

# **Effects of Sub-National Political Institutions on Localized Innovation: Evidence From United States Counties**

**Rusty V. Karst**  
**Texas A&M University - Corpus Christi**

**Andrew Johnson**  
**Texas A&M University - Corpus Christi**

**Colin Wooldridge**  
**Texas A&M University - Corpus Christi**

*This study investigates the influence of political institutions on innovation at the sub-national level in the United States, an area less explored compared to national contexts. It examines how political affiliations impact innovation support and outcomes, which are crucial indicators of economic development. The analysis focuses on county-level political affiliation, calculated as the mean percentage of Democratic versus Republican votes across five presidential elections. Data from over 94% of US counties were analyzed using hierarchical linear regression. The study evaluates the relationship between political affiliation and four measures of innovation, including support factors like venture capital and business incubators, as well as outcomes such as patents and initial public offerings. The findings indicate that counties leaning Democratic create a more favorable political environment for innovation. These results underscore the significant role of political institutions in fostering innovative business activities at the sub-national level, providing insights for policymakers and stakeholders aiming to enhance local economic growth.*

*Keywords: institutional influence, sub-national institutions, political institutions, political power, innovation*

## **INTRODUCTION**

The relationship between institutional context and business is well-established and known in associated extant literature. Studies consistently uphold institutional theory (North, 1991; Scott, 1995) as seminal in grounding interactions of antecedent institutional factors with business activity and firm outcomes across quite diverse contexts, from multinational enterprise strategy (e.g., Kostova & Zaheer, 1999; Chan, Isobe, & Makino, 2008) to leveraged buyout investing (Pe'Er & Gottschalg, 2011). Incorporating an institution-based view of firm strategy (e.g., Peng et al., 2009) helps clarify why formal and informal institutional contexts are important to commerce and how informal institutions spur formal (Holmes et al., 2013).

While national institutional context is certainly important and well-studied, researchers have recently increased focus on the potential disparate relative influence of the sub-national institutional context (Peng & Lebedev, 2017). Extending North's (1991) view that formal institutions stipulate the "rules of the game" for commerce, political democracy is a formal institution which creates and maintains varying amounts of governmental checks and balances, which collectively determine just how its people, organizations, and business activity should be overseen or governed (Gaur et al., 2007). At the national level, the United States (US) can be considered a strong political democracy. Within its boundaries, however, the political pendulum swings greatly between the two dominant platforms (i.e., Republican and Democratic), including all associated formal and informal institutional constraints. Political divisiveness throughout the US stands at a high level (Mason, 2015) as the likelihood that Americans identify as strongly liberal or conservative is increasing (Jost, 2006; Layman et al., 2006; Pew Research Center, 2014). Just as fewer Americans individually embrace moderate political leanings, fewer geographic areas of the country could be considered politically moderate.

Sub-national counties, states and regions are increasingly being referred as "red" or "blue" - symbolic of strong political leanings that favor one political party in a polarizing fashion (Jost, 2006; Layman et al., 2006; Pew Research Center, 2014; Mason, 2015). As these sub-national geographic areas tend to identify with a political party, the politicians representing these areas, and subsequently the political institutions, become increasingly reflective of the ideologies at the heart of the respective political party in the majority. These red vs. blue ideologies (informal) and downstream policies (formal) in turn, contribute to the institutional context which constrains business activity and firm conduct within its scope of reach. The political landscape thus translates into a set of geographically bounded regulations, incentives, and attitudes toward commerce that may affect: (1) the ability of firms to take certain actions, and (2) the costs imposed on the conduct of business activities – in that area. Within this sub-national institutional context, firms choose to take strategic actions based in part on an assessment of the isomorphic pressures exerted by the environment. We thus posit that the sub-national political backdrop of a geographic area (e.g., county, state) is an important consideration of the firm, just as with access to resources, labor, and logistics.

Innovation is an important business activity that varies considerably across companies (Kahn, 2018). Multifarious innovation frameworks have been extended in the literature (Henderson & Clark, 1990) to include those based on technology, service, process, management, and strategy (Birkinshaw, Hamel, & Mol, 2008). Whether disruptive or incremental, factors of innovation are important measures of firm business inputs and outputs. Drawing on institutional theory (North, 1991; Scott, 1995), this manuscript considers the political pressures of the sub-national institutional context related to a firm's pursuit of innovation. Specifically, we examine the institutional influence of the political party majority affiliation (Republican or Democratic) in a geographic area (county) in the US on firm innovation (inputs and outputs) in that area. On the surface, this study may seem dichotomous and thus simple to theoretically and empirically investigate. However, the distribution of wealth and commerce in the U.S indicates the relationship between political institutions and strategic action may be more complex than that. An argument can be made that more conservative areas may place increased emphasis on the value of financial transactions (reduced costs), as well as the value of organizations (decreased regulatory barriers), whereas more liberal areas may place decreased value on these, and additionally favor the value of individuals (union support, pro-employee policies). Innovation is consistently associated with increased value placed on the individual and collective knowledge (Dyer, Gregerson, & Christensen, 2011), which suggests liberal areas (i.e., Democratic) may have the upper hand when it comes to bolstering overall innovation. Our study confirms this position through literature review, theory development, hypotheses testing, and results discussion. Dominant political beliefs in a sub-national area of the US matter.

This study contributes to the literature in three main ways. First, understanding that constraints emanating from formal institutions are transmitted through, among others, political institutional structures (North, 1991), we take a sub-national institution-based view of political influence on the firm pursuit of innovation at the geographic county level. This is a novel level of analysis within the institutions literature, which has historically utilized country and state levels of analysis, respectively. Second, in examining the antecedent influence of dominant political party majority affiliation (Republican versus Democratic), our

study further highlights and strengthens the research and practical importance of political party platforms, and the scale and scope of their informal and formal influence on general business activity, as well as specific firm outcomes in a geographic area. And lastly, in consideration of these two contributions, our findings further suggest that these relationships occur in micro-environments (i.e., county), which vary greatly across the broader geographic area, in this case the US. This supports a micro-foundations perspective on the influence of political party platforms and sub-national institutions.

