

Attachment and Consumption Externalities: The Benefits of Product Parochialism

Daniel Chaffin, University of Nebraska, Kearney, West Center 408C, 1917 West 24th Street,
Kearney, NE 68849, chaffintd@unk.edu

Mark D. Packard, Assistant Professor. University of Nevada, Reno. Ansari Business 319B, 1664
N. Virginia Street, Reno, NV 89557, mpackard@unr.edu

ABSTRACT

The emerging demand-side literature offers a fresh perspective on strategic decisions such as diversification. Building on this emerging stream, we propose that the geographic diversity of a firm's consumers can have important performance implications. We examine the effects of consumer geographic diversity in the context of competitive football games during the 2016 presidential election. We argue that consumption externalities arise from consumption in close proximity with other consumers, which may benefit more geographically parochial customer segments. Our results generally support the notion that parochial products, targeted toward a narrow consumer geography, may enjoy a strategic benefit of greater loyalty and partial insulation from substitute offerings due to consumption externalities as compared to nationally distributed products.

Keywords: demand-side, geographic diversification, consumption externalities, substitutes

INTRODUCTION

The emerging demand-side literature (Adner and Levinthal 2001; Adner 2002; Adner and Zemsky 2006; Priem *et al.* 2012; Ye *et al.* 2012; Rietveld and Eggers 2018) argues that the heterogeneity of a firm's customers is strategically important (Adner and Snow 2010). So far, however, this literature has focused on consumer heterogeneity in technology adoption, suggesting that advantage results from a firm's serving heterogeneous consumer groups by spanning different technologies and navigating changing technologies (Adner and Snow 2010; Rietveld and Eggers 2018).

Other possible demand-side sources of competitive advantage, however, have so far gone unexplored. For example, what advantages might be gained from consumer co-location? Does the geography of a consumer base matter? Plausibly, there may be strategic tradeoffs to the geographic dispersion of a target consumer market: while the extended geographic reach can ostensibly increase total consumer awareness and market size, it may lose certain advantages of consumers being more densely co-located, such as identity signaling effects (Kim and Jensen 2014), consumer communities (Franke and Shah 2003; Füller *et al.* 2008; Kozinets *et al.* 2010), and so forth.

In this paper we extend the demand-side strategic management literature in recognizing additional demand-side sources of advantage from consumption externalities. We investigate the advantage persistence tradeoffs between firms who appeal to consumers across a wide geography versus a narrow geography. While intuition suggests that 'bigger is better' when it comes to the geographic reach of firms, we consider consumption externalities as a mechanism by which firm's with locationally homogenous (i.e. parochial) consumers may be advantaged. That is, consumers and, thus, their suppliers may benefit from consumption externalities that arise out of

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proximate consumption. Consumption externalities refer to benefits generated from consumption that are not fully captured by the focal consumer or firm (Berndt *et al.* 2003; Hilber 2005; Gilchrist and Sands 2016). Comparing the various (dis)advantages of large-scale and small-scale consumption, we conclude that firms with geographically dispersed consumers are generally advantaged financially when compared to smaller, parochial firms. Parochial firms, however, may engender greater customer loyalty and, thus, resilience.

We test this supposition empirically by examining firms' performance against the introduction of substitute market offerings, an important indicator of a firm's resilience. Our study examines the consumer geographic diversity of American football fans of the National Football League (NFL) and Collegiate (NCAA) Football, both of which vary widely in terms of the national versus regional appeal of their teams. These products are deployed in the form of competitive games, which attract consumer attention and, ultimately, advertising and sponsorship revenue. While games featuring teams with national appeal tend to attract much larger audiences compared to more regional teams, the 2016 United States presidential election provided an interesting natural experiment where political news coverage was especially engaging, a substitute for consumer attention.

Our results provide general support for our theoretical arguments. Firms with greater geographic diversity saw greater declines in viewership during the presidential election when compared to more regional firms, which, surprisingly, saw an increase in viewership. We also tested, and found support for, the mediating role of consumption externalities as an explanation for the variation in viewership.

Geographic Customer (Hetero)Homogeneity and Competitive (Dis)Advantage

Products can vary significantly in the geographic diversity of their consumers. We define consumer geographic diversity as the degree to which the consumers of a product are locationally dispersed. Some products have national or global appeal, where its consumers are spread to many different geographic locations, whereas other products are only locally or regionally recognized and valued.

