

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Abstract

When do jurisdictions compete to attract firms with business incentives and when do they coordinate? A simple model of inter-jurisdictional competition and firm location choice describes how the jurisdictions' gains from coordination depend on economic spillovers, competitive externalities, and political payoffs from winning firms. The potential gains from internalizing spillovers and competitive externalities are high if one of the two externalities is dominant. On the other hand, coordination can result in the loss of political payoffs. The model is applied to a case study of the competition between Kansas and Missouri for relocation of existing Kansas City firms across the border. Economic spillovers and competitive externalities between the two states likely were strong, suggesting that high political payoffs intensified the state competition. The growing unpopularity of the competition likely reduced the political payoffs and pushed the two states to agree on reducing the relocation incentives.

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1 Introduction

When do jurisdictions compete to attract firms and when do they coordinate? This paper studies how jurisdictions' gains from coordination depend on the economic spillovers, competitive externalities, and the political payoffs from winning firms. A simple model of inter-jurisdictional competition and firm location choice describes that the potential gains are large when one of the two externalities is dominant. To gain from addressing the freeriding problem, weak competitive externalities must allow firms to be diverted from elsewhere. On the other hand, to gain from internalizing the competitive externalities, weak economic spillovers must create room for incentive spending to be reduced. Coordination can also result in the loss of political payoffs, hurting elected officials but benefiting the residents.

The model is applied to study the competition between the states of Kansas and Missouri for relocating existing Kansas City firms across the border during 2009-2019. This competition has received much public attention due to the two states' large spending on relocation incentives. Evidence suggests that Kansas City firms were unlikely to move out of the metropolitan area, implying high competitive externalities between the two states. The economic linkage between the two states within Kansas City also appears to be strong. The model prediction that the two states would substantially freeride given these circumstances is inconsistent with the observed intensity of the border war. Large political payoffs from relocating firms is one possible explanation.

Evidence suggests that the Republican Kansas Governor Sam Brownback faced high political gains from relocating Kansas City firms from the Missouri side of the border. Brownback had implemented large tax cuts, known as the Kansas Experiment, to advance his fiscally conservative agenda. One key indicator of success for Brownback was the number of jobs created in the Kansas side of Kansas City since the Missouri side formed a suitable comparison group. The Democratic Missouri Governor Jay Nixon opposed tax cuts and pursued streamlining government functions to balance the budget. Nixon faced heavy resistance from the Republican state legislators that favored tax cuts to compete against Kansas.

The growing unpopularity of the border war pushed the two states to coordinate on reducing the relocation incentives. The first two coordination attempts in 2014 and 2016 failed. Brownback rejected Missouri's truce offer likely because he still needed to prove that the Kansas Experiment worked. It was only when there was near consensus that Brownback's policies had failed that he made a counter-offer. The new Democratic Kansas Governor Laura Kelly that replaced Brownback was politically charged to undo Brownback's policies, one of which was aggressive recruiting of Kansas City firms from Missouri. The third coordination attempt in 2019 to end the border war between Kelly and the new Republican Missouri Governor Michael Parson was successful. However, the agreement appears tenuous when the two states are presented with major firm relocation opportunities.

Some features of the Kansas City case are relevant for studying inter-jurisdictional competition and coordination in other regions. Jurisdictions in a common metropolitan area or regional industry cluster are likely to exert high competitive externalities and economic

spillovers on each other, especially when competing for the area's existing firms.[1]

For example, in New York metropolitan area, Connecticut relocated two financial firms, UBS in 1994 and RBS in 2005, from New York to nearby Stamford. On the other hand, the political payoffs from winning firms are more likely to vary over time for idiosyncratic reasons, affecting the chances of inter-jurisdictional coordination. For example, Maryland, Virginia, and Washington D.C. initially failed to coordinate on a joint incentive offer to attract Amazon HQ2 but later supported each other when all three were shortlisted, writing to Amazon CEO Jeff Bezos: "In many ways, our jurisdictions have embraced a shared vision for the future." Similarly in 1991, jurisdictions in the New York metropolitan area signed a non-aggression pact to end soliciting firms from each other but the agreement stopped at stating the common goals. The latest efforts to achieve inter-jurisdictional coordination are being made by state legislators across the nation in response to heightened public criticism of incentives. Since 2019, fifteen states have introduced bills and one state has passed the bill to join the Phase Out Corporate Giveway Interstate Compact to end poaching firms from other signatory states with firm-specific incentives.