## LITERATURE REVIEW

### Political Ideology

Political ideology has been defined as a “set of opinions underpinned by doctrines, values, and perceived moral truths that guide behavior toward a specific social order” (Johnson & Roberto, 2018, p.1040). Political ideology is a complex trait developed by psychological, biological, and environmental factors that result in individual opinions regarding public policy (Feldman & Johnston, 2014). Further, political ideology in the US may be framed as a single dimension with liberal and conservative ends of the spectrum (Jost et al., 2009). This dimension is often mapped to political parties and their values, allowing political party identification to serve as a proxy for political ideology (Goren et al., 2009). Through this identification, political ideology is perhaps best measured at the individual level and in the aggregate as with the case of geographic areas (Goren et al., 2009; Mason, 2015). The US political landscape is dominated by two political parties: Democrats (representing more liberal-minded individuals), and Republicans (representing more conservative minded individuals). As more individuals identify themselves as strongly conservative or liberal (Pew Research Center, 2014), the US is more divided along political lines than it has been in decades (Jost, 2006; Layman et al., 2006).

Political parties are a force for advocating ideological positions in an informal manner such as the political ideals of stakeholders. These positions may manifest in a local elected officials’ willingness to extend tax breaks or other incentives to entice a company to invest in their community. Parties also hold formal means to set institutional boundaries such as through advancement of public policy once party members have successfully gained control or influence within government. With control comes the ability for political parties to prioritize and enact legislation that more closely align with the party’s political ideolog. As the US has become more politically divided (Mason, 2015) many areas of the nation have begun to identify as “red” (conservative) or “blue” (liberal) areas (Gimpel et al., 2020). For instance, more urban areas are likely to have a majority of liberal voters than rural areas where people are more likely to identify as conservative (Gimpel et al., 2020). These areas tend to also reflect these ideologies in the legal and political environment, much of which affects conducting business. Thus, business owners and managers must interpret and act in accordance with these regulations. The importance of the political environment is shown through the significant resources corporations expend to engage with government (e.g., Hill, Kelly, Lockhart, & Van Ness, 2013) in pursuing favorable policies (Hillman, Keim, & Schuler, 2004).

We can better understand the positions of political parties and the underlying ideologies through examination of each political party’s platform. These official statements are approved every four years during the party’s nominating convention for their presidential candidates. The party platforms are intended to reflect the views of party members towards a wide array of social, economic, and public policy issues. The platforms serve as both a reflection of the views of the party’s membership and a guide for elected officials who were nominees of the party to form positions on public policy. Through platforms, information about parties’ informal and formal positions may be gained.

Often the two major political parties in the US have opposing policy positions on issues such as the extent of gun control, the role of the government in healthcare, the need for expansion of entitlement programs, and an acceptable level of immigration into the country among many others. Issues such as securing popular social programs (e.g., Medicare) and the expansion of free trade have typically enjoyed support across the two-party platforms. Public policy in the US generally favors innovation and entrepreneurship. The US has strong intellectual property rights protections, strong systems for adjudicating claims, and a culture that promotes entrepreneurial pursuits (Lee & Peterson, 2000). While these institutions

and pressures broadly promote innovation, there remains a wide level of disparity and inequality in the US. The states of West Virginia and Mississippi, with low levels of education and high rates of poverty, are strikingly different places than California, the home of Apple Inc., Oracle, and Google parent company Alphabet.

Alongside the significant differences among regions in the United States, is the public policy that affects strategic pursuits such as innovation. This is due in part to the public policy outcomes that address numerous incentives and considerations that may drive innovation. However, as advocated by the two major US political parties, public policies tend to have very different flavors. The respective party platforms provide some significant insight as the documents state specific party aims that are more directly conceived by strong party ideologists and less diluted by political compromise. While the platforms are not binding toward the respective party's elected government officials, they serve as a guide or agenda for governing. In effect they are the playbook for implementing public policy that is reflective of the political ideals collectively held by party membership.

The 2016 Democratic Party platform uses “innovation(s)” 14 times. It states the importance of an economy that promotes long-term investment “We need an economy that prioritizes long-term investment over short-term profit-seeking, rewards the common interest over self-interest, and promotes innovation and entrepreneurship” (2016: 1). The platform includes a section on the pursuit of innovation stating “We will nurture the next generation of scientists, engineers, and entrepreneurs, especially women and people of color, to make sure America continues to out-compete and out-innovate the rest of the world with our bold innovation agenda” (2016: 8). There is a focus on healthcare innovation and trade policies that promote the protection of property rights.

The 2016 Republican Party Platform mentions “innovation(s)” 23 times. The platform specifically speaks to the role that the party places on government as an institution noting “Government must give America’s innovators the freedom to create and, on their merits, succeed or fail” (2016: 6). The GOP platform also cites the need for innovation in healthcare with additional language that speaks to a need to limit the role of government in areas such as space exploration: “The entrepreneurship and innovation culture of the free market is revitalizing the nation’s space capabilities, saving taxpayer money, and advancing technology critical to maintain America’s edge in space and in other fields” (2016: 4). Similar language advocating privatization also includes more innovative practices that the private sector might apply to higher education, primary education (school choice), and the Department of Veterans Affairs (veteran healthcare) (Republican Party, 2016).

While on the surface both parties may appear to be strong advocates of “innovation,” the language suggests a much deeper divide on the role of government that is a foundational difference between the two major US political parties. As reflected in many public policy positions, Democrats tend to favor a larger role for the government while Republicans favor a more limited role by restraining the amount of public goods offered or by instead choosing to rely upon private enterprise for some services.

## **State Government**

The US political system in place for each of the 50 states has little variation compared to the large variation seen among nations. State authority is delineated by the US Constitution in terms of “those powers reserved to the state”, meaning that authority not specific to the US federal government are granted to state governments. The mechanisms of state governments are all similar in terms of having three branches of government (i.e., executive, legislative, judicial) and with only one exception all states have a bicameral legislature (Nebraska has a unicameral legislature). Thus, the paper focuses less on the mechanisms of government but rather the role of political ideology as an institutional force within systems of government that are relatively commensurate in authority and mechanisms. Past research suggests that political climate and political conditions have an impact on entrepreneurial growth (Tan, 2001). Further, variation in political institutions among nations has shown to have an impact on innovation (Boubakri et al., 2013). There exists a great deal of variation in institutions within a nation such as the US. Regional differences, such as the divide between rural and urban areas (Slaper et al., 2011), are indicative of the disparity of economic

performance. Strategic pursuits, such as the pursuit of innovation, also vary greatly among sub-national regions.