Products with large national followings often have various strategic advantages when compared to smaller, regional consumption, at least three of which have been explicitly recognized in the literature. First, national products benefit from economies of scale and scope, enabling firms to effectively leverage marketing expenditures across greater quantities (Dyer *et al.* 2016). Economies of scale offer greater access to distribution channels, and can, thus, enhance market and advertising performance (Kim *et al.* 1989; Hitt *et al.* 1997).

Second, a larger and wider customer base implies greater access to customer knowledge (Homburg *et al.* 2009), which can enable managers to be more selective in targeting strategic markets. Expansive geographic distribution enhances feedback from a far more dispersed consumer base and, thus, can often get a better sense of consumers' different needs, whereas local products draw from a constrained set of customer knowledge (Fabrizio and Thomas 2012).

Finally, a national product is comparatively highly valued as a status signal. Consumers signal their identity to others with the products they consume, and often look to signal status (Goldsmith *et al.* 2000; O'Cass and McEwen 2006). Consumers tend to associate broadly distributed products with greater prestige and sophistication (Steenkamp *et al.* 2003). The products they consume generally conform to the culture and identity of their social circle,

signaling identification with and inclusion within that circle. Products with a national or global identity may benefit from cultural nationalism or globalism (Holton 2000).

In contrast to these benefits, smaller, regional products appear to have a somewhat different attraction to consumers. While parochial products are, still, symbols and signals of consumer identity, such products tend to appeal to consumers' need for uniqueness and ethnocentricity. 'Need for uniqueness' refers to an innate and heterogeneous quality by which consumers "derive intrinsic satisfaction from the perception that they are unique, special, and separable from 'the masses'" (Simonson and Nowlis 2000, p. 51). Consumers high in a need for uniqueness tend to avoid bigger product names, instead favoring 'counterconformity' to smaller, local, and/or eccentric products (Tian *et al.* 2001).

Hypothesis 1: Product consumer geographic diversity is positively related to overall product performance.

The Impact of Substitutes

Substitutes can greatly undermine the value of products. A key feature of substitute offerings is that they compete on dimensions that are not readily alignable with a product's existing features. Alignability references the comparability of product characteristics between different product offerings (Markman & Gentner, 1993; Barroso, Giarratana, & Reis, 2016). For example, the horsepower of a given vehicle can be easily compared with the horsepower of another vehicle. However, vehicles' design and appeal are more difficult to compare. Competitive offerings within the same consideration set are likely to compete on alignable differences whereas substitute offerings emphasize non-alignable differences.

In the context of this study, the 2016 presidential election offers a meaningful substitute to consumers of competitive football games in competing for consumers' attention. Consumer

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attention is a scarce resource (Evans 2013). As such, while news of the election directly competes for attention to satisfy advertisers, football teams indirectly compete for attention through bowl games, championships and television contracts and revenue. Alignability within the football entertainment industry is high, allowing consumers to compare the win record, the importance of a game, or the level of rivalry between the two competing teams. However, its alignability with substitutes, such as the 2016 presidential election, is much lower as consumers are less able to effectively compare the two different offerings. In this case, the election's novelty, its potential ramifications, and the uncertainty surrounding it could serve as an effective substitute for the same consumer needs, (e.g. competition, excitement, and drama). Such substitutes effectively diminish the attention and interest given products in a particular industry space by drawing those who would otherwise patronize the industry toward other alternatives (Porter, 1985).

Hypothesis 2: Substitutes are negatively related to overall product performance.

Product Attachment and Consumption Externalities

There are two key factors associated with geographic proximity which stand out as potential countermeasures to the dominant benefits of broad geographic diversity: product attachment effects and consumption externalities. These effects appear to advantage proximity and parochialism over dispersion and diversity regarding the loyalty of its patrons, which, in turn, produces greater product resilience to industry change, such as the entry of new substitutes.

Product Attachment

Product attachment refers to the emotional bond between consumer and product (Schiffenstein & Zwartkruis 2008), evoking feelings of connection and affection (Thomson et al., 2005). The product attachment concept is an extension of relationship theory, which posits that

consumers form personal relationships, akin to social relationships, with products (Fournier, 1998). Scientists developed attachment theory, originally, to explain the relationship between nurturers and children, based in a sense of safety and security (Bowlby, 1979). A child's sense of security facilitates exploration and development while ensuring supervision and safety. Thus, attachment is key to facilitating higher levels of self-determination early on, which continues into adulthood as adults form attachments with others in their social network (Wei *et al.* 2005) as well as with their possessions (Belk, 1988).