Related literature. The extensive literature on inter-jurisdictional competition for firms with business incentives documents the rapidly intensifying competition in the U.S. (Bartik (2020) and finds mostly small welfare impacts of the competition due to the insensitivity of firms' decisions to incentives (Bartik (2005), Patrick (2014), Jensen (2017), Mast (2020), Slattery (2020), Slattery and Zidar (2020), Kim (2020)). The large payoffs from attracting firms would explain why jurisdictions are willing to offer large sums of incentives but the literature's findings imply that a substantial part of those payoffs are transferred to firms as incentives. In this paper's regional setting, inter-jurisdictional competition has further distributional consequences if a considerably larger share of the payoffs are derived by the elected officials than by the residents and if the competitive externalities and economic spillovers are strong. As Jensen et al. (2014), Jensen and Malesky (2018), and Slattery (2022) find, politicians use business incentives to claim credits for job creation, often around re-election, to signal their success in promoting economic growth. The political gains from relocating firms with incentives also appear to have been strong in Kansas City especially in the middle of the Kansas Experiment. This paper's case study suggests that the political payoffs can sometimes shift to elicit inter-jurisdictional coordination.

The rest of the paper proceeds as follows. Section 2 provides a model of inter-jurisdictional competition and firm location choice and discusses jurisdictions' potential gains from coordination. Section 3 presents a case study of the state competition in Kansas City, focusing on the conditions that likely contributed to the state coordination. Section 4 concludes.

2 Model

I model incentive offer decisions of three jurisdictions, $s \in \{K, M, O\}$ and location decisions of J number of firms, $j \in \{1 \cdots J\}$. Jurisdictions K and M belong to the same metropolis,

[1] See Agrawal and Hoyt (2018)'s Table A1 for a complete list of multi-state metropolitan statistical areas.

standing for Kansas and Missouri in Kansas City. Jurisdictions and firms make decisions sequentially in the order described below.

2.1 Inter-jurisdictional competition

I consider two cases with and without coordination between jurisdictions K and M. The following discussion is conditional on a firm, so I suppress the firm subscript j for brevity.

2.1.1 No coordination between jurisdictions K and M

Jurisdictions compete to host the firm by simultaneously offering incentives. Jurisdiction s chooses its incentive offer, b_s, to maximize the expected payoff:

$$\max_{b_s}(v_s^e + v_s^p - b_s)\Pr(s \text{ wins}|b_s) + \mathbb{1}[s \in \{K, M\}]\gamma v_s^e \Pr(\{K, M\} \setminus s \text{ wins}|b_s).$$

Jurisdiction s derives $v_s^e + v_s^p - b_s$ if it wins the firm. $v_s^e + v_s^p$ captures the gross payoff from winning and consists of two additively separable components. First, v_s^e captures the economic payoff from the firm's job creation, retention, and investment that contribute to the income of jurisdiction s's residents. Second, v_s^p captures the political payoff that jurisdiction s's elected official derives by claiming credits for v_s^e and also through possible political contributions of the firm receiving incentives (quid pro quo), both contributing to the reelection chances. The political payoff is assumed to be strictly increasing in economic payoff: $\frac{\partial v_s^p}{\partial v_s^e} > 0$. The motivation for this assumption is that a politician would likely earn more credits if she delivers larger economic benefits to her constituents.

Jurisdiction $s \in \{K, M\}$ derives γv_s^e even if the other jurisdiction in the metropolis wins. The motivation for this assumption is that if the economic linkage between jurisdictions K and M is strong, the economic benefit of one of those two jurisdictions hosting a firm is likely to spill over to the other jurisdiction. $\gamma \in [0, 1]$, governs the magnitude of such economic spillover between jurisdictions K and M and, for simplicity, is assumed symmetric.

The first-order condition for the optimal incentive offer, b_s, is:

$$b_s = v_s^p + v_s^e \left(1 + \mathbb{1}[s \in \{K, M\}]\gamma \frac{\Pr'(\{K, M\} \setminus s \text{ wins}|b_s)}{\Pr'(s \text{ wins}|b_s)}\right) - \frac{\Pr(s \text{ wins}|b_s)}{\Pr'(s \text{ wins}|b_s)}, \tag{1}$$

where $\Pr'(\cdot|\cdot)$ denotes the first derivative of the probability function with respective to the conditioning variable.