### **Innovation**

Innovation has been framed in numerous ways in research (Henderson & Clark, 1990) and represents various activities and pursuits across firms (Kahn, 2018). Innovation takes several forms including technological, service, process, management, and strategic (Birkinshaw, Hamel, & Mol, 2008). Other scholars have discussed the importance of individual traits and an organizations' collective pursuit of innovation (Dyer et al., 2011). Disruptive innovations may be the most salient as they tend to reshape industries and create significant value (Christensen, Raynor, & McDonald, 2015). However, this does not always mean the pursuit of innovation results in an industry changing event. Kahn notes "Successful organizations understand that innovation falls along a continuum, ranging from minor incremental changes to major radical innovations; innovation is not a binary phenomenon" (2018, p. 454).

### **Institutions**

Institutions constitute the "rules of the game" (North, 1991). Through their structured societal frameworks, institutions guide and constrain behavior within their bounded reach. As influenced by informal institutions (e.g., culture, ideology), constraining frameworks largely emanate from formal institutions transmitted through political, regulatory, and economic structures. These formal institutional structures collectively provide stability, reduce information complexity, help minimize market failures, and ease uncertainty in economic transactions and financial exchanges (North, 1991; Williamson, 2000). Institutions provide a basis for transactions, particularly in economic transactions at the root of commercial activity. These rules may manifest in tax incentives, levels of regulation, strength of legal protections, access to capital, intellectual property rights, and numerous other inputs that constitute an overall environment in which innovative activity is subject. Through these environmental pressures, innovation may be promoted or stifled. This study adopts this logic and examines specific micro-structures from political institutions at the sub-national (intra-national) level.

Political systems have long been considered an important source of institutional isomorphic pressure. Political democracy, as a formal institution, creates and maintains specified amounts of governmental checks and balances. It represents a societal tenet of just how its people and organizations should be overseen or governed (Gaur et al., 2007). Understanding that the formation of formal institutions is significantly influenced by idiosyncratic informal institutions (Holmes et al., 2013), this paper considers political constraints through informal means as measured by the predominance of support for one political party over the other. In the United States, political ideology is defined by two major political parties (Jost et al., 2009) which in turn tend to have areas of support rooted in geographic location (McKee, 2008). This paper considers how different political environments, as defined by geographic area, create variation in the institutional constraints exerted upon innovation. Due to differences in political ideology, these institutional pressures may lead to regions that are more favorable to innovation than others even within the same larger national context.

## **THEORY DEVELOPMENT**

Past work has considered the influence of sub-national institutions on strategic action. Pe'er and Gottschalg (2011) examined leveraged buyouts (LBOs) and political institutions at the state level. They found that more Republican areas were likely to have increased LBOs while the higher transaction costs of more liberal minded states would make LBOs less favorable. However, this does not apply to all risk-taking strategic investments as states like California, Illinois, and New York have long been both centers of commerce and liberal leaning areas of the US. Some of the most impoverished areas of the US are among the most conservative. The distribution of wealth and commercial activity suggests that the relation between strategic action and political institutions is more complex. The low regulatory barriers in Republican areas of the nation have not attracted many corporations noted for their innovative activity. Many fast growing

areas of the nation are politically liberal. This suggests that while Pe'Er Gottschalg (2011) show that Republican states offer advantages that are favorable for certain types of strategic actions (LBOs), other investments may be deployed in liberal areas of the nation with positive effects.

LBOs represent a value generating strategy that tends to benefit banks and financial sponsors. Pe'Er and Gottschalg (2011) note that the Republican party is more economically libertarian than the Democratic Party and “has closer ties to Wall Street (large corporations) and little support among labor union leadership” (p. 1358). LBOs have received criticism for redistributing assets (Datta & Iskandar-Datta, 1996) and job loss during restructuring (Bacon et al., 2013). The closure of some business operations and employee layoffs are viewed less favorably by the Democratic Party as their platform advocates “support for industrial policies that sustain unionized manufacturing jobs” (Pe'Er & Gottschalg, 2011, p. 1358) among other pro-employee policy positions. As LBOs pursue corporate policies that often-run counter to these tenets, Democratic institutions would be a less ideal geographic area for which to pursue this type of action. Alternatively, innovation is a value-generating strategy that tends to place the employee in a more favorable position as an asset to the corporation. The literature consistently notes the value of individual and collective knowledge in creating innovation (Dyer et al., 2011). As the focus of the value generation involved with innovation rests with the employee, in sharp contrast to a financial based transaction, investments in innovation would be more aligned with the political environment present in more liberal areas of the nation.

### **Political Ideology, Regulatory Environment, and Innovation**

Studies show that regulatory conditions significantly impact the innovation output of large firms and entrepreneurs alike (Gurses & Ozcan, 2015). Regulations range in flexibility in terms of how firms comply. For instance, market-based regulatory instruments are often taxes on pollution or carbon emissions, whereas an example of a narrow regulation would be meeting a standard such as using a renewable technology. A leading theory in this stream of research is the “Porter Hypothesis”, which can be summarized as the proposition that regulations spur organizations to innovate (Ambec et al., 2013). The logic behind this argument is that regulations increase production costs and therefore firms are incentivized to develop solutions to reduce those costs. However, conclusions regarding whether regulations drive innovation or are an obstacle have been inconsistent (Horbach, 2008; Martinez-Roz & Kunapatarawong, 2019; Pache & Santos, 2010). Researchers have recently conducted three recent meta-analyses in response to this inconsistency, finding a moderate positive relationship between environmental regulations and firm innovation (Cohen & Tubb, 2018; Lia & Liu, 2020; Li, Li, & Gan, 2022). While scholars have not reached consensus on the relationship between regulation and innovation, evidence continues to mount that regulations positively influence innovation by incentivizing firms to find solutions to avoid increased production costs associated with non-compliance with regulations.