Geography and attachment. The likelihood of repeated interactions and consistency in values is enhanced when consumers inhabit consistent geography. Consistent geography allows users to maintain access to products and engage in social relationships associated with product consumption. Social bonds can be an important way to enhance the value of an offering (Berry 1995; Price and Arnould 1999). Social bonds may be based on relationships with friends, family, and community (Hidalgo and Hernández 2001).

Products that have geographically diverse consumption will, thus, generally tend to have lower levels of attachment, as consumers are more diverse and are, thus, less likely to identify with or embody the core values of the product. Because geographically diverse products are less likely to embody the unique symbols, ideals, and values of a particular market, consuming such products are likely to engender lower attachment and are, thus, more vulnerable to substitute products (Morgan and Hunt 1994). Dispersed consumers also have less opportunity to reinforce product identity through socialization.

Consumption Externalities

A second advantage of product-consumer density is the augmenting of product value through increased *consumption externalities*. Consumption externalities, again, refer to the

benefits (or harms) captured by others' who are not the immediate consumer of a product or service. In the consumption of products, there are opportunities for other consumers to capture benefits from co-located consumption. Where products are highly concentrated, the mutual benefitting from such consumption externalities can be multiplied.

The influence of consumption externalities can be illustrated by sports team product consumption. Consumption of a football game includes participation in the rituals and traditions associated with the team brand (e.g. Holt 1995). For example, for those consumers closer to the cultural center, consuming the team brand is likely to include attending home games, tailgates, community barbecues, and game watching parties. Wearing team jerseys is also likely to evoke more conversation and social benefits when close to the cultural center, facilitating new friendships and increased social engagement and status.

In all, we posit that products with low geographic diversity are more likely to benefit from stronger attachment and consumption externalities when compared with products with high geographic diversity. As a result, the products are also likely to differ in their resilience to threats of substitution, favoring strong regional products with local interest. Consumer diversity inhibits products with broader geographic scope from producing the same level of attachment that regional products can have. Furthermore, wide product name dispersion reduces the potential of benefiting from consumption externalities. Thus, we conclude:

Hypothesis 3: The negative relationship between substitutes and product performance is moderated by consumer geographic diversity such that the relationship is more negative for national products than for regional products.

Hypothesis 4: The interaction effect of consumer geographic diversity and substitutes on product performance is mediated by consumption externalities.

METHODS

The primary purpose of this study is to determine whether and how regional and national products vary during periods of high distraction—their resilience against growing substitutes. To understand this relationship, we collected a list of 473 football games (both NFL and NCAA division 1) in 2016 from Sports Media Watch (www.sportsmediawatch.com). Sports Media Watch systematically catalogs viewership and ratings for games, including those viewed through streaming based on numbers from ShowBuzz Daily, Sports Business Daily, Programming Insider, and Network public relations. The published data include the teams playing, network, rating, and number of viewers. Missing data (e.g. when dates were not available for certain games) were supplemented from nfl.com and espn.com. We use viewership as a measure of performance. Viewership for a given game is estimated by Nieslen, as reported by www.sportsmediawatch.com. We measure consumption externalities using the value generated through ticket and merchandise sales. *Geographic Diversity* is measured by Google trends across the 4-year period leading up to the captured season (2011-2015) to assess the level of interest in the football team product by state across the time-period. This measure was then aggregated using an inversed Herfindahl index of diversity by team. We averaged the Herfindahl index for the two competing teams for each game. *Substitutes* were estimated using Google trends data at the national level. Each week the level of interest in the term “election” was collected and coded for the games for that week.

The summary statistics and correlations for our focal and control variables are included in Table 1. These statistics are largely in line with expectations, with *Geographic diversity*, *Postseason game*, and *NFL gamecount* positively related to *Viewers*, and *Election*, *Shared game*,

College gamecount and, surprisingly, *Win percentage* and *Game count* are negatively related to *Viewers*.

Insert Table 1 about here

Because *Viewers* is a count variable, we use a fixed effect Poisson model, which has been shown to be robust to a number of population distributional assumptions (Wooldridge 1999). We also clustered standard errors by the network fixed effect. Model 1 is a control model. Model 2 introduces the main effects, i.e. *Geographic diversity* and *Election*. Model 3 tests the interaction between *Geographic Diversity* and *Election*.