The optimal incentive offer is increasing in the gross payoff, $v_s^e + v_s^p$, but decreasing in the economic spillover magnitude, γ, for jurisdictions $s \in \{K, M\}$, since they shade their offers to freeride on each other's win. This freeriding effect also depends on the diversion ratio, $-1 \leq \frac{\Pr'(\{K,M\} \setminus s \text{ wins}|b_s)}{\Pr'(s \text{ wins}|b_s)} \leq 0$, whose magnitude captures the competitive externality that jurisdiction $s \in \{K, M\}$'s marginally higher offer exerts on the other jurisdiction in the metropolis. The magnitude of the diversion ratio increases with the firm's substitutability between locations K and M. The final term captures the strategic markdown, a function

of the firm profits and competing jurisdictions' incentive offers. In the extreme case with maximum spillover and competitive externalities (i.e., $\gamma = 1$ and $\frac{\Pr'(\{K,M\} \setminus s \text{ wins}|b_s)}{\Pr'(s \text{ wins}|b_s)} = -1$), incentive offers would be driven only by political payoffs.

2.1.2 Coordination between jurisdictions K and M

Jurisdictions K and M coordinate by choosing a joint incentive offer, b_{KM}, maximizing the sum of their economic payoffs. The political payoff is assumed to not matter but the model may be extended to include positive political payoffs if elected officials share credits for delivering economic payoffs to the constituents. The maximization problem is:

$$\max_{b_{KM}} \sum_{s\in\{K,M\}} (v_s^e + \gamma v_{\{K,M\}\setminus s}^e - b_{KM}) \Pr(s \text{ wins}|b_{KM}).$$

The first-order condition for the optimal joint incentive offer is:

$$b_{KM} = \frac{\sum_{s\in\{K,M\}} (v_s^e + \gamma v_{\{K,M\}\setminus s}^e) \Pr'(s \text{ wins}|b_{KM}) - \Pr(s \text{ wins}|b_{KM})}{\sum_{s\in\{K,M\}} \Pr'(s \text{ wins}|b_{KM})}.$$

The optimal joint offer internalizes the economic spillover, exerting an upward pressure. The competitive externalities are also internalized, exerting a downward pressure through increasing the amount of strategic markdown.

2.2 Firm location choice

Upon receiving incentive offers, the firm chooses the location that maximizes its profit, assumed to equal the location's incentive offer plus the scalar base profit that depends on exogenous characteristics. To close the model, the firm's location choice probability is:

$$\Pr(s \text{ wins}|b_s) = \int\int\int \prod_{s'\neq s} G_{b_{s'}}(b_s + \overline{\pi}_s - \overline{\pi}_{s'}) dH_{\overline{\pi}},$$

where $(\overline{\pi}_K, \overline{\pi}_M, \overline{\pi}_O) \sim H_{\overline{\pi}}$ denotes base profits, and G_{b_s} denotes jurisdiction s's offer distribution.

2.3 Expected payoff from coordination

The change in jurisdictions K and M's combined expected payoffs from coordination is:

$$\sum_{s\in\{K,M\}} \overbrace{(\Pr(s \text{ wins}|b_{KM}) - \Pr(s \text{ wins}|b_s))}^{\Delta \text{ winning probability}}(v_s^e + \gamma v_{\{K,M\}\setminus s}^e - b_s) + \Pr(s \text{ wins}|b_{KM}) \overbrace{(b_s - b_{KM})}^{\Delta \text{ payment}}$$
$$- \Pr(s \text{ wins}|b_s) v_s^p.$$

There are two sources of gains from coordination. First, jurisdictions K and M can raise their winning probabilities through coordinating on an offer higher than what they would have individually offered without coordination. This channel operates through countering

the freeriding problem and hence is important when the economic spillovers between the two jurisdictions are significant. Second, the jurisdictions can avoid competing against each other and decrease the incentive payments. This channel is important when the competitive externalities between the two jurisdictions are significant.

The two sources of gains from coordination are also at a race against each other. For jurisdictions K and M to benefit from addressing the freeriding problem, the competitive externalities between them need to be small so that there is scope for firms to be diverted from jurisdiction O. On the other hand, for jurisdictions K and M to benefit from internalizing the competitive externalities, the economic spillovers between them need to be small so that they are not extensively freeriding, creating room for the incentive offers to go down. In the extreme case with maximum economic spillovers and competitive externalities and minimum political payoffs[2], jurisdictions K and M cannot benefit from coordination. This is because the joint winning probability cannot go up when firms never choose jurisdiction O, and the incentive payments also cannot go down when they are already zero due to maximum freeriding. The above arguments are summarized in Table 1 and also illustrated using simulations of the parameterized model in Kim (2023).[3]

Table 1: Jurisdictions K and M's potential gains from coordination

	Competitive externality	
Economic spillover	Low	High
Low	Small gain	Large gain from payment ↓
High	Large gain from win probability ↑	Small gain

One obstacle to coordination is the commitment problem: the jurisdictions' potential disagreement over how to divide the total payoffs after competition takes place. For instance, suppose the jurisdictions make a high joint offer and divert a firm from outside the metropolis. Would a jurisdiction still be willing to contribute to the joint offer if it finds out that the firm is coming to the metropolis but going to the other jurisdiction? Similarly, suppose the jurisdictions make a low joint offer and reduce their incentive spendings. Would the winning jurisdiction still be willing to share its incentive savings with the other jurisdiction that cooperated in softening the competition? These motives to deviate from coordination resemble a prisoner's dilemma and are stronger after firms' location decisions are made when one jurisdiction is in a position to hold up the other.