Researchers from various disciplines studying the relationship between constraints and creative performance have found similar results. “Creativity in organizations refers to the generation of novel and useful outcomes (i.e., ideas, solutions, processes, products, etc.)” (P. 97, Acar, Tarakci, & Knippenberg, 2019). Constraints are externally imposed processes or decisions that restrict a problem space and possible solutions (Medeiros et al., 2017). Constraints are typically operationalized as limitations such as time pressure, financial resources, autonomy, resources, support, evaluation, rewards, and knowledge sharing. A recent meta-analysis published in the *Journal of Organizational Behavior* by Damadzic, Winchester, Medeiros, and Griffith (2022) using 111 studies found a significant positive relationship between constraints and creativity. Additionally, regulation may contribute to leveling the playing field by requiring compliance across industries, and thereby inducing innovation through increased competition (Fabrizi et al., 2018). Taken together, we contend that differences in Democratic and Republican regulatory approaches contribute to explaining disparities in innovation rates.

A review of the Republican and Democratic party platforms reveals sharp differences in regulatory tactics. For instance, in the 2016 Republican party platform, regulations are mentioned 24 times, with the overarching sentiment that regulations hinder business performance and should be reduced. Here is an example from the Republican party platform: “We will enforce the original intent of the Clean Water Act,

not it's distortion by EPA regulations. We will likewise forbid the EPA to regulate carbon dioxide, something never envisioned when Congress passed the Clean Air Act" While democrats seek to take a hardline approach to increasing regulation across the banking, housing, environmental, energy, and agricultural sectors; the following is an archetypal example of their position from the 2016 Democratic party platform, "We will stop Republican efforts to hamstring our regulators through budget cuts, and we will ensure they have the resources and independence to fully enforce the law and hold both individuals and corporations accountable when they break the rules." Given each party's stated positions on regulatory policy, we contend that the Democratic regulatory approach, particularly their market-based, more closely reflects the institutional policies found to result in increased innovation.

## **Political Ideology, Power Distance, and Innovation**

### *Employee Voice and Power Distance*

Employee voice has shown to be a strong predictor of positive organizational outcomes such as innovation (Rasheed, Shahzad, Conroy, Nadeem, & Saddique, 2017), collective learning (Detert & Burris, 2007) employee retention (Spencer, 1986), creativity, information sharing, and employee commitment. Employee voice is an employee's organizational citizenship behavior to improve the organization through constructive and change-oriented communication (LePine & Van Dyne, 1998). Voice enhances firm-level innovation as employees seek to contribute to solving organizational problems through their unique knowledge, skills, and abilities. As a firm's performance is largely dependent on the unique resources at their disposal (Barney, 1991), a firm's human capital represents potential sources of competitive advantage. However, an employee's decision to use voice within an organization heavily depends on the expected organizational response (Morrison, 2011). These expectations are primarily driven by the psychological safety felt by employees (Xu, Qin, Dust & DiRenzo, 2019). As such, the ability of organizations to ultimately enhance firm-level innovation as a function of employee voice is dependent on the organizational culture, and subsequent safety, employees feel in expressing their opinions. A strong predictor of the frequency of employee voice, is the power distance associated with the culture the employee is working within (Hu, Erdogan, Jian, Bauer, & Liu, 2017).

Power distance (PD) refers to "the extent to which a society accepts the fact that power is distributed unequally" (Hofstede, 1980, pp.262-77). High PD cultures are societies in which power is concentrated among high positions within the organizational hierarchy (Paharia & Swaminathan, 2019). Those with high PD beliefs typically believe that authority figures within an organization are superior in their ability to make reliable decisions and that inequality is natural (Kirkman et al., 2009). Whereas low PD cultures are characterized by egalitarian decision-making where employees from all hierarchical levels work together to influence organizational decisions. In low PD organizations, employees are more likely to feel psychologically safe to bring ideas to top management through the use of voice because there is not an expectation of a negative reprisal from the organizations. In high PD cultures, employees outside of the top management team are likely to fear punishment from leadership as questioning organizational decisions or presenting ideas as a lower-level employee could lead to termination (Dai, Li, Xie, & Deng, 2022). Furthermore, researchers have found that national-level innovation is negatively related to PD (Daniels & Reguras, 2014). In the American political ideological landscape, the two major parties differ substantially with respect the culture around PD (Fay & Frese, 2000).

Previous work has consistently found that conservative and liberal Americans have different belief systems (Paharia & Swaminathan, 2019). Specifically, one of the primary beliefs within conservative ideology is the acceptance of inequality, hierarchy, and respect for authority, aligning with high PD beliefs (Jost et al., 2003). A prior study using a sample of participants from Germany yield support for this link, finding that conservative beliefs were strongly positively associated with high PD beliefs (Fay & Frese, 2000). Specifically, the conservatism scale employed measured the preference for inequality at work by conceding privileges, rights to supervisors, and status symbols. Liberals on the other hand value egalitarianism and fairness that are associated with low PD beliefs (Graham, Haidt, & Nosek, 2009).

Furthermore, researchers consistently find a negative relationship between power distance and innovation at the national level. Taken together, we contend that based on the strong association between

political party and PD, innovation will be significantly influenced by the dominant political party within a geographic location through employee voice. In summary, in counties with more democratic voters, it is expected that innovation will be higher than in republican majority counties because employees feel psychologically safe in voicing their ideas and solutions to upper management, and therefore, organizations will reap the rewards of employees' unique knowledge, skills, and abilities.