Main and interaction effect results

In Model 2 we include the main effects to test Hypothesis 1. Hypothesis 1 posits *Geographic Diversity* to be positively related to *Viewership*. The coefficient is positive and significant ($\beta = 2.43$; $p = 0.012$), supporting the hypothesis. Hypothesis 2 holds that higher levels of interest in the election will be negatively related to viewership. In Model 2 the coefficient for *Election* is near zero and not statistically significant ($\beta = 0.001$; $p = 0.840$), not supporting Hypothesis 2.

Insert Table 2 about here

The third hypothesis posits that the negative relationship between *Substitutes* and *Viewership* is moderated by *Geographic Diversity* such that the relationship is weaker for products with less geographic diversification than for products with greater geographic diversity. The coefficient for the product of *Geographic Diversity* and *Substitutes* is negative and statistically significant ($\beta = -0.048$; $p < 0.001$). To further test these results we conducted a likelihood-ratio test comparing model 2 and model 3 (log likelihood ratio test statistic = 8657608

$p < 0.001$) which indicated that Model 3 achieves a comparatively greater explanation of variance relative to the increased model complexity.

Insert Figure 1 about here

Overall, these results provide support for our arguments that product performance is weaker for regional products than national products, but that parochial products are more resilient to distraction than national products.

Results for mediation tests

Ticket and merchandise sales revenue were available only for non-private colleges. Therefore, the mediation tests are conducted on a smaller overall sample of 249 games where finance information was available for both teams competing in the game.

We use the Barron and Kenny method (Baron and Kenny 1986), testing each of the paths using Poisson regression with fixed effects for network. For Model 1, we test the interaction effect associated with viewership on the reduced sample. The significance remains for this interaction effect ($b = -0.040$, $p = 0.027$). In Model 2, we test the path between the interaction effect and the mediator. This path is also significant ($b = -0.018$, $p < 0.001$). In model 3 we test the main effect path controlling for the mediator. Here we see that the interaction effect while statistically relevant, is smaller ($b = -0.023$, $p = 0.062$). These results indicate the possibility of a mediating effect.

We test for mediation a second way with a Sobel test by multiplying the coefficients for path A (moderator to mediator) and B (mediator to dependent variable) (Preacher and Hayes 2004). Because this is a mediated moderation test, we test the coefficients at the mean and a standard deviation above and below the mean for geographic diversification. The results indicate that the interaction effect of *Election* and *Geographic diversity* is at least partially mediated by

Consumption externalities particularly at the mean ($b = -3.35e-11, p = 0.002$) and high ($b = -6.17e-11, p < 0.001$) levels of *Geographic diversity*.

Insert Table 3 about here

DISCUSSION

The strategic implications of downstream consumer heterogeneity has been an emerging topic of conversation among management scholars (Adner and Snow 2010; Priem *et al.* 2012, 2013; Rietveld and Eggers 2018). Essential to this line of thinking are the strategic implications of consumer heterogeneity (Kim and Jensen 2014). Extending this work, we have sought to uncover the disparate advantages of more or less geographically diverse product consumers.

In this research, we have focused on the geographic dispersion of a product's consumers, whether they are broad and widely dispersed or localized and dense. Taking advantage of a recent natural experiment, with the comparatively dramatic U.S. presidential election of 2016, we pursued the comparative resilience of geographically diverse (national) football team products to their more parochial counterparts. Regional team products, while limited in geographic scope, were found to be *more* resilient to the distractions of the election.

In the analysis we found a surprising result. The interaction plot for the role of distractions indicated that not only did parochial products outperform national products during the election but that parochial products had an *increase* in viewership during the election when compared to a decrease in viewership for national products. We can only speculate as to why this may have been. We reran the plot after keeping only the collegiate games and found that the interaction was very similar, removing possible alternative explanations such as the kneeling protests in the NFL during the time. It is possible that viewers who identify more strongly with the local community than to their national identity may find their local sports team to be an

escape from the national political drama, whereas viewers who identify with national football products may have a stronger national identity and, therefore, be more interested in national politics.

Our results suggest that parochial products benefit from stronger consumer attachment due to the presence of consumption externalities. More specifically, regional products may benefit from greater consumer homogeneity, which enables the product to align their values and identity with the cultural interests of its patrons more closely. Furthermore, by maintaining a following closer to the product center, regional products increase the likelihood that consumers will benefit from consumption externalities such as consumer communities and local rituals. In doing so, we shed light on the demand-side implications of product geographic scope. We also tested for the mediating role of consumption externalities, the results providing evidence for the argument that consumption externalities serve as a partial explanation for why national products performed worse during the election when compared to parochial products. Consumption externalities appear to be a key strategic factor in determining product performance.