Another obstacle to coordination is the loss of political payoffs, which this paper argues is important for the Kansas City context. In the model, coordination weakly benefits the residents as shown in Table 1 but prevents the elected officials of jurisdictions K and M from deriving the political payoffs. If this distributional consequence is severe and if the competitive externalities between jurisdictions K and M are large, the elected officials may fail to coordinate on lower incentives and rather compete more intensely, hurting the

[2]i.e.,$\gamma = 1$, $\frac{\Pr'(\{K, M\} \setminus s \text{ wins}|b_s)}{\Pr'(s \text{ wins}|b_s)} = -1$, and $v_s^p = 0$.

[3]The simulated model assumes that jurisdictions K and M offer separate but jointly optimal incentives b_K, b_M. The gains from coordination articulated above are illustrated.

residents. In this case, the gains from coordinating on lower incentives would be amplified for the residents, but the politicians would not be willing to deliver those gains. To address this principal-agent problem, voters would need to substantially shade the credits they give to their elected officials for winning firms.

The model may be modified to approximate settings with positive political payoffs from coordination. When competitive externalities are low and economic spillovers are high, jurisdictions K and M would combine forces to attract firms from outside the metropolis. In this case, the metropolis residents may reward their elected officials for a successful coordination, without which firms would have been unlikely to choose the metropolis. On the other hand, when the competitive externalities are high and economic spillovers are low, the metropolis residents may be more reluctant to reward their elected officials, since while coordination reins in the within-metro competition, it is unlikely to attract new firms from outside the metropolis. How political payoffs from coordination vary with economic spillover and competitive externalities need to be further studied.

2.4 Special form of coordination: truce

A special form of coordination relevant for the Kansas City context is setting the joint incentive offer to zero ("truce") when competing for existing firms in jurisdictions K and M that have zero chance of choosing jurisdiction O. In this case, since jurisdictions K and M exert maximum competitive externalities on each other, a truce would be optimal in presence of either small economic spillovers or large political payoffs. In the latter case, the elected officials would be uninterested in a truce even though the residents face substantial gains from coordinating on lower incentives. The degree of the principal-agent problem may also vary across the two jurisdictions if the political payoffs from retaining firms are different from those of relocating new firms. For example, suppose voters reward a relocation more than a retention and punish a failed relocation less than a failed retention. In this case, the politician with more opportunities to relocate firms, perhaps because her jurisdiction is less economically developed, would be less willing to agree to a truce since she expects more to gain politically from relocations. The politician in the other jurisdiction would be far more interested in a truce since she has less to gain politically from fighting for retentions.

The disparity in jurisdictions K and M's economic strengths also highlights the commitment problem as a potential obstacle to coordination. The weaker jurisdiction facing ample opportunities to relocate firms would have less to gain from a truce limiting those opportunities. Hence, the stronger jurisdiction that has more to gain from the incentive savings would have to credibly commit to share its savings to elicit the weaker jurisdiction's coordination.

3 Kansas City Case Study

I use the model to study Kansas and Missouri's competition for relocating existing firms within the Kansas City metropolitan area. This competition has received much public attention for its remarkable intensity. Table 2 shows that each state spent nearly $200 million to relocate firms from each other in Kansas City during 2009-2019 according to

the data collected by the Hall Family Foundation. These are sizable amounts considering the fact that Kansas and Missouri collected about $334 and $510 million respectively in corporate income taxes in an average year during the sample period. Kansas attracted about 1,000 jobs more than Missouri for a total of 7,449 jobs. Kansas and Missouri spent about $21 and $23 thousand per job respectively.[4] In per-capita terms, the two states spent about $20 and $14 in an average year during the sample period, comparable to Slattery and Zidar (2020)'s finding that the average state tax credits per capita amount to $19 in 2014.[5]

The numbers reported in Table 2 include the incentives paid under the two states' flagship job creation programs. Kansas's Promoting Employment Across Kansas (PEAK) program allows firms with at least 10 (100) new employees to retain up to 95% of the payroll withholding taxes up to 7 (10) years. On the other hand, the Missouri Works program allows firms with at least 10 new employees to retain up to 100% of the state withholding taxes up to 5-6 years and 6-7% of new payroll of at least 100 new employees up to 5-6 years. The total incentives spent on relocating existing Kansas City firms across the border would further increase if local incentive payments which mostly consist of local property tax abatements are included.