### **Political Ideology, Employee Protections, Employee Representation, and Innovation**

At the national level, institutional differences in labor laws have significantly influenced innovation (Vatiero, 2017). These differences can serve to increase or reduce incentivization to find innovative solutions through two primary mechanisms. First, employee protection laws regarding termination assist in avoiding 'hold-up' risk. Hold-up problems are the risk that employees are disincentivized to create innovative solutions out of the fear that the employer simply discharge them to avoid sharing rents associated with the innovation (Manso, 2011). The probability of hold-up problems can be reduced through employment protection laws that constrain an employer's ability to discharge employees without cause. Thereby, incentivizing employees to come up with innovative solutions. Second, employee representation laws impact employee motivation to innovate through contractual agreements between employer and employee with respect to profit sharing. Employee representation laws have been shown to positively influence employee motivation to innovate by employees sharing a larger portion of profits associated with innovations. Employee representation laws effect this profit-sharing agreement due to differences in the strength of employees voice at the firm level. Employee representation laws range from workers' right to collective bargaining, unionization, and board membership. Through these institutional mechanisms, employees can negotiate increased profit-sharing for example. It is important to point out that prior research shows that both conditions are necessary to incentivize motivation. For instance, without employee representation mechanisms in place around profit-sharing associated with innovation, employees may holdup the organization by threatening to exit the firm to re-negotiate ex ante agreements. Belloc (2018) finds support for the positive relationship between labor laws and innovation when the institutional context contains both employee representation and termination protection legal regulations. One important caveat from Belloc's (2018) findings is that the relationship between the institutional context concerning labor laws is that this positive impact on innovation is significantly enhanced in knowledge-intensive industries where human capital is crucial to firm performance. The rationale for this is that knowledge lost through employees exiting highly knowledge intensive industries is up to 29 times higher than in physical capital-intensive such as in manufacturing. In industries with high knowledge intensity, regulations constraining employers from arbitrary employee termination is more pronounced over time. The longer an employee stays with a firm, the more human capital would be lost if they exited due to accumulated knowledge over time.

Differences in regulatory philosophy associated with liberal and conservative ideology are also reflected within each political party's approach to employee protection and representation laws. Specifically, the prevailing sentiment from the Republican platform is that employee protection and representation laws hinder business's ability to compete and innovate. An example of these ideological differences playing out is in the case of "pre-emption" where Republican state legislatures seek to supersede city and county regulations aimed at preventing increases in employee protection laws. Specifically, pre-emption occurs when the party in control at the state level seeks to pass legislation overriding the party in control at the county or city level. Researchers recently found that in states with Republican controlled legislatures, legislators are engaging in "pre-emption" at higher rates (Kim, Aldag, & Warner, 2020). Democrats on the other hand place a much greater emphasis on increasing employee protection laws such as creating legal barriers to termination, front line employee representation in upper-level management, paid leave, minimum wage, right to work, and prevailing wage. As such, employees in Republican counties are less likely to work in an institutional environment that incentivizes innovation because of reduced profit sharing and the threat of termination. Whereas in Democratic counties, it is more likely that employees have a contractual agreement ex ante with employers obligating the firm to share rents associated with innovative solutions created by employees. Moreover, these employees are less likely to fear termination



by the organization to avoid sharing innovation windfalls due to stronger restrictions around termination. Overall, we posit that employee in Democratic as opposed to Republican counties are more likely to work in an institutional environment incentivizing innovation

We contend that the sub-national level may be more finite than previously considered state-level. As there is significant variation of political ideology and policy within states, the county level is an appropriate institutional context to examine. Understanding that localized innovation in an area has inputs and outputs that may be differentially influenced by sub-national county institutions, we crafted hypotheses to reflect both innovation inputs and outputs, so that hypothesized difference may be more effectively captured. With the above literature review and hypotheses development in mind, we contend the inputs and outputs of innovation in a sub-national regional geography area, in this case U.S. counties, will be differentially influenced by the sub-national political institutions there. And further, that both innovation input and output levels and values in these sub-national areas will be greater in Democratic counties, when compared to Republican counties. As such, we extend the following hypotheses.

***Hypothesis 1a:*** *The level and value of the firm innovation input, venture capital core, will be greater in Democratic counties than in Republican counties.*

***Hypothesis 1b:*** *The level and value of the firm innovation input, business incubator, will be greater in Democratic counties than in Republican counties.*

***Hypothesis 2a:*** *The level and value of the firm innovation output, initial public offerings, will be greater in Democratic counties than in Republican counties.*

***Hypothesis 2b:*** *The level and value of the firm innovation output, patent core, will be greater in Democratic counties than in Republican counties.*

## **METHODOLOGY**

### **Data Collection**

#### *Independent Variable*

County level political affiliation was measured using the mean of the percentage of each county's vote cast for the Republican and Democratic Presidential candidates in the United States general election in five presidential elections: 2000, 2004, 2008, 2012, and 2016. The use of multiple election cycles helps to control for any variation attributable to a single election cycle. This data was obtained through the MIT Election Data and Science Lab (2018) as maintained by the Harvard Dataverse.

#### *Dependent Variables*

Data for the dependent variables were obtained from the Driving Regional Innovation, The Innovation Index 2.0 database created for the United States Economic Development Administration by Indiana University's Kelley School of Business (Indiana Business Research Center, 2016). These data rely upon survey data as well as numerous economic and business indicators. The Driving Regional Innovation project is focused on determining the differences among regions (county-by-county) in terms of innovation, entrepreneurial activity, and competitiveness (Indiana Business Research Center, 2016). The data is suitable for a sub-national analysis given the focus on county-level indicators. The data measures the variables across a three-year time frame. This is important as investment in innovation does not have an immediate payoff (Klingebiel & Rammer, 2020).

Dependent variables that measure innovation inputs (Venture Capital, Business Incubator Spillovers) and outputs (Initial Public Offerings, Patent Core) provide a more holistic view to ascertain if the building blocks for innovation and resulting innovation outcomes are present in the county. To measure the availability of venture capital, we include Venture Capital Core, measured over 10 years at the county level and scaled by the average GDP for the period (Indiana Business Research Center, 2016). The Innovation

2.0 report notes “Venture capital (VC) funds are used to launch new ideas, commercialize a new technology or expand innovative companies” and represent a significant investment in innovative activity (Indiana Business Research Center, 2016).

Using the measure Business Incubator Spillovers, we assess the concentration of resources available to businesses in the county. This data point is calculated based on “the number of business incubators within 50 miles, weighted by distance” (Indiana Business Research Center, 2016, p. 22). Initial Public Offerings is calculated by the sum of the total number of IPOs over 10 years in the county divided by the average GDP (Indiana Business Research Center, 2016). This measure is not only a means for firms to raise capital, but also an indicator that a firm is positioned for growth. To measure innovation output, we include the Patent Core measure as a measure of current innovation output and a patent's future value (Indiana Business Research Center, 2016).