References

References available upon request

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Table 1. Summary Statistics

Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1 Viewers	6120000	9620000	2000	111000000											
2 Geographic diversity	0.86	0.09	0.48	0.97	0.38										
3 Election	9.89	24.41	0	100	-0.08	0.00									
4 Shared game	0.01	0.09	0	1	-0.03	-0.01	-0.01								
5 Postseason game	0.26	0.44	0	1	0.02	-0.13	-0.18	0.00							
6 College gamecount	18.06	10.74	0	30	-0.69	-0.39	0.16	0.06	0.09						
7 NFL gamecount	1.20	2.32	0	8	0.64	0.45	-0.05	-0.05	-0.18	-0.87					
8 Point spread	6.25	11.25	0	78	-0.13	-0.01	0.04	0.03	0.08	0.10	-0.13				
9 Win percentage team 1	0.24	0.36	0	1	-0.21	-0.13	0.01	0.03	0.19	0.28	-0.34	0.65			
10 Win percentage team 2	0.23	0.32	0	1	-0.08	-0.04	0.00	0.02	0.16	0.09	-0.16	0.54	0.79		
11 Game count team 1	2.62	4.26	0	14	-0.18	-0.13	0.04	0.03	0.44	0.24	-0.32	0.53	0.80	0.72	
12 Game count team 2	3.13	4.50	0	14	-0.07	-0.03	0.05	0.01	0.35	0.05	-0.10	0.55	0.69	0.77	0.88

N=473 Correlations > |0.09| are significant $p < .05$

Table 2. Game performance Poisson estimates

	Model 1			Model 2			Model 3			
	b	se	p	b	se	p	b	se	p	
Geographic diversity	H1			2.430	(0.968)	(0.012)	2.704	(0.989)	(0.006)	
Election	H2			0.000	(0.001)	(0.840)	0.043	(0.013)	(0.001)	
Geographic diversity # Election	H3						-0.048	(0.013)	(0.000)	
Shared game		-0.296	(0.077)	(0.000)	-0.285	(0.071)	(0.000)	-0.273	(0.069)	(0.000)
Postseason game		0.248	(0.121)	(0.040)	0.259	(0.127)	(0.042)	0.260	(0.130)	(0.046)
College gamecount		-0.073	(0.023)	(0.002)	-0.069	(0.020)	(0.001)	-0.071	(0.020)	(0.001)
NFL gamecount		-0.047	(0.094)	(0.615)	-0.065	(0.090)	(0.472)	-0.068	(0.090)	(0.451)
Point spread		-0.010	(0.004)	(0.019)	-0.010	(0.004)	(0.009)	-0.010	(0.004)	(0.007)
Win percentage team 1		0.341	(0.148)	(0.022)	0.332	(0.181)	(0.066)	0.340	(0.187)	(0.070)
Win percentage team 2		0.037	(0.139)	(0.792)	-0.010	(0.147)	(0.947)	-0.020	(0.154)	(0.895)
Game count team 1		-0.038	(0.026)	(0.151)	-0.036	(0.028)	(0.188)	-0.037	(0.028)	(0.187)
Game count team 2		0.001	(0.010)	(0.916)	0.005	(0.009)	(0.558)	0.006	(0.009)	(0.496)
Distribution channel fixed effects	Included			Included			Included			
Day of week fixed effects	Included			Included			Included			
Observations		473			473			473		
AIC		787907033.4			743955684.9			735298078.8		
BIC		787907066.7			743955726.5			735298124.6		
Log Likelihood		-393953508.7			-371977832.5			-367649028.4		
Chi ²		70293.8			177347.5			1584440000		

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Table 3. Consumption externalities mediation Poisson estimates