I study three aspects of the Kansas City competition using the model.

Table 2: Kansas and Missouri's relocation incentive spendings in Kansas City, 2009-19

	Kansas	**Missouri**
Incentive spending	$199 million	$212 million
# Jobs relocated	7,449 jobs	6,565 jobs
# Firms relocated	76 firms	35 firms
Incentive spending per job	$21,000	$23,000
Incentive spending per capita	$20	$14

Note: Data from the Hall Family Foundation. Kansas's incentives are provided through the Promoting Employment Across Kansas (PEAK) program, and Missouri's incentives are provided through the Missouri Works program. Three firms that relocated to Missouri are excluded due to missing job information.

3.1 Competitive externality

Kansas and Missouri competed for existing firms in Kansas City that were unlikely to move out of the metropolitan area at the time.[6] Anecdotal evidence suggests that most firm relocations were initiated by firms threatening to move to the other side of the border or the economic development agencies recruiting firms.[7] The firms would have also faced relatively low cost of moving across the state border due to the physical proximity and the

[4] These numbers are lower than the average state spending of $46 thousand per job found by Slattery and Zidar (2020) who focus on subsidies worth more than $5 million.

[5] The total incentive spending reported in the first row of Table 2 is divided by each state's population in Kansas City metropolitan area times the number of sample years.

[6] One well-known exception is Applebee's relocation to California in 2015. Prior to this move, however, it relocated twice across the state border in Kansas City.

[7] Kansas Commerce Department was reported to have sent mass recruitment mails to Missouri businesses in 2016, including Missouri's Downtown Council Community Improvement District (Vockrodt, 2016).

access to the same pool of workers and suppliers. Press coverage frequently emphasizes how the firm relocations would have only changed the workers' commuting patterns. Jensen (2017) finds that Kansas's PEAK program had little impact on Kansas firms' employment and relocation decisions, suggesting that they were unlikely to move without the incentives. If the firms that Kansas and Missouri fought for were unlikely to move out of the city, competitive externalities between the two jurisdictions would have been high, implying the model's diversion ratio, $\frac{\Pr'(\{K,M\} \setminus s \text{ wins}|b_s)}{\Pr'(s \text{ wins}|b_s)}$, is close to -1.

3.2 Economic spillover

The economic spillovers that Kansas and Missouri would have derived when each other hosts firms would have been substantial given the tight economic linkage within the metropolitan area. One piece of supporting evidence is the large share of residents that commute across the state border: job opportunities are open to all residents regardless of which jurisdiction hosts firms. The likelihood ratio of a Kansas resident working in Missouri relative to in Kansas is 0.18, while the likelihood of a Missouri resident working in Kansas relative to in Missouri is 0.25 according to the commuting flows data from the 2011-2015 American Community Survey.[8] The job opportunities would further increase when considering the local multiplier effects generated by the entry of complementary businesses. It must be noted that these effects may change in the long-run as workers move their residences to optimize commute times and tax payments as studied by Agrawal and Hoyt (2018). Although the tax revenues generated from hosting firms would not spill over, the incentives also limit the amount of tax revenues that can be generated. In sum, Kansas and Missouri would have derived considerable economic spillovers from each other's wins, implying high $\gamma v_K^e, \gamma v_M^e$ in the model.

If ignoring the political payoffs from the analysis, the above discussion suggests that Kansas and Missouri's gains from coordination are small, as the model predicts that Kansas and Missouri would voluntarily shade their incentive offers in competition against each other due to the economic spillovers and competitive externalities. In this case, a formal coordination would be unnecessary. However, this model prediction is inconsistent with the observed intensity of the competition between Kansas and Missouri, and the analysis needs to incorporate the political payoffs from relocating firms.

3.3 Political payoff

The political payoffs from relocating firms appear to have been high during the 2010s. Sam Brownback, the Republican governor of Kansas during 2011-2018, aggressively cut individual income taxes and eliminated pass-through income taxes. These policies, also called the "Kansas Experiment," appears to have been impacted by the nationwide buildup of the Tea Party movement and its demand for fiscally conservative policies. The media portrays Brownback as having had ambitions for a second presidential bid. Brownback initially enjoyed extensive support, winning his first gubernatorial race with a wide margin

[8]These statistics are computed by dividing the share of Missouri (Kansas) workforce residing in Kansas (Missouri) by the share of Kansas (Missouri) workforce residing in Kansas (Missouri).