### *Control Variables*

The analysis included control variables: Economic Well-Being, 2016 County Population, and Industry Diversity. The Economic Well-Being Index includes poverty rate, income inequality, and migration among other components and was included in the Innovation 2.0 data (Indiana Business Research Center, 2016). This is an important institutional control variable as it works to account for the economic pressures in the region. Data on County Population (2016) was collected from the US Census Bureau. Population data serves to control for both market size and as an indicator if the county is a rural or urban area. Rural areas overwhelmingly vote for Republican candidates while urban areas support Democratic candidates (McKee, 2008). Data to control for the level of industry diversity was obtained from Indiana Business Research Center (2016) by using the measure of cluster diversity. The greater the index number (0-200) the higher the level of assortment of industry in the county.

Data for the dependent and independent variables was compiled by matching a unique FIPS (Federal Information Processing Standards) code across both datasets for each unique county (or equivalent subdivision of the state). One of the authors conducted a subsequent cross check using county name to ensure 100% correct matching. Data for the independent variable for counties in Virginia and boroughs in Alaska were not originally collected at the county level but rather by district (Alaska) or Metropolitan Statistical Area (MSA) (Virginia) and thus did not conform with other county level variables. Accordingly, these two states were excluded from the collection. Two other counties were excluded due to inadequate data. Among the 3,142 county and county-level equivalents (e.g., Parishes; District of Columbia), data on 2,978 are included in the data collection (N=2978). Observations were collected in a consistent manner from a large sample among the population of counties (94.7%) thus providing a strong case for generalizability.

### **Analysis**

Data was analyzed using IBM SPSS version 26. Because the independent and dependent variables were continuous in nature, hierarchical linear regression is an appropriate method of analysis. For each of the four dependent variables two models were analyzed. In the first block, control variables were included. In the second block, the independent variable (Democrat or Republican mean) was entered. As the two independent variables are highly correlated, a full model including both political measures would not be appropriate and thus these results are reported in separate columns in Tables 3-6.

### **Results**

Descriptive statistics and correlations are reported in Table 1 and Table 2, respectively. Models 1 and 2 are reported in Table 3; Models 3 and 4 in Table 4. These models support Hypothesis 1a and 1b as the Republican mean is significantly and negatively ( $b=-.175$ ;  $p<.001$ ) related to the dependent variable, venture core. Republican mean is significantly and negatively related to Business Incubator ( $b=-.194$ ;  $p<.001$ ). A significant, positive relation between Democratic mean and the dependent variables Venture Core ( $b=.262$ ;  $p<.001$ ) and Incubator Spillover ( $b=.204$ ;  $p<.001$ ) exists.

**TABLE 1  
DESCRIPTIVE STATISTICS**

	Minimum	Maximum	Mean	Std. Deviation	N
Republican 2016 Mean	0.072	0.915	0.596	0.133	2978
Democrat 2016 Mean	0.066	0.897	0.378	0.131	2978
Economic Well Being	59.6	187.8	111.457	22.301	2978
Population 2016	113	10137915	105408.7	338017.779	2978
Industry Cluster Diversity	50.00	199.7	1.138	40.801	2978
Venture Core	0	178.6	10.455	25.944	2978
Business Incubator Spillovers	0	200	79.16	52.264	2978
Initial Public Offerings	0	200	3.33	19.409	2978
Patent Core	0	180.3	66.467	54.41	2978

**TABLE 2  
CORRELATIONS**

**Table 2: Correlations**

	pop_2016	cluster_diverse	econ_well	incubator_spill	venture_core	ipo	patent_core	rep_mean	dem_mean
pop_2016	1	-.231**	-.059**	.345**	.540**	.463**	.335**	-.287**	.286**
cluster_diverse	-.231**	1	.213**	-.336**	-.306**	-.171**	-.399**	.253**	-.259**
econ_well	-.059**	.213**	1	-.137**	0.029	0.018	-0.012	.306**	-.340**
incubator_spill	.345**	-.336**	-.137**	1	.431**	.287**	.488**	-.324**	.332**
venture_core	.540**	-.306**	0.029	.431**	1	.696**	.447**	-.384**	.371**
ipo	.463**	-.171**	0.018	.287**	.696**	1	.227**	-.280**	.275**
patent_core	.335**	-.399**	-0.012	.488**	.447**	.227**	1	-.313**	.294**
rep_mean	-.287**	.253**	.306**	-.324**	-.384**	-.280**	-.313**	1	-.994**
dem_mean	.286**	-.259**	-.340**	.332**	.371**	.275**	.294**	-.994**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**TABLE 3**  
**SUB-NATIONAL POLITICAL INSTITUTIONAL INFLUENCE ON CAPITAL CORE**

	<b>Model 1</b>	<b>Model 2</b>
<b>Dependent Variable</b>		
Venture Core		
Intercept	28.424***	-23.486***
<b>Controls</b>		
Economic Well-Being	.174***	.181***
Population (2016)	.433***	.435***
Industry diversity	-.175***	-.176***
<b>Independent Variable</b>		
Republican_2016	-.269***	
Democratic_2016		.262***
<b>Omnibus Model Test Results</b>		
R	.396***	.626***
R <sup>2</sup>	.395***	.392***
Adjusted R <sup>2</sup>	.395***	.391***
F	487.263***	478.697***
Statistical Method	HLR	HLR

N=2978; \*\*\*p<.001; \*\*p<.01; \*p<.05

**TABLE 4**  
**SUB-NATIONAL POLITICAL INSTITUTIONAL INFLUENCE ON BUSINESS INCUBATOR**

	<b>Model 3</b>	<b>Model 4</b>
<b>Dependent Variable</b>		
Business Incubator Spillover		
Intercept	158.212***	79.114***
<b>Controls</b>		
Economic Well-Being	-.015	-.005
Population (2016)	.235***	.223***
Industry diversity	-.229***	-.228***
<b>Independent Variable</b>		
Republican_2016	-.194***	
Democratic_2016		.204***
<b>Omnibus Model Test Results</b>		
R	.472***	.475***
R <sup>2</sup>	.223***	.225***
Adjusted R <sup>2</sup>	.222***	.224***
F	213.059***	216.200***
Statistical Method	HLR	HLR

N=2978; \*\*\*p<.001; \*\*p<.01; \*p<.05

Table 5 and Table 6 show the results for Hypothesis 2a and 2b. Support was found for these hypotheses. A negative and significant relation exists between Republican mean and IPO (b=-.184; p<.001) as well as Patent (b=-.212; p<.001). A positive and significant relation between Democratic mean and IPO (b=.262; p<.001) as well as Patent (b=.194; p<.001) is reported.