	Model 1 Viewers			Model 2 Consumption externalities			Model 3 Viewers		
	b	se	p	b	se	p	b	se	p
Election	0.032	(0.016)	(0.040)	0.013	(0.004)	(0.001)	0.019	(0.011)	(0.069)
Geographic diversity	2.160	(0.434)	(0.000)	0.092	(0.390)	(0.813)	1.776	(0.480)	(0.000)
Geographic diversity # Election	-0.040	(0.018)	(0.027)	-0.018	(0.004)	(0.000)	-0.023	(0.013)	(0.062)
Shared game	-0.842	(0.069)	(0.000)	0.147	(0.060)	(0.014)	-0.947	(0.091)	(0.000)
Postseason game	0.188	(0.054)	(0.001)	-0.266	(0.039)	(0.000)	0.387	(0.046)	(0.000)
College gamecount	-0.010	(0.006)	(0.105)	0.016	(0.005)	(0.004)	-0.022	(0.006)	(0.000)
Point spread	-0.012	(0.003)	(0.000)	0.001	(0.003)	(0.673)	-0.013	(0.004)	(0.000)
Win percentage team 1	-0.046	(0.127)	(0.718)	-0.137	(0.244)	(0.575)	-0.142	(0.162)	(0.380)
Win percentage team 2	0.750	(0.178)	(0.000)	0.051	(0.269)	(0.850)	0.950	(0.143)	(0.000)
Game count team 1	0.281	(0.035)	(0.000)	0.015	(0.108)	(0.888)	0.334	(0.113)	(0.003)
Game count team 2	-0.275	(0.037)	(0.000)	-0.009	(0.115)	(0.934)	-0.342	(0.111)	(0.002)
Consumption externalities							0.000	(0.000)	(0.000)
Observations	248			248			248		
AIC	228838733.1			3593190000			123994210.2		
BIC	228838757.7			3593190000			123994234.8		
Log Likelihood	-114419359.5			-1796590000			-61997098.1		
Chi ²	43078.8			583360.1			3384.3		

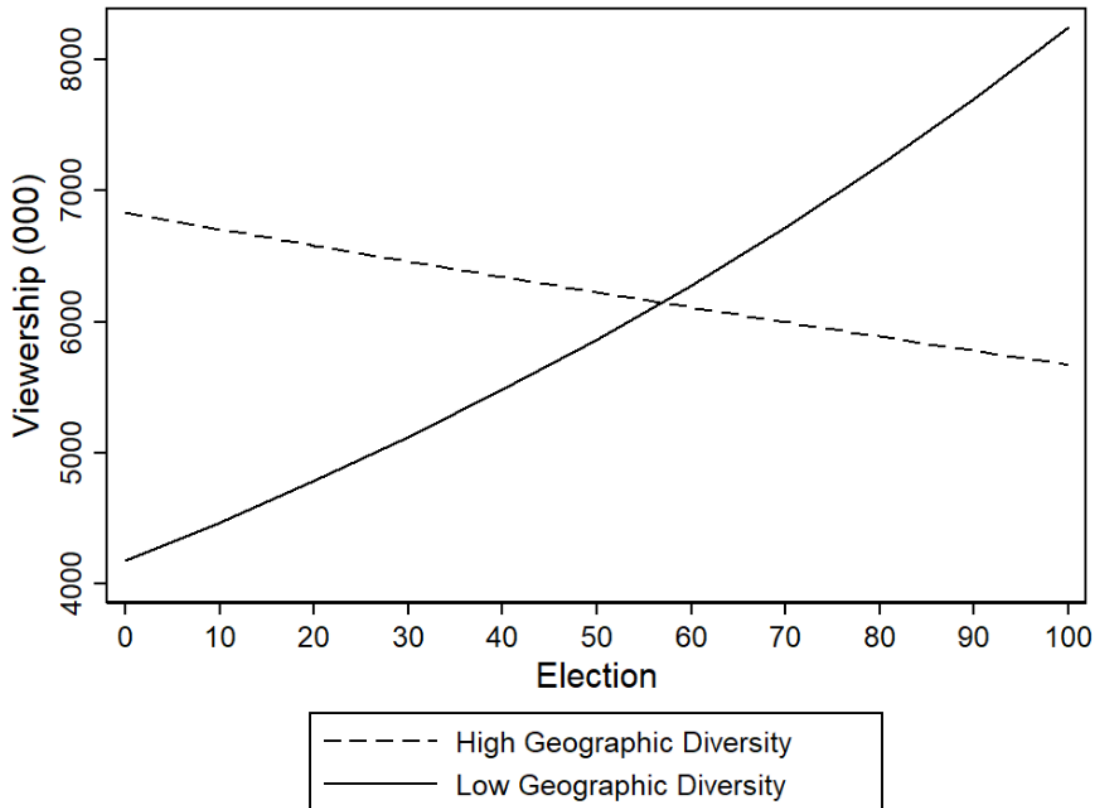


Figure 1. Interaction plot for Election and Geographic Diversity predicting Viewership