(31.1 percentage points) and backed by the Republican controlled state legislature. However, his popularity quickly waned due to the state's fiscal crisis and poor economy. Brownback won the second race with a narrow margin (3.7 percentage points) and resigned in 2018 to serve an ambassadorial role after the Kansas Experiment was repealed despite his veto.

The success of the Kansas Experiment, which appears to have been pivotal for Brownback's political ambition, was measured by key economic indicators such as job creation and business growth. Brownback framed his economic policies as a winning strategy to compete for firms against other states among which Missouri was singled out. Brownback underscores his success in relocating firms from the Missouri side of Kansas City in the 2017 State of the State Address:

> "As new businesses decline nationally, we boast a record number of new businesses here. Businesses from Missouri are moving across the border, making Kansas City more of a Kansas city. [...] Other states, most notably Missouri, are looking at how to create an economic atmosphere for private sector job growth."

Brownback's choice of Kansas City to showcase his policy effects is likely related to the fact that Missouri's Democratic governor during 2009-2017, Jay Nixon, opposed aggressive tax cuts and pushed for streamlining government functions to balance the budget and invest in job creation. Nixon won both of his gubernatorial elections with considerable margins (18.9 and 12.2 percentage points) but still faced strong resistance from the Republican controlled state legislature to cut taxes similar to Kansas. Nixon vetoed the tax cut bill in 2013 but the state legislature overrode the veto in 2014. Pitching the new Missouri Works program as a streamlined program to incentivize high quality job creation, Nixon describes his policies as superior to those of Kansas and other states in the 2012 State of the State Address:

> "Because of our focus on fiscal responsibility and efficiency, Missouri is one of the few states with a Triple-A credit rating from all three rating agencies. Kansas can't say that. Neither can Arkansas, Illinois, Kentucky, Nebraska or Tennessee. [...] We know how to manage our money — better than our neighboring states, and much better than Washington. [...] From our low taxes to our strong workforce, Missouri is well positioned for job creation. To keep our economy growing, we must build on these strengths. That's what our Missouri Works strategy will do."

In sum, Brownback and Nixon took competing approaches to economic development and were mindful of their performances relative to each other. The competition was fueled by the partisan nature of the policies. The political payoffs from relocating firms in Kansas City thus would have been high if the city was perceived as a battlefield for the competing policies and if the job numbers in the city were used to keep scores. This would have been especially true for Brownback who had a bigger point to prove.

Assuming high v_K^p, v_M^p, the model predicts that Kansas and Missouri would have offered high incentives, mostly driven by political payoffs if the competitive externalities and economic spillovers are high as argued in the previous subsections. The first-order condition (Equation 1) which captures this intuition can be used to quantify the minimum political payoffs that explain the observed incentive spendings. In an empirical exercise with further structure on firm profits and economic payoff distributions, Kim (2023) finds a substantial share of incentive spendings to be politically driven: at least 10% of Kansas's total median payoff net of spillovers is political when relocating a firm with less than 20 jobs. On the other hand, at least 10% of Missouri's total median payoff net of spillovers is political when relocating a firm with at least 100 jobs.

The model further predicts that the political payoffs generate distributional consequences from coordination: the residents gain from coordinating on lower incentives while the politicians lose the expected political payoffs. In result, as discussed below, a significant reduction in political payoffs was needed for the elected officials to coordinate.

3.4 Failed coordination attempts

Declining political payoffs from firm relocations contributed to the multiple coordination attempts between Kansas and Missouri. Growing skepticism about the effects of incentives is documented in the local media. At least twelve editorials criticizing the border war are found in the local newspaper, Kansas City Star, during 2012-2016. Academic research has also shown that the incentive programs deliver little benefits to the residents not only in Kansas City but also in other areas (e.g., Jensen (2017), Bartik (2005)). The competition between Kansas and Missouri also received national spotlight and was satirized in a late night talk show on the national television. A group of about twenty civic and business leaders in Kansas City played a leading role in urging Brownback and Nixon to end the border war. In 2011, they wrote to the two governors:

> "The Kansas City community is experiencing an economic border war. State incentives are being used to lure businesses back and forth across the state line with no net economic gain to the community as a whole and a resulting erosion of the area's tax base. We are asking that you direct your Departments of Commerce to develop parallel legislation to reduce this unproductive use of tax incentives. While your departments work on this legislation, we ask that you both mutually agree to a bilateral halt to the issuance of incentives for business relocations between the two states within the Greater Kansas City area."