**TABLE 5**  
**SUB-NATIONAL POLITICAL INSTITUTIONAL INFLUENCE ON IPO**

	Model 5	Model 6
Dependent Variable		
Initial Public Offering		
Intercept	9.254***	-17.813***
Controls		
Economic Well-Being	.109***	.116***
Population (2016)	.404***	.404***
Industry diversity	-.054**	-.054**
Independent Variable		
Republican_2016	-.184***	
Democratic_2016		.185***
Omnibus Model Test Results		
R	.500***	.499***
R <sup>2</sup>	.250***	.249***
Adjusted R <sup>2</sup>	.249***	.248***
F	247.204***	246.695***
Statistical Method	HLR	HLR

N=2978; \*\*\*p<.001; \*\*p<.01; \*p<.05

**TABLE 6**  
**SUB-NATIONAL POLITICAL INSTITUTIONAL INFLUENCE ON PATENT CORE**

	Model 7	Model 8
Dependent Variable		
Patent Core		
Intercept	127.956***	45.201***
Controls		
Economic Well-Being	.134***	.136***
Population (2016)	.206***	.211***
Industry diversity	-.326***	-.329
Independent Variable		
Republican_2016	-.212***	
Democratic_2016		.194***
Omnibus Model Test Results		
R	.514***	.507***
R <sup>2</sup>	.264***	.257***
Adjusted R <sup>2</sup>	.263***	.256***
F	266.760***	257.587***
Statistical Method	HLR	HLR

N=2978; \*\*\*p<.001; \*\*p<.01; \*p<.05

To ensure that collinearity did not affect the results, we assessed the Variance Inflation Factor (VIF) and condition indices for all models. The highest value across all models was 1.257 and the highest average VIF was 1.167, both well below the recommended cutoff value of 10, thus multicollinearity does not appear to be a concern in the results (Neter et al., 1996).

## DISCUSSION

This study complements and broadens extant literature across three domains: institutions, political party platforms, and innovation. From an institutions perspective, this manuscript takes a sub-national institution-based view of political influence on firm pursuit of innovation at the geographic county level. Extant institutions research has historically used the national context, and secondarily the state/province, as levels of analysis for theoretical and empirical examination. Our paper takes a more novel sub-national approach, the county level of analysis, which provides increasingly detailed and more fine-grained results across the same geographic areas. This study thus contributes to the rising focus on sub-national institutional influence on business activity and firm strategic action.

From a political party platform perspective, this manuscript further highlights and strengthens the literature, and practical importance, in examining the antecedent influence of dominant political party majority affiliation (Republican versus Democratic) on general business activity and specific firm conduct and outcomes (e.g., successful pursuit of innovation). Results illuminate the scale and scope of the political party platform's informal and formal influence in majority on firm innovation in a geographic area. Study findings confirm hypotheses that firm level innovation, across both input and outputs, is consistently negatively influenced at the county level, when the majority political party is Republican. All Republican relationships were negative and significant, whereas all Democratic relationships were positive and significant. These findings affirm the conservative nature of the republican platform, in placing increased value on financial transactions (reduced costs) and organizations (reduced regulatory barriers), whereas democratic platforms place less value on these, and more on the value of individuals (union support, pro-employee policies). Innovation is consistently associated with increased value placed on the individual and collective knowledge from individual in aggregate.

Considering the influence of the sub-national institutional context of county level political party platforms, our findings further suggest that these relationships indeed occur in additionally micro-environments (i.e., county) which vary greatly across the broader geographic area, in this case the US. This supports a micro-foundations perspective on the influence of political party platforms and sub-national institutions. Both inputs and outputs of innovation were examined in this study. Antecedents to innovation (inputs) and downstream outcomes from innovation (outputs) both were consistently influenced by the political party platform in majority. All proxied innovation inputs (Venture Capital & Business Incubator Spillovers) and outputs (Initial Public Offerings & Patent Core) consistently were negatively correlated with Republican Political Platforms and positively with Democratic. When controlling for industry effects, we discovered that industry diversity has a negative relationship with innovation, regardless of the majority political party. Counties with increased types of firms across industries had decreased innovative business activity (both inputs and outputs), particularly when compared to counties less diverse in industry firm types. For self-evident reasons, from a practical perspective, firms who incorporate innovation in their strategy would benefit from this study.

### Limitations

As with all empirical research, limitations exist in this study. Data used is cross-sectional in nature and structure, emanating from one period (2016). As such, variations over the longer term were not examined and thus cannot be generalized across time. Further, the criterion variables used, innovation inputs and outputs, collectively represent but one factor of business activity and firm strategic action. We understand the nature of these relationships is more complex than this (e.g., Pe'Er & Gottschalg, 2011). Additionally, in taking an increasingly micro-foundations approach (e.g., sub-national institutions), study findings may be less generalizable to larger populations. However, this study tested associated relationships including 2,978 counties, representing 94.7% of all counties in the US.

## CONCLUSION

This paper contributes to the literature across institutions, majority political party, and innovation streams. In doing so, we believe it further highlights the importance of study context in sub-national environments. Taking an increasingly micro-foundations approach increases the meaningfulness of results and the potential variability from study to study, based on selection of contextual variables in support of theory development and hypotheses testing. To that end, additional micro-foundations studies across diverse contexts in these areas would move the literature forward, and we believe this manuscript has helped do so.