In result, both governors openly expressed the need to tame the competition and engaged in dialogues that continued for more than a year. Kansas launched the Kansas Border Challenge Advisory Committee, and Missouri legislators started working on a bill. In 2014, Nixon signed the Missouri Senate Bill No. 635 which proposed to Kansas a moratorium on incentive provision to Kansas City firms relocating across the border without new job creation.[9] However, this proposal failed to elicit an agreement from Kansas for at least

[9] https://www.senate.mo.gov/14info/pdf-bill/intro/SB635.pdf

three reported reasons.

First, Kansas raised the concern that firms would leave Kansas City if the two states did not provide relocation incentives. Kansas wanted to use discretionary incentives for firms likely to move out of the city, but Nixon did not have the discretion to pick particular firms to incentivize as the Missouri Quality Jobs program (predecessor to Missouri Works program) worked by entitlements. Missouri Republican legislators were unlikely to hand over the discretion to Nixon for the fear of his "micro-managing tax credit programs" (Hanna, 2013). The two states also disagreed over the degree of their competitive externalities. Missouri Republican Senator Ryan Silvey, who filed the moratorium, stated in 2014 that Kansas City firms were unlikely to leave the city even if the relocation incentives were banned:

> "The chances of a (Kansas City-area) company relocating to another region because we wouldn't allow cross-border competition is exceedingly slim. The fact is, they're just not interested in doing anything. I think it's because Kansas is worried about their ability to attract businesses from outside the region. Once they're in the region, they feel like they can bring them across the border. But they want to use us to get them here."

Second, Kansas wanted Missouri to lower its local tax abatements to the same level as Kansas, while Missouri was concerned that Brownback's tax cuts were already creating an uneven playing field. Finally, Kansas expressed that Missouri's proposal was coercive especially when Missouri Senator Silvey threatened with a retaliatory "Kansas recruitment act" if Kansas did not accept the offer. Blake Schreck, president of the Lenexa Chamber of Commerce and a member of the Kansas Border Challenge Advisory Committee replied in 2014 that Missouri's proposal "made it feel to many that Kansas was being dictated to rather than being negotiated with" (Roberts, 2014).

In 2016, Kansas offered a proposal of its own to Missouri just before the official time was up for responding to the first proposal. The main difference in Kansas's proposal was that the state incentives could still be awarded to Kansas City firms relocating across the border if they invested at least $10 million in a new building. Brownback's intention was to support the construction industry and to limit the use of incentives for the "lease jumpers" that relocate from one leased space to another just across the border. This time, Missouri legislators brushed off the offer stating that the $10 million capital exemption rule would require an amendment to the Missouri Works program and that the offer was less comprehensive than the first one Missouri made (Hudnall, 2016). Kansas's offer did not address dealing with firms likely to move out of the city, a concern that Kansas reported was keeping it from agreeing to Missouri's first offer.

The disparity in Brownback and Nixon's political payoffs likely also played a role in the failed coordination attempts. It is evident that Brownback had a large stake in delivering positive results of the Kansas Experiment. Kansas City firm relocations were framed as a measure of success, and Brownback would have wanted the border war to continue. On the

other hand, Nixon was on the defensive, having to compete against increasingly aggressive Kansas. Losing the border war or increasing relocation incentives to keep up with Kansas's tax cut would have bolstered the Missouri Republican's demand for a similar tax cut, which ran counter to Nixon's platform. It is also worth pointing out that failing to retain firms is likely more politically costly than failing to relocate firms, since the former entails worse economic outcomes whereas the latter maintains the status quo. Being on the defensive thus would have meant that Nixon faced a higher political cost of the border war.

The disparity in Kansas and Missouri's economic strengths would have further implied that Kansas had more to gain both economically and politically from the border war. As Missouri side of the Kansas City is more developed and dense, Kansas would have faced more opportunities to relocate existing firms from Missouri. The truce offer limiting those opportunities would have hence appeared unattractive to Kansas unless Missouri credibly committed to share its incentive savings with Kansas.

It was only when Brownback was confronted with the fiscal crisis that he offered to reduce relocation incentives albeit partially. In 2016, Brownback's approval rating hovered around 20% and was labeled the least popular governor in the country. Brownback's political payoffs from firm relocations would also have fallen dramatically, as the consensus was that the Kansas Experiment failed and was about to be repealed. Missouri Republicans hence would have been less worried about losing the border war. Nixon was also term limited and his second term was about to end.

Although the first two coordination attempts may have failed due to the disparity in political payoffs, it was the growing unpopularity of the border war that pushed them to actively consider coordination in the first place. Strong leadership of Donald Hall, the CEO of Hallmark, in unifying the voices of local civic and business leaders and mediating the dialogues between Brownback and Nixon also was a catalyst in eliciting the coordination proposals.

3.5 Successful coordination

The third coordination attempt succeeded. Kansas elected a new Democratic governor, Laura Kelly, while Missouri elected a new Republican governor, Michael Parson. In 2019, Parson signed the Senate Bill No. 182 similar to the original one that Nixon signed in 2014, and Kelly signed an executive order agreeing to stop paying state incentives to Kansas City firms relocating from one border county to another unless net new jobs are created.[10]

There are three notable factors that likely contributed to the fruition of the third attempt. First, Kelly was motivated to undo the effects of the Kansas Experiment and resolve the fiscal crisis which would have presented her with substantial political returns to ending the border war. Writing to a local newspaper after the signing of the executive order, Kelly describes her success in ending the border war as a part of reversing Brownback's policies:

[10] Missouri Bill: https://www.senate.mo.gov/19info/pdf-bill/House/HCS-SB/SB0182.pdf, Kansas Executive Order: https://governor.kansas.gov/wp-content/uploads/2019/08/EO-19-09_Executed.pdf

> "The Brownback-Colyer administration's lack of interest in ending the border war was emblematic of economic recklessness on their watch that extended well beyond a failed tax experiment. The fiscal fallout was unprecedented. The process of rebuilding state operations — including the important work of fueling job growth — began the day I took office."

Second, in 2019, a coalition of state legislators from the two states helped attract USDA's two research agencies (about 550 jobs) to Kansas City in competition against other states. This incidence reflects a change in mood for a regional cooperation. Speaking of the two governor's agreement, Tim Cowden, president and CEO of the Kansas City Area Development Council, notes that the bi-state cooperation on USDA "has no doubt contributed to this watershed moment in our region's history." Third, Mayor Quinton Lucas of Kansas City, Missouri also backed the state-level coordination by agreeing to Kelly's request to limit the local property tax abatements to ten years to level with the limit in Kansas.

Zero relocation incentives are consistent with the model's predicted outcome if there were no political payoffs but high competitive externalities and economic spillovers. The model explains the ramping up of border war and its eventual end with the changing political payoffs. However, changing economic payoffs as an explanation of the phenomenon cannot be ruled out. For this argument to hold, significantly large changes in economic payoffs are necessary since some are assumed to spill over to the neighboring jurisdiction. It could be that in the wake of the Great Recession, the economic payoffs from relocating firms rose substantially, escalating the border war. On the other hand, it is less clear how the economic payoffs could have declined to end the war.

The state cooperation that attracted the USDA jobs is a telling example of how inter-jurisdictional coordination depends on competitive externalities and economic spillovers. The two states both recognized the need to combine forces when their competitive externalities were low: USDA had received 136 proposals from 36 states. However, once the USDA officially selected Kansas City, the competitive externalities reached the maximum, and the two states intensely fought each other. It appears that the political payoffs drove the competition. Missouri Representative Emanuel Cleaver recalls calling Kansas Representative Sharice Davids after hearing the news of USDA's selection of Kansas City:

> "I told her, 'Either side that wins, both sides win.' You look at Sprint, for example, I have a large number of constituents who work at Sprint in Johnson County, so I'm not going to be that disappointed if the USDA picks Kansas. [...] Nevertheless, I prefer that it be relocated to Kansas City, Missouri, and I'm going to work very hard to get that done."

The ceasefire agreement appears tenuous when the two states are presented with opportunities to poach firms from each other. Just after the agreement, Missouri attracted a financial firm, Waddell and Reed, from Kansas with $62 million in state incentives and $35 million in local incentives. Missouri defended this deal as having been grandfathered in

before the ceasefire agreement. After a merger, the company decided not to relocate in the end. Kansas similarly defended its relocation offer of $20 million to Bluescope Construction in 2020. More recently, Kelly, just before her reelection in 2022, expressed intention to use incentives to attract Kansas Chiefs' Arrowhead Stadium from Missouri.

4 Conclusion

This paper has studied the state competition for firm relocations in Kansas City, focusing on the role political payoffs likely have played in shaping the transition from competition to coordination. The current coordination puts the two states in a situation similar to what the model predicts with strong competitive externalities and economic spillovers but no political payoffs. Political gains from firm relocations continue to tempt politicians. Future research can study what conditions makes informed voters more likely to credit politicians for attracting firms with business incentives. Specifically, how the political returns to coordination and incentive usage differ between Kansas City and other non-affected areas can be explored. The political economy of two policy instruments – taxes and firm-specific incentives – played an important role in the Kansas City context. The nature of interaction between the two instruments need to be studied in a unified framework as noted by Agrawal et al. (2022). Finally, how political payoffs shape regional coordination when the competitive externalities are weak (e.g., Kansas and Missouri's cooperation to attract USDA and host World Cup games) can also be studied further.

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