## REFERENCES

- Bacon, N., Wright, M., Ball, R., & Meuleman, M. (2013). Private equity, HRM, and employment. *Academy of Management Perspectives*, 27(1), 7–21.
- Beck, T., Clarke, G., Groff, A., Keefer, P., & Walsh, P. (2001). New tools in comparative political economy: The database of political institutions. *The World Bank Economic Review*, 15(1), 165–176.
- Birkinshaw, J., Hamel, G., & Mol, M.J. (2008). Management innovation. *Academy of Management Review*, 33(4), 825–845.
- Boubakri, N., Cosset, J.C., & Saffar, W. (2013). The role of state and foreign owners in corporate risk-taking: Evidence from privatization. *Journal of Financial Economics*, 108(3), 641–658.
- Chan, C.M., Isobe, T., & Makino, S. (2008). Which country matters? Institutional development and foreign affiliate performance. *Strategic Management Journal*, 29(11), 1179–1205.
- Christensen, C.M., Raynor, M.E., & McDonald, R. (2015). What is disruptive innovation. *Harvard Business Review*, 93(12), 44–53.
- Dai, Y., Li, H., Xie, W., & Deng, T. (2022). Power distance belief and workplace communication: The mediating role of fear of authority. *International Journal of Environmental Research and Public Health*, 19(5).
- Datta, S., & Iskandar-Datta, M.E. (1996). Who gains from corporate asset sales? *Journal of Financial Research*, 19(1), 41–58.
- Democratic Party. (2016). *Party Platform*. Retrieved from <https://democrats.org/where-we-stand/party-platform/>
- Dyer, J.H., Gregersen, H.B., & Christensen, C.M. (2011). *The innovator's DNA: Mastering the five skills of disruptive innovators*. Harvard Business Press. Boston MA USA.
- Feldman, S., & Johnston, C. (2014). Understanding the determinants of political ideology: Implications of structural complexity. *Political Psychology*, 35(3), 337–358.
- Gaur, A.S., Delios, A., & Singh, K. (2007). Institutional environments, staffing strategies, and subsidiary performance. *Journal of Management*, 33(4), 611–636.
- Gimpel, J.G., Lovin, N., Moy, B., & Reeves, A. (2020). The urban–rural gulf in American political behavior. *Political Behavior*, pp. 1–26.
- Goren, P., Federico, C.M., & Kittilson, M.C. (2009). Source cues, partisan identities, and political value expression. *American Journal of Political Science*, 53(4), 805–820.
- Henderson, R.M., & Clark, K.B. (1990). Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. *Administrative Science Quarterly*, 35(1), 9–30.
- Hill, M.D., Kelly, G.W., Lockhart, G.B., & Van Ness, R.A. (2013). Determinants and effects of corporate lobbying. *Financial Management*, 42(4), 931–957.
- Hillman, A.J., Keim, G.D., & Schuler, D. (2004). Corporate political activity: A review and research agenda. *Journal of Management*, 30(6), 837–857.
- Holmes, Jr, R.M., Miller, T., Hitt, M.A., & Salmador, M.P. (2013). The interrelationships among informal institutions, formal institutions, and inward foreign direct investment. *Journal of Management*, 39(2), 531–566.

- Indiana Business Research Center. (2016). *Innovation 2.0*. Kelley School of Business, Indiana University. Retrieved from <http://www.statsamerica.org/ii2/overview.aspx>
- Johnson, A.F., & Roberto, K.J. (2018). Right versus left: How does political ideology affect the workplace?. *Journal of Organizational Behavior*, 39(8), 1040–1043.
- Jost, J.T. (2006). The end of the end of ideology. *American Psychologist*, 61(7), 651.
- Jost, J.T., Federico, C.M., & Napier, J.L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, 60, 307–337.
- Kahn, K.B. (2018). Understanding innovation. *Business Horizons*, 61(3), 453–460.
- Klingebiel, R., & Rammer, C. (2021). Optionality and selectiveness in innovation. *Academy of Management Discoveries*, 7(3), 328–342.
- Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review*, 24(1), 64–81.
- Layman, G.C., Carsey, T.M., & Horowitz, J.M. (2006). Party polarization in American politics: Characteristics, causes, and consequences. *Annual Review Political Science*, 9, 83–110.
- Lee, S.M., & Peterson, S.J. (2000). Culture, entrepreneurial orientation, and global competitiveness. *Journal of World Business*, 35(4), 401–416.
- Mason, L. (2015). “I disrespectfully agree”: The differential effects of partisan sorting on social and issue polarization. *American Journal of Political Science*, 59(1), 128–145.
- McKee, S.C. (2008). Rural voters and the polarization of American presidential elections. *PS: Political Science & Politics*, 41(1), 101–108.
- MIT Election Data and Science Lab. (2018). *County Presidential Election Returns 2000-2016*. <https://doi.org/10.7910/DVN/VOQCHQ>, Harvard Dataverse, V6, UNF:6:ZZe1xuZ5H2l4NUiSRcRf8Q== [fileUNF]
- Neter, J., Kutner, M.H., Wasserman, W., & Nachtsheim, C.J. (1996). *Applied Linear Regression Models*. Homewood, IL: Irwin.
- North, D.C. (1991). Institutions. *Journal of Economic Perspectives*, 5(1), 97–112.
- Pe’Er, A., & Gottschalg, O. (2011). Red and blue: The relationship between the institutional context and the performance of leveraged buyout investments. *Strategic Management Journal*, 32(12), 1356–1367.
- Peng, M.W., & Lebedev, S. (2017). Intra-national business (IB). *Asia Pacific Journal of Management*, 34, 241–245.
- Peng, M.W., Sun, S.L., Pinkham, B., & Chen, H. (2009). The institution-based view as a third leg for a strategy tripod. *Academy of Management Perspectives*, 23(3), 63–81.
- Pew Research Center. (2014). *Religious landscape study*. Pew Research Center. Retrieved from <https://www.pewforum.org/about-the-religious-landscape-study/>
- Republican Party. (2016). *Republican Platform 2016*. Retrieved from [https://prod-cdn-static.gop.com/media/documents/DRAFT\\_12\\_FINAL%5B1%5D-ben\\_1468872234.pdf](https://prod-cdn-static.gop.com/media/documents/DRAFT_12_FINAL%5B1%5D-ben_1468872234.pdf)
- Scott, S.M. (1995). *Institutions and organizations*. Thousand Oaks, CA: Sage.
- Slaper, T.F., Hart, N.R., Hall, T.J., & Thompson, M.F. (2011). The index of innovation: A new tool for regional analysis. *Economic Development Quarterly*, 25(1), 36–53.
- Tan, J. (2001). Innovation and risk-taking in a transitional economy: A comparative study of Chinese managers and entrepreneurs. *Journal of Business Venturing*, 16(4), 359–376.
- Williamson, O.E. (2000). Economic institutions and development: A view from the bottom. In Kahkonen, S., & Olson, M. (Eds.), *A New Institutional Approach to Economic Development*, pp. 92–118.